Reynolds Ranch Project

Draft Environmental Impact Report

State Clearinghouse Number 2006012113

(Volume II: Technical Appendices)

The City of Lodi
221 West Pine Street
P.O. Box 3008
Lodi, California 95241-1910

Prepared by:
WILLDAN
13191 Crossroads Parkway North
Suite 405
Industry, CA 91746-3479

June 2006

Appendices

Appendix A: Initial Study/Notice of Preparation and Responses
Appendix B: Air Quality Study
Appendix C: Biological Resource Assessment Wetlands Assessment
Appendix D: Cultural Resource Assessment
Appendix E: Phase 1 Environmental Site Assessment
Appendix F: Noise Impact Assessment
Appendix G: Public Services Responses
Appendix H: Utilities

Appendix A

Initial Study/Notice of Preparation and Responses

Initial Study
Reynolds Ranch / Blue Shield
Lodi, San Joaquin County, CA

Lead Agency:

City of Lodi
221 West Pine Street
Lodi, CA 95241-1910
(209) 333-6711
Contact: Peter Pirnejad

January 20, 2006

Environmental Checklist

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Aesthetics *Would the project:*				
a) Have a substantial adverse effect on a scenic vista?	✖	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	✖	☐	☐	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	✖	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	✖	☐	☐	☐
2. Agriculture Resources *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.* *Would the project:*				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	✖	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	✖	☐	☐	☐
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	✖	☐	☐	☐
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.* *Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	✖	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	✖	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	✖	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	✖	☐	☐	☐
4. Biological Resources *Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✖	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✖	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	✖	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	✖	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	✖	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	✖	☐	☐	☐
5. Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	✖	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	✖	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	✖	☐	☐	☐
6. Geology and Soils *Would the project:*				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	✖	☐	☐	☐
ii) Strong seismic ground shaking?	✖	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	✖	☐	☐	☐
iv) Landslides?	✖	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	✖	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	✖	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	✖	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	✖	☐	☐	☐
7. Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	✖	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	✖	☐	☐	☐
d) Be located within one-quarter mile of a facility that might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste?	✖	☐	☐	☐
e) Be located on a site of a current or former hazardous waste disposal site or solid waste disposal site unless wastes have been removed from the former disposal site; or 2) that could release a hazardous substance as identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code?	✖	☐	☐	☐
f) Be located on land that is, or can be made, sufficiently free of hazardous materials so as to be suitable for development and use as a school?	✖	☐	☐	☐
g) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	✖	☐	☐	☐
h) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	✖	☐	☐	☐
i) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	✖	☐	☐	☐
j) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	✖	☐	☐	☐
k) Be located within 1500 feet of: (i) an above-ground water or fuel storage tank, or (ii) an easement of an above ground or underground pipeline that can pose a safety hazard to the proposed school?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
8. Hydrology and Water Quality *Would the project:*				
a) Violate any water quality standards or waste discharge requirements?	✖	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	✖	☐	☐	☐
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	✖	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	✖	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	✖	☐	☐	☐
f) Otherwise substantially degrade water quality?	✖	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	✖	☐	☐	☐
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	✖	☐	☐	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	✖	☐	☐	☐
j) Inundation by seiche, tsunami, or mudflow?	✖	☐	☐	☐
9. Land Use and Planning *Would the project:*				
a) Physically divide an established community?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	✖	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	✖	☐	☐	☐
10. Mineral Resources *Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	✖	☐	☐	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	✖	☐	☐	☐
11. Noise *Would the project result in:*				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✖	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	✖	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	✖	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	✖	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	✖	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	✖	☐	☐	☐
12. Population and Housing *Would the project:*				

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	✖	☐	☐	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	✖	☐	☐	☐
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	✖	☐	☐	☐
13. Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire Protection?	✖	☐	☐	☐
b) Police Protection?	✖	☐	☐	☐
c) Schools?	✖	☐	☐	☐
d) Parks?	✖	☐	☐	☐
e) Other public facilities?	✖	☐	☐	☐
14. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	✖	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	✖	☐	☐	☐
15. Transportation/Traffic *Would the project:*				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	✖	☐	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	✖	☐	☐	☐
c) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	✖	☐	☐	☐
e) Result in inadequate emergency access?	✖	☐	☐	☐
f) Result in inadequate parking capacity?	✖	☐	☐	☐
16. Utilities and Service Systems *Would the project:*				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	✖	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	✖	☐	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	✖	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	✖	☐	☐	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	✖	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	✖	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	✖	☐	☐	☐
17. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	✖	☐	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	✖	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	✖	☐	☐	☐

Environmental Factors That Could Result in a Potentially Significant Impact		
The environmental factors listed below are checked because the proposed project may result in a "potentially significant impact" as indicated by the preceding checklist and will be further analyzed in an Environmental Impact Report.		
✖ Aesthetics	✖ Agriculture Resources	✖ Air Quality
✖ Biological Resources	✖ Cultural Resources	✖ Geology/Soils
✖ Hazards & Hazardous Materials	✖ Hydrology/Water Quality	✖ Land Use/Planning
✖ Mineral Resources	✖ Noise	✖ Population/Housing
✖ Public Services	✖ Recreation	✖ Transportation/Traffic
✖ Utilities/Services Systems	✖ Mandatory Findings of Significance	

Environmental Determination

On the basis of this initial evaluation:

☐ I find that the proposed project could not have a significant effect on the environment, and a **Negative Declaration** will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. **A Mitigated Negative Declaration** will be prepared.

✖ I find that the proposed project MAY have a significant effect on the environment, and an **Environmental Impact Report** is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An **Environmental Impact Report** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **Negative Declaration** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **Negative Declaration**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signed _____ Date _____

Discussion of Environmental Evaluation

1. AESTHETICS

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

2. AGRICULTURAL RESOURCES

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

3. AIR QUALITY

The impacts associated with this project will be studied in the EIR and determined what level of analysis is necessary. At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category.

4. BIOLOGICAL RESOURCES

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

5. CULTURAL RESOURCES

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

6. GEOLOGY AND SOILS

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

7. HAZARDS AND HAZARDOUS MATERIALS

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

8. HYDROLOGY AND WATER QUALITY

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

9. LAND USE AND PLANNING

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

10. MINERAL RESOURCES

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

11. NOISE

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

12. POPULATION AND HOUSING

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

13. PUBLIC SERVICES

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

14. RECREATION

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate..

15. TRANSPORTATION/TRAFFIC

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

16. UTILITIES AND SERVICE SYSTEMS

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate.

17. MANDATORY FINDINGS OF SIGNIFICANCE

At this point there is not enough known about the project to determine the extent of the impact if any that the project will have on this category. The EIR will be used to analyze this category and determine the level of analysis appropriate

Notice of Preparation

Form B

To: _____
(Agency)

_____
(Address)

_____

Subject: Notice of Preparation of a Draft Environmental Impact Report

Lead Agency:		**Consulting Firm (If applicable):**	
Agency Name	**City of Lodi**	Firm Name	Willdan
Street Address	221 West Pine Street	Street Address	2399 Gateway Oaks Drive, Suite 210
City/State/Zip	Lodi, CA 95240	City/State/Zip	Sacramento, CA 95833
Contact	Peter Pirnejad	Contact	Al Warrot

The City of Lodi will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approvals for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but **not later than 30 days** after receipt of this notice.

Please send your response to City of Lodi at the address shown above. We will need the name for a contact person in your agency.

Project Title: Reynolds Ranch/Blue Shield Development Plan

Project Location: Outside and adjacent to the City of Lodi corporate boundary but within the General Plan and Sphere of Influence of the City of Lodi in the County of San Joaquin specifically, south of Harney Lane and between State Route 99 and the UPRR.

Project Description:
The project involves the creation of a Development Plan of approximately 60 acres within a larger infrastructure Master Plan of approximately 220 acres all within the southeast section of the City of Lodi's Sphere of Influence. As the attached map describes, the entire project boundary is bordered by the State Route 99 to the east, the Union Pacific Rail Road to the west, Harney Lane to the North, and the property line that runs parallel and approximately 637 feet north of Scottsdale Road to the South.

The Master Plan entails approximately 160+ acres of residential including park and public uses, 20+ acres of office, and 40+ acres of retail use. It is anticipated the Master Plan will focus primarily on infrastructure needs to serve land uses proposed in the 60-acre project area and projected by the General Plan for the remaining 160 acres. The Development Plan will study only the office and retail uses totaling 60+ acres. The office use is anticipated to be approximately a 200,000 square foot multi-story building at full capacity on a 20+ acre site employing a total of 1,600 employees at full capacity. The office user is anticipated to be a single owner-occupied corporation operating back office services and a large call center with an expected parking need of 900+ spaces in two shifts. The retail component is proposed to consist of one 100,000 square foot building and one 150,000 square foot building each on its own 20+ acre parcel. The City is preparing a Program Level analysis for the Master Plan and Project Level analysis for the Development Plan.

The entire project area is outside the current City boundaries but within the Planned Residential Reserve designation of the General Plan and within the LAFCo approved Sphere of Influence.

The City would like to hear your views regarding the scope and content of the environmental information to be addressed in this EIR.

The City will hold a scooping meeting on Tuesday, February 14, 2006, at 3:00 p.m. in Carnegie Forum, 305 W. Pine Street, Lodi, California.

The City will receive comments on the Notice of Preparation for a 30-day period, commencing on Wednesday, January 25, 2006 and ending on Monday, February 27. 2006. Any person wishing to comment on the scope and content of the environmental information to be addressed in this EIR must submit such comments to the City of Lodi.

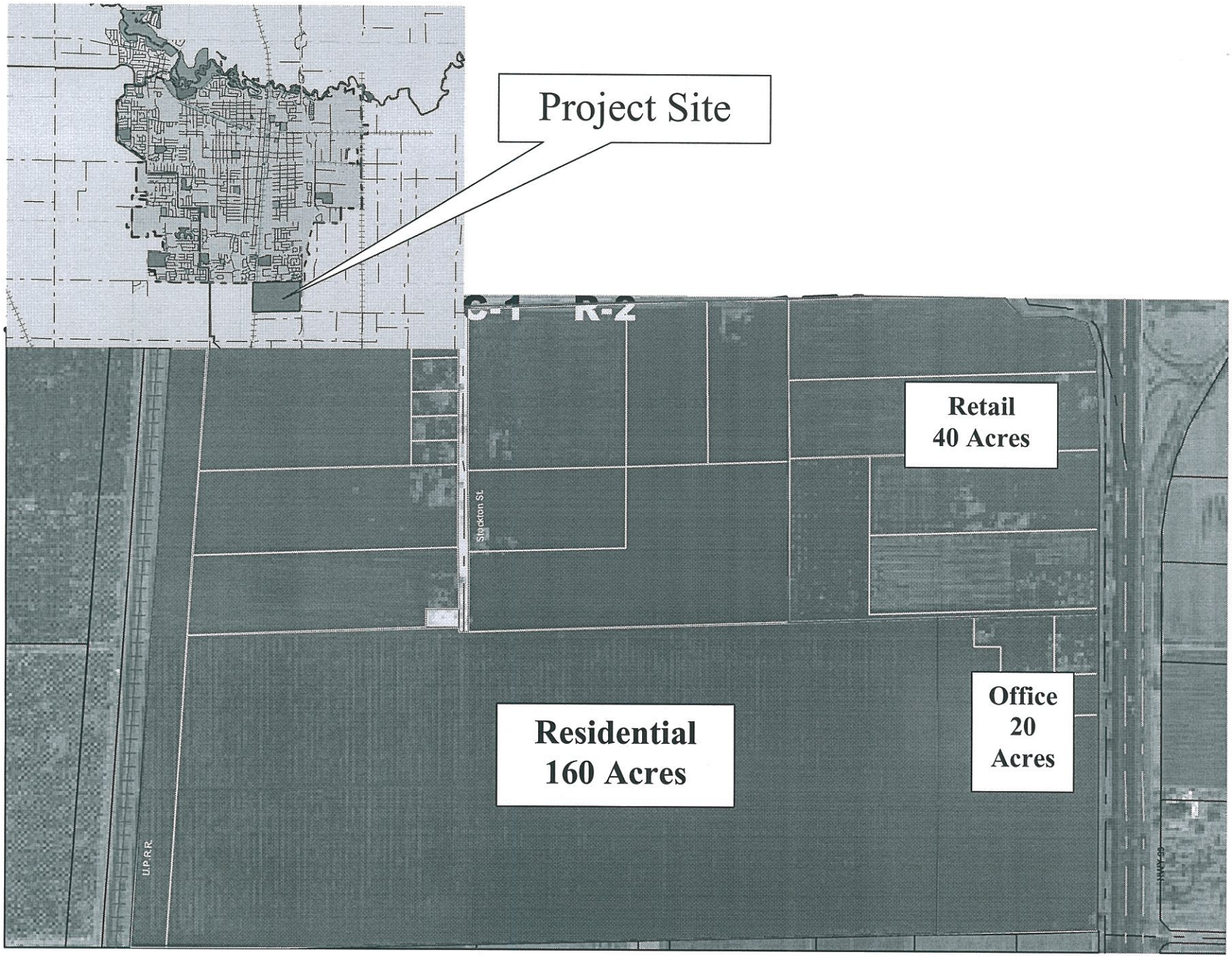
Date January 23, 2006 Signature _____

Title Planning Manager

Telephone (209) 333-6711

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

PROJECT SITE LOCATION AND PRELIMINARY LAND USE PLAN



STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

January 25, 2006

RECEIVED
JAN 31 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

To: Reviewing Agencies

Re: Reynolds Ranch/Blue Shield Development Plan
SCH# 2006012113

Attached for your review and comment is the Notice of Preparation (NOP) for the Reynolds Ranch/Blue Shield Development Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Peter Pirnejad
City of Lodi
221 West Pine Street
Lodi, CA 95240

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2006012113
Project Title Reynolds Ranch/Blue Shield Development Plan
Lead Agency Lodi, City of

Type NOP Notice of Preparation

Description The project involves the creation of a Development Plan of approximately 60 acres within a larger infrastructure Master Plan of approximately 220 acres all within the southeast section of the City of Lodi's Sphere of Influence.

Lead Agency Contact

Name Peter Pirnejad
Agency City of Lodi
Phone (209) 333-6711 **Fax**
email
Address 221 West Pine Street
City Lodi **State** CA **Zip** 95240

Project Location

County San Joaquin
City Lodi
Region
Cross Streets Harney Lane between SR 99 and the UPRR
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 99
Airports
Railways UPRR
Waterways
Schools
Land Use

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Biological Resources; Geologic/Seismic; Toxic/Hazardous; Water Quality; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Traffic/Circulation; Other Issues

---

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 2; Department of Health Services; Office of Emergency Services; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 10; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 01/25/2006 **Start of Review** 01/25/2006 **End of Review** 02/23/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: San Joaquin

SCH# 2005121019

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  David Johnson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **California Energy Commission**
  Roger Johnson
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [x] **Office of Historic Preservation**
  Wayne Donaldson
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Reclamation Board**
  DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [x] **Fish & Game Region 2**
  Banky Curtis
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [ ] **Fish & Game Region 4**
  Mike Mulligan
- [ ] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [x] **Dept. of Health Services**
  Veronica Rameriz
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Debby Eddy
- [x] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [ ] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [x] **California Highway Patrol**
  John Olejnik
  Office of Special Projects
- [x] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
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- [x] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Mario Orso
- [ ] **Caltrans, District 12**
  Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
  - [ ] Transportation Projects
    Kurt Karperos
  - [ ] Industrial Projects
    Mike Tollstrup
- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Jim Hockenberry
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
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- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
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- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

Last Updated on 08/10/05

State of California—Health and Human Services Agency
Department of Health Services

California
Department of
Health Services

SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

RECEIVED
JAN 3 1 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

January 27, 2006

Peter Pirnejad, Planning Manager
City of Lodi
221 West Pine Street
Lodi, CA 95240

RESPONSE TO THE NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE REYNOLDS RANCH/BLUE SHIELD DEVELOPMENT PLAN PROJECT

This letter is in response to the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the Reynolds Ranch/ Blue Shield Development Plan Project. The NOP was received by the Department from City of Lodi (City) on January 24, 2006. After reviewing the notice, the Department has the following comments.

The Department wants to make sure that the issue of water quality and quantity produced by the City of Lodi is addressed in the Environmental Impact Report. The EIR should take into consideration that the development of the area should not compromise the quality and quantity of the water produced by the wells that exist in the area. The EIR should also address the issue that the water production is adequate to meet the long term demands of the developed area. Since the City presently relies on groundwater, the City should study its ground water supply to make sure that ground water supply will sustain all this growth without significantly diminishing the quantity of water stored in the aquifer.

Based on the requirements outlined in California Water Code Sections 10910 through 10915, the City should prepare an assessment to assure that there will be a long term adequate supply of water to support this significant increment of development. Typically these issues listed in California Water Code Sections 10910 through 10915 would be addressed in a water supply master plan. Therefore, the City shall prepare a water supply master plan to address all the issues listed in this letter and all the items identified in the California Water Code Sections 10910 through 10915 to support the City's conclusions in the EIR with respect to the adequacy and sustainability of its water supply.

Flex your POWER
Do your part to help California save energy. To learn more about saving energy, visit the following web site:
www.consumerenergycenter.org/flex/index.html

Southern California Drinking Water Field Operations Branch
31 East Channel Street, Room 270, Stockton, CA 95202
(209) 948-7696; (209) 948-7451 fax
Internet Address: http://www.dhs.ca.gov/ps/ddwem/technical/dwp/dwpindex.htm

If you have any questions or comments regarding this letter, please contact me at (209) 948-3816 or Bhupinder Sahota at (209) 948-3881.

Joseph O. Spano

Joseph O. Spano, P.E.
District Engineer
Southern California Branch
Drinking Water Field Operations
Stockton District

A:\3910004\Response to NOP 0106

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

RECEIVED
FEB 03 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

January 31, 2006

Peter Pirnejad
City of Lodi
221 West Pine Street
Lodi, CA 95240

Dear Mr. Pirnejad:

Re: SCH# 2006012113; Reynolds Ranch/Blue Shield Development Plan

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the County be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

Kevin Boles
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: Pat Kerr, UP

RECEIVED
FEB 02 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

X6 PP

File

SJCOG, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 468-3913 • FAX (209) 468-1084

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LEAD AGENCY ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Peter Pirnejad , City of Lodi Community Development Department

From: Erin Sickler, SJCOG, Inc.

Date: January 31, 2006

Re: **Lead Agency Project Title:** Reynolds Ranch/Blue Shield Development

Lead Agency Project Number: N/A

Assessor Parcel Number(s): Multiple

Total Acres to be converted from Open Space Use: 220 acres

Habitat Types to be Disturbed: Multi-purpose Open Space and Urban Land

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Mr. Pirnejad:

SJCOG, Inc. has reviewed the Notice of Preparation for the Reynolds Ranch/ Blue Shield EIR. This project involves the creation of a development plan of approximately 60 acres within a larger infrastructure of approximately 220 acres. This project is bordered by Strate Route 99 to the east, Union Pacific Railroad to the west, Harney Lane to the North, and the property line that runs parallel and approximately 637 feet north of Scottsdale Road to the South.

The City of Lodi is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). Although participation in the SJMSCP is voluntary, lead agents should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP.

This Project is subject to the SJMSCP. Please contact SJMSCP staff regarding completing the following steps to satisfy SJMSCP requirements:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- Sign and Return Incidental Take Minimization Measures to SJMSCP staff (given to project applicant after pre-construction survey is completed)
- Pay appropriate fee based on SJMSCP findings
- Receive your Certificate of Payment and release the required permit

If you have any questions, please call (209) 468-3913.

CITY OF LODI
FIRE DEPARTMENT
MEMORANDUM

RECEIVED
FEB 07 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

TO: Peter Pirnejad, Planning Manager

FROM: Michael E. Pretz, Fire Chief

DATE: February 3, 2006

SUBJECT: Reynolds Ranch/ Blue Shield Development Plan

The Reynolds Ranch/Blue Shield Development Plan will impact the delivery of Fire Service in the Southeast sector of the City. The current General Plan Health and Safety element calls for the City of Lodi Fire Department to maintain a three (3) minute emergency travel time. The closest fire station location to the proposed development is Fire Station #2, located at 705 E. Lodi Avenue. Since 2003, Fire Department response time data has indicated a decline in our ability to meet the three (3) minute response time in that area. In 2005, we met this goal only 51% of the time. Moreover, the Fire Department has experienced a 30% increase in call volume in the proposed development area over the previous three (3) years.

In addition to the City's General Plan, the Fire Department also uses National Fire Protection Association standards in determining adequacy of fire protection. NFPA 1710 sets a response time requirement of four (4) minutes emergency travel time for 90% of all emergencies. Even using the NFPA standard, the Fire Department only meets the response time criteria for this area 66.6% of the time. In order to accomplish our mission and meet the response time goals for the proposed development, a fire station will need to be built in the proposed development area.

In order to service the proposed development a one (1) acre site with a 10,000 square foot fire station capable of housing a total of twelve (12) firefighters, four (4) of which will be on duty at one time will be needed. In addition, the apparatus floor will need three (3) drive-through bays, deep enough to park two (2) fire apparatus per bay. Construction costs are estimated to be approximately $2.65/square foot. The cost may not include tenant improvements. In addition, a new fire engine, with pump capacity of 1,500 gallons per minute (GPM), capable of carrying four (4) firefighters and equipment will also be needed. Total cost for a fully equipped fire apparatus is approximately $500,000.

All commercial, retail, and residential buildings will be expected to comply will all applicable City of Lodi Fire Codes, including street width, access, and fire sprinkler provisions. For Fire Code information, please contact Verne Person, Fire Marshal. Verne will also be the point of contact for the Fire Department; he can be reached at (209) 333-6739.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

RECEIVED
FEB 09 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

February 6, 2006

To: Reviewing Agencies

Re: Reynolds Ranch/Blue Shield Development Plan
SCH# 2006012113

Attached for your review and comment is the Notice of Preparation (NOP) for the Reynolds Ranch/Blue Shield Development Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Peter Pirnejad
City of Lodi
221 West Pine Street
Lodi, CA 95240

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

S. Morgan

for Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	**2006012113**
Project Title	Reynolds Ranch/Blue Shield Development Plan
Lead Agency	Lodi, City of

Type	**NOP** Notice of Preparation
Description	The project involves the creation of a Development Plan of approximately 60+/- acres within a larger infrastructure Master Plan of approximately 220+/- acres all within the southeast section of the City of Lodi's Sphere of Influence.

Lead Agency Contact

Name	Peter Pirnejad		
Agency	City of Lodi		
Phone	(209) 333-6711	***Fax***	
email			
Address	221 West Pine Street		
City	Lodi	***State*** CA	***Zip*** 95240

Project Location

County	San Joaquin			
City	Lodi			
Region				
Cross Streets	Harney Lane between SR 99 and the UPRR			
Parcel No.				
Township		***Range***	***Section***	***Base***

Proximity to:

Highways	99
Airports	
Railways	UPRR
Waterways	
Schools	
Land Use	

Project Issues	Agricultural Land; Air Quality; Biological Resources; Geologic/Seismic; Toxic/Hazardous; Water Quality; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Traffic/Circulation; Other Issues
Reviewing Agencies	Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 2; Native American Heritage Commission; Office of Emergency Services; Department of Health Services; Department of Housing and Community Development; California Highway Patrol; Caltrans, District 10; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received	02/06/2006	***Start of Review***	02/06/2006	***End of Review***	03/07/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

JD

County: San Joaquin

SCH# 2006012113

Resources Agency

- ■ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  David Johnson
- ☐ **California Coastal Commission**
  Elizabeth A. Fuchs
- ☐ **Colorado River Board**
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- ☐ **Dept. of General Services**
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  - ☐ **RWQCB 6V**
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  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

☐ **Other** _____

_____

_____

Last Updated on 08/10/05

SAN JOAQUIN COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT

1810 E. HAZELTON AVE., STOCKTON, CA 95205-6232
PHONE: 209/468-3121 FAX: 209/468-3163

February 8, 2006

MEMORANDUM

TO: Peter Pirnejad
Planning Manager

FROM: Karla Kuhl
Assistant Planner

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report
Reynolds Ranch/Blue Shield Development Plan

Please send a copy of the Draft EIR prepared on the above-mentioned project to me to review upon completion.

Thank you.

From: Jerry Adams
Sent: Thursday, February 16, 2006 4:57 PM
To: Peter Pirnejad
Cc: Blair King; David Main; Gary Benincasa
Subject: RE: Blue Shields / Reynolds Ranch

Peter,

I appreciate the heads-up. I do have concerns about any new housing developments or

We also have some building recommendations concerning building address lighting for

Chief Jerry J. Adams
Lodi Police Department
215 W. Elm Street
Lodi, CA 95240
(209)333-6725
www.lodi.gov/police

From: Peter Pirnejad
Sent: Wednesday, February 15, 2006 10:29
To: Jerry Adams
Subject: Blue Shields / Reynolds Ranch

Hay Jerry,
I would like to give you a heads up and have you start thinking about the new 220+/-
We sent out a Notice of Preparation a few weeks ago and wanted to solicit comments f
Fire already sent their comments to us (I have attached them for your review)
I would like you or your designee to start giving some thoughts as to what you will
We will be contacting you (We meaning myself and the consulting team - Willdan) to g
We had our Scoping meeting yesterday where we received input from the public, public
In any case if you could start drafting something up as far as a memo and be ready t
We have a deadline to comments to the Notice of Preparation by March 7. But we will

Look forward to your comments.

Thanks,

Peter Pirnejad
Planning Manager
221 West Pine Street
PO Box 3006
Lodi, CA 92541-1910
T 209-333-6711
F 209-333-6842
Ppirnejad@lodi.gov

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

February 21, 2006

RECEIVED
FEB 23 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

Peter Pirnejad
City of Lodi
221West Pine Street
Lodi, CA 95240

Dear Mr. Pirnejad:

Re: SCH 2006012113; Reynolds Ranch/Blue Shield Development Plan

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the County be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

Kevin Boles
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: Pat Kerr, UP

THOMAS R. FLINN
DIRECTOR

THOMAS M. GAU
DEPUTY DIRECTOR

MANUEL SOLORIO
DEPUTY DIRECTOR

STEVEN WINKLER
DEPUTY DIRECTOR

ROGER JANES
BUSINESS ADMINISTRATOR

Public Works
San Joaquin County
Working for YOU

P. O. BOX 1810 - 1810 E. HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201-3018
(209) 468-3000 FAX (209) 468-2999
www.co.san-joaquin.ca.us

February 23, 2006

RECEIVED
FEB 27 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

Mr. Peter Pirnejad
City of Lodi
221 West Pine Street
Lodi, California 95240

SUBJECT: REVISED NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE REYNOLDS RANCH/BLUE SHIELD DEVELOPMENT PLAN

Dear Mr. Pirnejad:

San Joaquin County Department of Public Works has reviewed the above mentioned document and has the following comments:

From Transportation Planning:

1. A traffic impact study is required for the full master planned development. The traffic study shall identify all impacts from the master planned development, and respective mitigation measures. The traffic study shall identify the project's fair share percentage cost of any improvements. The City of Lodi shall collect the project's fair share of improvement costs.

2. San Joaquin County Public Works will be interested in reviewing a Traffic Impact Study for the proposed development project. Study intersections shall include:

    a. West Lane/Harney Lane.
    b. Stockton Street/Harney Lane.
    c. SR99 East Frontage/Harney Lane.
    d. SR99 West Frontage/Harney Lane.
    e. Cherokee Memorial Park Access/Harney Lane.
    f. Beckman Road/Harney Lane.
    g. SR99 East Frontage Road/Scottsdale Road.

3. Recent City of Lodi development, coupled with the proposed project, will undoubtedly render the State Highway Route 99/Harney Lane interchange inadequate. It is the City's responsibility to hold the developer financially responsible for their impacts to the interchange.

4. The Environmental Impact Report must also address the implications the proposed project's design will have on the reconstruction of the State Highway Route 99/Harney Lane interchange. Due to the adjacent cemetery, expansion of the interchange will only be feasible to the west and south. This must be addressed now.

5. The project shall be subject to the recently passed Regional Transportation Impact Fee.

6. An Encroachment Permit is required for any work and/or traffic control within the County's jurisdiction.

Thank you for the opportunity to comment. Please add San Joaquin County Department of Public Works to your distribution list for future environmental documents. Should you have any questions or need additional information, please contact me at 468-8494.

Sincerely,

ANDREA VALLEJO
Assistant Planner

AV:rc
TP-6B069-R1

c: Adam Brucker, Senior Transportation Planner
Dwayne Sabiniano, Engineering Assistant II
Michael Selling, Senior Civil Engineer

RECEIVED
FEB 27 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

San Joaquin Valley Air Pollution Control District

February 23, 2006

Reference No. C20060173

Peter Pirnejad
City of Lodi
221 West Pine St.
Lodi, CA 95240

Subject: Notice of Preparation of Draft Environmental Impact Report for Reynold's Ranch / Blue Shield

Dear Mr. Pirnejad:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above and offers the following comments:

The entire San Joaquin Valley Air Basin is classified non-attainment for ozone and fine particulate matter (PM10). This project would contribute to the overall decline in air quality due to construction activities in preparation of the site, and ongoing traffic and other operational emissions. This project may generate significant air emissions and it will reduce the air quality in the San Joaquin Valley. The project will make it more difficult to meet mandated emission reductions and air quality standards. A concerted effort should be made to reduce project-related emissions as outlined below:

Preliminary analysis indicated that development of this magnitude would likely produce emissions in excess of the District's annual Thresholds of Significance for ozone precursors. These thresholds are 10 tons per year for either of the following two ozone precursor emissions: reactive organic gases (ROG) or oxides of nitrogen (NOx). When projects are of this size, the District recommends the preparation of an Air Quality Impact Assessment (AQIA) and a Traffic Impact Study (TIS) to quantify project emissions and determine potential adverse air impacts.

The District recommends using the URBEMIS 2002 Version 8.7 program to calculate project area and operational emissions and to identify mitigation measures that reduce impacts. URBEMIS can be downloaded from www.urbemis.com or the South Coast Air Quality Management District's website at http://www.aqmd.gov/ceqa/urbemis.html. If the preliminary analysis indicates that the project exceeds the District's Thresholds of Significance for ozone precursors (10 tons/year of either ROG or NOx, then the District recommends the preparation of a full Air Quality Impact Assessment (AQIA) that describes the air quality setting and identifies measures that reduce air quality impacts. The project applicant or consultant is encouraged to consult with District staff for assistance in determining appropriate methodology and model inputs.

The District does not recommend quantifying fugitive PM10 emissions from construction activities. The District considers that PM10 emissions are reduced to levels considered less-than-significant through compliance with the District's Regulation VIII (Fugitive PM10 Emissions) rules. If construction activity is especially intense, or sensitive receptors are nearby, the District recommends applying the enhanced PM10 control measures listed in the *Guide for Assessing and Mitigating Air Quality Impacts; 2002 version* (GAMAQI).

The District recommends that the air quality section of the EIR have four main components:

1. **A description of the regulatory environment and existing air quality conditions impacting the area**. This section should be concise and contain information that is pertinent to analysis of the project. The District has several sources of information available to assist with the existing air quality and regulatory environment section of the EIR. The District's GAMAQI contains discussions regarding the existing air quality conditions and trends of the San Joaquin Valley Air Basin, including those pollutants of particular concern: ozone, PM10, and carbon monoxide. In addition, it provides an overview of the regulatory environment governing air quality at the federal, state, and regional levels. The GAMAQI provides air monitoring data and other relevant information for PM-10 and other pollutants. The most recent air quality data for the District is Available at the California Air Resources Board's (CARB) website at http://www.arb.ca.gov/html/aqe&m.htm. The air quality section of EPA's Region 9 (which includes information on the San Joaquin Valley Air Basin) can be found at http://www.epa.gov/ region09/air/index.html. Additionally, this section should also contain a discussion regarding growth projections that San Joaquin County provided to the District (through the San Joaquin COG) for inclusion in the Ozone and PM10 Attainment Plans and any impacts this project will have on Federal Conformity for San Joaquin County and the San Joaquin Valley Air Basin. Lastly, this section should clearly describe the air pollution regulatory authority of the District and CARB for the various emission sources in the Reynold's Ranch / Blue Shield Project.

2. **Estimates of existing emissions and projected pollutant emissions related to the increase in project source emissions and vehicle use, along with an analysis of the effects of these increases.** The EIR should include the methodology, model assumptions, inputs and results for pollutant emissions. The cumulative impact analyses should consider current existing and planned development both within the project area and in surrounding areas. The EIR needs to address the short-term and long term local and regional adverse air quality impacts associated with the operation of construction equipment (reactive organic gases, nitrogen oxides, carbon monoxide, and PM10) and emission generated from stationary and mobile sources. The EIR should identify the components and phases of the project. The EIR should provide emissions projections for the project at the build out of each phase (including ongoing emissions from each previous phase).

   Ozone Precursors – The District recommends using the regional transportation model to quantify mobile source emissions, but in some cases it may be possible to use the URBEMIS 2002 Version 8.7 program to calculate project area and operational emissions. Tulare County Association of Governments may be able to provide assistance with the regional transportation model. The District recommends using the URBEMIS 2002 Version 8.7 program to calculate project area and operational emissions and to identify mitigation measures that reduce impacts. URBEMIS can be downloaded from http://www.urbemis.com/ or the South Coast Air Quality Management District's website at: http://www.aqmd.gov/ceqa/urbemis.html. If the analysis reveals that the emissions generated by this project will exceed the District's thresholds, this project may significantly impact the ambient air quality if not sufficiently mitigated. The project applicant or consultant is encouraged to consult with District staff for assistance in determining appropriate methodology and model inputs.

   Hazardous Air Pollutants (HAPs) – The air analysis should discuss District regulations for identifying and reducing HAPs and should describe how the City of Lodi would address potential impacts to sensitive receptors near the construction site. Potential HAPs sources include project equipment, and trucks (CARB has designated diesel particulate emissions as a toxic air contaminant). On page 43 of the District's GAMAQI, the District addresses and defines sensitive receptors with respect to CEQA. If the project is near sensitive receptors and HAPs are a concern, the project developer should perform a Health Risk Assessment (HRA). HRA guidelines promulgated by the California Office of Environmental Health Hazard Assessment (OEHHA) and OEHHA toxicity criteria must be used. The District recommends use of the latest version of the Hot Spots Analysis and Reporting Program (HARP) released by CARB for a health risk assessment because it is the only software that is compliant with the OEHHA guidelines. An HRA should include a discussion of the toxic risk associated with the proposed project, including

project equipment, operations, and vehicles. The GAMAQI defines the significance levels for toxic impacts as a cancer risk greater than 10 in a million and/or a hazard index (HI) of 1.0 or greater for chronic non-carcinogenic or acute risks. The project consultant should contact the District to review the proposed modeling approach before modeling begins. For more information on hazardous air pollutants (HAPs) analyses, please contact Mr. Leland Villalvazo, Supervising Air Quality Specialist, at (559) 230-6000 or hramodeler@valleyair.org.

Carbon Monoxide Hotspot Analysis – Results of the traffic study should be used to identify intersections and corridors with high levels of congestion that may result in a CO hot spot. CO hot spots should be screened using a protocol developed by the Institute of Transportation Studies at University of California Davis entitled Transportation Project-Level Carbon Monoxide Protocol. Locations that are predicted by the CO Protocol to experience high levels of CO should be modeled using the dispersion model CALINE4. The procedure for using EMFAC 2002 to calculate emission factors to be used in the CALINE4 modeling can be downloaded at the CalTrans Division of Environmental Analysis site http://www.gov.ca.gov/hq/env/air/emfac.htm.

Odor Analysis- The proposed project should be analyzed to see if it is considered near a location of sensitive receptors (including residences) and if odor is a concern. The procedure outlined in the District's GAMAQI includes the following:

- Identify the location of sensitive receptors (including residences).
- Compare the distance to the nearest sensitive receptor to the distances in Table 4.2 of the GAMAQI. If the sensitive receptors are further away than the distances given in Table 4.2, no further analysis is required. The results should be documented in the EIR.
- Obtain any odor complaints against the facility or similar facilities from the local District office and the county's environmental health department.
- Review the complaints to determine the location of complainants relative to the facility.
- Identify any sensitive receptors at similar distances.
- Determine if emissions of odoriferous compounds will increase or decrease with implementation of the project.
- Draw any reasonable conclusions as to the probability that the project will generate odor complaints based on this analysis of complaint history.

3. **Identify and discuss all existing District regulations that apply to the project**. The EIR should identify and discuss all existing District regulations that apply to the project. It would be appropriate to discuss proposed rules that are being developed that would apply to the proposed project. District rules and regulations are periodically revised, and new regulations are promulgated. The District strongly advises the Department of Transportation to contact the District for any rule updates and new rules when the project development begins. Current District rules and regulations applicable to the proposed project are requirements. Current rules and regulations are available on the District's website at http://www.valleyair.org/rules/1ruleslist.htm.

Regulation VIII (Fugitive PM10 Prohibitions) Rules 8011-8081 are designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, landfill operations, etc. The District's compliance assistance bulletin for construction sites can be found at http://www.valleyair.org/busind/comply/PM10/Reg%20VIII%20CAB.pdf.

If a residential project is 10.0 or more acres in area or a non-residential project is 5.0 or more acres in area or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021. Construction activities shall not commence until the District has approved the Dust Control Plan. A template of the District's Dust Control Plan is available at http://www.valleyair.org/ busind/comply/PM10/forms/DCP-Form%20-%2012-01-2005.doc.

Rule 2280 (Portable Equipment Registration) As of May 1, 1994, all portable emission units (including portable drilling rigs) are required to register with the District or CARB. Should this

project require the installation of an air stripping operation, and/or an auxiliary diesel or natural gas engine greater than fifty (50) brake horsepower, application for an Authority to Construct may be required. Any question pertaining to District permitting or registration requirements should be directed to our Permit Services division at (559) 230-6000.

Rule 3135 (Dust Control Plan Fee) This rule requires the applicant to submit a fee in addition to a Dust Control Plan. The purpose of this fee is to recover the District's cost for reviewing these plans and conducting compliance inspections. More information on the fee is available at http://www.valleyair.org/rules/currntrules/Rule%203135%201005.pdf.

Rule 4002 (National Emission Standards for Hazardous Air Pollutants) In the event that any portion of an existing building will be renovated, partially demolished or removed, the project will be subject to District Rule 4002. Prior to any demolition activity, an asbestos survey of existing structures on the project site may be required to identify the presence of any asbestos containing building material (ACBM). Any identified ACBM having the potential for disturbance must be removed by a certified asbestos contractor in accordance with CAL-OSHA requirements. If you have any questions concerning asbestos related requirements, please contact Ms. Jan Sudomier at (209) 557-6422, or contact CAL-OSHA at (559) 454-1295. The District's Asbestos Requirements Bulletin can be found at http://valleyair.org/busind/comply/asbestosbultn.htm.

Rule 4102 (Nuisance) This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and be subject to District enforcement action.

Rule 4103 (Open Burning) This rule regulates the use of open burning and specifies the types of materials that may be open burned. Agricultural material shall not be burned when the land use is converting from agriculture to non-agricultural purposes (e.g., commercial, industrial, institutional, or residential uses). Section 5.1 of this rule prohibits the burning of trees and other vegetative (non-agricultural) material whenever the land is being developed for non-agricultural purposes. In the event that the project applicant burned or burns agricultural material, it would be in violation of Rule 4103 and be subject to District enforcement action.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) If asphalt paving will be used, then paving operations of this project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) This rule limits PM10 and PM2.5 emissions from residential development. Construction plans for residential developments may be affected by section 5.3, specifically:

§5.3 Limitations on Wood Burning Fireplaces or Wood Burning Heaters in New Residential Developments.

Beginning January 1, 2004,

5.3.1 No person shall install a wood burning fireplace in a new residential development with a density greater than two (2) dwelling units per acre.

5.3.2 No person shall install more than two (2) EPA Phase II Certified wood burning heaters per acre in any new residential development with a density equal to or greater than three (3) dwelling units per acre.

5.3.3 No person shall install more than one (1) wood burning fireplace or wood burning heater per dwelling unit in any new residential development with a density equal to or less than two (2) dwelling units per acre.

More information about Rule 4901 can be found on our website at www.valleyair.org. For compliance assistance, please contact Mr. Wayne Clarke, Air Quality Compliance Manager, at (559) 230-5968.

Rule 4902 (Residential Water Heaters) This rule applies to and limits emissions of NOx from residential natural gas-fired water heaters.

Rule 9510 (Indirect Source Review) This rule requires the applicants of certain development projects to submit an application to the District when applying for the development's last discretionary approval. The rule requires developers to mitigate emissions at the project site to the extent feasible and to pay a mitigation fee to the District for a percentage of the remaining emissions. The ISR rule becomes effective March 1, 2006. Projects that have a final discretionary application in process and have not received approval by March 1, 2006 must submit an ISR application by April 3, 2006. For further information please contact the District's CEQA-ISR Section at (559) 230-5800 or ISR@valleyair.org.

4. **Identify and discuss all feasible measures that will reduce air quality impacts generated by the project.** "Feasible" means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors: (California Code of Regulations (CCR § 15364)). The California Environmental Quality Act (CEQA) requires that EIRs "describe measures which could minimize significant adverse impacts" (CCR §15126(c)). Additionally, the CCR requires that "a public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures that would substantially lessen any significant effects that the project would have on the environment " (CCR § 15021(a)(2)). For each potential adverse impact, mitigation measures should be identified to reduce impacts below air quality threshold levels of significance. Therefore, the EIR should identify which mitigation measures will be included in the project, and how each mitigation measure will be implemented. The reduction of air quality impacts from implementation of mitigation measures should be quantified to the extent possible. If a measure cannot be quantified a qualitative discussion should be provided explaining the benefits of the proposed mitigation measure. The EIR should discuss how project design modifications could reduce project impacts. Site design, equipment alternatives, construction and operational measures that would reduce emissions should be identified. Mitigation measures must be included in the EIR that reduce the emissions of reactive organic gases, nitrogen oxides, and PM10 to the fullest extent possible. Site design and construction measures that would reduce air quality impacts should be included. The Districts *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) describes these features. The current GAMAQI can be found at http://www.valleyair.org/transportation/ceqa_guidance_documents.htm. The Local Government Commission (LGC) website, http://www.lgc.org, contains valuable information and resources on subjects from street design to energy efficiency.

   The District recommends the following applicable mitigation measures:

   - Trees should be carefully selected and located to protect the buildings from energy consuming environmental conditions, and to shade 50% of paved areas within 15 years. Also, large canopy shade trees should be planted adjacent to all sidewalks thirty foot on center and at a ratio of one tree for each five parking spaces. Structural soil should be used under paved areas to improve tree growth. For information on Structural Soil see http://www.hort.cornell.edu/uhi/outreach/csc/. For information on Tree Selection see http://www.ufei.org/. For Urban Forestry see http://www.coolcommunities.org, http://wcufre.ucdavis.edu and http://www.lgc.org/bookstore/energy/downloads/sjv_tree_guidelines.pdf.

   - Sidewalks and bikeways should be installed throughout as much of the project as possible and should be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling. Connections to nearby public uses and commercial areas should be made as direct as possible to promote walking for some trips. Sidewalks and bikeways should be designed to separate pedestrian and bicycle pathways from vehicle paths. Sidewalks and bikeways should be designed to be accommodating and appropriately sized for anticipated future pedestrian and bicycle use. Such pathways should be easy to navigate, designed to facilitate pedestrian movement through the project, and create a safe environment for all potential users (pedestrian, bicycle and disabled) from obstacles and automobiles. Pedestrian walkways should be created to connect all buildings

throughout the project. The walkways should create a safe and inviting walking environment for people wishing to walk from one building to another. Walkways should be installed to direct pedestrians from the street sidewalk to the buildings. Safe and convenient pathways should be provided for pedestrian movement in large parking lots. Mid-block paths should be installed to facilitate pedestrian movement through long blocks (over 500' in length) and cul-de-sacs. Sidewalks should be designed for high visibility (brightly painted, different color of concrete, etc.) when crossing parking lots, streets and similar vehicle paths.

- As many energy conserving and emission reducing features as possible should be included in the project. Energy conservation measures include both energy conservation through design and operational energy conservation. Examples include (but are not limited to):
  - Increased energy efficiency (above California Title 24 Requirements) See http://www.energy.ca.gov/title24/.
  - Energy efficient widows (double pane and/or Low-E), lighting, appliances, and heating and cooling systems. See http://www.energystar.gov/
  - Programmable thermostats for all heating and cooling systems
  - Use Low and No-VOC coatings and paints. See South Coast's site for No-VOC Coatings at http://www.aqmd.gov/prdas/brochures/paintguide.html
  - High-albedo (reflecting) roofing material. See http://eetd.lbl.gov/coolroof/
  - Cool Paving. "Heat islands" created by this and similar projects contribute to the reduced air quality in the valley by heating ozone precursors. See http://eande.lbl.gov/heatisland/ and http://www.harc.edu/harc/Projects/CoolHouston/
  - Radiant heat barrier. See http://www.eere.energy.gov/consumerinfo/refbriefs/bc7.html
  - Features to promote energy self-sufficiency (solar water-heating systems, photovoltaic cells, solar thermal electricity systems, small wind turbines, etc.) Rebate and incentive programs are offered for alternative energy equipment. See http://www.dsireusa.org/, http://rredc.nrel.gov/, and http://www.energy.ca.gov/renewables/
  - Awnings or other shading mechanism for windows
  - Porch, patio and walkway overhangs
  - Utilize daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows etc. See http://www.advancedbuildings.org
  - Electrical outlets around the exterior of the units to encourage use of electric landscape maintenance equipment
  - Natural gas fireplaces (instead of wood-burning fireplaces or heaters)
  - Natural gas lines in backyard or patio areas to encourage the use of gas barbecues
  - Reducing the amount of single occupancy vehicle visitor traffic to and from the project (bicycle parking facilities for patrons and employees in a covered secure area, reducing parking spot supply, implementing parking charges)
  - Employee shower and locker areas for bicycle and pedestrian commuters
  - On-site employee cafeterias or eating areas
  - Pre-wire the units with high speed modem connections/DSL and extra phone lines
  - Exits to adjoining streets should be designed to reduce time to re-enter traffic from the project site
  - More information can be found at http://www.ciwmb.ca.gov/GreenBuilding/, http://www.consumerenergycenter.org/index.html, http://www.sustainable.doe.gov/, and http://www.lgc.org.

- The District encourages the applicant and fleet operators using the facility to take advantage of the District's Heavy-Duty Engine program to reduce project emissions. The Heavy Duty program provides incentives for the replacement of older diesel engines with new, cleaner, fuel-efficient diesel engines. The program also provides incentives for the re-power of older, heavy-duty trucks with cleaner diesel engines or alternative fuel engines. New alternative fuel heavy-duty trucks also qualify. For more information regarding this program contact the District at (559) 230-5858 or visit our website at http://www.valleyair.org/transportation/heavydutyidx.htm.

- The Department of Transportation should require that all diesel engines be shut off when not in use on the premises to reduce emissions from idling. The applicant should install equipment that

provides amenities that would otherwise be powered by idling engines. An example of such technology includes *IdleAire*. See http://www.idleaire.com/.

- Construction equipment may be powered by diesel engines fueled by alternative diesel fuel blends or Ultra Low Sulfur Diesel (ULSD). CARB has verified specific alternative diesel fuel blends for NOx and PM emission reduction. Only fuels that have been certified by CARB should be used. Information on biodiesel can be found on CARB's website at http://www.arb.ca.gov/fuels/diesel/altdiesel/altdiesel.htm and the EPA's website at http://www.epa.gov/oms/models/biodsl.htm. The applicant should also use CARB certified alternative fueled engines in construction equipment where practicable. Alternative fueled equipment may be powered by Compressed Natural Gas (CNG), Liquid Propane Gas (LPG), electric motors, or other CARB certified off-road technologies. To find engines certified by the CARB, see their certification website http://www.arb.ca.gov/msprog/offroad/cert/cert.php. For more information on any of the technologies listed above, please contact Mr. Chris Acree, Senior Air Quality Specialist, at (559) 230-5829.

- Construction equipment may be used that meets the current off-road engine emission standard (as certified by the CARB), or be re-powered with an engine that meets this standard. Tier I, Tier II and Tier III engines have significantly less NOx and PM emissions compared to uncontrolled engines. To find engines certified by the CARB, see http://www.arb.ca.gov/msprog/offroad/cert/cert.php. This site lists engines by type, then manufacturer. The "Executive Order" shows what Tier the engine is certified as. Rule 9510 requires construction exhaust emissions to be reduced by 20 percent for NOx and 45 percent for PM10 when compared to the statewide fleet average or to pay an in lieu mitigation fee. For more information on incentive funding for heavy-duty engine emission reduction projects, please contact Mr. Thomas Astone, Air Quality Specialist, at (559) 230-5800.

- Enhanced construction activity mitigation measures include:
  - Limit area subject to excavation, grading, and other construction activity at any one time
  - Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use
  - Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set)
  - Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways, and "Spare the Air Days" declared by the District.
  - Implement activity management (e.g. rescheduling activities to reduce short-term impacts)
  - During the smog season (May through October), lengthen the construction period to minimize the number of vehicles and equipment operating at the same time.
  - Off road trucks should be equipped with on-road engines when possible.
  - Minimize obstruction of traffic on adjacent roadways.

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call me at (559) 230-5818 or Mr. Dave Mitchell, Planning Manager, at (559) 230-5807 and provide the reference number at the top of this letter.

Sincerely,

Jessica R. Willis

Jessica R. Willis
Air Quality Specialist
Central Region

c: file

San Joaquin Valley
Air Pollution Control District

February 28, 2006

RECEIVED
MAR 0 3 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

Reference No. C20060304

Peter Pirnejad
City of Lodi
221 West Pine St.
Lodi, CA 95240

Subject: Revised Notice of Preparation of Draft Environmental Impact Report - Reynold's Ranch/Blue Shield

Dear Mr. Pirnejad:

The San Joaquin Valley Unified Air Pollution Control District (District) has previously commented on this project and has no additional comments at this time.

Previous comments: District Reference Number C20060173, mailed to you on February 23, 2005

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call me at (559) 230-5818 or Mr. Dave Mitchell, Planning Manager, at (559) 230-5807 and provide the reference number at the top of this letter.

Sincerely,

Jessica R. Willis

Jessica R. Willis
Air Quality Specialist
Central Region

c: file

Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400 • FAX (209) 557-6475

Central Region Office
1990 East Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 • FAX (559) 230-6061
www.valleyair.org

Southern Region Office
2700 M Street, Suite 275
Bakersfield, CA 93301-2373
(661) 326-6900 • FAX (661) 326-6985

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
3330 Ad Art Road
Stockton, CA 95208
(209) 943-8666
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

RECEIVED
MAR 15 2006
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

March 2, 2006

File No.: 265.8981.11045

Peter Pirnejad
City of Lodi Community
221 West Pine Street
Lodi, CA 95240

Dear Mr. Pirnejad:

Thank you for the opportunity to review the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Reynolds Ranch/Blue Shield Development Plan Project located in the area of State Route 99 and Harney Lane (SCH# 2006012113). While the development area is adjacent to the City of Lodi, and anticipated to be annexed into the City of Lodi prior to completion, the project will have significant impacts on the surrounding county roads as well as State Routes (SR) 12 and 99. The California Highway Patrol (CHP) has the primary responsibility for traffic enforcement on county roads as well as these State Highways. These roadways will see a significant increase in the average daily traffic volumes. Additionally, this increase will be felt on Interstates 5 (I-5) and 205 (I-205) as these are major commute routes to the Bay Area from the Lodi area.

The project plan includes approximately 220 acres with an anticipated building plan encompassing an unspecified number of dwelling units, in addition to commercial and business/industrial parks. The Notice of Preparation does indicate a need to mitigate the expected increased traffic volumes throughout the project and adjacent roadways by widening the major roadways and increasing the number of lanes to help maintain the City of Lodi's Level Of Service (LOS) standards for local roadways. However, there is no discussion of mitigating the impact of the increased traffic on the supporting State Route and freeway systems, other than perhaps egress and ingress alterations to SR 99. It is important that the City of Lodi work closely with the Department of Transportation (Caltrans) as well as the California Highway Patrol in developing long range plans that are beneficial to all the citizens utilizing the highway system.

It is clear the proposed project will create challenges for daily commuters and tax the already busy roadway systems in the area. This development will directly impact the Stockton and Tracy CHP's ability to effectively manage traffic without an increase in resources. This need should be addressed in the project's Environmental Impact Report. Should you have any questions, please feel free to call me or Lieutenant Edward Whitby of my staff at (209) 943-8666.

Sincerely,

S. M. COUTTS, Captain
Commander

cc: Special Projects Section
Tracy CHP

Appendix B

Air Quality Study

Giroux & Associates
Environmental Consultants

AIR QUALITY IMPACT ANALYSIS

REYNOLDS RANCH

CITY OF LODI, CALIFORNIA

Prepared for:

Willdan
Attn: Robert Sun
13191 Crossroads Parkway North, Suite 405
Industry, California 91746-3497

Date:

May 19, 2006

Project No.: P06-021AQ

3 Rushingwind, Irvine, California 92614 - Phone (949) 387-5477 - Fax (949) 387-5478

METEOROLOGY CLIMATE

The climate of San Joaquin County, as with all of California, is dominated by the strength and position of semi-permanent high-pressure cell over the Pacific Ocean north of Hawaii. In summer, when the high is strongest and farthest north, temperatures are hot and humidity's are low, but persistent afternoon and evening breezes somewhat help to moderate the summer heat. In winter, when the high is weakest and farthest south, weather patterns are more changeable as occasional storms are interspersed with protracted periods of stagnant, fair weather conditions.

Temperatures at the project site average 59°F annually with a moderate to strong seasonal oscillation. Summer afternoon's average in the low 90's while winter nights are generally in the upper 30s. Although maxima of 108 degrees and minima down to 21 degrees have been observed in Lodi, extremes of temperature are somewhat moderated by the proximity of the Pacific Ocean. About 70 days per year exceed 90 degrees, while about 35 days drop to just below freezing.

The annual rainfall as measured in Lodi, which falls almost exclusively from late October to early May, totals 16.3 inches per year, but varies significantly from year to year. Measurable rain falls on about 34 days per year but only 11 of those days have moderate rainfall of more than 0.5 inches in 24 hours.

Winds across San Joaquin County show a number of distinct patterns depending on the driving mechanism and the topographical steering of both the Delta and the Central Valley axis. The dominant winds across Lodi are from west to east from the strong marine air infow from the cool Bay Area to the warm Central Valley. They turn toward the southeast across Lodi as they head up the San Joaquin Valley. Winds are dominantly from the W-NW, except during occasional periods of poorly disorganized valley winds when the cross-valley component is dominant. During summer, the onshore flow from ocean to land creates a strong inflow into the San Joaquin River Valley that may bring air pollution into San Joaquin County from the Bay Area. During winter storms, the Valley topography also funnels the winds with a dominant and well-organized flow again from the NW. Between the winter storms, winds are often light with weak downvalley flow from the east or southeast toward the Delta.

The net effect of the observed wind patterns is that daytime mixing in the project area, especially in summer, is generally good. Any observed air pollution effects of local emissions sources tend to occur many miles away from the source in response to prevailing wind patterns. At night, especially in winter, the near calm winds tend to localize the impact from any emissions sources. Winter air quality patterns tend therefore to be dominated by micro-scale dispersion processes with generally good air quality except in very close proximity to freeways, parking lots or highly congested intersections. In the absence of any significant development in the Lodi area, the limited dispersion potential from the weak nocturnal winds is probably not a significant air quality issue except for possible agricultural activity emissions stagnation.

In addition to prevailing wind patterns that control the rate of dispersal and trajectory of local pollutant emissions, the San Joaquin Valley Air Basin (SJVAB) experiences two types of

inversions that affect the vertical depth through which pollutants can be mixed. In summer, air within the high pressure cell over the region warms by compression as it sinks. The resulting warm layer aloft creates a lid over the region until surface heating late in the day finally destroys this subsidence inversion. These inversions contribute to summer photochemical smog problems by confining pollution to a shallow layer between ground surface and the inversion base aloft.

At night, especially in winter, the air near the ground cools by radiative processes, while the air aloft remains warm. Surface-based radiation inversions are formed that, in conjunction with nearly calm winds, cause localized air pollution "hot spots" to be created near emissions sources because of the very poor winter nocturnal dispersive capacity. These inversions burn off after sunrise, but are a factor in contributing to elevated nocturnal primary (unreacted) automotive air pollution levels such as carbon monoxide (CO). While the subsidence and radiation inversions are present throughout much of the year, they are much less dominant than on summer afternoons and winter nights, respectively. Their decreased importance during the spring and fall transitional periods leads to generally good air quality during these seasons.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed Reynolds Ranch project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Research suggests, however, that long-term exposure to air pollution at or above standards may lead to chronic adverse health effects. Just meeting standards may not provide a sufficient health protection cushion for sensitive receptor populations.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. Because California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. A description of source and effects of those air pollutants with clean air standards is shown in Table 2.

Table 1 includes those federal clean air standards that were adopted in 1997. These standards included a chronic (8-hour) exposure limit for ozone and a standard for ultra-small diameter particulate matter of 2.5 microns of less (called PM-2.5). EPA's authority to promulgate clean air standards without a specific congressional mandate, and without a comparison of costs to air

quality benefits, was challenged in a series of court cases that culminated in the U.S. Supreme Court agreeing to hear the appeal in November, 2000. On February 27, 2001, the U.S. Supreme Court, in a unanimous decision, overturned the previously issued stay of implementation of the federal standards for ozone (8 hours) and ultra-fine particulate matter (PM-2.5). The Court ruled that EPA did not require specific congressional authorization for this action, nor did it have to consider the cost-benefit ratio of the action. However, the Court did find that the proposed implementation schedule for these standards was inconsistent. That inconsistency has since been resolved.

In addition to a variety of pollutants with ambient air quality standards (called "criteria pollutants"), air quality considerations may include pollutants which have no safe level of exposure (toxic or hazardous air contaminants), "normal" air constituents present in variable quantities (carbon dioxide, methane, water vapor), precursors to the pollutants (ammonia, chloride, sulfates, nitrates, etc, which form particulate matter), and nuisance pollutants such as odors or large dust particles that soil property.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over air quality matters in the SJVAB. The SJVAPCD was formed in 1991. The air district is responsible for air quality programs in San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and a portion of Kern County. The SJVAPCD has a large number of air quality responsibilities. For many years its primary role was in the control of stationary sources of air pollution. More recent legislation at the state and federal levels increased local air district responsibilities to implement transportation control measures (TCM's). The SJVAPCD also coordinates its air quality planning and improvement efforts with various councils/associations of governments, transportation planning agencies, as well as with economic development or trade associations to maximize the benefit and minimize the impact of air pollution improvement efforts.

The San Joaquin Valley has been designated as a non-attainment air basin by the EPA and the California Air Resources Board (ARB) for ozone and fine particulate matter. In response to state and federal clean air legislation the SVJAPCD is required to prepare and adopt air quality attainment plans on a prescribed schedule. The attainment planning process has generated multiple state-mandated plans, four federal ozone plans, three federal PM-10 plans and one federal CO plan since 1991.

The most significant and controversial air quality planning issue has focused on the 1-hour ozone standard. It become obvious several years ago that the basin could not demonstrate an adequate rate-of-progress to meet the 1-hour standard within the timetable required for a "severe" non-attainment area. A downgrade to an "extreme" non-attainment area was requested and granted that shifts the attainment deadline to 2010. The plan was locally approved and forwarded to the EPA in November 2004. This plan is the currently adopted blueprint for improved ozone air quality in the basin.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	0.12 ppm (235 μg/m³)	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (140 μg/m³)		0.08 ppm (157 μg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 μg/m³	Gravimetric or Beta Attenuation	150 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		50 μg/m³		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation	15 μg/m³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	(new standard pending)	Gas Phase Chemiluminescence	0.053 ppm (100 μg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 μg/m³)		–		
Lead	30-Day average	1.5 μg/m³	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 μg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 μg/m³)	–	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 μg/m³)		0.14 ppm (365 μg/m³)	–	
	3 Hour	–		–	0.5 ppm (1,300 μg/m³)	
	1 Hour	0.25 ppm (655 μg/m³)		–	–	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 μg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m³)	Gas Chromatography			

Table 2

Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

The 1-hour federal standard was replaced by an 8-hour standard in mid-2005. The deadline for approving a revised plan for the 8-hour ozone standard is 2007, and the attainment deadline for the basin is 2013. The 1-hour plan will continue to function as the operative attainment strategy until the 8-hour standard attainment plan replaces the current extreme non-attainment plan.

The California Air Resources Board (ARB) is required to periodically review the most recent health effects studies, and revise state AAQS accordingly. Based upon this mandate, the ARB has adopted, or is adopting, state standards for ozone (8-hour), PM-10, PM-2.5 and nitrogen dioxide (NO2) that are more stringent than their federal counter-parts.

BASELINE AIR QUALITY

San Joaquin Valley air quality primarily results from a combination or stagnant atmospheric ventilation, intense sunshine to drive photochemical reactions, and continuing growth/ urbanization. While agricultural activities continue to contribute to particulate emissions, much of the summer haze is due to ozone (smog). Motor vehicles generate 57 percent of smog precursors, with off-road vehicles, consumer products and small utility equipment adding 20 percent (www. Valleyair.org/newsed/apvalley.htm). The contribution of pollutants from outside the air basin is most pronounced near the gap in the Coast Range in the San Joaquin/Sacramento Delta. With continuing emissions improvements in the Bay Area, the smog transport problem into San Joaquin County is much less severe than what it was 10-20 years ago.

The combination of limited dispersive capacity and growth contribute to the continuing non-attainment status of the basin for several pollutants. Ozone and small-diameter particulates exceed standards by a substantial margin. While the South Coast (Los Angeles) Air Basin (SCAB) continues to have the poorest air quality in California, the gap between the San Joaquin Valley Air Basin (SJVAB) and the SCAB has been steadily narrowing. Whereas improvement over the last two decades has been pronounced in the SCAB, it has been only minimal in the Valley. Smog levels are almost identical downwind of Fresno or Bakersfield as they are in much of Los Angeles County.

Existing levels of ambient air quality and historical trends and projections in the project area are well documented from measurements made by the SJVAPCD in several locations in San Joaquin County. The most complete air monitoring measurements closest to the project site are made in Stockton. From these data one can infer that baseline air quality levels near the project site are occasionally unhealthful, but that such violations of clean air standards usually affect only those people most sensitive to air pollution exposure. Table 3 summarizes the monitoring history from the Stockton monitoring station for the last 5 years.

As reflected in the data in Table 3, the standards for ozone and for particulate matter (PM-10) are routinely exceeded near the project site, as they are throughout the air basin. The SJVAB is designated as a "non-attainment" air basin by state and federal agencies as shown in Table 4.

Table 3
Air Quality Monitoring Summary
(Days Standards Were Exceeded and Maximum Observed Concentrations)

Pollutant/Standard	2000	2001	2002	2003	2004
Ozone					
1-hour > 0.09 ppm (S)	4	5	2	3	1
1-hour > 0.12 ppm (F)	0	0	0	0	0
8-hour > 0.09 ppm	0	1	0	1	0
Max 1-hour Conc. (ppm)	0.107	0.103	0.102	0.104	0.096
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 1-hour Conc. (ppm)	6.5	8.4	6.0	5.8	3.7
Max 8-hour Conc. (ppm)	3.9	6.0	3.2	3.1	2.5
Nitrogen Dioxide					
1-hour > 0.25 ppm (S)	0	0	0	0	0
Max 1-hour Conc. (ppm)	0.099	0.084	0.076	0.088	0.079
Respirable Particulates (PM-10)					
24-Hour > 50 $\mu g/m^3$ (S)	9/61	11/63	10/64	3/62	3/61
24-Hour > 150 $\mu g/m^3$ (F)	0/61	0/63	0/64	0/62	0/61
Max. 24-Hr. Conc. ($\mu g/m^3$)	97.	147.	91.	90.	61.
Ultra-Fine Particulates (PM-2.5)					
24-Hour > 65 $\mu g/m^3$ (F)	1/123	2/123	0/124	0/123	0/122
Max. 24-Hour Conc. ($\mu g/m^3$)	78.	76.	64.	45.	41.

(S) - State ambient standard; (F) - Federal ambient standard

Data from Stockton (Hazelton) Air Monitoring Summary,
Source: California Air Resources Board, PTSD-06-021-CD, 2006

Table 4

San Joaquin Valley Air Basin Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	**State Standards**
Ozone – 1 Hour	Non-attainment/Extreme	Non-attainment/Severe
Ozone – 8 Hour	Non-attainment/Serious	No State Standard*
PM-10 – 24 Hour	Non-attainment/Serious	Non-attainment
PM 2.5 – 24 Hour	Unclassified**	No State Standard
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead Particulates	No Designation	Attainment
Other Pollutants (H2S, SO4, visibility)	No Federal Standards	Attainment or Unclassified

* State standard goes into effect in 2006, basin will be non-attainment.
** To be determined, but likely non-attainment.

However, Stockton (and, by inference Lodi) has not recorded any violations of the federal one-hour ozone standard in the last five years. The federal 8-hour ozone standard was exceeded only twice in five years. No more than three violations of federal standards in three years is considered as "attainment" under federal guidelines. Although the air basin as a whole is considered in "serious non-attainment" for the 8-hour ozone standard, the project area has considerably better ozone air quality than the rest of the air basin.

Table 3 includes data for PM-2.5. PM-2.5 monitoring was begun in 1999 following adoption of a federal standard in 1997. Based upon available PM-2.5 measurements the basin will be designated as "non-attainment" for the federal annual and 24-hour standards. PM-2.5 is different from more ordinary "dust" in that very little of PM-2.5 is created by the mechanical breakdown of larger particles. PM-2.5 is created mainly as a combustion byproduct (soot), or from chemical growth of microscopic materials. Health effects from elevated PM-2.5 exposure are believed to be more severe than from PM-10. Table 3 shows that although San Joaquin County experiences frequent violations of PM-10 standards from agricultural activities, very few violations of the PM-2.5 standard have been observed in the last five years because agricultural dust does not break down readily into PM-2.5.

More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are low near the project site because background levels, never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable regulations.

SJVAPCD Regulations

The SJVAPCD has developed a number of rules and regulations to reduce emissions from existing air pollution sources and to offset the effects of continued Central Valley growth. Many rules are aimed at industrial sources or heavy industries. As the major air pollution sources become better controlled, newer rules focused on smaller sources that are significant pollution contributors on a cumulative scale. The air district is pre-empted from directly controlling on-road vehicles, trains, etc., but does have authority to regulate their impact through "indirect source" rules. The list of APCD rules that are potentially applicable to the proposed project include:

Rule 3135 - Dust Control Plan and Fee
Rule 4102 - Nuisance Prohibition
Rule 4103 - Open Burning Limits on Agricultural Debris
Rule 4641 - Asphalt Emissions Limits
Rule 4901 - Prohibits Wood-Burning Fireplaces Except in Very Low-Density Housing.
Rule 4902 - Requires Low-Nox Water Heaters
Regulation VIII - Fugitive PM-10 Prohibitors
Rule 9510 - Indirect Source Review - Traffic and Construction Emissions Impact Mitigation

AIR QUALITY IMPACTS

THRESHOLDS OF SIGNIFICANCE

Ozone and PM-10 are the two non-attainment pollutants in the air basin that merit critical consideration relative to project-related air quality impacts. While any generation of air pollution is of concern, precursors to ozone and/or PM-10 generation have the most stringent thresholds. For projects within the SJVAB, the SJVAPCD, in its "Guide for Assessing and Mitigating Air Quality Impacts," or GAMAQI (updated 2001), recommends use of the following thresholds for project operation:

ROG	10 tons/year
NOx	10 tons/year
CO	violation of 1- or 8-hour standard

Significance could also derive from emissions of odors or hazardous air pollutants. Development and occupancy of a residential, office or commercial community would not typically generate any hazardous air pollutants or odors. Some odors may result from on-going agricultural operations in the project vicinity. However, nearby agricultural operations are not associated with animal husbandry or occasionally odorous crops such as onions or garlic. The absence of dairies, feed lots, poultry ranches, hog farms, etc., near the site, suggest that agricultural odor is not likely a project siting constraint.

Construction activity is an important PM-10 contributor for new development in the air basin. Because prediction of PM-10 generation depends on a variety of variables which may change from project to project or from day to day, the SJVAPCD has recommended a qualitative, rather than a quantitative, approach to assessing impact significance for PM-10 construction activity emissions. The air district has developed a menu of PM-10 control options in GAMAQI that define the minimum content of a construction dust control program as required by Rule VIII of the district's rules and regulations. In addition to the mandatory program, GAMAQI provides discretionary enhanced or additional control measures that should be implemented if the activity occurs in close proximity to sensitive receptors. With the effective implementation of a minimum dust control program as required by Regulation VIII, and with the use of enhanced or additional measures, where warranted, the PM-10 impact from construction activities is found to less-than-significant. The listing of required measures, as well as those additional candidate measures recommended because of possible proximity of adjacent sensitive receptors, are included in the mitigation section of this report.

Though federal state standards for PM-2.5 have been established, the SJAPCD has not developed a threshold of significance for this pollutant.

CONSTRUCTION ACTIVITY IMPACTS

Construction activities may generate fugitive dust (PM-10) during clearing and grading, and equipment exhaust from earth-moving and construction equipment. The SJAPCD considers reduction of fugitive dust through compliance with all Regulation VIII provisions to be adequate proof that PM-10 emissions from soil disturbance have been reduced to less-than-significant levels. Construction equipment exhaust, however, may impact regional air quality in ways that are not mitigated by Reg. VIII. Diesel-fueled equipment exhaust contains high levels of NOx that participate in regional smog formation. Diesel exhaust also contains diesel particulate matter (DPM) that is a known carcinogen. The Air District has therefore developed mitigation requirements for all major construction projects. A major development is defined as:

- 50 of more residential units
- 2,000 square feet of commercial space
- 39,000 square feet of office space

Reynolds Ranch qualifies as major under every one of these categories. These mitigation requirements are a component of Rule 9510 (adopted December, 2005). Rule 9510 became effective March 1, 2006.

For construction equipment, emissions must be reduced by a specified level compared to the emissions that would have resulted from using statewide average equipment. The emissions for any equipment greater than 50 horse-power (HP) reduction requirement is as follows:

20% of total NOx emissions

45% of total PM-10 emissions

These reductions can be achieved by using less pollutant equipment, or by paying an in-lieu fee, or by a combination of both approaches. The fee is approximately $9,000 per ton for each pollutant.

The SJVAPCD will utilize the collected fees to implement basin-wide pollution control programs such as purchase of cleaner equipment for transit agencies, school districts, etc. Documentation of the calculated construction activity emissions, any "credit" for a commitment to using cleaner equipment (diesel equipment with oxidation catalysts, soot filters, etc.), and any residual excess to be mitigated by payment of fees must be included in an Air Impact Assessment (AIA) required for every major project. The AIA may be prepared by the project applicant, or the APCD will prepare the AIA and fee calculation using default values. The AIA application must be submitted no later than the date of any final discretionary approval by a public agency. Compliance with Rule 9510 requirements for construction equipment exhaust is considered to mitigate exhaust impacts to regional air quality to less-than-significant.

OPERATIONAL ACTIVITY IMPACTS

This project proposed to develop approximately 1,434 dwelling units and approximately 350,000 square feet of commercial development and approximately 200,000 square feet of office space on approximately 220 acres. The project will add 28,300 daily trips to the regional traffic burden at project build-out. Residential use will also generate air emissions from a variety of small sources such as consumer products, paints and coatings, landscape utility equipment, natural gas combustion, cooking or recreational fires, pesticides, etc. These emissions are designated as "area sources" in contrast to the "mobile sources" from project-related travel. Conversion of agricultural uses to residential will eliminate the air pollution emissions associated with crop production that has historically occurred on and around this parcel.

GAMAQI segregates projects into three classes of potential impact with three corresponding analysis levels, as follows:

Small Project Analysis Level (SPAL)

Cursory Analysis Level (CAL)

Full Analysis Level (FAL)

Table 5-2 of the GAMAQI identifies threshold sizes for residential uses. When the GAMAQI was initially developed, a residential project that generates no more than 1,453 daily trips is considered to require only a SPAL. With continuing emissions improvements, the daily trip threshold has increased due to an improved vehicle fleet. However, at 28,300 daily trips, no amount of emissions improvements can reduce the project impact below the significance threshold. The project analysis is therefore at a CAL level of detail.

Components of a CAL include:

- Regional emissions calculations using URBEMIS computer model.
- CO Screening Analysis based on the CALINE4 model.
- Determine if odors, air toxics or hazards such as asbestos may be associated with the project.
- Conduct a FAL for a potentially significant project.

REGIONAL EMISSIONS (URBEMIS2002)

URBEMIS2002 calculations were performed for interim year 2008 and project build-out in the year 2015. The year 2015 was used as a conservative estimate even though build-out may not occur until beyond 2015. Cars are becoming progressively cleaner, such that a build-out assumption of 2015 will predict higher levels of emissions than a later year. Total annual emissions were assumed to be 365 times the annual peak. The URBEMIS2002 model typically includes a winter calculation that includes a large number of wood stoves and operating fireplaces that are not representative of suburban households. The smog problem in the Valley is furthermore a warm season issue. Multiplication of the summer emissions rate by 365 rather than a separate winter calculation was presumed to be more representative of project-related impacts to regional ozone issues.

Tables 5 and 6 summarize the results of these calculations. ROG and NOx will exceed the SJVAPCD significance threshold. Project-related air quality impacts are thus considered individually significant on a basin-wide/regional scale.

Mitigation of significant operational activity air quality impacts is required by SJVAPCD rules and regulations. The district has adopted an Indirect Source Review (ISR) rule that requires an applicant to reduce one-third of its baseline (non-mitigated) NOx emissions for a period of ten years after completion of each project phase. Similarly, one-half of project-related PM-10 emissions must be reduced.

Reduction can occur through on-site measures such as vehicle trip reduction or enhanced energy efficiency. Off-site measures, such as purchase of cleaner equipment or retirement of old "clunkers" is also an option. Finally, payment of an off-site mitigation fee is required for any excess emissions. For example, without any on-site mitigation, the off-site mitigation fee for Phase I is calculated as follows:

NOx = 15.83 tons/year x 2.5 x $9,350/ton = $370,026.25

PM-10 = 14.44 tons/year x 5 x $9,011/ton = $650,594.20

Total = $1,020,620.45

Any quantifiable off-set must be documented in an Air Impact Assessment (AIA) application. The AIA application is due at the APCD on or before the date of any final public agency discretionary action. Phase I will have a large employee base with hundreds of employees living in/near Lodi working the same shift. The potential for car-pooling, van-pooling and other multi-occupant vehicle use is substantial for the proposed project. For example, trip reduction of ten percent would translate into a $100,000 fee reduction. A number of measures could be subsidized by this cost saving. The combination of on-site mitigation measures and in-lieu fees applied to basin-wide mitigation programs will reduce regional air quality impacts to a level that is considered less-than-significant.

Table 5

Interim Year Annual Project Air Pollution Emissions

Pollutant	Phase I Emissions Tons per Year Year 2008	SJVAPCD Threshold
ROG		
Area Sources	6.08	
Mobile Sources	13.34	
TOTAL	19.42	10
NOx		
Area Sources	2.16	
Mobile Sources	13.67	
TOTAL	15.83	10
CO		
Area Sources	2.16	
Mobile Sources	135.33	
TOTAL	137.34	[1]
PM-10		
Area Sources	0.01	
Mobile Sources	14.43	
TOTAL	14.44	[2]

1. Not significant if the one-hour CO standard of 20 ppm or the 8-hour standard of 9 ppm are not exceeded
2. Not significant if all aspects of SJVAPCD Regulation VIII are complied with

Source: URBEMIS2002 Computer Model; Daily rate X 365 days/year ÷ 2,000 lb/ton

Table 6

Year 2015 Project Air Pollution Emissions

Pollutant	Emissions Tons per Year Year 2015	SJVAPCD Threshold
ROG		
Area Sources	19.64	
Mobile Sources	27.38	
TOTAL	47.02	10
NOx		
Area Sources	4.43	
Mobile Sources	29.68	
TOTAL	34.11	10
CO		
Area Sources	5.87	
Mobile Sources	297.58	
TOTAL	303.45	[1]
PM-10		
Area Sources	0.02	
Mobile Sources	61.42	
TOTAL	61.44	[2]

[1] Not significant if the one-hour CO standard of 20 ppm or the 8-hour standard of 9 ppm are not exceeded

[2] Not significant if all aspects of SJVAPCD Regulation VIII are complied with

Source: URBEMIS2002 Computer Model; Daily rate X 365 days/year ÷ 2,000 lb/ton

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

Regionally, at build-out in year 2030, project implementation will generate 28,300 daily trips to the project. However, it will also provide living space for an estimated 2,400 people, schools to accommodate 1,000 students, as well as office and retail facilities. Because people can live, shop and work in the same neighborhood, as well as have children walk to neighborhood schools and recreational parks, in a regional sense the project is air quality positive.

In the City of Lodi's Housing Element for 2003-2009, adopted in 2004 as part of the General Plan, approximately 5,004 dwelling units were identified for annexation residential development. With its planned 1,084 dwelling units, this project will account for approximately 20 percent of that already planned development. Although the mobile source emissions will have a regionally significant and non-mitigable air quality impact, the air quality benefits of a positive jobs-housing balance contribution should be noted in any statement of overriding considerations.

The basin air quality management plan (AQMD) is based upon the growth forecasts for the region. The AQMD anticipates emissions increases from planned growth, and emissions reductions from existing and future control programs. To the extent that the proposed project is consistent with City of Lodi housing projections, and to the extent that local job generation is air quality positive in reducing out-of-area travel, the project is considered consistent with the AQMP.

CO SCREENING ANALYSIS

Possible air quality "hot spots" require substantial concentrations of traffic, highly congested traffic flow, and already substantially elevated background CO concentrations. None of these conditions are met near the project site. A number of intersections are forecast to experience substantial congestion without mitigation (signals and widening). A screening analysis for future CO exposures was therefore performed to verify the absence of any future "hot spots" even if traffic mitigation is slow to be implemented. Cars are becoming sufficiently clean, however, such that CO "hot spots" no longer occur.

To verify this conclusion, a CO screening analysis was performed at the intersections surrounding the project. One-hour CO concentrations were calculated on the sidewalks adjacent to these intersections. Peak one-hour levels (ppm above background) were as follows:

One-Hour CO Concentrations (ppm)

Intersections	Existing	Interim	Interim & Project	2030	2030 & Project
AM Peak Hours					
Harney Lane/					
Hutchins St.	0.9	0.8	0.8	0.2	0.3
Stockton St.	0.6	0.6	0.6	0.2	0.2
Cherokee Ln.	0.6	0.7	0.7	0.2	0.2
PM Peak Hour					
Harney Lane/					
Hutchins St.	0.9	0.8	0.8	0.2	0.3
Stockton St.	0.6	0.6	0.7	0.2	0.2
Cherokee Ln.	0.5	0.8	0.6	0.2	0.2

Existing peak one-hour local CO background levels are 0.9 ppm. Combined worst-case background (3.7 ppm in 2004) plus local (0.9 ppm) equate to CO levels of 4.6 ppm which are far below the one-hour standard of 20 ppm. Worst-case one hour levels are even lower than the allowable 8-hour exposure of 9 ppm. Micro-scale impacts are less than significant.

ODORS, DUST AND HAZARDOUS AIR POLLUTANTS

There are no releases of odors or toxic air contaminants associated with the Reynolds Ranch development that would be detectable beyond the site perimeter. However, on-site residential uses may be exposed to chemicals used in on-going agricultural activities near the development. Application of chemicals may create hazardous and nuisance odors and farm operations may also create dust.

Agricultural uses are located immediately west and south of the project site. The railroad tracks separate the on-site residential uses from the agricultural uses to the west. Additionally a mini-storage facility located between the tracks and planned medium-density residential uses will help shield the western perimeter. An agricultural buffer is planned along the southern periphery of the project site. It is presumed that a 6 foot fence would separate the perimeter of the residential development from the adjacent mini-storage and agricultural uses to the south.

These buffers and walls around the perimeter of the project site would minimize potential conflicts in land use. Schools and parks are considered pollution-sensitive, especially for toxic or hazardous compounds sometimes used in agriculture. These uses will be located within the center of the project site in order to maximize the set-back between active agricultural fields and

maximally sensitive land uses. Application and toxicity of agricultural chemicals is also strictly regulated when they are used near homes or schools. Though these measures are believed to adequately shield the project from any adverse impacts, it is recommended that anyone buying or leasing a residential property in Reynolds Ranch be provided a disclosure statement. The notifications should disclose that the residence is located in an agricultural area and is subject to ground and aerial applications of chemicals. The disclosure should note that agricultural operation may, on occasion, create odor and dust nuisances from tilling, harvesting or processing of crops.

MITIGATION

Dust control is required by SJVAPCD Regulation VIII to reduce PM-10 emissions during construction to a less-than-significant level. Table 7 lists the measures that are required in Regulation VIII. Because the SJVAB is a non-attainment area for PM-10, and this is a large development, inclusion of additional dust control measures beyond minimum requirements is required. Table 7 thus includes the menu of recommended additional control measures.

Operational activity emissions are predicted to exceed NOx and ROG significance thresholds for both the interim time period and at project build-out. The degree of "excess" emissions is so large that no feasible mitigation can be adopted to reduce ozone precursor emissions to less than significant.

Micro-scale impacts are less than significant. No air quality "hot spots" will be generated by this project adjacent to the project site.

Adjacent agricultural application of chemicals may create hazardous and nuisance odors and farm operations may also create dust. The planned agricultural buffer along the southern periphery of the property as well as 6 foot wall surrounding the project should provide adequate dust protection for the southern perimeter. The distance separation of the train tracks and mini-storage units should provide adequate protection for the residences on the western perimeter. The mini-storage buildings will also act as dust buffer. A 6 foot wall surrounding residences on the western periphery of the project is recommended for both dust and noise.

Toxicity of chemicals applied near homes, schools and parks as well as application methods will be strictly regulated to achieve a less-than-significant exposure to residents, students and other sensitive on-site users. Anyone buying or leasing a residential property in Reynolds Ranch should be notified in writing that their property is in an agricultural area. The notifications should disclose that the residence is located in an agricultural area and is subject to ground and aerial applications of chemicals. The disclosure should note that agricultural operation may, on occasion, create odor and dust nuisances from tilling, harvesting or processing of crops.

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Table 7
Dust Control Measures for Construction
Emissions of PM-10

Regulation VIII Control Measures

The following controls are required to be implemented at all construction stites to maintain VDE (visible dust emissions) at less than 20 percent opacity as required by Regulation VIII:

- A fugitive dust control plan shall be developed for APCD approval prior to grading.
- A responsible individual trained in dust control shall be identified, and his/her name and contact information shall be conspicuously posted around the perimeter of any grading/construction areas.
- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scrapping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off-site, all materials shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (*The use of dry rotary brushes is expressly prohibited except where accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blowers is expressly forbidden.)*
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions ut8ilizing sufficient water or chemical stabilizer/suppressant.

Additional Control Measures

The following additional control measures are strongly encouraged because the basin is a PM-1-non-attainment area:

- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.

- Install wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds exceed 20 mph.
- Limit area subject to excavation, grading and other construction activity at any time.

APPENDIX

URBEMIS2002 Computer Model Output

2008

URBEMIS 2002 For Windows 8.7.0

File Name: <Not Saved>
Project Name: Reynolds Ranch - Phase I
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	33.29	11.81	11.00	0.00	0.03

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	73.12	74.89	741.54	0.46	79.08

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	106.41	86.70	752.54	0.46	79.10

URBEMIS 2002 For Windows 8.7.0

File Name: <Not Saved>
Project Name: Reynolds Ranch - Phase I
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.86	11.80	9.44	0	0.02
Hearth - No summer emissions					
Landscaping	0.25	0.01	1.56	0.00	0.01
Consumer Prdcts	7.34	-	-	-	-
Architectural Coatings	24.84	-	-	-	-
TOTALS(lbs/day,unmitigated)	33.29	11.81	11.00	0.00	0.03

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medium density residentia	9.51	11.07	110.37	0.07	11.68
Office park	63.61	63.83	631.17	0.39	67.39
TOTAL EMISSIONS (lbs/day)	73.12	74.89	741.54	0.46	79.08

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medium density residentia	9.38	6.00 trips/dwelling unit	150.00	900.00
Office park		3.31 trips/Emplyee	1,600.00	5,296.00
		Sum of Total Trips		6,196.00
		Total Vehicle Miles Traveled		52,085.80

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.00	1.60	98.00	0.40
Light Truck < 3,750 lbs	15.00	2.70	95.30	2.00
Light Truck 3,751- 5,750	16.20	1.20	97.50	1.30
Med Truck 5,751- 8,500	7.20	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.70	76.50	23.50	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Office park				48.0	24.0	28.0

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/9.38 to 6.0/9.38

Changes made to the default values for Area

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2008.

2015

URBEMIS 2002 For Windows 8.7.0

File Name: <Not Saved>
Project Name: Reynolds Pase 2
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	107.59	24.26	32.18	0.11	0.10

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	150.05	162.65	1,630.55	1.93	336.53

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	257.64	186.91	1,662.72	2.04	336.63

URBEMIS 2002 For Windows 8.7.0

File Name: <Not Saved>
Project Name: Reynolds Pase 2
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	1.80	24.17	16.39	0	0.04
Hearth - No summer emissions					
Landscaping	2.45	0.09	15.78	0.11	0.06
Consumer Prdcts	53.03	-	-	-	-
Architectural Coatings	50.31	-	-	-	-
TOTALS(lbs/day,unmitigated)	107.59	24.26	32.18	0.11	0.10

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	5.38	6.23	64.64	0.07	12.94
Medium density residentia	16.71	17.45	180.92	0.21	36.23
High density residential	7.11	7.48	77.55	0.09	15.53
MDR residential-Phase 1	5.33	5.61	58.17	0.07	11.65
HDR senior residential	3.53	3.11	32.28	0.04	6.46
Elementary school	14.23	7.97	79.51	0.09	16.48
Mini storage	0.80	1.08	10.60	0.01	2.24
Commercial	59.95	81.35	794.60	0.96	167.79
Office park	37.01	32.37	332.28	0.39	67.19
TOTAL EMISSIONS (lbs/day)	150.05	162.65	1,630.55	1.93	336.53

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	34.33	9.71 trips/dwelling unit	103.00	1,000.13
Medium density residentia	30.06	5.82 trips/dwelling unit	481.00	2,799.42
High density residential	5.26	6.00 trips/dwelling unit	200.00	1,200.00
MDR residential-Phase 1	2.42	6.00 trips/dwelling unit	150.00	900.00
HDR senior residential	30.00	3.33 trips/dwelling unit	150.00	499.50
Elementary school		1.40 trips/students	1,000.00	1,400.00
Mini storage		37.74 trips/acre	5.30	200.02
Commercial		42.86 trips/1000 sq. ft.	350.00	15,001.00
Office park		3.31 trips/employee	1,600.00	5,296.00
		Sum of Total Trips		28,296.07
		Total Vehicle Miles Traveled		222,374.19

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
Mini storage	2.0	1.0	97.0
Commercial	2.0	1.0	97.0
Office park	48.0	24.0	28.0

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Single family housing
have changed from the defaults 9.57/34.33 to 9.71/34.33
The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/30.06 to 5.82/30.06
The Trip Rate and/or Acreage values for Apartments mid rise
have changed from the defaults 5.76/5.26 to 6.0/5.26
The Trip Rate and/or Acreage values for Apartments high rise
have changed from the defaults 5.29/2.42 to 6.0/2.42
The Trip Rate and/or Acreage values for Retirement community
have changed from the defaults 3.71/30. to 3.33/30.

Changes made to the default values for Area

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

THE HEALTH EFFECTS OF AIR POLLUTION ON CHILDREN

Fall 2000

Michael T. Kleinman, Ph.D.
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University of California, Irvine.

Table of Contents

Introduction **1**
Why are Children More Susceptible to Air Pollution Than Adults? **1**
The Lung's Important Role in Health 2
USC Children's Health Study 2
Which Air Pollutants Have the Greatest Impact on the Health of Children and Adults? **2**
Ozone *2*
Ozone formation 3
Ozone Air Quality Standards 3
How Ozone Damages Lungs 4
Is Ozone-Related Lung Damage Permanent? 5
Research and Air Quality Standards 5
How to Reduce Ozone Exposure 6
Carbon Monoxide *6*
Who is Most Sensitive to the Health Effects of Carbon Monoxide? 6
Air Quality Standards for Carbon Monoxide 7
Sources of Carbon Monoxide 7
Health Effects of Carbon Monoxide 7
Prenatal Effects of Carbon Monoxide 8
Airborne Particles *8*
The Challenge of Measuring Particle Pollution 8
Sources of Particle Pollution 9
Historic Air Pollution Disasters 9
Health Effects of Particulate Pollution 10
Nitrogen Oxides *11*
Health Effects of Nitrogen Dioxide 11
Improvements in Nitrogen Dioxide Measurements 12
Lead *13*
Sources of Lead Pollution 13
Sulfur Oxides *13*
Diesel Emissions *14*
What's in Diesel? 14
What Can Be Done to Reduce the Effects of Air Pollution on Children's Health? 15

Introduction

Air pollution has many effects on the health of both adults and children. The purpose of this article will be to examine what is known about how air pollution affects health, especially children's.

Over the past several years the incidence of a number of diseases has increased greatly. Asthma is perhaps the most important disease with an increasing incidence, but other diseases, such as allergic reactions, bronchitis and respiratory infections also have been increasing. The cause of these increases may be due at least in part to the effects of air pollution. This review will address the following questions:

1. Why are children more susceptible to the effects of air pollution than adults?
2. Which air pollutants have the greatest impact on the health of children and adults?
3. What can be done to reduce the effects of air pollution on children's health?

Why are Children More Susceptible to Air Pollution Than Adults?

In many health effects research studies, children are considered as if they were small adults. This is not really true. There are many differences between children and adults in the ways that they respond to air pollution. For example, children take in more air per unit body weight at a given level of exertion than do adults. When a child is exercising at maximum levels, such as during a soccer game or other sports event, they may take in 20 percent to 50 percent more air -- and more air pollution -- than would an adult in comparable activity.

Another important difference is that children do not necessarily respond to air pollution in the same way as adults. Adults exposed to low levels of the pollutant ozone will experience symptoms such as coughing, soreness in their chests, sore throats, and sometimes headaches. Children, on the other hand, may not feel the same symptoms, or at least they do not acknowledge them when asked by researchers. It is currently not known if children actually do not feel the symptoms or if they ignore them while preoccupied with play activities.

This probably does not mean that children are less sensitive to air pollution than adults. There are several good studies that show children to have losses in lung functions even when they don't cough or feel discomfort. This is important because symptoms are often warning signals and can be used to trigger protective behavior. Children may not perceive these warning signals and might not reduce their activities on smoggy days.

Children also spend more time outside than adults. The average adult, except for those who work mostly outdoors, spends most of their time indoors -- at home, work, or even at the gym. Children spend more time outside, and are often outdoors during periods when air pollution is at its highest.

The typical adult spends 85 percent to 95 percent of their time indoors, while children may spend less than 80 percent of their time indoors. Children may also exert themselves harder than adults when playing outside.

Perhaps the most important difference between adults and children is that children are growing and developing. Along with their increased body size, children's lungs are growing and changing, too.

The Lung's Important Role in Health
The lung is an extremely complex organ. While most organs in your body are made up of a few different types of cells, the lung contains more than 40 different kinds of cells. Each of these cells is important to health and maintaining the body's fitness.

Air pollution can change the cells in the lung by damaging those that are most susceptible. If the cells that are damaged are important in the development of new functional parts of the lung, then the lung may not achieve its full growth and function as a child matures to adulthood. Although very little research has been conducted to address this extremely important issue, this review will discuss the information that is available.

USC Children's Health Study
Recent results from the Children's Health Study, conducted by investigators at the University of Southern California, suggest that children with asthma are at much greater risk of increased asthma symptoms when they live in communities with higher levels of ozone and particles and participate in three or more competitive sports. Having said all this, the purpose of this review is not to discourage children or adults from normal daily activities and outdoor exercise. Exercise has very important, beneficial outcomes. Appropriate exercise and prudent exposures of children and adults should be encouraged even in an environment that may always contain some amount of air pollution.

Which Air Pollutants Have the Greatest Impact on the Health of Children and Adults?

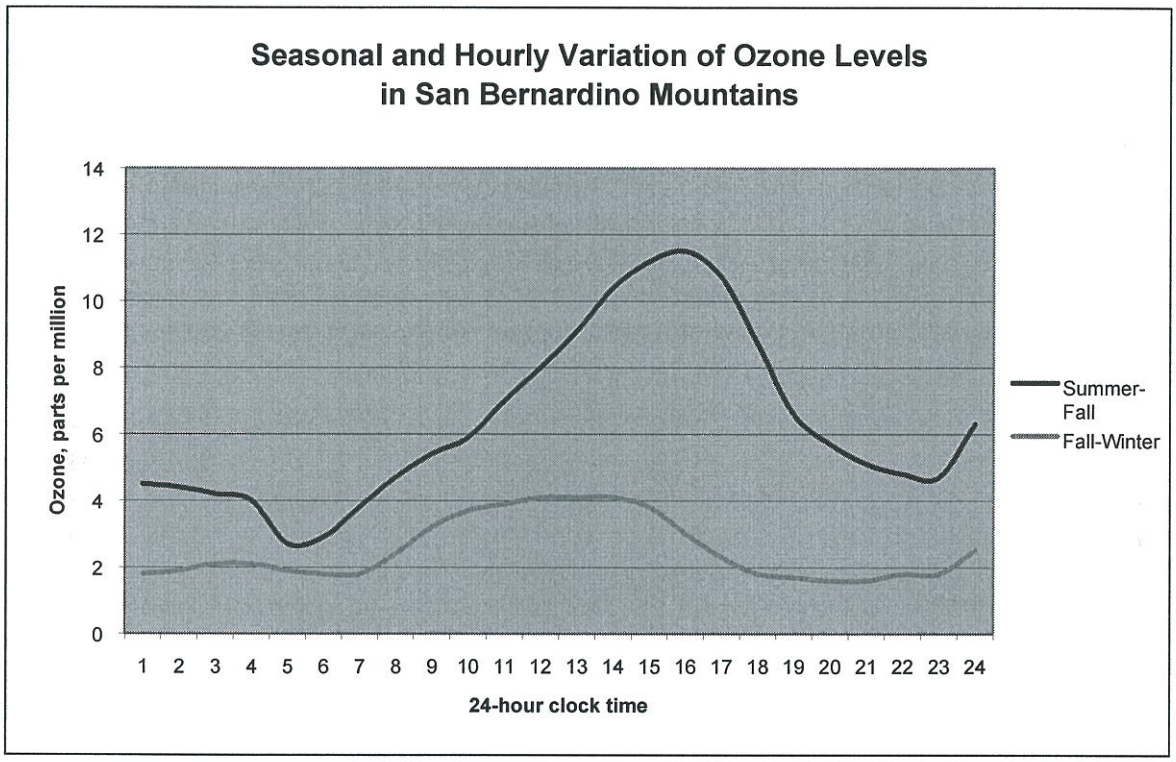
Ozone

Ozone is one of the most important air pollutants affecting human health in regions like Southern California.

Ozone (O_3) is a molecule built of three atoms of oxygen linked together in a very energetic combination. When ozone comes into contact with a surface it rapidly releases this extra force in the form of chemical energy. When this happens in biological systems, such as the respiratory tract, this energy can cause damage to sensitive tissues in the upper and lower airways.

Ozone formation

Because ozone forms as a product of solar energy and photochemical reactions of pollutants, it is not surprising that the highest concentrations of ozone in the atmosphere occur when sunlight is most intense. Thus, ozone generally reaches peak levels during the middle of the day in the summer months. These types of air pollution patterns are called diurnal and seasonal variations. The following graph shows that ozone levels in the San Bernardino Mountains are highest in the summer and fall, and peak in the late afternoon.



Ozone Air Quality Standards

Federal and state agencies have set air quality standards for ozone. An ozone level greater than 0.08 parts per million (ppm) averaged over eight hours is considered unhealthful. This level has been set because both laboratory and community studies have demonstrated measurable effects of ozone at or above that threshold.

The effects of ozone on people include:

- irritation of the nose and throat;
- increased mucus production and tendency to cough;
- eye irritation and headaches for some; and
- during severe episodes, chest pain and difficulty taking a deep breath without coughing.

How Ozone Damages Lungs

What happens when you breathe air that is contaminated with ozone? Like oxygen, ozone is soluble in the fluids that line the respiratory tract. Therefore some ozone can penetrate into the gas-exchange, or alveolar, region of the deep lung.

The following photos show how ozone affects the sensitive tissue in the deep lung. The pictures are from the lungs of rats exposed to ozone in a laboratory under carefully controlled conditions. The human lung is similar --although not identical -- to the rat's lung in terms of the types of cells and the overall structure of the alveolar region.

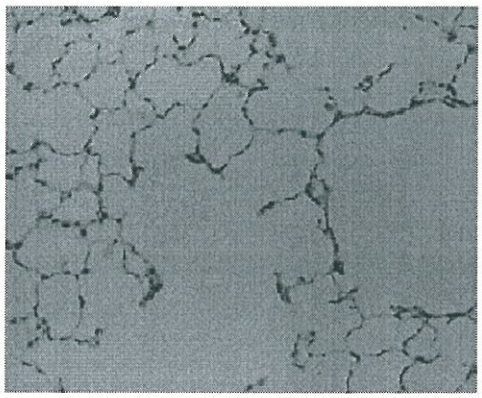


Figure 1

Figure 1 shows a magnified view of the structure of the normal gas-exchange region of the lung. It is called the gas-exchange region because oxygen inhaled from the air is transferred to the hemoglobin in blood in small blood vessels located inside the thin walls separating the alveolar air spaces.

At the same time, carbon dioxide, produced by normal metabolism and dissolved in the blood, is excreted into the air and expired when you breathe out.

The walls of a normal alveolus are very thin. There are only two layers of cells and a thin interstitial matrix separating the air in the alveolar space, or lumen, from the fluid inside the blood vessels. The cells that line the healthy alveoli are mostly very broad and very thin, and are called Type I lung cells or Type I pneumocytes. This provides a very large surface area across which gases can be efficiently transported.

Figure 2 shows the effects of breathing 0.2 ppm ozone for 4 hours. In Southern California air pollution levels can approach 0.2 ppm -- a Stage 1 ozone alert -- during the smoggiest summer days. The photo shows evidence of additional cells, called macrophages, and some material that may be fragments of ozone-injured alveolar wall cells inside the alveolar space.

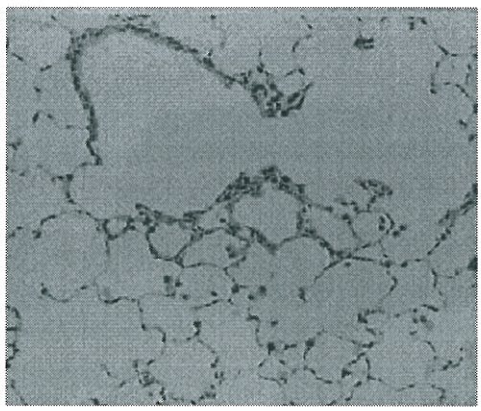


Figure 2

Macrophages are immune system cells that respond to the injury of the delicate cells that line the alveolar lumen. These macrophages play important roles in protecting the lungs from inhaled bacteria,

fungi and viruses, and are also important in helping to repair lung tissue injury caused by inhaled pollutants.

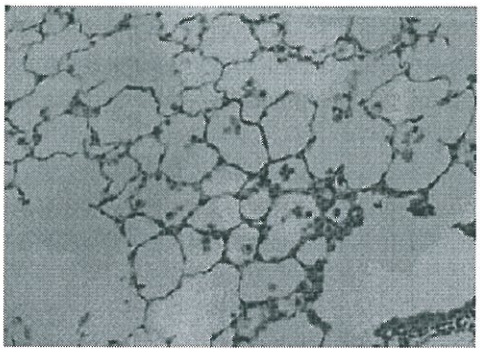


Figure 3

Figure 3 shows more extensive damage following exposure a higher concentration of ozone, 0.6 ppm. The alveolar walls are thicker and there is evidence of cells infiltrating within the walls. There are more macrophages in the alveolar spaces and the thin, Type I cells have been damaged and replaced with thicker Type II, almost cube-shaped cells that are more resistant to the toxic effects of ozone. All of these changes occurred within 48 hours after exposure. If exposure continues for more than three days, the evidence of cell injury seems to be reduced, except for the continuing presence of the Type II cells.

Is Ozone-Related Lung Damage Permanent?
People actually report that the symptoms they feel when first exposed to ozone seem to go away, even though their exposure continues.

Following ozone injury, if the lung is not exposed to ozone for approximately five to seven days, it can for the most part repair itself provided the injury is not too extensive. However, long-term studies with laboratory animals have shown that there may be residual and in some cases permanent damage. This damage might be thought of as accelerated aging of the lung. Thus, frequent exposures to ozone can cause transient damage. The lung's defenses can repair most but probably not all of that damage within a relatively short time in most healthy individuals.

Research and Air Quality Standards
Health scientists probably know more about the effects of ozone on human health than about any other pollutants. This is because ozone is pervasive in the environment. Also there are excellent methods of measuring ozone so the pollutant can be studied using epidemiological methods. The findings of these epidemiological studies can be verified using well-controlled laboratory studies with human volunteers and laboratory animals. Thousands of scientific papers on the health effects of ozone have been published and these have been critically reviewed in documents that provide the scientific basis for National and State Ambient Air Quality Standards. (Ambient refers to outdoor air.)

These so-called Criteria Documents are important because they are extensively reviewed by scientists, public agencies, industry representatives, environmental groups such as the American Lung Association and the Natural Resources Defense Council,

and the public. National and state ambient air quality standards set the goals for healthy air quality in Southern California and across the country.

Based upon the most recent studies, it is now apparent that ozone plays an important role in causing acute health effects, such as heightening asthma symptoms and developing bronchitis symptoms.

The role of ozone in producing long-term or chronic effects is less clear, at least from the available epidemiological studies. However, laboratory animal studies suggest that there can be long-term consequences.

How to Reduce Ozone Exposure
The U.S. Environmental Protection Agency (EPA) has recommended that ozone should not exceed 0.08 ppm averaged over an 8-hr period. When ozone exceeds this level, active children and adults, those with respiratory disease such as asthma, and other people with unusual susceptibility to ozone should limit prolonged outdoor exposure.

Incidentally, personal tobacco smoking during periods of high ozone exposure doubled the risk of asthmatic individuals needing to go to the emergency room for treatment of asthma symptoms.

Carbon Monoxide

Carbon monoxide (CO), a colorless, odorless gas, is a byproduct of combustion.

When inhaled, carbon monoxide reacts very rapidly with hemoglobin in the blood, preventing uptake and transport of oxygen. Because carbon monoxide readily and firmly attaches to hemoglobin, it stays in the blood for a relatively long time. Thus, during an exposure carbon monoxide concentrations in blood can rise in a matter of minutes, then stay high for hours.

Who is Most Sensitive to the Health Effects of Carbon Monoxide?
Most of the health effects directly associated with carbon monoxide are most likely due to decreases in oxygen delivery to vital organs such as the heart and the brain.

People with heart disease may be especially sensitive to the effects of carbon monoxide. In addition, people with lung diseases that limit efficient use of inhaled oxygen, such as asthma and emphysema, may also be susceptible. Even in people without heart or lung diseases, reduced delivery of oxygen to skeletal muscles, especially during exercise, can reduce the ability to perform strenuous work.

At high levels of carbon monoxide exposure, impaired delivery of oxygen to the central nervous system can reduce the ability to respond quickly to external stimuli. After exposures that convert 5 percent to 10 percent of the circulating hemoglobin to carboxyhemoglobin (COHb), people's ability to recognize and react to flashes of light in a test system are reduced. At 10 percent to 30 percent carboxyhemoglobin, nausea,

headaches, unconsciousness, and sometimes death can result. The severity of symptoms increases with the concentration of carboxyhemoglobin.

Air Quality Standards for Carbon Monoxide
Both the EPA and the State of California have set air quality standards for carbon monoxide based on the results of epidemiological and laboratory findings. Ambient levels of carbon monoxide should not exceed 9 ppm, when averaged over an 8-hour interval, and should not exceed 20 ppm in any one-hour period. (The USEPA has a slightly higher 1-hour standard of 35 ppm).

Sources of Carbon Monoxide
The major sources of carbon monoxide pollution are automotive exhaust and emissions from large industrial combustion sources such as electrical power plants. Because these sources produce many contaminants in addition to carbon monoxide -- such as fine particles and nitrogen oxides -- it is often difficult to isolate the health effects of ambient carbon monoxide from those of other pollutants.

In addition to carbon monoxide generated outside, there are also important indoor sources of the pollutant. The most important of these are combustion sources such as gas ovens, gas burners, water heaters, and heating systems. However, in most cases emissions from well-maintained and vented gas appliances are small.

Tobacco smoking is a more significant source of carbon monoxide. Tobacco smoke can contain very high concentrations of carbon monoxide (1,000 ppm to 50,000 ppm). Carbon monoxide levels in the homes of children whose relatives smoke tobacco products can be higher than the carbon monoxide levels outdoors.

Health Effects of Carbon Monoxide
There are hundreds of cases per year of deaths or severe illness due to carbon monoxide poisoning from faulty appliances, indoor emissions of automobile exhaust and industrial exposures. These cases show that carbon monoxide poisoning causes symptoms very similar to those of the flu. In fact, the true number of cases is not really known because many people may have been poisoned slightly and thought that they were just fighting off a cold or the flu. Thus it is very important to make sure that home appliances are well-maintained and that all combustion sources are properly vented to the outdoors.

Epidemiological studies have shown significant association between several health effects and carbon monoxide, although as mentioned earlier it is difficult to completely isolate carbon monoxide's effects from those of other air pollutants.

For example, asthmatic children in Taiwan who were exposed to high levels of traffic-related air pollution -- using carbon monoxide and nitrogen dioxide as marker compounds-- reported more respiratory symptoms than children with lower exposures.

A study of physician office visits in London showed associations between air pollution and doctor visits for asthma and other lower respiratory disease. For children, levels of nitrogen dioxide, carbon monoxide, and sulfur dioxide were associated with increased numbers of medical consultations. However, in adults, the only consistent association was with levels of airborne particles. This suggests that children and adults might respond differently to pollution exposures.

Prenatal Effects of Carbon Monoxide

Carbon monoxide may also have prenatal effects. Pregnant women who were exposed to high levels of ambient carbon monoxide (5 ppm to 6 ppm) were at increased risk of having low birth-weight babies. It has long been known that women who smoke cigarettes during pregnancy have low birth-weight babies, but this is the first study of similar findings in women exposed to environmental carbon monoxide.

Babies exposed to carbon monoxide during the maturation of their organs may suffer permanent changes to those organs. Studies using newborn rats showed that carbon monoxide exposure could cause changes in the heart muscle tissue. This is turn could increase the severity of effects of artery constrictions when they became adults. Other animal studies have shown that long-term carbon monoxide exposure can contribute to a disease called ventricular hypertrophy, in which the cells of the heart's ventricle chambers are enlarged and possibly weakened.

Airborne Particles

Particles, including nitrates, sulfates, carbon[1] and acid aerosols[2] are a complex group of pollutants.

Unlike ozone, which has a specific chemical composition, airborne particles vary in size and composition depending on time and location. Although the components of particles may have common sources, the types and amounts of particles collected at any one time and location may be unique.

To add to the problem, gaseous pollutants including ozone, sulfur dioxide, nitrogen dioxide and carbon monoxide often are present in the atmosphere at the same time as are particles. It is not always possible to clearly differentiate between the health effects of the gases, the particles, and possibly the combination of particles and gases. This complexity presents a tremendous challenge to the scientific community and to public in trying to understand how inhaled particles affect human health.

The Challenge of Measuring Particle Pollution

Precisely measuring particulate pollution is more difficult and labor intensive than measuring gaseous pollutants such as ozone. For this reason, particle concentrations are not measured on a daily basis in most communities. Frequently, they are measured once every six days.

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[1] Both elemental and organic. Elemental carbon is pure carbon from combustion sources, including diesel particulate. Organic carbon is a semi-volatile hydrocarbon from combustion and some evaporative sources.
[2] Aerosol is the scientific term used to describe particles suspended in a fluid, such as air.

Particle samples are collected on filters that are then weighed. Particle concentrations are reported in terms of micrograms of particles per cubic meter ($\mu g/m^3$) of collected air.

Originally, the particle samples were relatively indiscriminate with respect to particle size and often contained very large particles. These large particles contributed a great deal to the weighed particle mass, but might not have been very important with respect to lung health. This is because most of the particles were too large to penetrate through the nasal and head airways to reach the lung. A more health-related sample was needed.

After a great deal of scientific consideration it was decided that particulate matter with aerodynamic diameters[3] less than or equal to 10 microns (μm) should be collected. Ambient air quality standards were developed for this material, which is called PM_{10}.

Sources of Particle Pollution

Researchers noted that the sources of relatively large-size particles (greater than 3 microns in aerodynamic diameter) were quite distinct from the sources of particles less than 1 micron in diameter.

The larger, so-called "coarse" particles are mostly produced by mechanical processes, such as automobile tire wear on the road, industrial cutting, grinding and pulverizing processes and re-suspension of particles from the ground or other surfaces by wind and human activities. The chemical composition of coarse particles may be somewhat similar to the chemical composition of soil in that area, along with industrial compounds from activities such as mining or smelting operations. The coarse fraction of urban aerosols also contains bits of plants, molds, spores and some bacteria. Thus the characteristics of the coarse particles may vary greatly in different communities.

In contrast, the smaller or so-called "fine" particles in the urban aerosol come from combustion sources, such as power plants, automobile, truck, bus and other vehicle exhaust or from the reactions that transform some of the pollutant gases into solid or liquid particles. These distinctions may be important because the current air pollution health effects literature suggests, although not with certainty, that for some key health effects the fine particles are more important than the coarse particles. These findings have led EPA to propose a new nationwide $PM_{2.5}$ standard that would reduce exposure to particles that are 2.5 microns or less in diameter.

Historic Air Pollution Disasters

Epidemiological studies have consistently associated adverse health effects with exposures to particulate air pollution. Early studies implicated particulate and sulfur dioxide pollution in the acute illnesses and premature deaths associated with extremely

[3] Aerodynamic diameter is used to define particles' size. Particle deposition on a surface, or in the lung, depends on the particle's aerodynamic and diffusion characteristics. A particle's aerodynamic characteristics depend on its density, shape, actual size, and velocity while its diffusion characteristics are functions of its size and the density of the air in which it is suspended.

severe pollution episodes in Donora, Penn., London, and New York in the 1940s, 1950s, and 1960s. The particle levels in a four-week pollution disaster in London in 1955 were more than 50 times higher than the California standard.[4] Twenty percent of that aerosol was composed of acid sulfates -- probably sulfuric acid. The number of people hospitalized for lung or heart-related diseases was extraordinarily high, but more importantly there were more than 4,000 premature, or "excess," deaths in the London population.

Fortunately, major efforts by government agencies, the public, and industries have made it very unlikely there will ever be a similar episode in modern urban communities. However, the lessons learned from these disasters are still relevant. Despite the fact that our levels of airborne particles are much lower than those that occurred during the disasters, EPA estimates that there are still more than 6,000 excess deaths in the United States that could be associated with inhaled particles.

Health Effects of Particulate Pollution

Current ambient levels of PM_{10} -- 30 to 150 micrograms per cubic meter -- are associated with increases in the numbers of people that die daily from heart or lung failure. Most of these deaths are among the elderly. However there is a strong body of evidence that some children are also adversely affected by particulate matter.

The American Thoracic Society's Environmental and Occupational Health Assembly reviewed current health effects literature. They report that daily fluctuations in PM_{10} levels have been related to:

- acute respiratory hospital admissions in children;
- school and kindergarten absences;
- decreases in peak lung air flow rates in normal children; and
- increased medication use in children and adults with asthma.

The USC Children's Health Study suggests that children with asthma living in a community with high particle concentrations may have suppressed lung growth. After children moved into cleaner cities their lung growth returned to the normal rate, but they did not recover the lost potential growth, according to John Peters, the study's principle investigator.

It is difficult to positively assign a quantitative risk associated with particulate matter because nearly all studies of its health effects find other pollutants present that may account for some of the effects.

Part of the problem is due to the nature of the data being collected. The levels of particulate matter vary during the course of the day and peak values can be quite high. Few studies have evaluated the effect of these short-term "spikes." However, at least one epidemiological study of children with asthma suggested that changes in symptoms

[4] The California standard for particulate matter (PM_{10}) is 50 micrograms per cubic meter averaged over 24 hours

and lung function correlate more strongly with 1-hour peaks than with 24-hour average concentrations.

Other studies, primarily with laboratory animals, suggest that the chemical composition[5] and surface areas of the particles may be more important than particle mass. Scientists are continuing to study the health effects of particles and are developing better methods for measuring the important constituents. It may be possible in the near future to more accurately assess the effects of inhaled particles on human health.

Nitrogen Oxides

Nitrogen oxides are produced during most combustion processes. Mobile sources and power plants are the major contributors in Southern California.

About 80 percent of the immediately released nitrogen oxide is in the form nitric oxide (NO). Small amounts of nitrous oxide (N_2O) are also produced. Nitrous oxide is a "greenhouse" gas that is suspected of playing an important role in global warming.

Nitric oxide reacts with oxygen in the air to produce nitrogen dioxide (NO_2). Further oxidation during the day causes the nitrogen dioxide to form nitric acid and nitrate particles. In the dark, nitrogen dioxide can react with ozone and form a very reactive free radical. The free radical then can react with organic compounds in the air to form nitrogenated organic compounds, some of which have been shown to be mutagenic and carcinogenic.

Health Effects of Nitrogen Dioxide

Nitrogen dioxide is the most important nitrogen oxide compound with respect to acute adverse health effects. Under most chemical conditions it is an oxidant, as is ozone. However, it takes about 10 times more nitrogen dioxide than ozone to cause significant lung irritation and inflammation.

Nitrogen dioxide differs from ozone in that it suppresses the immune system to a much greater degree. As discussed below, some epidemiological studies have shown that children exposed to high levels of ambient nitrogen dioxide may be at increased risk of respiratory infections. Studies with laboratory animals have indeed shown that if mice are exposed first to nitrogen dioxide and later to bacteria at a level that would not infect a healthy control animal, their normal lung defense mechanisms are suppressed and the bacteria are able to infect the host.

[5] The idea that all particles are equally toxic is not scientifically justified. There are many good examples that can be taken from studies of particles in the workplace. For example, certain types of particles that contain quartz --a natural mineral composed of silicon dioxide but with a specific crystal structure -- are very potent lung irritants. Repeated exposures to this material can lead to a serious, permanent lung disease called lung fibrosis. Other mineral particles that are fibrous, such as specific forms of asbestos, can cause lung cancer. Other particles such as titanium dioxide do not seem to cause occupational diseases.

Average levels of nitrogen dioxide in the United States range from 0.02 to 0.04 ppm. Levels in major urban areas in Southern California may be higher, but the region has not exceeded the federal standard[6] for nitrogen dioxide since 1991.

During the 1970s, one of the first studies relating respiratory illnesses and changes in lung function to ambient nitrogen dioxide concentrations reported that children living in areas with high nitrogen dioxide concentrations had greater incidences of lung-related illness than children living in areas with lower concentrations. Since then, other epidemiological studies have suggested that children with asthma are more likely than children without asthma to have reduced lung function and symptoms of respiratory irritation, such as cough and sore throat, when outdoor average nitrogen dioxide concentrations exceed about 0.02 ppm.

Some studies also have suggested that children younger than five years old may be more severely affected by nitrogen dioxide than older children. Several epidemiological studies have suggested that for children, the most important effect of ambient exposure to nitrogen dioxide might be increased susceptibility to respiratory infections and increased severity of responses to inhaled allergens.

Although many epidemiological studies show significant associations between outdoor nitrogen dioxide concentrations and adverse health outcomes, some studies do not corroborate these effects. In part, this is because it is often difficult to fully account for the influences of indoor sources of nitrogen dioxide.

Improvements in Nitrogen Dioxide Measurements

More recent studies have used special devices, called passive dosimeters, that can be worn by children to collect nitrogen dioxide for later analysis. These measurements give epidemiologists the ability to better assess a child's total nitrogen dioxide exposure over the course of the day. These studies show that there can be a great deal of individual variation in exposures, even for children living in the same communities. Thus, it is not surprising that epidemiological studies that do not estimate a nitrogen dioxide dose may reach different conclusions.

However, laboratory studies involving controlled exposures of human volunteers and laboratory animals have demonstrated plausible effects of nitrogen dioxide on human health. For example, if one exposes rats or other animals to nitrogen dioxide, and then examines their respiratory tract tissues, it is very evident that the pollutant can cause short-term injury similar to that seen after ozone exposure.

Long-term exposures to high concentrations of nitrogen dioxide can produce chronic damage to respiratory tract tissue that resembles the lung disease emphysema.

The pollutant's suppression of immune system functions reduces the ability of the host to fight off bacterial and viral infections. Human volunteers who inhaled weakened

[6] 0.053 ppm as an annual average

influenza virus after being exposed to nitrogen dioxide in laboratories were more susceptible to the infection than a control group that did not inhale nitrogen dioxide.

Other studies show that nitrogen dioxide decreases the body's ability to generate antibodies when challenged by pathogens, and may reduce the ability of the respiratory system to remove foreign particles such as bacteria and viruses from the lung.

Lead

People can be exposed to lead (Pb) through air, food and water. Lead is a toxic heavy metal that causes nerve damage and impairs the body's ability to make hemoglobin, leading to a form of anemia.

Sources of Lead Pollution

Large amounts of lead were emitted to the atmosphere when it was used as a gasoline additive.[7] The emitted lead could be inhaled. In addition, lead fallout from the air caused widespread contamination of soil, plants, food products, and water.

Lead is often measured in children's blood as an index of environmental exposure. Even low levels[8] of lead in the blood of children aged 6 to 7 are linked to measurable changes in intelligence quotient and certain perceptual-motor skills. Higher levels of lead exposure can also result in kidney damage and may be related to high blood pressure in adults.

Sulfur Oxides

Most manmade emissions of the gas sulfur dioxide (SO_2) come primarily from the combustion of fossil fuels such as coal, oil, and diesel fuel.

Most of the sulfur in fossil fuel is converted sulfur dioxide, but a small amount is also converted to sulfuric acid. In the atmosphere, gaseous sulfur dioxide can also be converted to sulfuric acid and sulfate-containing particles. Thus, atmospheric concentrations of sulfur dioxide are often highly associated with acidic particles, sulfuric acid particles and sulfate particle concentrations.

The current National Ambient Air Quality Standards for sulfur dioxide are 18 micrograms per cubic meter averaged annually, and 365 micrograms per cubic meter averaged over 24 hours. Southern California does not exceed the national air quality standard because its industries primarily burn low-sulfur fuels such as natural gas. Much of the sulfur oxide air pollution in Southern California is likely to be associated with diesel emissions.

[7] Lead in the form of tetraethyl lead was added to gasoline in the United States in large amounts from the 1950s until it was banned in the mid-1970s.
[8] 10 to 30 micrograms per 100 milliliters

Sulfur dioxide is a very water-soluble gas and therefore most of the sulfur dioxide that is inhaled is absorbed in the upper respiratory tract and does not reach the lung's airways. However, the small amount of sulfur dioxide that does penetrate into the airways can provoke important health effects, primarily in individuals with asthma.

For those with asthma, even relatively short-term, low-level exposures to sulfur dioxide can result in airway constriction leading to difficulty in breathing and possibly contribute to the severity of an asthmatic attack.

A number of epidemiological studies have shown associations between ambient sulfur dioxide and rates of mortality (death) and morbidity (illness). However, because sulfur dioxide is often strongly correlated with fine particles and especially sulfate-containing particles, it is difficult to separate the effects of sulfur dioxide from those of the particle compounds.

A study in France found an increase of 2.9 visits to the emergency room for every 20 micrograms per cubic meter increase in atmospheric sulfur dioxide. The results pertained to days when the average sulfur dioxide levels were above 68 micrograms per cubic meter but below the U.S. health standard.

In London, asthma and other lower respiratory diseases in children were most significantly associated with exposures to nitrogen dioxide, carbon monoxide, and sulfur dioxide. In adults the only consistent association was with particulate matter.

Hospital admissions for children with asthma may increase by 20 percent following acute exposure to ozone peaks and possibly with sulfur dioxide. Chronic exposure to increased levels of fine particles, sulfur dioxide, and nitrogen dioxide may be associated with up to threefold increase in nonspecific respiratory symptoms. Thus, recent literature suggests that sulfur dioxide affects adults and children differently and that chronic and acute effects may also be different.

Diesel Emissions

Diesel fuel is burned to power buses, trucks, road-building equipment, trains, boats and ships and electricity-generating equipment. When diesel fuel is burned, the exhaust includes both particles and gases. Diesel emissions are important constituents of ambient air pollution.

What's in Diesel?

Diesel particles consist mainly of elemental carbon and other carbon-containing compounds. Hundreds of compounds have been identified as constituents of diesel particles. These include polycyclic aromatic hydrocarbons (PAHs) and other compounds that have been associated with tumor formation and cancer. In 1998, the California Air Resources Board designated diesel particulate a cancer-causing toxic air contaminant.

Diesel particles are microscopic. More than 90 percent of them are less than 1 micron in diameter. Due to their minute size, diesel particles can penetrate deeply into the lung. There is evidence that once in the lung, diesel particles may stay there for a long time.

In addition to particles, diesel exhaust contains several gaseous compounds including carbon monoxide, nitrogen oxides, sulfur dioxide and organic vapors, for example formaldehyde and 1,3-butadiene. Formaldehyde and 1,3-butadiene have been classified as toxic and hazardous air pollutants. Both have been shown to cause tumors in animal studies and there is evidence that exposure to high levels of 1,3-butadiene can cause cancer in humans.

AQMD's recent landmark research project, the Multiple Air Toxics Exposure Study II, found that diesel particulate is responsible for about 70 percent of the total cancer risk from all toxic air pollution in the greater Los Angeles metropolitan area.

Diesel emissions may also be a problem for asthmatics. Some studies suggest that children with asthma who live near roadways with high amounts of diesel truck traffic have more asthma attacks and use more asthma medication.

Some human volunteers, exposed to diesel exhaust in carefully controlled laboratory studies, reported symptoms such as eye and throat irritation, coughing, phlegm production, difficulty breathing, headache, lightheadedness, nausea and perception of unpleasant odors. Another laboratory study, in which volunteers were exposed to relatively high levels of diesel particles for about an hour, showed that such exposures could cause lung inflammation.

Thus current epidemiological and laboratory evidence suggests that at typical urban concentrations, diesel exhaust may contribute significantly to the health effects of air pollution.

What Can Be Done to Reduce the Effects of Air Pollution on Children's Health?

After reviewing the literature on how children's exposures differ from those of adults, it is evident that:

- children are outdoors more hours per day than most adults;
- they exert themselves to a greater degree while they are outside than most adults; and
- they participate in more organized activities than adults.

There are definite health benefits to having children participate in outdoor activities. However, scientific evidence also suggests that air pollution exposures can injure children's lungs and other organs.

Air quality information in the form of health reports and air quality advisories are now a regular part of life in California. One logical step is to reduce strenuous activities during pollution episodes and try to take advantage of those hours when airborne pollutant levels are lower.

At the public level there is a long-standing commitment to improve air quality. When you look at the air pollution levels in California today you can see that a great deal of progress has been made. There has been a cost for this progress. For instance, some products are more expensive. In return, the lower levels of pollutant exposure compared to 20 years ago should decrease the adverse effect of air pollution on the long-term health of our developing children.

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Research Article

Ambient Air Pollution and Atherosclerosis in Los Angeles

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- Introduction
- Materials and Methods
- Results
- Discussion

Abstract
Associations have been found between long-term exposure to ambient air pollution and cardiovascular morbidity and mortality. The contribution of air pollution to atherosclerosis that underlies many cardiovascular diseases has not been investigated. Animal data suggest that ambient particulate matter (PM) may contribute to atherogenesis. We used data on 798 participants from two clinical trials to investigate the association between atherosclerosis and long-term exposure to ambient PM up to 2.5 µm in aerodynamic diameter ($PM_{2.5}$). Baseline data included assessment of the carotid intima-media thickness (CIMT), a measure of subclinical atherosclerosis. We geocoded subjects' residential areas to assign annual mean concentrations of ambient $PM_{2.5}$. Exposure values were assigned from a $PM_{2.5}$ surface derived from a geostatistical model. Individually assigned annual mean $PM_{2.5}$ concentrations ranged from 5.2 to 26.9 µg/m^3 (mean, 20.3). For a cross-sectional exposure contrast of 10 µg/m^3 $PM_{2.5}$, CIMT increased by 5.9% (95% confidence interval, 1-11%). Adjustment for age reduced the coefficients, but further adjustment for covariates indicated robust estimates in the range of 3.9-4.3% (*p*-values, 0.05-0.1). Among older subjects (≥ 60 years of age), women, never smokers, and those reporting lipid-lowering treatment at baseline, the associations of $PM_{2.5}$ and CIMT were larger with the strongest associations in women ≥ 60 years of age (15.7%, 5.7-26.6%). These results represent the first epidemiologic evidence of an association between atherosclerosis and ambient air pollution. Given the leading role of cardiovascular disease as a cause of death and the large populations exposed to ambient $PM_{2.5}$, these findings may be important and need further confirmation. *Key words:* air pollution, atherosclerosis, particulate matter. *Environ Health Perspect* 113:201-206 (2005). doi:10.1289/ehp.7523 available via *http://dx.doi.org/* [Online 22 November 2004]

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Introduction

A large body of epidemiologic evidence suggests associations between ambient air pollution and cardiovascular mortality and morbidity (Peters and Pope 2002; Pope et al. 2004). All of these studies focus on events occurring at a late stage of vascular disease processes. The impact of air pollution on the underlying preclinical conditions remains poorly understood.

We hypothesize that current levels of ambient particulate matter (PM) up to 2.5 µm in aerodynamic diameter ($PM_{2.5}$) may contribute to atherosclerosis, leading to subclinical anatomical changes that play a major role in cardiovascular morbidity and mortality later in life. Animal studies support our hypothesis by showing that inhalation of ambient PM promotes oxidative lung damage, including alveolar and systemic inflammatory responses (Becker et al. 1996; Dye et al. 2001; Fujii et al. 2002; Goto et al. 2004; Suwa et al. 2002; van Eeden et al. 2001).

We investigated the association between residential ambient $PM_{2.5}$ and carotid artery intima-media thickness (CIMT) using prerandomization baseline data from two recent clinical trials conducted in Los Angeles, California (Hodis et al. 2002). CIMT is a well-established quantitative measure of generalized atherosclerosis that correlates well with all of the major cardiovascular risk factors, with coronary artery atherosclerosis, and with clinical cardiovascular events (Mack et al. 2000). It is an established tool for investigating the contribution of long-term exposures such as smoking or passive smoking to subclinical stages of atherosclerosis at any given age (Diez-Roux et al. 1995; Howard et al. 1994, 1998). This is the first study to assess the association of atherosclerosis with air pollution.

Materials and Methods

Population and health assessment. We used baseline health data from two randomized, double-blind, placebo-controlled clinical trials conducted at the University of Southern California Atherosclerosis Research Unit (Hodis et al. 2002). The Vitamin E Atherosclerosis Progression Study (VEAPS) investigated the effects of vitamin E on the progression of atherosclerosis measured by CIMT. The B-Vitamin Atherosclerosis Intervention Trial (BVAIT) focused on the effect of vitamin B supplements on the progression of atherosclerosis (trial in progress). Baseline assessment in both trials included CIMT measured between 1998 and 2003 using the same standardized methods (Hodis et al. 2002; Selzer et al. 1994, 2001). Recruitment of volunteers occurred over the entire Los Angeles Basin, covering a geographic area of approximately 64,000 km^2.

Eligible subjects for the VEAPS trial (n = 353) were men and women ≥ 40 years of age with slightly increased LDL cholesterol (≥ 3.37 mmol/L) but with no clinical signs or symptoms of cardiovascular disease (CVD) (Hodis et al. 2002). Subjects with diabetes, diastolic blood pressure > 100 mm Hg, thyroid disease, serum creatinine > 0.065 mmol/L, life-threatening diseases, or high alcohol intake were excluded.

BVAIT (n = 506) had a similar design to that of VEAPS. Men and women > 40 years of age were prescreened to meet study criteria (fasting plasma homocysteine ≥ 8.5 µmol/L; postmenopausal for women; no evidence of diabetes, heart disease, stroke, or cancer). Subjects were excluded on the basis of any clinical signs or symptoms of CVD, diabetes or fasting serum glucose ≥ 140 mg/dL, triglyceride levels ≥ 150 mg/dL, serum creatinine > 1.6 mg/dL, high blood pressure, untreated thyroid disease, life-threatening disease with prognosis < 5 years, or high alcohol intake.

Thus, our study included "healthy" subjects with biomarkers (elevated LDL cholesterol or homocysteine) that suggested an increased risk of future CVDs (n = 859). Fifty-eight subjects were excluded in the exposure assignment process because they lived outside the area with $PM_{2.5}$ data. Three subjects had missing data in at least one of the covariates used in the models. Our total sample consisted of 798 participants.

Health measures, including CIMT. Our main outcome of interest is CIMT. In both trials, high-resolution B-mode ultrasound images of the right common carotid artery were obtained before the intervention (baseline) with a 7.5-MHz linear array transducer attached to an ATL Ultramark-4 Plus Ultrasound System (Ultramark, Bothell, WA). We used this baseline CIMT measurement as the outcome. Details of this highly reproducible method are published (Hodis et al. 2002; Selzer et al. 1994, 2001). Blood pressure, height, and weight were measured with standard procedures.

The baseline questionnaires included an assessment of all major CVD risk factors and covariates, including clinical events, diet, use of prescription medications, physical activity, current and past smoking and passive smoking, and vitamin supplements. Age, education, and other sociodemographic factors were available for each subject. Fasting blood samples were also drawn for lipid measurements. Data used in our analyses were collected with the same tools in both trials.

Exposure assignment. To assess exposure we chose a novel approach derived from a geographic information system (GIS) and geostatistics. This method allows for assignment of long-term mean ambient concentrations of $PM_{2.5}$ to the ZIP code area of each subject's residential address (Künzli and Tager 2000). The resulting surface of $PM_{2.5}$ covered the entire Los Angeles metropolitan area. The surface is derived from a geostatistical model and data from 23 state and local district monitoring stations (during 2000). These monitors are located across the Los Angeles region to characterize urban levels of pollution. To assign exposure, $PM_{2.5}$ data were interpolated using a combination of a universal kriging model

with a quadratic drift and a multiquadric radial basis function model (Bailey and Gatrell 1995; Burrough and McDonnell 1998). We averaged the two surfaces based on 25-m grid cells. Examination of errors from the universal model showed that > 50% of the study area had assigned values within 15% of monitored concentrations, whereas 67% were within 20%. The larger errors were on the periphery of our study area, where the density of study participants was the lowest. We linked the ZIP code centroids of each subject with the exposure surface through a geocoding database [Environmental Systems Research Institute (ESRI) 2004]. Figure 1 illustrates the $PM_{2.5}$ surface with the geolocated ZIP codes. Individually assigned $PM_{2.5}$ data had a range from 5.2 to 26.9 μg/m^3 (mean, 20.3), thus exceeding the range observed across 156 metropolitan areas used in the largest cohort study of air pollution and mortality (Pope et al. 2002). All models were implemented with ArcScript from ESRI (Redlands, CA).

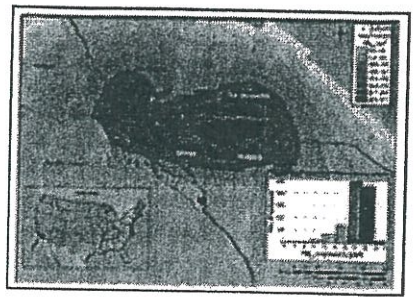


Figure 1. ZIP code locations of the study population geocoded on the $PM_{2.5}$ surface, modeled with 2000 $PM_{2.5}$ data, and distribution of individually assigned concentrations.

Statistical analyses. We tested the univariate and multivariate associations between CIMT and ambient $PM_{2.5}$ using linear regression analyses. Extensive residual diagnostics indicated some heteroskedasticity, which was rectified with the natural log-transformed CIMT. We adjusted for factors that were statistically associated with both CIMT and ambient $PM_{2.5}$ (age, male sex, low education, and low income). Next, we expanded the models using covariates that were associated with either $PM_{2.5}$ or CIMT, including indicator variables for current second-hand smoke exposure and current and former personal smoking. We then added covariates that play a role in atherosclerosis such as blood pressure, LDL cholesterol, or proxy measures such as reporting treatment with antihypertensives or lipid-lowering medications at study entry. These factors may affect the pathophysiologic pathways linking air pollution exposure and atherosclerosis (Ross 1999); thus, such models may overadjust the coefficients. We chose this conservative approach to test the sensitivity of the effect estimates under a broad range of model assumptions.

There is increasing evidence that host factors such as age, sex, or underlying disease and risk profiles may modify the effects of air pollution (Pope et al. 2002; Zanobetti and Schwartz 2002). Furthermore, the finding of atherosclerosis in PM-exposed rabbits was based on a hyperlipidemic trait (Suwa et al. 2002). Therefore, we also stratified by sex, age (< 60 years, ≥ 60 years), smoking status, and lipid-lowering drug therapy.

Results

Table 1 summarizes the main characteristics of the study population and among main subgroups. Table 2 presents the percent change in CIMT in association with a 10 μg/m^3 contrast in ambient $PM_{2.5}$ concentrations for three cross-sectional regression models. The unadjusted model indicates a 5.9% [95% confidence interval (CI), 1-11%] increase in CIMT per 10 μg/m^3 $PM_{2.5}$. For the observed contrast between lowest and highest exposure (20 μg/m^3 $PM_{2.5}$), this corresponds to a 12.1% (2.0-23.1%) increase in CIMT. The only covariate with a substantial effect on the point estimate was age, which reduced the effect from 5.9 to 4.3% (0.4-9%) per 10 μg/m^3 $PM_{2.5}$. This change agrees with the age-related effect modification. Otherwise, effect estimates across the models remained robust, in the range of 3.9-4.3% with *p*-values from 0.05 to 0.1. To corroborate the exposure-response relationship, we also categorized $PM_{2.5}$ levels into quartiles. Figure 2 shows the adjusted mean CIMT across these four groups of equal sample size at the mean levels of the covariates (age, sex, education, and income). The trend across the exposure groups was statistically significant ($p = 0.041$). The unadjusted means of CIMT among these quartiles of exposure were 734, 753, 758, and 774 μm, respectively.

Table 1.

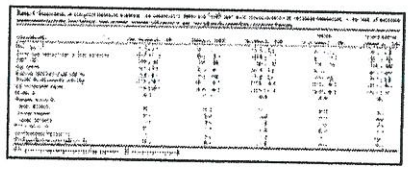
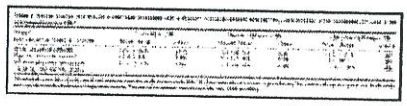
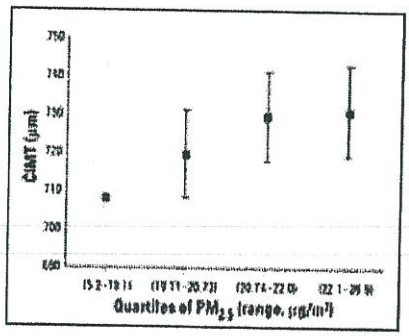


Table 2.





The associations between CIMT and $PM_{2.5}$ were substantially stronger among 109 subjects reporting lipid-lowering medication at study entry, both in men and in women (Table 2, Figure 3). The crude effect reached 15.8% (2-31%) per 10 μg/m^3 $PM_{2.5}$, with adjusted values ranging between 12 and 16%. Despite the small sample size, *p*-values of all models were mostly < 0.1 and often < 0.05.

Results also suggest significant age and sex interactions, with much larger effects in women and in the older age group (Figure 3). Effect estimates in

women were statistically significant and typically in the range of 6-9% per 10 μg/m^3 $PM_{2.5}$. Associations were strongest among women ≥ 60 years of age (n = 186), leading to crude estimates of 19.2% (9-31%). Adjusted coefficients ranged from 14 to 19%, being statistically significant in all models and sensitivity analyses.

Among never smokers (n = 502), the effect estimate reached 6.6% (1.0-12.3%). The estimate was small and not significant in current (n = 30) and former smokers (n = 265).

Figure 2. Mean CIMT ± 1 SE among quartiles of the $PM_{2.5}$ distribution. The y-axis shows mean CIMT levels at the population average of the adjustment covariates (age, sex, education, and income). The first quartile is the reference group.

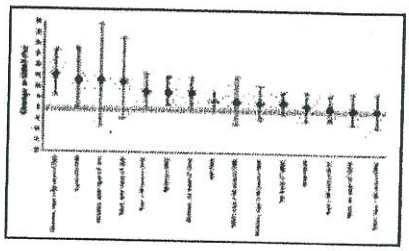


Figure 3. Percent difference and 95% CI in CIMT associated with a 10 μg/m^3 contrast in ambient $PM_{2.5}$ in all subjects and in subgroups. Lipid-LT, lipid-lowering therapy. All estimates are based on the cross-sectional linear model with log intima-media thickness as the dependent variable and home outdoor $PM_{2.5}$ as the independent variable, adjusted for sex, age, education, and income. Numbers in parentheses are numbers of subjects per group. Data are ordered by size of point estimate; the null effect line is indicated by a dash.

Discussion

Our study presents the first evidence for an association between CIMT and long-term exposure to ambient air pollution. As recently reviewed in a statement of the American Heart Association (Brook et al. 2004) substantial epidemiologic and experimental evidence suggests a contribution of ambient air pollutants on cardiovascular mortality and morbidity. However, these studies focus on acute and subacute effects on cardiac autonomic function, inflammatory or thrombogenic markers, arrhythmia, myocardial infarction, cardiovascular hospital admission, and death. The only outcome considered in long-term air pollution studies has been mortality. The relative risks for acute effects on mortality have been substantially smaller than those observed for long-term associations (Pope et al. 2002; Samet et al. 2000). As shown previously, cohort studies are capable of capturing acute and chronic effects of air pollution on the course of diseases that ultimately lead to premature death (Künzli et al. 2001). In contrast, time-series and panel studies investigate only the associations of event occurrence with the most recent exposure (Künzli et al. 2001). Thus, if air pollution has both acute and cumulative long-term effects, one expects larger mortality coefficients in cohort studies. CIMT reflects long-term past exposure; thus, we provide the first evidence for chronic effects of air pollution on atherogenesis that may in part explain the above mentioned discrepancy between acute and long-term risk estimates (Pope et al. 2002; Samet et al. 2000).

There are several major aspects to be considered in the interpretation of this new finding, mainly the strength in the exposure assignment, the limited evidence for bias, the differences in effects within subgroups, and plausibility.

Exposure assignment. The individual residence-based assignment of exposure represents a substantial improvement over most studies that have relied on central monitors or on binary road buffers combined with basic interpolation (Hoek et al. 2002; Pope et al. 2004). As a sensitivity analysis, we used weighted least-squares models with the weights specified as the inverse of the standard errors from the universal kriging model to down-weight estimates with larger error. In addition, we implemented models based solely on the universal kriging estimate. In both instances results were robust and similar to what we found with our main model.

Time-activity studies show that people spend most of their time in or around home, and our restriction of exposure assessment on residential address captures the most relevant part of exposure (Leech et al. 2002). $PM_{2.5}$ generally displays spatially homogeneous distributions across small areas such as neighborhoods and blocks, and as a result, the ambient conditions at the ZIP code centroid likely reflect the levels expected at home outdoors (Roosli et al. 2000). $PM_{2.5}$ of outdoor origin will also penetrate indoors, and correlations between long-term outdoor PM concentrations and indoor levels of PM from outdoor origin is high (Sarnat et al. 2000). Exposure to ambient air pollution while working and during commute are not included in our exposure term but are considered to be a relevant source of exposure (Riediker et al. 2003). Although most likely a random misclassification with biases toward the null, the errors may affect subgroups differently, thus explaining part of the observed interactions.

In Los Angeles, no clear trends have been observed in $PM_{2.5}$ concentrations over the past 5-10 years. The year 2000 surface characterizes the prevailing mean $PM_{2.5}$ concentrations across several years and can be considered a measure of long-term past exposure. This year also sits in the middle of the baseline recruitment period. Overall, the various limitations in our exposure assignment may add some random error, biasing results toward weaker associations (Thomas et al. 1993).

We also assigned ambient ozone to ZIP code centroids. Inclusion of ozone in the models had no impact on the $PM_{2.5}$ coefficients or the SEs. Ozone and $PM_{2.5}$ were not correlated (r = -0.17), and the $PM_{2.5}$ estimates were not substantially

different in low- and high-ozone regions. The estimates of association for ozone were positive but not statistically significant and much smaller than for $PM_{2.5}$. This finding must be put in context of the specific challenges in determining long-term exposure to ozone, which are substantially different than in the case of PM exposure. In contrast to $PM_{2.5}$ from outdoor origin, ambient ozone levels have lower correlations with personal exposure (Avol et al. 1998; Sarnat et al. 2000, 2002); therefore, the ability to detect effects of ozone will likely be reduced due to greater misclassification.

Biases. Our subjects were a nonrandom sample of "healthy" volunteers with above-average education, meeting strict inclusion criteria for the two clinical trials. Although we cannot exclude some systematic selection biases affecting the cross-sectional data, it is unlikely that subjects with preclinical signs of atherosclerosis would have been more likely to volunteer if they lived in more polluted areas. Although the selection of subjects limits the generalization to other populations, we do not expect this to lead to over- or underestimating the cross-sectional associations. The two trials recruited subjects independently; thus, the effects may be compared across trials to evaluate the potential influence of selecting volunteers. The populations differed with regard to age, smoking habits, baseline LDL and treatment, blood pressure, active and passive smoking, and other relevant factors; thus, the $PM_{2.5}$ coefficients were smaller and were not statistically significant in the VEAPS trial with its younger population. However, after taking these factors into account, the associations with ambient $PM_{2.5}$ were similar. For example, among elderly women of VEAPS (n = 70) and BVAIT (n = 116), the effect estimate was 18.1% (-0.1 to 36.3.%) and 13.6% (2.8-24.4.%), respectively. There is some evidence for larger effects in subjects with cardiovascular risk factors, indicated by prescriptions of lipid-lowering treatment. Our trials excluded subjects with clinically manifest CVDs. Moreover, if air pollution amplifies systemic inflammation among those prone to atherosclerosis, exclusion of subjects with high LDL may be a source of bias. One may expect effect estimates in a less selected, less healthy population to be larger than those reported.

The wealth of baseline data from these clinical trials offered the opportunity to control for a broad array of covariates. Apart from the effect of age adjustment, estimates were robust to numerous combinations of covariates, including income, education, active and passive tobacco smoke, cardiovascular prescriptions, vitamin intake, and physical activity. Uncontrolled or residual confounding appears to be an unlikely explanation for these results. Among women, adjustment for hormone replacement therapies did not affect the $PM_{2.5}$ estimates.

In previous studies, we found that spatial autocorrelation in the residuals could affect the size and significance of pollution coefficients (Jerrett et al. 2003a). We investigated spatial autocorrelation of the unstandardized residuals. We assessed autocorrelation with first-order, adjusted first-order, and second-order spatial weight matrices based on nearest neighbor contiguity, but we found no evidence of spatial autocorrelation. This supports the conclusion that the models supply efficient unbiased estimates (Jerrett et al. 2003b). As part of our sensitivity analyses, we also derived $PM_{2.5}$ surfaces using different interpolations and weighted least squares with weights equal to the inverse of the standard error of the exposure estimate. All approaches produced very similar results.

Evidence for effect modification. The data suggest substantial interactions with age, sex, smoking, and underlying cardiovascular risk factors. Given the reduced sample size among subgroups, the recruitment of volunteers, and the cross-sectional nature of the data, it is difficult to fully explore the causes of the observed modifications of associations and to establish susceptibility profiles. If the exposure misclassifications differed across subgroups, part of the interactions may be explained by differential exposure error. The sex and age difference could also be an artifact due to measurement error in the assigned exposure because time spent in commuting and location of work places may be different in men and women and in the young and elderly. Empirical studies on mobility suggest women have smaller activity spaces than men and younger groups, meaning they tend to spend more time in and around the home (Kwan and Lee 2004), and the same is probably true of the elderly compared with younger groups. Exposure measurement error may be reduced in those spending more time at home, leading to stronger effects (Thomas et al. 1993). Moreover, differences in statistical power may play a role as well; as shown at least for the 25-40-year age range, power to detect effects on CIMT is larger in women than in men (Stein et al. 2004).

The finding that those reporting prescriptions of lipid-lowering medications at baseline showed stronger associations of CIMT with $PM_{2.5}$ merits further investigation. This result agrees with the observed effects of PM on atherosclerosis in experiments conducted in hyperlipidemic rabbits (Goto et al. 2004; Suwa et al. 2002). The systemic inflammatory and atherogenic reaction in these rabbits was related to the amount of PM contained in the alveolar macrophages. In our study, being under lipid-lowering therapy is an indicator for risk profiles prone to atherogenesis. Those subjects were mostly men (64%) and, on average, older, more often active or passive smokers, and almost twice as likely to report antihypertensive treatment. The systemic response to ambient PM may amplify and expand the oxidation of LDL cholesterol among these susceptible subjects, consequently contributing to injury in the artery wall (Goto et al. 2004; Ross 1999). Investigations of short-term effects of ambient air pollution on mortality also suggest that underlying risk profiles such as diabetes may amplify susceptibility to ambient PM (Zanobetti and Schwartz 2002), and similar findings have been shown with smoking and diabetes mellitus in association with CIMT (Karim et al. 2005). To clarify the relevance of lipid status, it would be interesting to investigate our hypothesis among cohorts with familial hypercholesteremia (Wiegman et al. 2004; Wittekoek et al. 1999).

As shown in Figure 3, the size of the point estimate was larger among the older subjects. Future research needs to clarify whether air pollution contributes to atherosclerosis only after a certain age or early on. Effects of air pollution on lung development have been observed during adolescence and may be a result of both pulmonary and chronic systemic inflammatory effects (Gauderman et al. 2002); thus, it is conceivable that atherogenic responses may occur early in life. The age dependence of the effects may also be codetermined by genetic factors (Humphries and Morgan 2004; Ross 1999).

We also observed larger effects in women. If other cardiovascular risk factors such as occupational exposures dominate atherosclerosis in men, we would expect a smaller effect signal and less precision in the estimates among men. We also hypothesize that interactions may reflect biologic causes. If premenopausal women are protected against atherosclerosis by endogenous hormones, loss of hormonal protection would lead to increased vulnerability after menopause (Kannel et al. 1976). This could explain part of the interaction by both age and sex.

Active and passive smoking did not confound results in either the total sample or among subgroups. Adjustment for active tobacco smoke led to a slight increase in the effect estimate; thus, residual confounding is unlikely to overestimate the effects. However, $PM_{2.5}$ associations were clearly stronger in never smokers compared with smokers (data not shown). This gradient was also observed in all subgroups with significant $PM_{2.5}$ associations (Figure 3). Oxidative and inflammatory effects of smoking may dominate to such an extent that the additional exposure to ambient air pollutants may not further enhance effects along the same pathways. The difference in the effects of $PM_{2.5}$ in smokers and nonsmokers needs further investigation. The American Cancer Society cohort study does not reveal a clear pattern of a smoking interaction for the association of ambient air pollution and cardiovascular death (Krewski et al. 2004; Pope et al. 2004). In the Study on Air Pollution and Lung Diseases in Adults (SAPALDIA), associations between air pollution and level of pulmonary function did not differ by smoking status (Ackermann-Liebrich et al. 1997).

Some U.S. studies indicate effect modification of air pollution by socioeconomic status (SES) with much stronger effects among the less educated (Pope et al. 2002). The cause of this interaction pattern is not well understood. SES status was rather homogeneous in these mostly well-educated volunteers, providing little power to investigate interactions of pollution with SES. If lower SES also positively modifies effects of air pollution on atherosclerosis, our population would provide an underestimate of the health effects in the general population (O'Neill et al. 2003). Further research on samples representative of the population will be needed to assess whether the high SES in the clinical trials biases the effects toward the null.

Future research should focus on identifying factors that determine susceptibility to $PM_{2.5}$. We are initiating studies on subjects with inflammatory metabolic syndromes prone to accelerated atherosclerosis such as postmenopausal women, diabetics, or obese or physically inactive people. To corroborate the cross-sectional findings, follow-up studies are ultimately needed to investigate the association of concurrent levels of air pollution exposure with the progression of CIMT.

Plausibility. From a biologic perspective, our results support the hypothesis that long-term exposure to ambient PM contributes to systemic inflammatory pathways, which are a relevant aspect of atherogenesis (Ross 1999). The findings indicate a biologically plausible link between the observed acute effects of ambient air pollution on systemic inflammation (Glantz 2002) and the long-term consequences of sustained vascular inflammation leading to increased atherosclerosis and, ultimately, cardiovascular death (Hoek et al. 2002; Pope et al. 2004). Among susceptible people, this may lead to artery wall lesions similar to those observed in the rabbit model (Fujii et al. 2002; Suwa et al. 2002). In these hyperlipidemic rabbits, 4-week PM exposure was associated with the progression of atherosclerotic lesions, coupled with an enhanced release of bone marrow monocytes. These precursors of macrophages play an important role in the atherogenic inflammatory responses (Goto et al. 2004; Ross 1999; Suwa et al. 2002). Given the central role of oxidized LDL in the initiation and progression of atherogenesis, suggestions that the plasma of automotive workers with high exposure to traffic exhaust is more susceptible to oxidation is also of interest (Sharman et al. 2002).

As a quantitative plausibility check, we compared the size of the $PM_{2.5}$ effects with effects of other risk factors on CIMT. Using smoking and environmental tobacco smoke (ETS) as a model for air pollution exposure, the size of our estimates appear plausible (Diez-Roux et al. 1995; Howard et al. 1994). Associations of ETS and current levels of air pollution with various respiratory outcomes are similar and support the notion of common underlying pathways (Künzli 2002). Smoking and ETS associate with stiffer and thicker artery walls, reflecting the systemic effect of these exposures (Howard et al. 1994; Mack et al. 2003). Exposure to ETS was associated with 2-3% thicker intima-media, which approximate the effects observed for a 10 $\mu g/m^3$ change in $PM_{2.5}$ (Diez-Roux et al. 1995; Howard et al. 1994). Using never smokers without ETS exposure as the referent group in our data, never smokers with ETS at home had 0.9% (-2.7 to 4.5%) thicker artery walls; former smokers' CIMT was increased on average by 3.4% (0.7-6.3%), and the 30 current smokers had 5% (-1.5 to 11.6%) thicker CIMT. The trend across these four categories of tobacco exposure was statistically significant. As shown in Table 1, smokers were underrepresented in these volunteers of well-educated participants.

The observed percent change in CIMT corresponds to an increase in the thickness of approximately 20-40 μm per 10

μg/m^3 contrast in $PM_{2.5}$. This difference in CIMT translates into some 3-6% increase in the long-term risk for myocardial infarction (O'Leary et al. 1999). Pope et al. (2004) reported that long-term exposure to $PM_{2.5}$ was associated with an 18% (14-23%) increase in ischemic heart disease. Effect sizes reported here concur with these findings, indicating that a fraction of the total effect of ambient PM on cardiovascular mortality may be mediated through sustained long-term effects of air pollution on atherosclerosis (Künzli et al. 2001). This is in line with the proposed model (Künzli et al. 2001) in which some of the effects observed in cohort studies must reflect long-term contributions of air pollution to the underlying disease progression, whereas in other cases, air pollution contributes only to triggering of cardiovascular events or death (Bell et al. 2004; Künzli et al. 2001; Peters and Pope 2002).

From a biologic and policy perspective, we emphasize that $PM_{2.5}$ probably serves as a surrogate for the mixture of urban air pollution and constituents of PM. It is premature to conclude that $PM_{2.5}$ and its constituents are the atherogenic culprit per se. Atherosclerosis results from complex processes that may include a combination of various urban pollutants, host factors, and pathways that ultimately lead to the findings of a CIMT-$PM_{2.5}$ association.

In conclusion, we have presented the first epidemiologic evidence supporting the idea of a chronic vascular response to respiratory and systemic effects of PM exposure. Given the leading role of heart disease as a cause of death in most westernized countries and the growing contribution in developing countries, these findings may be of high public health relevance. Further investigations need to focus on susceptible groups and follow-up of cohorts to investigate the effect of air pollution on the progression of CIMT.

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Vol. 290 No. 14, October 8, 2003

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TABLE OF CONTENTS >

Featured Link
- E-mail Alerts

Article Options
- Abstract
- PDF
- Send to a Friend
- Related articles in this issue
- Similar articles in this journal

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- Add to File Drawer
- Download to Citation Manager
- PubMed citation
- Articles in PubMed by
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- Asthma
- Allergy
- Occupational and Environmental Medicine
- Pediatrics
- Pediatrics, Other
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Association of Low-Level Ozone and Fine Particles With Respiratory Symptoms in Children With Asthma

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ABSTRACT

Context Exposure to ozone and particulate matter of 2.5 μm or less ($PM_{2.5}$) in air at levels above current US Environmental Protection Agency (EPA) standards is a risk factor for respiratory symptoms in children with asthma.

Objective To examine simultaneous effects of ozone and $PM_{2.5}$ at levels below EPA standards on daily respiratory symptoms and rescue medication use among children with asthma.

Design, Setting, and Participants Daily respiratory symptoms and medication use were examined prospectively for 271 children younger than 12 years with physician-diagnosed, active asthma residing in southern New England. Exposure to ambient concentrations of ozone and $PM_{2.5}$ from April 1 through September 30, 2001, was assessed using ozone (peak 1-hour and 8-hour) and 24-hour $PM_{2.5}$. Logistic regression analyses using generalized estimating equations were performed separately for maintenance medication users (n = 130) and nonusers (n = 141). Associations between pollutants (adjusted for temperature, controlling for

same- and previous-day levels) and respiratory symptoms and use of rescue medication were evaluated.

Main Outcome Measures Respiratory symptoms and rescue medication use recorded on calendars by subjects' mothers.

Results Mean (SD) levels were 59 (19) ppb (1-hour average) and 51 (16) ppb (8-hour average) for ozone and 13 (8) μg/m^3 for $PM_{2.5}$. In copollutant models, ozone level but not $PM_{2.5}$ was significantly associated with respiratory symptoms and rescue medication use among children using maintenance medication; a 50-ppb increase in 1-hour ozone was associated with increased likelihood of wheeze (by 35%) and chest tightness (by 47%). The highest levels of ozone (1-hour or 8-hour averages) were associated with increased shortness of breath and rescue medication use. No significant, exposure-dependent associations were observed for any outcome by any pollutant among children who did not use maintenance medication.

Conclusion Asthmatic children using maintenance medication are particularly vulnerable to ozone, controlling for exposure to fine particles, at levels below EPA standards.

INTRODUCTION

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

Children with asthma are particularly vulnerable to the adverse health effects of high levels of **air pollution**. Studies of children with asthma living in some of the most highly polluted regions of the world conclude that exposure to levels of ozone or particulate matter (especially particles ≤2.5 μm in diameter [$PM_{2.5}$]) regularly in excess of US Environmental Protection Agency (EPA) air quality standards (120 ppb [1-hour average] and 80 ppb [8-hour average] for ozone and 65 μg/m^3 for 24-hour $PM_{2.5}$) significantly enhances the risk of respiratory symptoms, asthma medication use, and reduced lung function.[1-5]

Studies of children with asthma living in regions with levels of pollution within or near compliance with EPA air quality standards suggest that the current standards do not protect these more vulnerable members of the population.[6-10] Asthma severity, as measured by symptoms, medication use, restrictions in activity, or use of medical services, has been shown to be affected by exposure to ozone (1-hour maximum measurement[6-10] or 8-hour average[6-9]), particles 10 μm or smaller (PM_{10}),[6, 8] or $PM_{2.5}$ (12-hour total).[6]

Of interest in many recent studies of children with asthma are the simultaneous effects of ozone and particulates on asthma severity.[2-3,8] Simultaneous exposure to high levels of both ozone and $PM_{2.5}$ (fine particles)[2] or PM_{10}(coarse particles)[3] found in Mexico City, Mexico, contributed to increased respiratory symptoms among children with asthma. In a region of lower pollution, asthma symptoms were associated with both ozone and course particles.[8] In the current study, we examined the simultaneous

effects of ozone and fine particles on daily respiratory symptoms and rescue medication use of children with asthma residing in southern New England during spring and summer 2001.

METHODS

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

Participants

The study participants were 271 children from a cohort of families living in Connecticut and the Springfield area of Massachusetts who were participating in a study of asthma development.[11-12] From 1997 through 1999, 1002 infants born to families with at least 1 child with physician-diagnosed asthma were enrolled in the original birth cohort. Beginning in 2000, eligible asthmatic siblings (1 per cohort family) were identified and invited to participate in a 1-year prospective study of asthma severity. Eligibility criteria were that the child was younger than 12 years at the time of enrollment and had exhibited respiratory symptoms or used asthma medication within the previous 12 months. Included in the current analysis are subjects enrolled for all or part of the 183-day sampling period (April 1 through September 30, 2001), which includes the summertime, high-ozone pollution months in this region. Of 357 children identified as being eligible for inclusion in the current analysis, 56 refused follow-up, 16 were lost to follow-up, and 14 withdrew before April 1, 2001, leaving a total of 271 (76%). The Human Investigation Committee of Yale University, New Haven, Conn, approved this study, and all respondents (mothers of study subjects) gave informed consent before participation.

Data Collection

Demographic information and medical histories were collected during a home interview with the mother at enrollment. Daily respiratory symptoms (wheeze, persistent cough, chest tightness, shortness of breath) and medication use (maintenance medications, including inhaled or systemic steroids, cromolyn sodium, and leukotriene inhibitors, and rescue medications, including bronchodilators) were recorded on symptom and medication calendars by the child's mother and collected through monthly telephone interviews. Additional information about the previous 12 months was collected at an exit interview (eg, dates the child had been away from the southern New England region during the study year).

Air Quality Assessment

Study subjects resided in a 6691-square mile area in Connecticut and the Springfield area of Massachusetts. All ambient air quality monitoring sites (14 sites for ozone, 10 in Connecticut and 4 in Massachusetts; 4 sites for daily $PM_{2.5}$, 2 in Connecticut and 2 in Massachusetts; 13 temperature sites, 12 in Connecticut and 1 in Massachusetts) were located within a 52.5-mile radius centered at Southington, Conn (14 miles southwest of Hartford). The maximum distance between sites was 105 miles; the minimum distance was 4 miles. The Departments of Environmental Protection (DEPs) of Connecticut and Massachusetts provided measurements for hourly ozone concentrations and temperatures and daily 24-hour $PM_{2.5}$ (total $PM_{2.5}$ accumulated during 24

hours). Since both ozone and fine particle pollutants, as well as meteorological variables, tend to be regional,[13] the maximum daily 1-hour average (mean over 1 hour) and the 8-hour rolling average (mean over previous 8 hours) for ozone, daily $PM_{2.5}$ concentration, and maximum daily temperature were averaged across monitoring sites. Between-site correlation coefficients (Pearson *r*) were high for the 4 daily $PM_{2.5}$ sites (median $r = 0.91$; range, 0.84-0.95) and the 13 temperature sites (median $r = 0.97$; range, 0.85-0.99). There was more variability among the 14 ozone monitoring sites (median $r = 0.83$; range, 0.50-0.97 for the 1-hour average; and median $r = 0.81$; range, 0.47-0.97 for the 8-hour average). For technical details on ambient air quality monitoring, see the Web sites for the Connecticut DEP[14] and the Massachusetts DEP.[15]

Data Analysis

To examine the effects of ozone and $PM_{2.5}$ on children with different degrees of asthma severity, children were divided into 2 groups: those who used any maintenance medication during the 183-day observation period (n = 130) and those who did not (n = 141). Use of maintenance medication was used as a proxy for asthma severity to avoid using the outcome measures (respiratory symptoms and rescue medication use) in the assessment of severity. Logistic regression analyses, using generalized estimating equations (PROC GENMOD with AR1 autoregressive structure in SAS statistical software)[16-18] and adjusted for maximum daily temperature, were used to evaluate the association between levels of ozone and $PM_{2.5}$, with presence or absence of specific respiratory symptoms or rescue medication use. Using a repeated-measures technique permitted each subject to serve as his or her own control; therefore, personal variables (eg, race and other sociodemographic factors) that would not change during the study were not included in the models. Subgroup analysis, which included either 17 160 observations (an average of 132 days of data for 130 users of maintenance medication) or 19 035 observations (135 days for 141 nonusers of maintenance medication), focused directly on the association between exposures and health effects.

Exposure variables were categorized into quintiles, then entered into the model as dummy variables. The reference category for each was the lowest quintile. Both same-day and previous-day levels of ozone and $PM_{2.5}$ were examined. Analyses were performed separately for each severity group and each outcome. In single-pollutant models, a test for linear trend was performed by examining the model when the pollutant was entered as a continuous variable instead of as quintiles. In copollutant models, a test for goodness of fit was performed using the Hosmer-Lemeshow statistic for logistic regression. Significance level for all tests was set at .05.

RESULTS

Descriptive Statistics

Levels of ozone, $PM_{2.5}$, and temperature from April through September 2001 are summarized in Table 1 and Figure 1. The EPA 1-hour standard (120 ppb) was exceeded on 3 days, and the 8-hour ozone standard

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment

(80 ppb) was exceeded on 10 days of the 183 days of observation. There were no days when the level of $PM_{2.5}$ exceeded the EPA 24-hour standard of 65 μg/m^3. There was a strong correlation between ozone and fine particles ($PM_{2.5}$ vs 1-hour average ozone r = 0.77 vs 8-hour average r = 0.74) (Table 2).

• Author information
• References

View this table:
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[in a new window]

Table 1. Ozone, Particulate Matter of 2.5 μm or Less ($PM_{2.5}$), and Temperature in Southern New England, April 1 to September 30, 2001

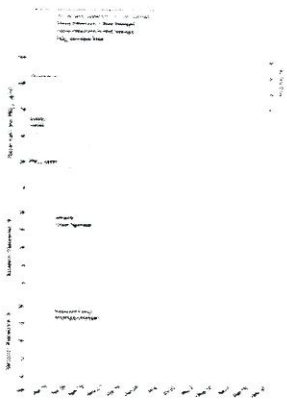

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Figure. Daily Levels of Ozone (Both 1-Hour Average and 8-Hour Average), Particulate Matter of 2.5 μm or Less ($PM_{2.5}$), and Daily Maximum Temperature, With Daily Prevalence of Respiratory Symptoms for Users of Asthma Maintenance Medication (n = 130) for Southern New England, April 1 through September 30, 2001

Dotted lines at 80 ppb and 120 ppb indicate Environmental Protection Agency standards for 8-hour average and 1-hour average ozone, respectively. Note that daily exposure levels shown here are the result of averaging over regional monitoring sites (14 ozone, 4 $PM_{2.5}$, and 13 temperature sites).

View this table:
[in this window]
[in a new window]

Table 2. Pearson Correlation Coefficients for Same Day and Previous Day Levels of Ozone and Particulate Matter of 2.5 μm or Less ($PM_{2.5}$)

There were no significant differences between the users (n = 130) of maintenance medication and nonusers (n = 141) for mean (SD) age of study subjects (age on April 1, 2001, for users, 8.8 [2.0] years [range, 2.4-12.7 years]; age of nonusers, 8.3 [2.2] years [range, 2.0-12.6 years]; t test P = .71) or mean days of participation (mean participation for users, 132 [48] days [range, 3-183 days]; mean participation for nonusers, 135 [51] days [range, 5-183 days]; t test P = .50). Sex and ethnicity did not differ by medication use. Nearly two thirds of each group were male (users, 64.6%; nonusers, 64.5%; χ^2 test P = .99), and most

children in each group were white, with smaller numbers of black and Hispanic children (users, 80.0%, 8.5%, and 11.5%, respectively; nonusers, 70.9%, 11.4%, and 17.7%, respectively; χ^2 test $P = .22$). Compared with nonusers of maintenance medication, users had significantly more days of all respiratory symptoms and rescue medication use: 50% of this group experienced approximately 1 week of persistent cough or wheeze, had 2 to 3 days of chest tightness or shortness of breath, and used rescue medication for nearly 3 weeks during the 26-week study period. At least half of all nonusers experienced no symptoms and did not use rescue medication during this same period (Table 3). Daily prevalence of symptoms for users of maintenance medication is shown in Figure 1. With the exception of somewhat higher rates of symptoms in the early spring and late summer when the temperatures tended to be lowest, there was overall conformity of reporting all 4 symptoms across the observation period.

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Table 3. Rates of Respiratory Symptoms and Rescue Medication Use for Study Subjects Stratified by Use of Maintenance Medication (Southern New England, April 1-September 30, 2001)*

Single-Pollutant Models for Users of Maintenance Medication

Ozone (1-Hour Average). An ozone concentration of 51.6 ppb or higher (the top 3 quintiles of the distribution of the maximum 1-hour average) on the same day as the reported symptom was the only exposure variable associated with an increased likelihood of wheeze (by 16%, 16%, and 22%, respectively) (Table 4, model 1). A 4% increase in bronchodilator use was also associated with same-day levels of ozone (51.6-58.8 ppb) (Table 4, model 1). Previous-day levels of maximum 1-hour average ozone were associated with increased likelihoods of persistent cough (16% increase for levels ≥72.7 ppb), chest tightness (by 21%, 30%, and 37% for levels ≥51.6 ppb), and shortness of breath (by 22% and 30% for levels ≥58.9 ppb) (Table 4, Model 2). The effects of previous-day levels on chest tightness and shortness of breath were significant in an exposure-dependent way: for each 50-ppb increase in previous-day, 1-hour ozone levels, the likelihood of these symptoms increased by 26% (odds ratio [OR], 1.26; 95% confidence interval [CI], 1.0-1.48) and 22% (OR, 1.22; 95% CI, 1.02-1.45), respectively.

View this table:
[in this window]
[in a new window]

Table 4. Odds Ratios From 6 Single-Pollutant Logistic Regression Models of Respiratory Symptoms or Rescue Medication Use of Maintenance Medication Users (n = 130) (Southern New England, April 1 to September 30, 2001)*

Ozone (8-Hour Average). An ozone concentration of 63.3 ppb or higher, measured as the maximum 8-hour average on the same day as the reported symptom, was associated with a 30% increase in chest tightness (Table 4, model 3). Previous-day levels of 52.1 ppb or higher were associated with increased chest tightness, persistent cough, and shortness of breath (Table 4, model 4). As was the case with 1-hour ozone levels, the associations with the symptoms of chest tightness and shortness of

breath were exposure dependent: a 50-ppb increase in previous-day, 8-hour ozone level increased the likelihood of chest tightness (OR, 1.33; 95% CI, 1.09-1.62) and shortness of breath (OR, 1.30; 95% CI, 1.05-1.61).

$PM_{2.5}$. Increased likelihood of chest tightness was associated with same-day levels of $PM_{2.5}$ from 12.1 to 18.9 μg/m^3 (Table 4, model 5). Previous-day levels of 19.0 μg/m^3 or higher were associated with persistent cough, chest tightness, and shortness of breath (Table 4, model 6).

Copollutant Models for Users of Maintenance Medication

In logistic regression models of both ozone and fine particles for children taking maintenance medication, an increased likelihood of respiratory symptoms was associated with levels of ozone on the same day, previous day, or both; and increased bronchodilator use was associated with the highest level of same-day ozone. Neither respiratory symptoms nor bronchodilator use were associated with level of fine particles.

Ozone (1-Hour Average) and $PM_{2.5}$. Increased likelihood of wheeze was associated with same-day levels of 1-hour average ozone of 43.2 ppb or higher in an exposure-dependent manner (Table 5). When ozone is entered into this same model as a continuous variable, a 50-ppb increase in same-day ozone increases the likelihood of wheeze by 35% (OR, 1.35; 95% CI, 1.11-1.65). None of the exposure variables was associated with an increased likelihood of persistent cough, and only 1-hour average ozone levels between 43.2 and 51.5 ppb were associated with a decreased likelihood of cough (OR, 0.88; 95% CI, 0.78-0.99). The likelihood of chest tightness was significantly increased by same-day (≥58.9 ppb) and previous-day (≥51.6 ppb) levels of ozone in an exposure-dependent way. The likelihood of chest tightness increases by 47% (OR, 1.47; 95% CI, 1.18-1.84) for each 50-ppb increase in same-day levels of ozone, and by 42% (OR, 1.42; 95% CI, 1.14-1.78) for each 50-ppb increase in previous-day levels. Shortness of breath and ozone were similarly associated; likelihood of the symptom was increased by same-day levels of 72.7 ppb or higher and previous-day levels from 58.9 to 72.6 ppb (by 32%). Increased likelihood of bronchodilator use was associated with same-day levels of 72.7 ppb or higher (Table 5).

View this table:
[in this window]
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Table 5. Odds Ratios From the Copollutant Logistic Regression Model for Same-Day and Previous-Day Levels of Ozone (1-Hour Average) and Particulate Matter of 2.5 μm or Less ($PM_{2.5}$) Related to Each Respiratory Symptom or Rescue Medication Use of Maintenance Medication Users (n = 130) (Southern New England, April 1 to September 30, 2001)*

Ozone (8-Hour Average) and $PM^{2.5}$. For 8-hour average ozone levels, the likelihood of chest tightness was increased by same-day (OR, 1.64; 95% CI, 1.23-2.17) and previous-day (OR, 1.45; 95% CI, 1.10-1.92) levels of 63.3 ppb or higher. Shortness of breath was similarly associated; likelihood of the symptom was increased by same-day (OR, 1.45; 95% CI, 1.10-1.91) and

previous-day (OR, 1.31; 95% CI, 1.00-1.71) levels of 63.3 ppb or higher. As seen for the highest 1-hour ozone level, increased bronchodilator use was associated with same-day levels of 63.3 ppb or higher for 8-hour ozone measurements (OR, 1.09; 95% CI, 1.02-1.17).

Nonusers of Maintenance Medication

Single-Pollutant Models. Similar analyses for nonusers of maintenance medication revealed no significant associations among the top 3 concentration quintiles for the exposure variables and respiratory symptoms or bronchodilator use. For example, chest tightness was not significantly associated with same-day, 1-hour ozone levels of 72.7 ppb or higher (OR, 0.92; 95% CI, 0.68-1.25), same-day, 8-hour ozone levels of 63.3 ppb or higher (OR, 1.17; 95% CI, 0.72-1.92), or previous-day, 8-hour ozone levels of 63.3 ppb or higher (OR, 0.99; 95% CI, 0.74-1.35). The only significant association was an increased likelihood of wheeze (OR, 1.20; 95% CI, 1.00-1.43) in the presence of previous-day, 8-hour average ozone between 39.1 and 45.8 ppb (the second quintile).

Copollutant Models. For the children who were not users of asthma maintenance medication, neither fine particles nor 1-hour average ozone levels were associated with increased likelihoods of respiratory symptoms in copollutant models. Increased bronchodilator use was associated with previous-day fine particle concentrations between 9.0 and 12.0 $\mu g/m^3$ in the model with 1-hour ozone levels (Table 6) and with these same levels in the model with 8-hour ozone (OR, 1.30; 95% CI, 1.02-1.65). An increase in the likelihood of wheeze was associated with 8-hour ozone, but only for concentrations between 39.1 and 45.8 ppb on the same day (OR, 1.33; 95% CI, 1.00-1.77) or the previous day (OR, 1.31; 95% CI, 1.05-1.63) and between 52.1 and 63.2 ppb for same-day levels (OR, 1.35; 95% CI, 1.00-1.81).

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Table 6. Odds Ratios From the Copollutant Logistic Regression Model for Same-Day and Previous-Day Levels of Ozone (1-Hour Average) and Particulate Matter of 2.5 μm or Less ($PM_{2.5}$) Related to Respiratory Symptoms and Rescue Medication Use of Maintenance Medication Nonusers (n = 141) (Southern New England, April 1 to September 30, 2001)*

COMMENT

In models controlling for ambient fine particle concentration and typically at levels below EPA air quality standards, daily ambient ozone was found to be significantly associated with increased risk of respiratory symptoms and increased use of rescue medication among children with asthma severe enough to require maintenance medication. Study strengths include frequent telephone follow-up to collect information on daily calendar-recorded symptoms and medication use; absence of reporting bias between symptoms and

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information

• References

regionally collected ambient air quality data; the use of both the maximum 1-hour average (sensitive to spikes in concentration) and 8-hour average (a measure of short-term, cumulative exposure) to assess daily ambient ozone levels; use of $PM_{2.5}$ levels measured daily; and examination of the simultaneous effects of ozone and $PM_{2.5}$ at levels near or below current EPA ambient standards. Our results contribute to the limited literature examining the simultaneous effects of ozone and suspended particles on daily respiratory symptoms for a sensitive subpopulation in models adjusted for daily temperature.

One potential limitation of the study is that ambient ozone and particle concentrations were represented as means over regional sites. For the 14 ozone sites on any particular day, the mean (SD) ratio of maximum to minimum reading was 1.70 (0.50), which is similar to the mean ratio of upper to lower limit of each quintile of the summer ozone distribution of 1.38 (0.30) from our study. This suggests that the analysis using quintiles of the ozone distribution captures the variability that exists in the study region. Variability among $PM_{2.5}$ sites was less, but a potential limitation is that there were only 4 sites with daily measurements. However, a comparison between readings from these 4 sites and readings from the 10 sites with $PM_{2.5}$ readings every 3 days revealed good agreement. For the 61 days all sites had in common, the 10-site mean (SD) was 13.8 (8.2) compared with 12.8 (7.7) $\mu g/m^3$ for the 4 sites, and the Pearson correlation was 0.97.

Another potential limitation is the lack of personal variables (eg, race) in the regression models. However, by taking advantage of the repeated measurements we had for each subject, we were able to use each subject as his or her own control. The sample of 271 children contributed 36 195 person-days of observations to the analyses. Our within-subjects analytic approach permitted a strong test of the associations between ambient **air pollution** and health outcomes, and personal variables, since they would not vary within subjects, could be excluded from the models.

In this study, we did not consider medical care utilization as an outcome. Since this was not a clinic-based study, we did not have access to records to confirm medical visit dates. However, medical records are not necessarily more objective than reports of symptoms and medication use, since a number of factors unrelated to symptom severity also influence utilization. Symptoms and medication use vary from day to day and may be a more sensitive indicator of the effects of daily changes in **air pollution** on respiratory health, since not all symptoms result in a physician visit.

In our copollutant models, ozone but not fine particles significantly predicted increased risk of respiratory symptoms and rescue medication use among children using asthma maintenance medication. We found an immediate (same-day) effect of ozone on wheeze (with the 1-hour ozone metric), chest tightness, and shortness of breath (with both the 1-hour and 8-hour ozone metrics). We also found that previous-day levels of ozone (both metrics) were significantly associated with increased risk of chest tightness and shortness of breath. Goodness-of-fit tests for copollutant models suggest that the models with significant findings (wheeze, chest tightness, and shortness of breath) are reasonably good fits to the data. There were no systematic patterns to the lack of fit for models for persistent cough and bronchodilator use. However, because of repeated measurements, observations were not independent in any of the models, which may affect the interpretation of the Hosmer-Lemeshow statistic. It is possible that the

more frequently reported events of persistent cough and bronchodilator use may be associated with ambient **air pollution** in combination with other factors (eg, activity level) not included in the current study.

Effects of 1-hour ozone among children using asthma maintenance medication, especially the association of same-day ozone with wheeze and previous-day ozone with chest tightness, appear to be more exposure dependent than the effects of small particles. In copollutant models for wheeze and chest tightness, a 50-ppb increase in same-day, 1-hour ozone level increased the likelihood of wheeze by 35% and chest tightness by 47%. However, since particles and ozone were positively correlated, it is difficult to separate their effects in the copollutant models. In the single-pollutant model for chest tightness, a 50-ppb increase in previous-day levels of 1-hour ozone resulted in a 26% increase in the likelihood of having the symptom. When same-day levels of 1-hour ozone were added to the model, the likelihood of this symptom went up to 32%. In the copollutant model, a 50-ppb increase in previous-day, 1-hour ozone level increased the likelihood of chest tightness by 42%. Levels of $PM_{2.5}$ happened to be relatively low and never exceeded EPA standards for the duration of the study period, which likely contributed to the lack of significant particle effects observed in the copollutant models. For our region, an examination of the association between symptoms and particle levels in winter months when ozone is not a factor would help us better understand the role of exposure to small particles on respiratory health.

There is little doubt that children with asthma are especially vulnerable to high levels of **air pollution**. Among a group of asthmatic children (n = 71) living in Mexico City, where levels of ozone have regularly exceeded the EPA standard, multivariate regression analyses of same-day ambient **air pollution** and separate models of previous-day pollution all revealed significant effects of ozone and fine particles on the likelihood of cough (an increase of 8% for each 50-ppb increase in ozone on either the same day or previous day; an increase of 6% or 8% for each 10-$\mu g/m^3$ increase in $PM_{2.5}$ on the same day or previous day) and lower respiratory tract illness (by 7% for each pollutant on the same day or previous day).[2] The effects seen for $PM_{2.5}$ in Mexico City, but not in our study, could be explained by the large difference between the mean (SD) 24-hour concentration of $PM_{2.5}$ in Mexico City (85.7 [30.2] $\mu g/m^3$), which was above the EPA standard of 65 $\mu g/m^3$ and was well above the mean of 13.1 (7.9) $\mu g/m^3$ observed in the current study. In addition, the chemical composition of the fine particles in each region may be different.[2, 10] The larger effect of 1-hour ozone that we found could be explained in part by the fact that we stratified our analysis by asthma severity, thereby observing a consistent pattern of increased likelihood of some symptoms of more than 40% in the group with more severe disease and no significant effects among the group with less severe disease.

Our results are consistent with recent studies[7, 10] that suggest exposure to lower levels of ozone is associated with respiratory symptoms in children with asthma. Children with asthma who attended a week-long asthma summer camp (a total of 166 children during three 1-week periods compared with our 183-day observation period) in the Connecticut River Valley (the same geographic area as the current study) were exposed to levels of ozone somewhat higher than the current study (mean [SD] 1-hour average, 84 [38] ppb; range, 20-160 ppb). In single-pollutant models, daily levels of same-day ozone were significantly associated with increased chest symptoms, β-agonist use, and decreased lung function.[10] These associations did not change when same-day

levels of sulfate (a primary constituent of $PM_{2.5}$ in this region) were added to the model. In a recent study[7] of 846 children with asthma living in 8 urban areas around the country, ozone at levels comparable to those observed in the current study (mean 8-hour average of 48 ppb compared with our mean of 51 ppb with <5% of the days exceeding the EPA standard of 80 ppb in both studies) was associated, in single-pollutant models, with morning respiratory symptoms (wheeze, cough, or chest tightness). Although the data were not shown, the authors of each study also noted that adding copollutants to their models did not appreciably confound the effect of ozone. Both studies concluded that ozone, even at levels lower than current EPA standards, is strongly associated with adverse respiratory health effects in children with asthma.

Previous environmental chamber studies[19-21] of adults with asthma exposed to ozone for 1 to a few hours have shown relatively little effect on symptoms or lung function. On the other hand, short-term exposure to elevated levels of ozone and particulates in outdoor air has been associated with reduced pulmonary function in otherwise healthy children.[1, 22-23] Our study of asthmatic children under ambient exposure conditions in areas of lower pollution suggests that the more prolonged exposures associated with summertime ozone produce a greater stimulus than chamber exposures, that asthmatic children are more susceptible than asthmatic adults, that effects are delayed and not captured by short-term chamber studies, or that coexposures to other unidentified constituents of ambient air enhance the response to ozone. A recent study supporting this view examined the impact of traffic-reducing changes in Atlanta, Ga, during the 1996 summer Olympic Games.[24] Significant reductions in ozone and particles were associated with significant reductions in acute asthma care events (physician, clinic, or hospital visits) among children aged 1 to 16 years. In analyses including days before, during, and after the Olympics, an increase in daily acute asthma events was associated with levels of 1-hour ozone concentrations beginning at 60 to 89 ppb. Our findings indicate that comparable levels were associated with an increased likelihood of wheeze (≥58.9 ppb), chest tightness (≥58.9 ppb), shortness of breath, and rescue medication use (≥72.7 ppb).

In our study, we defined 2 levels of asthma severity based on maintenance medication use. We reasoned that since we were examining the association of **air pollution** and symptoms, we did not want to use symptoms to define severity. Instead, we used maintenance medication as a proxy for disease severity even though medication use and symptoms will be related. Maintenance medication users had significantly more wheeze, persistent cough, chest tightness, and shortness of breath than the nonusers and used rescue medication significantly more often. Our results strongly suggest that this definition of asthma severity divides the group into 2 levels of vulnerability to **air pollution**.

Our study is a unique combination of a sample of asthmatic children with detailed symptom and medication use followed for a long period and well-measured daily ambient copollutants. These results add to others that suggest that, even at low levels of ambient ozone and controlling for ambient fine particle concentration, children with severe asthma are at a significantly increased risk of experiencing respiratory symptoms.

AUTHOR INFORMATION

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

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REFERENCES

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

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Vol. 287 No. 9, March 6, 2002

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TABLE OF CONTENTS >

Featured Link
- E-mail Alerts

Article Options
- Abstract
- PDF
- Send to a Friend
- Related articles in this issue
- Similar articles in this journal

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- Add to File Drawer
- Download to Citation Manager
- PubMed citation
- Articles in PubMed by
  - Pope III CA
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- ISI Web of Science (264)
- Contact me when this article is cited

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- Pulmonary Diseases, Other
- Occupational and Environmental Medicine
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- Topic Collection Alerts

Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution

C. Arden Pope III, PhD; Richard T. Burnett, PhD; Michael J. Thun, MD; Eugenia E. Calle, PhD; Daniel Krewski, PhD; Kazuhiko Ito, PhD; George D. Thurston, ScD

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ABSTRACT

Context Associations have been found between day-to-day particulate air pollution and increased risk of various adverse health outcomes, including cardiopulmonary mortality. However, studies of health effects of long-term particulate air pollution have been less conclusive.

Objective To assess the relationship between long-term exposure to fine particulate air pollution and all-cause, lung cancer, and cardiopulmonary mortality.

Design, Setting, and Participants Vital status and cause of death data were collected by the American Cancer Society as part of the Cancer Prevention II study, an ongoing prospective mortality study, which enrolled approximately 1.2 million adults in 1982. Participants completed a questionnaire detailing individual risk factor data (age, sex, race, weight, height, smoking history, education, marital status, diet, alcohol consumption, and occupational exposures). The risk factor data for approximately 500 000 adults were linked with air pollution data for metropolitan areas throughout the United States and combined with vital status and cause of death data through December 31, 1998.

Main Outcome Measure All-cause, lung cancer, and cardiopulmonary mortality.

Results Fine particulate and sulfur oxide–related pollution were associated with all-cause, lung cancer, and cardiopulmonary mortality. Each 10-μg/m^3 elevation in fine particulate air pollution was associated with approximately a 4%, 6%, and 8% increased risk of all-cause, cardiopulmonary, and lung cancer mortality, respectively. Measures of coarse particle fraction and total suspended particles were not consistently associated with mortality.

Conclusion Long-term exposure to combustion-related fine particulate air pollution is an important environmental risk factor for cardiopulmonary and lung cancer mortality.

INTRODUCTION

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

Based on several severe air pollution events,[1-3] a temporal correlation between extremely high concentrations of particulate and sulfur oxide air pollution and acute increases in mortality was well established by the 1970s. Subsequently, epidemiological studies published between 1989 and 1996 reported health effects at unexpectedly low concentrations of particulate air pollution.[4] The convergence of data from these studies, while controversial,[5] prompted serious reconsideration of standards and health guidelines[6-10] and led to a long-term research program designed to analyze health-related effects due to particulate pollution.[11-13] In 1997, the Environmental Protection Agency adopted new ambient air quality standards that would impose regulatory limits on fine particles measuring less than 2.5 μm in diameter ($PM_{2.5}$). These new standards were challenged by industry groups, blocked by a federal appeals court, but ultimately upheld by the US Supreme Court.[14]

Although most of the recent epidemiological research has focused on effects of short-term exposures, several studies suggest that long-term exposure may be more important in terms of overall public health.[4] The new standards for long-term exposure to $PM_{2.5}$ were originally based primarily on 2 prospective cohort studies,[15-16] which evaluated the effects of long-term pollution exposure on mortality. Both of these studies have been subjected to much scrutiny,[5] including an extensive independent audit and reanalysis of the original data.[17] The larger of these 2 studies linked individual risk factor and vital status data with national ambient air pollution data.[16] Our analysis uses data from the larger study and (1) doubles the follow-up time to more than 16 years and triples the number of deaths; (2) substantially expands exposure data, including gaseous copollutant data and new $PM_{2.5}$ data, which have been collected since the promulgation of the new air quality standards; (3) improves control of occupational exposures; (4) incorporates dietary variables that account for total fat consumption, and consumption of vegetables, citrus, and high-fiber grains; and (5) uses recent advances in statistical modeling, including the incorporation of random effects and nonparametric spatial smoothing components in the Cox proportional hazards model.

METHODS

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

Study Population

The analysis is based on data collected by the American Cancer Society (ACS) as part of the Cancer Prevention Study II (CPS-II), an ongoing prospective mortality study of approximately 1.2 million adults.[18-19] Individual participants were enrolled by ACS volunteers in the fall of 1982. Participants resided in all 50 states, the District of Columbia, and Puerto Rico, and were generally friends, neighbors, or acquaintances of ACS volunteers. Enrollment was restricted to persons who were aged 30 years or older and who were members of households with at least 1 individual aged 45 years or older. Participants completed a confidential questionnaire, which included questions about age, sex, weight, height, smoking history, alcohol use, occupational exposures, diet, education, marital status, and other characteristics.

Vital status of study participants was ascertained by ACS volunteers in September of the following years: 1984, 1986, and 1988. Reported deaths were verified with death certificates. Subsequently, through December 31, 1998, vital status was ascertained through automated linkage of the CPS-II study population with the National Death Index.[19] Ascertainment of deaths was more than 98% complete for the period of 1982-1988 and 93% complete after 1988.[19] Death certificates or codes for cause of death were obtained for more than 98% of all known deaths. Cause of death was coded according to the *International Classification of Diseases, Ninth Revision (ICD-9)*. Although the CPS-II cohort included approximately 1.2 million participants with adequate questionnaire and cause-of-death data, our analysis was restricted to those participants who resided in US metropolitan areas with available pollution data. The actual size of the analytic cohort varied depending on the number of metropolitan areas for which pollution data were available. Table 1 provides the number of metropolitan areas and participants available for each source of pollution data.

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[in a new window]

Table 1. Summary of Alternative Pollution Indices*

Air Pollution Exposure Estimates

Each participant was assigned a metropolitan area of residence based on address at time of enrollment and 3-digit ZIP code area.[20] Mean (SD) concentrations of air pollution for the metropolitan areas were compiled from various primary data sources (Table 1). Many of the particulate pollution indices, including $PM_{2.5}$, were available from data from the Inhalable Particle Monitoring Network for 1979-1983 and data from the National Aerometric Database for 1980-1981, periods just prior to or at the beginning of the follow-up period. An additional data source was the Environmental Protection Agency Aerometric Information

Retrieval System (AIRS). The mean concentration of each pollutant from all available monitoring sites was calculated for each metropolitan area during the 1 to 2 years prior to enrollment.[17]

Additional information on ambient pollution during the follow-up period was extracted from the AIRS database as quarterly mean values for each routinely monitored pollutant for 1982 through 1998. All quarterly averages met summary criteria imposed by the Environmental Protection Agency and were based on observations made on at least 50% of the scheduled sampling days at each site. The quarterly mean values for all stations in each metropolitan area were calculated across the study years using daily average values for each pollutant except ozone. For ozone, daily 1-hour maximums were used and were calculated for the full year and for the third quarter only (ie, July, August, September). While gaseous pollutants generally had recorded data throughout the entire follow-up period of interest, the particulate matter monitoring protocol changed in the late 1980s from total suspended particles to particles measuring less than 10 μm in diameter (PM_{10}), resulting in the majority of total suspended particle data being available in the early to mid-1980s and PM_{10} data being mostly available in the early to mid-1990s.

As a consequence of the new $PM_{2.5}$ standard, a large number of sites began collecting $PM_{2.5}$ data in 1999. Daily $PM_{2.5}$ data were extracted from the AIRS database for 1999 and the first 3 quarters of 2000. For each site, quarterly averages for each of the 2 years were computed. The 4 quarters were averaged when at least 1 of the 2 corresponding quarters for each year had at least 50% of the sixth-day samples and at least 45 total sampling days available. Measurements were averaged first by site and then by metropolitan area. Although no network of $PM_{2.5}$ monitoring existed in the United States between the early 1980s and the late 1990s, the integrated average of $PM_{2.5}$ concentrations during the period was estimated by averaging the $PM_{2.5}$ concentration for early and later periods.

Mean sulfate concentrations for 1980-1981 were available for many cities based on data from the Inhalable Particle Monitoring Network and the National Aerometric Database. Recognizing that sulfate was artifactually overestimated due to glass fiber filters used at that time, season and region-specific adjustments were made.[17] Since few states analyzed particulate samples for sulfates after the early 1980s, individual states were directly contacted for data regarding filter use. Ion chromatography was used to analyze PM_{10} filters and this data could be obtained from metropolitan areas across the United States. Filters were collected for a single reference year (1990) in the middle of the 1982-1998 study period. The use of quartz filters virtually eliminated the historical overestimation of sulfate. Mean sulfate concentrations for 1990 were estimated using sulfate from AIRS, data reported directly from individual states, and analysis of archived filters.

Statistical Analysis

The basic statistical approach used in this analysis is an extension of the standard Cox proportional hazards survival model,[21] which has been used for risk estimates of pollution-related mortality in previous longitudinal cohort studies.[15-16] The standard Cox model implicitly assumes that observations are statistically independent after controlling for available risk factors, resulting in 2

concerns with regard to risk estimates of pollution-related mortality.[22] First, if the assumption of statistical independence is not valid, the uncertainty in the risk estimates of pollution-related mortality may be misstated. Second, even after controlling for available risk factors, survival times of participants living in communities closer together may be more similar than participants living in communities farther apart, which results in spatial autocorrelation. If this spatial autocorrelation is due to missing or systematically mismeasured risk factors that are spatially correlated with air pollution, then the risk estimates of pollution-related mortality may be biased due to inadequate control of these factors. Therefore, in this analysis, the Cox proportional hazards model was extended by incorporating a spatial random-effects component, which provided accurate estimates of the uncertainty of effect estimates. The model also evaluated spatial autocorrelation and incorporated a nonparametric spatial smooth component (to account for unexplained spatial structure). A more detailed description of this modeling approach is provided elsewhere.[22]

The baseline analysis in this study estimated adjusted relative risk (RR) ratios for mortality by using a Cox proportional hazards model with inclusion of a metropolitan-based random-effects component. Model fitting involved a 2-stage process. In the first stage, survival data were modeled using the standard Cox proportional hazards model, including individual level covariates and indicator variables for each metropolitan area (without pollution variables). Output from stage 1 provided estimates of the metropolitan-specific logarithm of the RRs of mortality (relative to an arbitrary reference community), which were adjusted for individual risk factors. The correlation between these values, which was induced by using the same reference community, was then removed.[23] In the second stage, the estimates of adjusted metropolitan-specific health responses were related to fine particulate air pollution using a linear random-effects regression model.[24] The time variable used in the models was survival time from the date of enrollment. Survival times of participants who did not die were censored at the end of the study period. To control for age, sex, and race, all of the models were stratified by 1-year age categories, sex, and race (white vs other), which allowed each category to have its own baseline hazard. Models were estimated for all-cause mortality and for 3 separate mortality categories: cardiopulmonary (*ICD-9* 401-440 and 460-519), lung cancer (*ICD-9* 162), and all others.

Models were estimated separately for each of the 3 fine particle variables, $PM_{2.5}$ (1979-1983), $PM_{2.5}$ (1999-2000), and $PM_{2.5}$ (average). Individual level covariates were included in the models to adjust for various important individual risk factors. All of these variables were classified as either indicator (ie, yes/no, binary, dummy) variables or continuous variables. Variables used to control for tobacco smoke, for example, included both indicator and continuous variables. The smoking indicator variables included: current cigarette smoker, former cigarette smoker, and a pipe or cigar smoker only (all vs never smoking) along with indicator variables for starting smoking before or after age 18 years. The continuous smoking variables included: current smoker's years of smoking, current smoker's years of smoking squared, current smoker's cigarettes per day, current smoker's cigarettes per day squared, former smoker's years of smoking, former smoker's years of smoking squared, former smoker's cigarettes per day, former smoker's cigarettes per day squared, and the number of hours per day exposed to passive cigarette smoke.

To control for education, 2 indicator variables, which indicated completion of high school or education beyond high school, were included. Marital status variables included indicator variables for single and other vs married. Both body mass index (BMI) values and BMI values squared were included as continuous variables. Indicator variables for beer, liquor, and wine drinkers and

nonresponders vs nondrinkers were included to adjust for alcohol consumption. Occupational exposure was controlled for using various indicator variables: regular occupational exposure to asbestos, chemicals/acids/solvents, coal or stone dusts, coal tar/pitch/asphalt, diesel engine exhaust, or formaldehyde, and additional indicator variables that indicated 9 different rankings of an occupational dirtiness index that has been developed and described elsewhere.[17, 25] Two diet indices that accounted for fat consumption and consumption of vegetables, citrus, and high-fiber grains were derived based on information given in the enrollment questionnaire.[18] Quintile indicator variables for each of these diet indices were also included in the models.[18]

In addition to the baseline analysis, several additional sets of analysis were conducted. First, to more fully evaluate the shape of the concentration-response function, a robust locally weighted regression smoother[26] (within the generalized additive model framework[27]) was used to estimate the relationship between particulate air pollution and mortality in the second stage of model fitting. Second, the sensitivity of the fine particle mortality risk estimates compared with alternative modeling approaches and assumptions was evaluated. Standard Cox proportional hazards models were fit to the data including particulate air pollution as a predictor of mortality and sequentially adding (in a controlled forward stepwise process) groups of variables to control for smoking, education, marital status, BMI, alcohol consumption, occupational exposures, and diet.

In addition, to evaluate the sensitivity of the estimated pollution effect while more aggressively controlling for spatial differences in mortality, a 2-dimensional term to account for spatial trends was added to the models and was estimated using a locally weighted regression smoother. The "span" parameter, which controls the complexity of the surface smooth, was set at 3 different settings to allow for increasingly aggressive fitting of the spatial structure. These included a default span of 50%, the span that resulted in the lowest unexplained variance in mortality rate between metropolitan areas, and the span that resulted in the strongest evidence (highest *P* value) to suggest no residual spatial structure. The risk estimates and SEs (and thus the confidence intervals) were estimated using generalized additive modeling[27] with S-Plus statistical software,[28] which provides unbiased effect estimates, but may underestimate SEs if there is significant spatial autocorrelation and significant correlations between air pollution and the smoothed surface of mortality. Therefore, evidence of spatial autocorrelation was carefully evaluated and tested using the Bartlett test.[29] The correlations of residual mortality with distance between metropolitan areas were graphically examined.

Analyses were also conducted of effect modification by age, sex, smoking status, occupational exposure, and education. Finally, models were fit using a variety of alternative pollution indices, including gaseous pollutants. Specifically, models were estimated separately for each of the pollution variables listed in Table 1, while also including all of the other risk factor variables.

RESULTS

Fine particulate air pollution generally declined in the United States during the follow-up period of this study. Figure 1 plots mean $PM_{2.5}$ concentrations for 1999-2000 over mean $PM_{2.5}$ concentrations for 1979-

Jump to Section
- Top
- Introduction
- Methods
-

Results
- Comment
- Author information
- References

1983 for the 51 cities in which paired data were available. The concentrations of $PM_{2.5}$ were lower in 1999-2000 than in 1979-1983 for most cities, with the largest reduction observed in the cities with the highest concentrations of pollution during 1979-1983. Mean $PM_{2.5}$ levels in the 2 periods were highly correlated (r = 0.78). The rank ordering of cities by relative pollution levels remained nearly the same. Therefore, the relative levels of fine particle concentrations were similar whether based on measurements at the beginning of the study period, shortly following the study period, or an average of the 2.

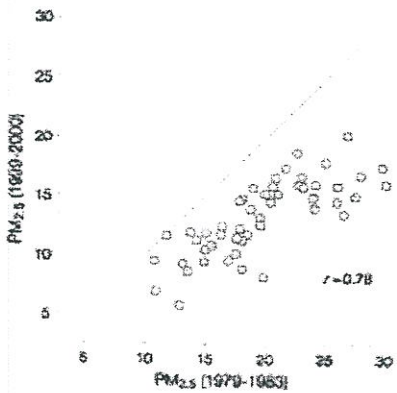

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Figure 1. Mean Fine Particles Measuring Less Than 2.5 μm in Diameter ($PM_{2.5}$)

Mean $PM_{2.5}$ concentrations in micrograms per meters cubed for 1999-2000 are plotted along with concentrations for 1979-1983 for the 51 metropolitan areas with paired pollution data. The dotted line is a reference 45°-equality line.

As reported in Table 2, all 3 indices of fine particulate air pollution were associated with all-cause, cardiopulmonary, and lung cancer mortality, but not mortality from all other causes combined. Figure 2 presents the nonparametric smoothed exposure response relationships between cause-specific mortality and $PM_{2.5}$ (average). The log RRs for all-cause, cardiopulmonary, and lung cancer mortality increased across the gradient of fine particulate matter. Goodness-of-fit tests indicated that the associations were not significantly different from linear associations (P>.20).

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Table 2. Adjusted Mortality Relative Risk (RR) Associated With a 10-μg/m^3 Change in Fine Particles Measuring Less Than 2.5 μm in Diameter

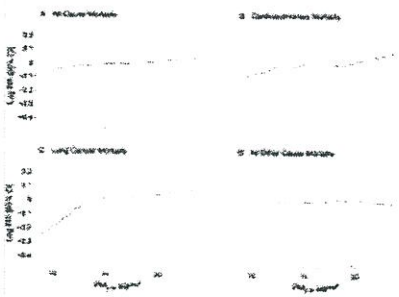

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Figure 2. Nonparametric Smoothed Exposure Response Relationship

Vertical lines along x-axes indicate rug or frequency plot of mean fine particulate pollution; $PM_{2.5}$, mean fine particles measuring less than 2.5 μm in diameter; RR, relative risk; and CI, confidence interval.

The fine particle mortality RR ratios from various alternative modeling approaches and assumptions are presented in Figure 3. After controlling for smoking, education, and marital status, the controlled forward stepwise inclusion of additional covariates had little influence on the estimated associations with fine particulate air pollution on cardiopulmonary and lung cancer mortality. As expected, cigarette smoking was highly significantly associated with elevated risk of all-cause, cardiopulmonary, and lung cancer mortality ($P<.001$). Estimated RRs for an average current smoker (men and women combined, 22 cigarettes/day for 33.5 years, with initiation before age 18 years) were equal to 2.58, 2.89, and 14.80 for all-cause, cardiopulmonary, and lung cancer mortality, respectively. Statistically significant, but substantially smaller and less robust associations, were also observed for education, marital status, BMI, alcohol consumption, occupational exposure, and diet variables. Although many of these covariates were also statistically associated with mortality, the risk estimates of pollution-related mortality were not highly sensitive to the inclusion of these additional covariates.

Figure 3. Mortality Relative Risk (RR) Ratio Associated With 10-μg/m^3 Differences of $PM_{2.5}$ Concentrations

Data presented are for 1979-1983 for the different causes of death, with various levels of controlling for individual risk factors, and using alternative modeling approaches. The 3 models with spatial smoothing allow for increasingly aggressive fitting of the spatial structure. Plus sign indicates model included previous variables (ie, smoking included stratification by age, sex, and race); $PM_{2.5}$, mean fine particles measuring less than 2.5 μm in diameter; and CI, confidence interval.

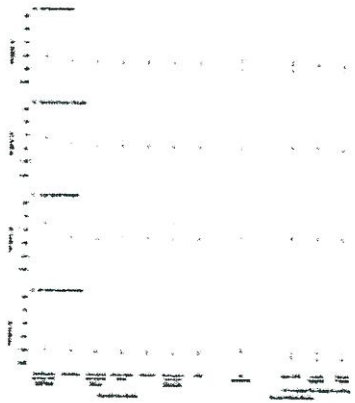

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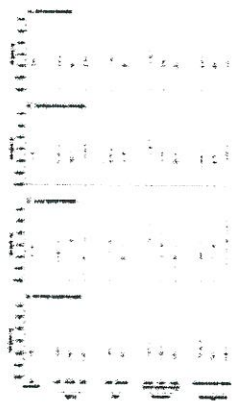
Figure 3 also demonstrates that the introduction of the random-effects component to the model resulted in larger SEs of the estimates and, therefore, somewhat wider 95% confidence intervals. There was no evidence of statistically significant spatial autocorrelation in the survival data based on the Bartlett test ($P>.20$) after controlling for fine particulate air pollution and the various individual risk factors. Furthermore, graphical examination of the correlations of the residual mortality with distance between metropolitan areas did not reveal significant spatial autocorrelation (results not shown). Nevertheless, the incorporation of spatial smoothing was included to further investigate the robustness of the estimated particulate pollution effect. Effect estimates were not highly sensitive to the incorporation of spatial smoothing to account for regional clustering or other spatial patterns in the data.

Figure 4 presents fine particle air pollution–related mortality RR ratios after stratifying by age, sex, education, and smoking status, and adjusting for all other risk factors. The differences across age and sex strata were not generally consistent or statistically significant. However, a consistent pattern emerged from this stratified analysis: the association with particulate pollution was stronger for both cardiopulmonary and lung cancer mortality for participants with less education. Also, for both cardiopulmonary and lung cancer mortality, the RR estimates were higher for nonsmokers.

Figure 4. Adjusted Mortality Relative Risk (RR) Ratio Associated With 10-μg/m^3 Differences of $PM_{2.5}$ Concentrations



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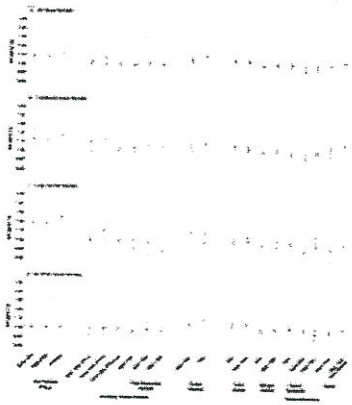
Data presented are for 1979-1983 for the different causes of death stratified by age, sex, education, and smoking status. $PM_{2.5}$ indicates mean fine particles measuring less than 2.5 μm in diameter; CI, confidence interval.

Figure 5 summarizes the associations between mortality risk and air pollutant concentrations listed in Table 1. Statistically significant and relatively consistent mortality associations existed for all measures of fine particulate exposure, including $PM_{2.5}$ and sulfate particles. Weaker less consistent mortality associations were observed with PM_{10} and PM_{15}. Measures of the coarse particle fraction ($PM_{15-2.5}$) and total suspended particles were not consistently associated with mortality. Of the gaseous pollutants, only sulfur dioxide was associated with elevated mortality risk. Interestingly, measures of $PM_{2.5}$ were associated with all-cause cardiopulmonary, and lung cancer mortality, but not with all other mortality. However, sulfur oxide pollution (as measured by sulfate particles and/or sulfur dioxide) was significantly associated with mortality from all other causes in addition to all-cause, cardiopulmonary, and lung cancer mortality.

Figure 5. Adjusted Mortality Relative Risk (RR) Ratio Evaluated at Subject-Weighted Mean Concentrations

$PM_{2.5}$ indicates particles measuring less than 2.5 μm in diameter; PM_{10}, particles measuring less than 10 μm in diameter; PM_{15}, particles measuring less than 15 μm in diameter; $PM_{15-2.5}$, particles measuring between 2.5 and 15 μm in diameter; and CI, confidence interval.



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COMMENT

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

This study demonstrated associations between ambient fine particulate air pollution and elevated risks of both cardiopulmonary and lung cancer mortality. Each 10-μg/m^3 elevation in long-term average $PM_{2.5}$ ambient concentrations was associated with approximately a 4%, 6%, and 8% increased risk of all-cause, cardiopulmonary, and lung cancer mortality, respectively, although the magnitude of the effect somewhat depended on the time frame of pollution monitoring. In addition, this analysis addresses many of the important questions concerning the earlier, more limited analysis of the large CPS-II cohort, including the following issues.

First, does the apparent association between pollution and mortality persist with longer follow-up and as the cohort ages and dies? The present analysis more than doubled the follow-up time to more than 16 years, resulting in approximately triple the number of deaths, yet the associations between pollution and mortality persisted.

Second, can the association between fine particulate air pollution and increased cardiopulmonary and lung cancer mortality be due to inadequate control of important individual risk factors? After aggressively controlling for smoking, the estimated fine particulate pollution effect on mortality was remarkably robust. When the analysis was stratified by smoking status, the estimated pollution effect on both cardiopulmonary and lung cancer mortality was strongest for never smokers vs former or current smokers. This analysis also controlled for education, marital status, BMI, and alcohol consumption. This analysis used improved variables to control for occupational exposures and incorporated diet variables that accounted for total fat consumption, as well as for

consumption of vegetables, citrus, and high-fiber grains. The mortality associations with fine particulate air pollution were largely unaffected by the inclusion of these individual risk factors in the models. The data on smoking and other individual risk factors, however, were obtained directly by questionnaire at time of enrollment and do not reflect changes that may have occurred following enrollment. The lack of risk factor follow-up data results in some misclassification of exposure, reduces the precision of control for risk factors, and constrains our ability to differentiate time dependency.

Third, are the associations between fine particulate air pollution and mortality due to regional or other spatial differences that are not adequately controlled for in the analysis? If there are unmeasured or inadequately modeled risk factors that are different across locations, then spatial clustering will occur. If this clustering is independent or random across metropolitan areas, then the spatial clustering can be modeled by adding a random-effects component to the Cox proportional hazards model as was done in our analysis. The clustering may not be independent or random across metropolitan areas due to inadequately measured or modeled risk factors (either individual or ecological). If these inadequately measured or modeled risk factors are also spatially correlated with air pollution, then biased pollution effects estimates may occur due to confounding. However, in this analysis, significant spatial autocorrelation was not observed after controlling for fine particulate air pollution and the various individual risk factors. Furthermore, to minimize any potential confounding bias, sensitivity analyses, which directly modeled spatial trends using nonparametric smoothing techniques, were conducted. A contribution of this analysis is that it included the incorporation of both random effects and nonparametric spatial smoothing components to the Cox proportional hazards model. Even after accounting for random effects across metropolitan areas and aggressively modeling a spatial structure that accounts for regional differences, the association between fine particulate air pollution and cardiopulmonary and lung cancer mortality persists.

Fourth, is mortality associated primarily with fine particulate air pollution or is mortality also associated with other measures of particulate air pollution, such as PM_{10}, total suspended particles, or with various gaseous pollutants? Elevated mortality risks were associated primarily with measures of fine particulate and sulfur oxide pollution. Coarse particles and gaseous pollutants, except for sulfur dioxide, were generally not significantly associated with elevated mortality risk.

Fifth, what is the shape of the concentration-response function? Within the range of pollution observed in this analysis, the concentration-response function appears to be monotonic and nearly linear. However, this does not preclude a leveling off (or even steepening) at much higher levels of air pollution.

Sixth, how large is the estimated mortality effect of exposure to fine particulate air pollution relative to other risk factors? A detailed description and interpretation of the many individual risk factors that are controlled for in the analysis goes well beyond the scope of this report. However, the mortality risk associated with cigarette smoking has been well documented using the CPS-II cohort.[16] The risk imposed by exposure to fine particulate air pollution is obviously much smaller than the risk of cigarette smoking. Another risk factor that has been well documented using the CPS-II cohort data is body mass as measured by BMI.[30] The Word Health Organization has categorized BMI values between 18.5-24.9 kg/m^2 as normal; 25-29.9 kg/m^2, grade 1 overweight; 30-39.9 kg/m^2, grade 2 overweight; and 40 kg/m^2 or higher, grade 3 overweight.[31] In the present analysis, BMI

values and BMI values squared were included in the proportional hazards models. Consistent with previous ACS analysis,[30] BMI was significantly associated with mortality, optimal BMI was between approximately 23.5 and 24.9 kg/m^2, and the RR of mortality for different BMI values relative to the optimal were dependent on sex and smoking status. For example, the RRs associated with BMI values between 30.0 and 31.9 kg/m^2(vs optimal) would be up to approximately 1.33 for never smokers. Based on these calculations, mortality risks associated with fine particulate air pollution at levels found in more polluted US metropolitan areas are less than those associated with substantial obesity (grade 3 overweight), but comparable with the estimated effect of being moderately overweight (grade 1 to 2).

In conclusion, the findings of this study provide the strongest evidence to date that long-term exposure to fine particulate air pollution common to many metropolitan areas is an important risk factor for cardiopulmonary mortality. In addition, the large cohort and extended follow-up have provided an unprecedented opportunity to evaluate associations between air pollution and lung cancer mortality. Elevated fine particulate air pollution exposures were associated with significant increases in lung cancer mortality. Although potential effects of other unaccounted for factors cannot be excluded with certainty, the associations between fine particulate air pollution and lung cancer mortality, as well as cardiopulmonary mortality, are observed even after controlling for cigarette smoking, BMI, diet, occupational exposure, other individual risk factors, and after controlling for regional and other spatial differences.

AUTHOR INFORMATION

Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

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Analysis and interpretation of data: Pope, Burnett, Krewski, Thurston.

Drafting of the manuscript: Pope, Burnett, Ito, Thurston.

Critical revision of the manuscript for important intellectual content: Pope, Thun, Calle, Krewski, Thurston.

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Obtained funding: Pope, Thun, Thurston.

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Study supervision: Pope, Krewski.

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Jump to Section
- Top
- Introduction
- Methods
- Results
- Comment
- Author information
- References

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Verrier et al.
Circulation 2002;106:890-892.
FULL TEXT

On the Use of Generalized Additive Models in Time-Series Studies of Air Pollution and Health
Dominici et al.
Am. J. Epidemiol. 2002;156:193-203.
ABSTRACT | FULL TEXT

Expanding the health care debate
Suzuki
Can Med Assoc J 2002;166:1678-1679.
FULL TEXT

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Appendix C

Biological Resource Reports

- Assessment of "Waters of the U.S.", Including Wetlands
- Biological Resources Assessment for the Reynolds Ranch Development Project

REYNOLDS RANCH DEVELOPMENT PROJECT

Assessment of "Waters of the U.S.," Including Wetlands

MARCH 17, 2006

Prepared for:
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North State Resources, Inc.

TABLE OF CONTENTS

Reynolds Ranch Development Project
Assessment of "Waters of the U.S.," Including Wetlands

1. INTRODUCTION 1

2. BACKGROUND 1

3. ENVIRONMENTAL SETTING 1

4. METHODOLOGY 6

5. RESULTS 6

6. REFERENCES 7

FIGURES

Figure 1 Study Area 2
Figure 2 Aerial Photograph 3

APPENDICES

Appendix A Soils Unit Map
Appendix B Delineated Feature
Appendix C Wetland Data Form

REYNOLDS RANCH DEVELOPMENT PROJECT

Assessment of "Waters of the U.S.," Including Wetlands

1. INTRODUCTION

North State Resources, Inc. (NSR) has conducted an assessment of "waters of the U.S.," including wetlands for the 234± acre Reynolds Ranch Development Project study area (study area). The proposed Reynolds Ranch Development Project (proposed project) is an approximately 220± acre mixed-use development. It includes low, medium, and high density residential areas; senior housing; retail commercial; office space; a school; and open space and agricultural greenbelt areas. The proposed project would be located in San Joaquin County, near the southeastern edge of the City of Lodi. This location is adjacent to existing residential development on the north and provides easy access to State Route 99.

2. BACKGROUND

a) **Location*:*** The study area is located in San Joaquin County, near the southeast portion of the City of Lodi. This location corresponds to a portion of Section 24, Township 3 North, Range 6 East of the *Lodi South, California*, U.S. Geological Survey (USGS) 7.5-minute quadrangle. The location of the study area is shown on a USGS 7.5-minute topographic map in Figure 1. An aerial photograph of the study area is shown in Figure 2.

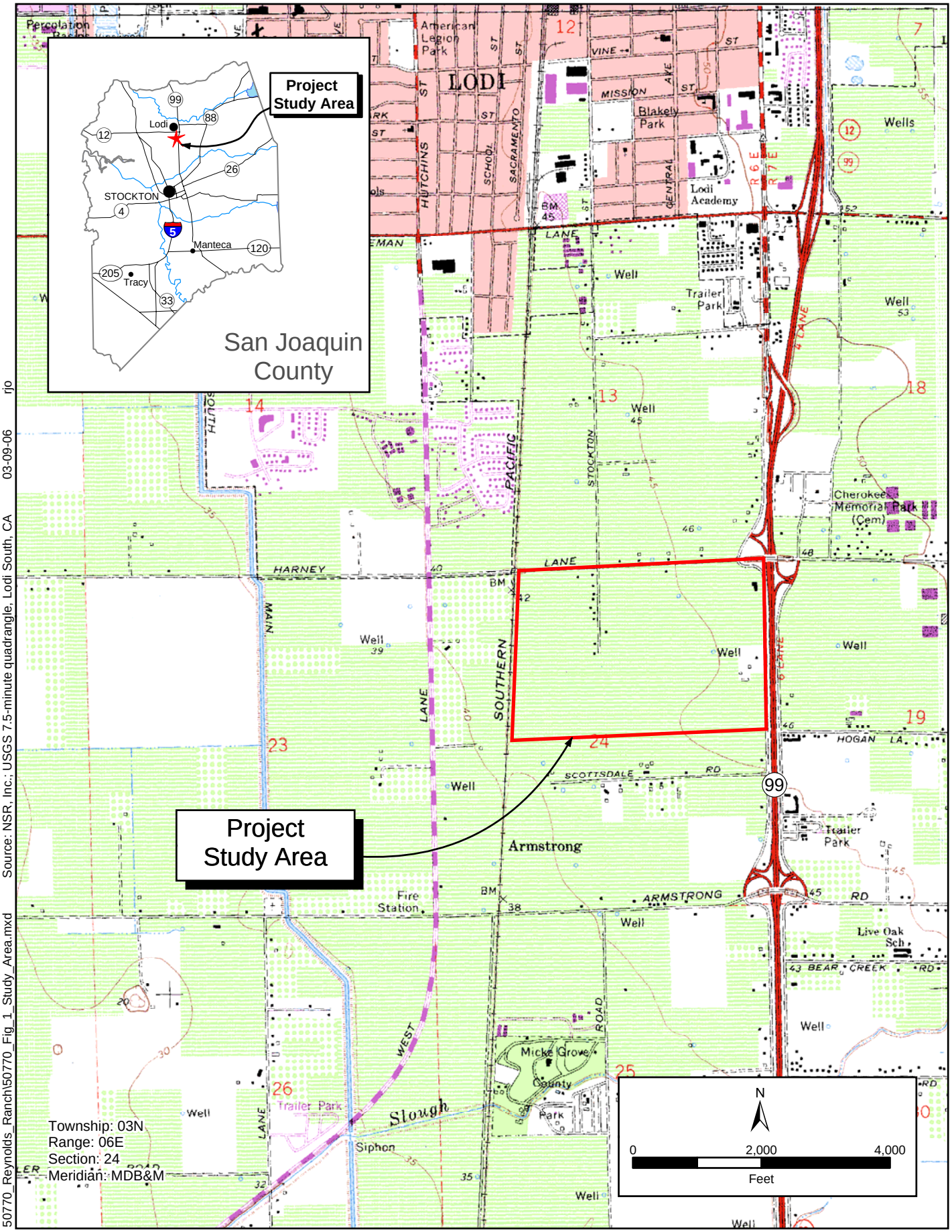
b) **Acreage:** The study area encompasses 234± acres.

c) **Proximity to major highways and streets:** The study area is bounded by State Route 99 to the east, the Union Pacific Railroad to the west, and Harney Lane to the north.

d) **USGS Hydrologic Unit:** The study area is located within the Lower Cosumnes – Lower Mokelumne USGS Hydrologic Map Unit [Map Unit Number 18040005] (U.S. Environmental Protection Agency 2006).

3. ENVIRONMENTAL SETTING

a) **Current/Surrounding Land Use:** The study area primarily consists of vineyards. There are also scattered rural residences, a small area of established almond orchard, fallow agricultural land, and a Moose Lodge building and appurtenances. Surrounding land uses are suburban residential, rural residential, and commercial.



50770_Reynolds_Ranch\50770_Fig_1_Study_Area.mxd Source: NSR, Inc.; USGS 7.5-minute quadrangle, Lodi South, CA 03-09-06 rjo

North State Resources, Inc.

Reynolds Ranch Development Project

Figure 1
Location of Project Study Area

50770_Reynolds_Ranch\50770_Fig_3_Soils.mxd Source: NSR, Inc.; USGS DOQQ, Lodi South, CA 03-09-06 rjo

North State Resources, Inc.

Reynolds Ranch Development Project

Figure 2
Aerial Photograph

b) **Site Elevation:** The approximate elevation at the study area is 40-50 feet above mean sea level.

c) **Climate:**

- ***Type:*** Mediterranean with cool, wet winters and hot, dry summers.
- ***Precipitation:*** Average annual precipitation is 18 inches, most of which occurs as rain between November 1 and April 30 (Western Regional Climate Center 2005).
- ***Air temperature:*** Air temperatures range between an average January high of 54º F and an average of 91º F during July. Daily high temperatures commonly exceed 100º F during the summer. The year-round average high is approximately 74º F (Western Regional Climate Center 2005).
- ***Growing season:*** The average length of the 28º F growing season is between 263 and 337 days (U.S. Department of Agriculture 1992).
- **Site Topography/Landscape:** Topography within the study area is nearly level.

e) **Hydrology/Hydrologic Features/Hydrologic Connectivity:** There is a single drainage swale in the northeastern corner of the study area. This drainage swale receives water from the north via a culvert beneath Harney Lane and channels it east towards State Route 99. There is also an excavated ditch that parallels a portion of the Union Pacific Railroad on the south, and borders the western edge of the study area. The drainage swale and the excavated ditch do not convey water to or from jurisdictional "waters of the U.S." outside of the study area.

f) **Soils:** Soils within the study area are described in the *Soil Survey of San Joaquin County, California* (U.S. Department of Agriculture 1992). A soil survey map of the study area is presented in Appendix A. Four soil map units are recognized within the study area: Acampo sandy loam, 0-2% slopes; Tokay fine sandy loam, 0-2% slopes; Tokay-Urban land complex, 0-2% slopes; and Tujunga loamy sand, 0-2% slopes. These map units are considered non-hydric; however, they may contain hydric inclusions (U.S. Department of Agriculture, Soil Conservation Service 1992). The following provides brief descriptions of these map units:

- ***Acampo sandy loam, 0-2% slopes.*** This is a moderately well-drained, nearly level soil that occurs on low fan terraces. It is deep to a hardpan, and formed in alluvium derived from granitic rock sources. Permeability is moderately rapid and available water capacity is moderate. This soil map unit is non-hydric, but may contain hydric inclusions of Devries soils in basin rims.

- ***Tokay fine sandy loam, 0-2% slopes.*** This is a very deep, well-drained, nearly level soil that occurs on low fan terraces. It formed in alluvium derived from granitic rock sources. Permeability is moderately rapid and available water capacity is high. This soil map unit is non-hydric, but may contain hydric inclusions of Devries soils in basin rims.

- ***Tokay-Urban land complex, 0-2% slopes.*** This is a nearly level map unit that occurs on low fan terraces. This unit is 50% Tokay fine sandy loam and 35% Urban land. The Tokay soil is very deep and well-drained. It formed in alluvium derived from granitic rock sources. Permeability is moderately rapid and available water capacity is high. Urban lands consist of areas covered by roads, driveways, sidewalks, etc. The soil material under these impervious services is similar to that of Tokay fine sandy loam. This soil map unit is non-hydric, but

may contain hydric inclusions of Devries soils in basin rims, or Columbia soils in flood plains.

- ***Tujunga loamy sand, 0-2% slopes.*** This soil is very deep, somewhat excessively drained, and nearly level on flood plains and elongated channel remnants. It formed in alluvium derived from granitic rock sources. Permeability is rapid and available water capacity is low. This soil map unit is non-hydric, but may contain hydric inclusions of Columbia soils in flood plains.

g) **Plant Communities:** Four plant communities occur within the study area: fallow cropland, vineyard, orchard, and urban (Mayer and Laudenslayer 1988). A description of each habitat type is provided below.

- ***Fallow cropland.*** The fallow cropland is highly disturbed and dominated by annual non-native forbs. The dominant plant species in these areas are miner's lettuce (*Claytonia perfoliata* - FAC) and common chickweed (*Stellaria media* - FACU). Associated species include soft brome (*Bromus hordeaceus* - FAC), fiddleneck (*Amsinckia* spp. - NL), filaree (*Erodium* spp. - NL), henbit (*Lamium amplexicaule* - NL), red maids (*Calandrinia ciliata* - FACU), milk thistle (*Silybum marianum* - NL), cocklebur (*Xanthium strumarium* – FAC+), wild radish (*Raphanus raphanistrum* - NL), pineapple weed (*Chamomilla suaveolens* - FACU), and yellow star-thistle (*Centaurea solstitialis* - NL).

- ***Vineyard***. Vineyards within the study area contain both well-established and newly planted grapevines (*Vitis* sp.). The vineyards are generally well-groomed and lack other plant species. However, in some areas other species are present including shepherd's purse (*Capsella bursa-pastoris* – FAC-), common chickweed, filaree, red maids, soft brome, annual bluegrass (*Poa annua* – FACW-), miner's lettuce, fireweed (*Epilobium* sp.), Bermuda grass (*Cynodon dactylon* - FAC), dandelion (*Taraxacum officinale* - FACU), and nightshade (*Solanum* sp.). Adjacent to the vineyards and bordering the study area on the west is a drainage ditch that runs parallel to the Union Pacific Railroad. Plant species associated with this ditch include black mustard (*Brassica nigra* - NL), yellow star-thistle, foxtail barley (*Hordeum jubatum* – FAC+), common chickweed, giant reed (*Arundo donax* - FACW), and fruit trees (*Prunus* sp. - NL).

- ***Orchard.*** Orchard within the study area contains well-established almond trees (*Prunus dulcis*). The orchard appears to be well-groomed and supports only scattered annuals in the understory.

- ***Urban.*** Urban areas within the study area include roadsides, a ball field, rural residences, and a Moose Lodge. These areas are dominated by lawns, horticultural plant species, and weedy annuals. Tree species observed within urban portions of the study area include California walnut (*Juglans californica*), fruit tree (*Prunus* spp.), birch (*Betula* spp.), deodar cedar (*Cedrus deodara*), coast redwood (*Sequoia sempervirens*), Lombardy poplar (*Populus nigra*), orange (*Citrus sinensis*), and olive (*Olea europaea*). Common shrubs and herbaceous species within urban portions of the study area include pampas grass (*Cortaderia selloana*), rose (*Rosa* spp.), narcissus (*Narcissus* spp.), camellia (*Camellia* spp.), alyssum (*Lobularia maritima*), calendula (*Calendula officinalis*), iris (*Iris* sp.), and tulip (*Tulipa* sp.). Species found within the ball field, located behind the Moose Lodge include lanceleaf plantain

(*Plantago lanceolata*), speedwell (*Veronica persica*), vetch (*Vicia* spp.), fireweed (*Epilobium* spp.), blue gum (*Eucalyptus globulus* and *E.* spp.), and golden raintree (*Koelreuteria paniculata*).

4. METHODOLOGY

A field assessment of the study area for the presence/absence of "waters of the U.S.," including wetlands, was performed on March 1, 2006, by NSR biologists Mark Wuestehube and Deborah Stout. The assessment was conducted on foot and all areas were viewed to the degree necessary to determine the presence/absence of jurisdictional features.

The determination of the presence/absence of wetlands was based on field observations of indicators for wetland vegetation, hydrology, and soils. The indicator status for vegetation was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)*, (Reed 1988). Indicators for wetland hydrology and soils were determined using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

The determination of the presence/absence of "other waters" (e.g., streams, jurisdictional drainages), was based on investigating drainage features for the presence/absence of an ordinary high water mark and status as tributaries to navigable "waters of the U.S." or streams tributary to navigable "waters of the U.S." The determination of presence/absence of an ordinary high water mark was made according to definitions provided in U.S. Army Corps of Engineers (ACOE) regulations (33 CFR 328.3 and 33 CFR 328.4).

5. RESULTS

"Waters of the U.S.," including wetlands, do not occur within the study area. No jurisdictional "other waters" or wetland features were identified within the study area, as indicators for tributary status, wetland vegetation, hydrology, and soils were not observed.

The drainage swale in the northeastern corner of the study area was suspect due to the presence of facultative vegetation (i.e., equally likely to occur in wetlands and nonwetlands). Soils were sampled and no hydric soil indicators were observed. The swale does not qualify as "other waters" because it is not tributary to "waters of the U.S.;" it does not qualify as a wetland because hydric soils indicators and hydrology indicators (primary and secondary) are absent. The location of the swale is shown in Appendix B; the completed data form is in Appendix C.

The excavated ditch near the western boundary was dominated by upland plant species. For this reason this feature was not delineated. At the time of the field investigation, neither feature showed evidence of saturation or ponding, although significant rainstorms had passed through the area less than 48 hours previously.

NSR recommends that this report be submitted to the ACOE with a request for a letter stating that no Department of the Army permit would be required for activities occurring within the study area.

6. REFERENCES

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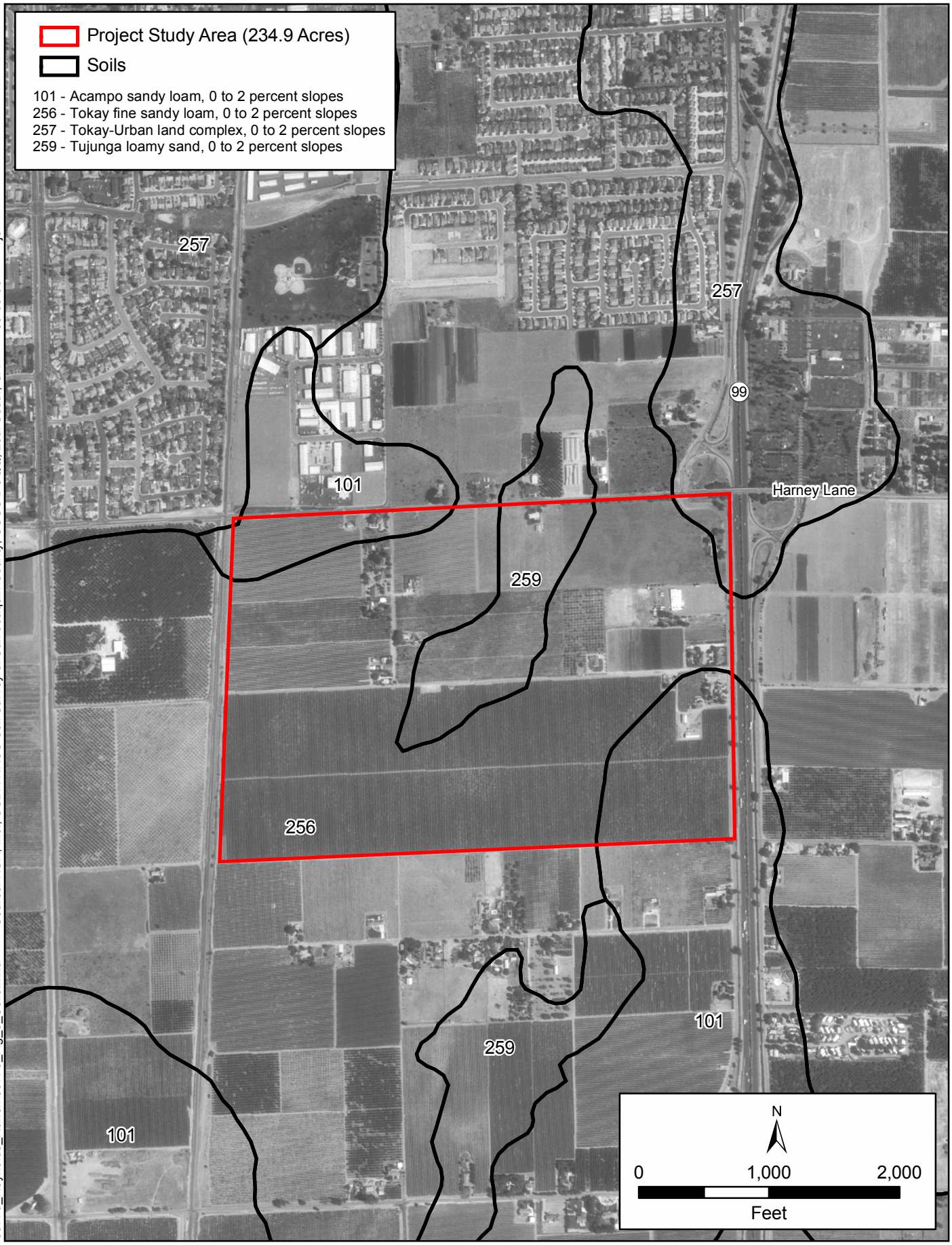
APPENDIX A

Soil Units Map



50770_Reynolds_Ranch\50770_Fig_3_Soils.mxd Source: NSR, Inc.; USDA NRCS Soil Survey of San Joaquin County; USGS DOQQ, Lodi South, CA 03-09-06 rjo

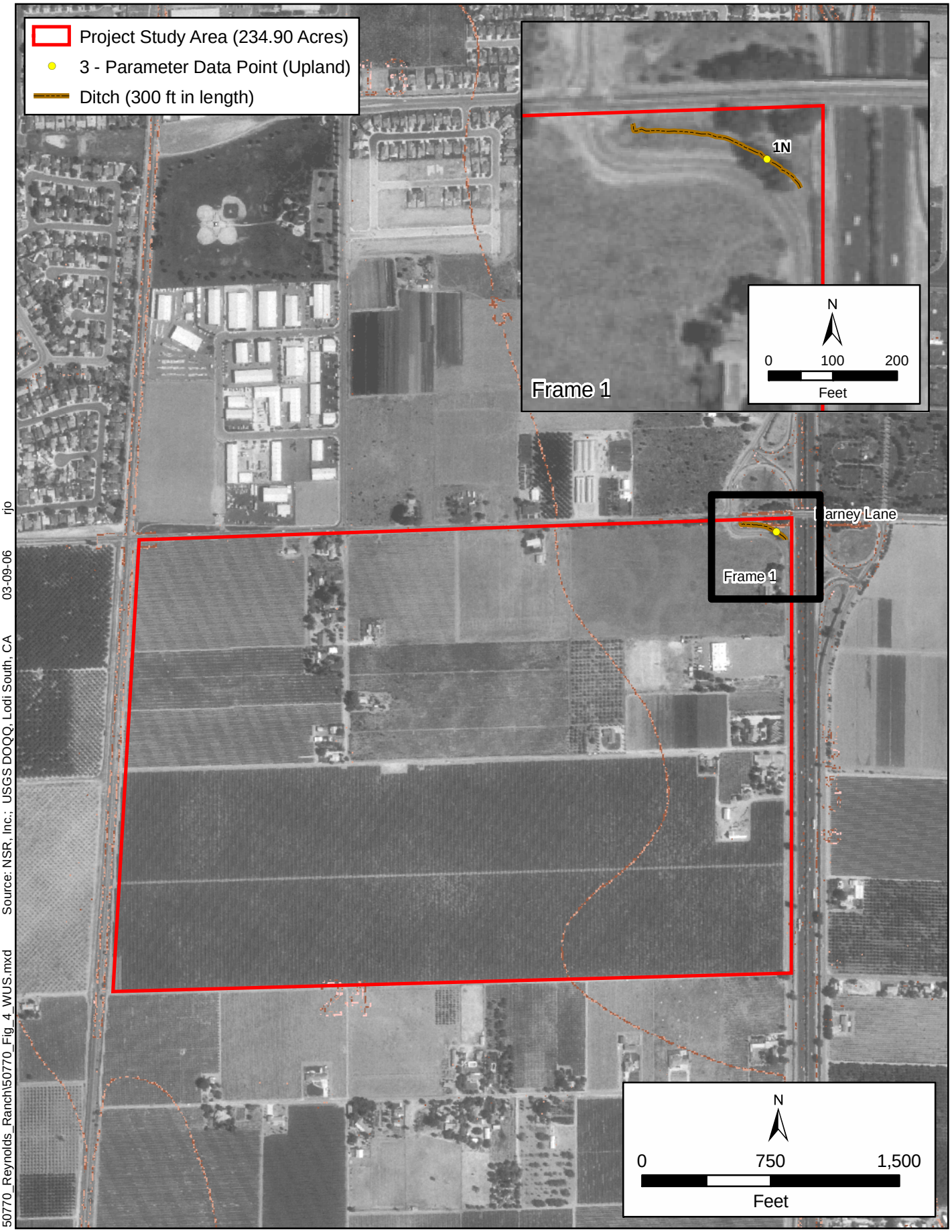
North State Resources, Inc.

Reynolds Ranch Development Project

Soil Map Units

APPENDIX B

Delineated Feature



50770_Reynolds_Ranch\50770_Fig_4_WUS.mxd Source: NSR, Inc.; USGS DOQQ, Lodi South, CA 03-09-06 rjo

North State Resources, Inc.

Reynolds Ranch Development Project

Location of Delineated Feature

APPENDIX C

Wetland Data Form

DATA FORM: ROUTINE WETLAND DETERMINATION | Comm. ID: Upland | Data Point: 1

Project/Site: Reynold's Ranch
Applicant/Owner:
Investigator: Wuestkube / Stout

Date: 3/11/06
County: San Joaquin
State: California

Do normal circumstances exist on the site? (Y) or N
Is the site significantly disturbed (atypical situation)? Y or (N)
Is the area a potential problem area. Y or (N)

Explain:

VEGETATION

Dominant Plant Species	Cover	Stratum	Indicator
1. Bromus hordeaceus	70	h	FAC
2. Hordeum jubatum	30	h	FAC+
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Percent of dominant species that are OBL, FACW or FAC _____

Remarks: other species: Lactuca serriola, Galium sp., Claytonia perfoliata

HYDROLOGY

- ☐ Recorded Data (Describe in Remarks)
  - ☐ steam, lake, or tide gauge
  - ☐ aerial photographs
  - ☐ other
- ☑ No Recorded data available

Field Observation:
Depth of Surface Water: N/A (in.)
Depth of Free Water in Pit: N/A (in.)
Depth of Saturated Soil: N/A (in.)

Wetland Hydrology Indicators

Primary Indicators	Secondary Indicators
☐ inundated	☐ oxidized root channels in upper 12"
☐ saturated in upper 12 "	☐ water-stained leaves
☐ water marks	☐ local soil survey data
☐ drift lines	☐ FAC-neutral test
☐ sediment deposits	☐ other (explain in remarks)
☐ drainage patterns in wetlands	

Remarks: Lacks wetland hydrology. Feature is low-lying linear swale, but no 1° or 2° indicators.

SOILS

Map Unit Name (Series and Phase): Tokay-Urban land complex, 0-2% slopes
Taxonomy (Subgroup):
Hydric Status on SCS Field Office List: Non-hydric w/ hydric inclusions

Drainage Class: WD
Field Observations Confirm Mapped Type? (Y) or N

Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/contrast	Texture, Concretions, Structure, Etc.
12	B	7.5YR 3/4	Ø	Ø	sandy silt loam

Remarks: high chroma Ø mottling no vertical streaking or organic pan Ø high organic matter content in surface

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic odor
- ☐ Aquic moisture regime
- ☐ Reducing conditions
- ☐ Gleyed or low-chroma colors
- ☐ Positive alpha-alpha dipyridyl test
- ☐ Concretions
- ☐ High organic content in surface layer in sandy soil
- ☐ Organic streaking in sandy soils
- ☐ Listed on local hydric soils list
- ☐ Listed on national hydric soils list
- ☐ Other _____

WETLAND DETERMINATION

Hydrophytic vegetation present? Y or (N) **Wetland Hydrology Present?** Y or (N) **Hydric Soils Present?** Y or (N)
Is this sampling Point within a wetland? Y or (N)

Remarks: Feature is low-lying, linear swale. Does not exhibit wetland hydrology or evidence of wetland soil. Does not meet wetland criteria. Large storm ≤ 48 hours previous to sampling.

North State Resources, Inc.

April 3, 2006

WILLDAN
Attn: Mr. Robert Sun, Senior Planner
13191 Crossroads Parkway North, Ste. 405
Industry, California 91746-3497

Subject: Biological Resources Assessment for the Reynolds Ranch Development Project.

Mr. Sun,

North State Resources, Inc. (NSR) has conducted a biological resource assessment to support the planning and design of the proposed 220± acre Reynolds Ranch Development Project (study area). The study area is located in San Joaquin County, California, near the southeastern edge of the City of Lodi. The study area is bounded by State Route 99 to the east, the Union Pacific Railroad to the west, and Harney Lane to the north. The study area location corresponds to Section 24 of Township 03 North and Range 06 East of the *Lodi South, California*, U.S. Geological Survey (USGS) 7.5-minute quadrangle (Figure 1).

Project Description

The proposed Reynolds Ranch is a 220± acre mixed-use development. It includes low, medium, and high density residential areas; senior housing; retail commercial; office space; a school; and open space and agricultural greenbelt areas. Reynolds Ranch would be located at the southeastern edge of the City of Lodi, adjacent to existing residential development on the north with easy access to State Route 99.

Purpose of Assessment

The purpose of this biological resources assessment is to:

- Generally characterize the habitat types present within the study area;
- Determine the presence/absence of suitable habitat for special-status species within the study area; and
- Determine the presence/absence of "waters of the U.S." and wetland habitats within the study area.

Environmental Setting

The study area is located in the southern Sacramento Valley. The topography of this region is flat. Elevations range from approximately 40 to 50 feet above mean sea level. The climate in the general area is characterized as Mediterranean with cool, wet winters and hot, dry summers. Precipitation is on average 18 inches annually, most of which occurs as rain between November 1 and April 30 (Western Regional Climate Center 2005). Air temperatures range between an average January low of 37º F and an average high of 91º F during July. Daily high temperatures commonly exceed 100º F during the summer. The year-round average high is approximately 74º F and the year-round average annual low is 43º F (Western Regional Climate Center 2005). The *Soil Survey of San Joaquin County, California* (U.S. Department of Agriculture 1992) identifies four mapping units within the study area: Acampo sandy loam, 0 to 2% slopes; Tokay fine sandy loam, 0-2% slopes; Tokay-Urban land complex, 0-2% slopes; and Tujunga loamy sand, 0-2% slopes.

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The study area is located just west of State Route 99 at the southeastern edge of the City of Lodi. A majority of the study includes planted vineyards, some of which are well established although several areas have been planted recently. The remainder of the study area contains scattered rural residences; a small, established walnut orchard; and some areas of unused cropland. Trees within the study area occur primarily in association with rural residences.

Methodology

Prior to conducting the field assessment, the following information sources were reviewed:

- *Lodi South, California* USGS quadrangle;
- Black and white aerial photography of the study area and vicinity dated September 16, 1998;
- California Department of Fish and Game California Natural Diversity Data Base (CNDDB) records for the *Lodi South, California* USGS quadrangle and the surrounding eight quadrangles (CDFG 2006) (Appendix A);
- U.S. Fish and Wildlife Service (USFWS) list of endangered and threatened species that may occur in or be affected by projects in the *Lodi South, California* USGS quadrangle (Appendix B);
- Pertinent literature, including: *Inventory of Rare and Endangered Vascular Plants of California* (California Native Plant Society 2001); *The Jepson Manual, Higher Plants of California* (Hickman 1993); *Amphibian and Reptile Species of Special Concern in California* (Jennings and Hayes 1994); *California Birds: Their Status and Distribution* (Small 1994); *Bird Species of Special Concern in California* (Remsen 1978); and *Mammalian Species of Special Concern in California* (Williams 1986).

Field assessments of the study area were conducted by NSR biologists Mark Wuestehube and Deborah Stout on March 1 and by Deborah Stout on March 17, 2006. The study area was surveyed by walking the area to assess habitat types, evaluate the potential for the occurrence of special-status species, determine presence or absence of protected tree species, and determine the presence or absence of "waters of the U.S.," wetland habitats, and other sensitive biological resources.

Results

Vegetation Communities

Four vegetation communities occur within the study area: unused cropland, vineyard, orchard, and urban (Figure 2). The unused cropland is highly disturbed and dominated by annual non-native forbs. The dominant plant species in these areas are miner's lettuce (*Claytonia perfoliata*) and common chickweed (*Stellaria media*). Associated species include soft brome (*Bromus hordeaceus*), fiddleneck (*Amsinckia* spp.), filaree (*Erodium* spp.), henbit (*Lamium amplexicaule*), red maids (*Calandrinia ciliate*), milk thistle (*Silybum marianum*), cocklebur (*Xanthium strumarium*), wild radish (*Raphanus raphanistrum*), pineappleweed (*Matricaria matricarioides*), and yellow star-thistle (*Centaurea solstitialis*).

Vineyards within the study area contain both well-established and newly planted grapevines (*Vitis* sp.). The orchard within the study area contains well-established almond trees (*Prunus dulcis*). There are no understory plants associated with the orchard or with many of the vineyards. However, some of the vineyards support an understory of shephard's purse (*Capsella bursa-pastoris*), common chickweed, filaree, red maids, soft brome, annual bluegrass (*Poa annua*), miner's lettuce, fireweed, Bermuda grass (*Cynodon dactylon*), dandelion (*Taraxacum officinale*), and nightshade

(*Solanum* sp.). Adjacent to the vineyards and bordering the study area on the west is a drainage ditch that runs parallel to the Union Pacific Railroad. Plant species associated with this ditch include black mustard (*Brassica nigra*), yellow star-thistle, foxtail barley (*Hordeum jubatum*), common chickweed, giant reed (*Arundo donax*), and fruit trees (*Prunus* sp.).

Urban portions of the study area include roadsides, a ball field, and rural residences. These areas are dominated by lawns, horticultural plant species, and weedy annuals. Tree species observed within the study area include California walnut (*Juglans californica*), fruit trees (*Prunus* spp.), birch (*Betula* spp.), deodar cedar (*Cedrus deodara*), coast redwood (*Sequoia sempervirens*), Lombardy poplar (*Populus nigra*), orange (*Citrus sinensis*), and olive (*Olea europaea*). Common shrubs and herbaceous species within urban portions of the study area include pampas grass (*Cortaderia selloana*), rose (*Rosa* spp.), narcissus (*Narcissus* spp.), camellia (*Camellia* spp.), alyssum (*Lobularia maritima*), calendula (*Calendula officinalis*), iris (*Iris* sp.), and tulip (*Tulipa* sp.). Species found within the ball field, located behind the Elks Lodge include lanceleaf plantain (*Plantago lanceolata*), speedwell (*Veronica persica*), vetch (*Vicia* spp.), fireweed (*Epilobium* spp.), blue gum (*Eucalyptus globulus* and *E.* spp.), and golden raintree (*Koelreuteria paniculata*).

In addition to these vegetation communities, a single, large valley oak (*Quercus lobata*) was observed in the extreme southeastern corner of the study area (Figure 2). The tree was measured to be 38.2 inches diameter at breast height.

CNDDB Query Results

According to CNDDB query results, there are reported occurrences of seven (7) special-status plant and wildlife species within five miles of the study area: burrowing owl (*Athene cunicularia*), midvalley fairy shrimp (*Branchinecta mesovallensis*), Swainson's hawk (*Buteo swainsoni*), vernal pool tadpole shrimp (*Lepidurus packardi*), Sacramento splittail (*Pogonichthys macrolepidotus*), Sanford's arrowhead (*Sagittaria sanfordii*), and giant garter snake (*Thamnophis gigas*) (Figure 3).

Special-Status Species

For the purposes of this assessment, "special-status" is defined to include those species that are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed, or candidates, for listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as species of concern or species of local concern by USFWS, or as species of special concern by CDFG;
- Plants or animals that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA);
- Plants listed as rare under the California Native Plant Protection Act; or
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1B and 2).

A list of regionally occurring special-status plant and wildlife species was compiled based on a review of pertinent literature, the results of the field assessments, a species list obtained from the USFWS (Appendix B), and the results of a CNDDB query of all reported occurrences of special-status species within the *Lodi South, California* USGS quadrangle

and the surrounding eight quadrangles (Appendix A). Additionally, the following documents were reviewed for reference information: the list of *State- and Federally-listed Endangered, Threatened, and Rare Plants of California* (CDFG 2006a); the *California Department of Fish and Game Special Vascular Plants, Bryophytes, and Lichens List* (CDFG 2006b); the *State of California Special Animals List* (CDFG 2006c); and the *List of State- and Federally-listed Endangered and Threatened Animals of California* (CDFG 2006c). Habitat requirements for each special-status species were assessed and compared to the habitats occurring within the study area (Appendix C).

Based upon the review of habitat requirements and the results of the field assessments, the study area provides suitable habitat for eight (8) special-status wildlife species. These species include burrowing owl (*Athene cunicularia hypugaea*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), rufous hummingbird (*Selasphorus rufus*), pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis*).

Burrowing owl

The western burrowing owl inhabits open, dry grasslands and deserts, as well as open stages of pinyon-juniper and ponderosa pine. The nesting season is between February 1 and August 31. Western burrowing owls typically nest in abandoned rodent burrows, particularly those of California ground squirrels, which they modify each year. Burrowing owls forage in open grassland areas adjacent to nest sites. The species has also been documented in open areas near human habitation, especially airports and golf courses. The Central Valley and surrounding foothill regions of California provide year-round habitat for the western burrowing owl.

Swainson's hawk

Swainson's hawk requires large areas of foraging habitat, preferably grassland or pasture habitats. Preferred prey items are voles (*Microtus* sp), gophers, birds, and insects such as grasshoppers. They have also adapted to some croplands, particularly alfalfa, but also hay, grain, tomatoes, beets and other row crops. Crops such as cotton, corn, rice, orchards, and vineyards are not suitable since they either lack suitable prey or the prey is unavailable to the Swainson's hawk due to the crops structure. In the Central Valley, Swainson's hawk is generally tied to riparian habitat for nesting sites.

White-tailed kite

The white-tailed kite can be found in association with the herbaceous and open stages of a variety of habitat types, including open grasslands, meadows, emergent wetlands, and agricultural lands. Nests are constructed near the top of dense oaks, willows, or other tree stands located adjacent to foraging areas. The species forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. White-tailed kite are seldom observed more than 0.5 mi (0.8 km) from an active nest during the breeding season. The white-tailed kite is found year-round in both the coastal zones and lowlands of the Central Valley in California.

California horned lark

California horned larks occur in a variety of open habitats with low, sparse vegetation. They breed in the open in small depressions in the ground. California horned larks are primarily seed eaters but also feed insects to their young. This subspecies is resident in the coastal range and San Joaquin Valley to northern Baja California

Loggerhead shrike

The loggerhead shrike prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches located in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Loggerhead shrikes skewer their prey to thorns or barbs on

barbed-wire fences. The purpose of this trait may be to help kill the prey or to cache the food for latter consumption. Loggerhead shrikes are found in lowlands and foothills throughout California.

Rufous hummingbird
Rufous hummingbird is a common migrant and uncommon summer resident of California. This species utilizes a wide variety of habitats that provide nectar-producing flowers, including valley foothill hardwood, valley foothill hardwood conifer, riparian, and various chaparral habitats in both northward and southward migration; montane riparian, aspen, and high mountain meadows used in southward migration. This species can be found wherever rich nectar sources are located including gardens and orchards.

Pallid bat
The pallid bat is a medium-sized bat that prefers foraging on terrestrial arthropods in dry open grasslands near water and rocky outcroppings or old structures. It may also occur in oak woodlands and at the edge of redwood forests along the coast. Roosting typically occurs in groups. Roosts often occur in caves and mine tunnels, but buildings and trees may be used for day roosts. More open, sites such as buildings, porches, garages, highway bridges, and mines may be used for night roosts. Pallid bats are sensitive to human disturbances at roost sites. The pallid bat occurs throughout much of California.

Greater western mastiff bat
The western mastiff bat, California's largest bat species, is an uncommon resident throughout its range in California. It occurs in the southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through southern California and from the coast eastward to the Colorado Desert. It is found in large open habitats where suitable roost sites are abundant. Roosting habitat primarily occurs in cliffs and rock outcrops, but can also be found in buildings with similar crevices. It feeds primarily on moths and crickets.

Raptor species (birds of prey) and migratory birds, other than those listed as special-status, may potentially nest within the study area. All raptor species, including relatively common species and their nests are protected from take under California Fish and Game Code. Migratory birds and their nests are protected under the Migratory Bird Treaty Act.

No special-status wildlife species were observed within the study area. Incidental observations of wildlife species made during the field assessment are included in Appendix D.

Waters of the U.S. and Wetland Habitats
A formal delineation of waters of the U.S., including wetlands, was conducted concurrently with the field assessment. The delineation found no jurisdictional wetlands or other waters of the U.S. within the study area. Please see *Reynolds Ranch Development Project Assessment of "Waters of the U.S.," Including Wetlands* for additional detail (North State Resources 2006a).

Regulatory Framework

This section lists specific environmental review and consultation requirements and identifies permits and approvals that may be necessary from local, state, and federal agencies prior to construction of the proposed project.

Federal

U.S. Fish and Wildlife Service
Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Most of the birds that may occur within the study area are protected under the MBTA. Therefore, project construction has the potential to directly take the nests, eggs, young, or individuals of protected species. Further, construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests, a violation of the MBTA.

State

California Department of Fish and Game
Birds of Prey

Under Section 3503.5 of the California Fish and Game Code it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. This Code protects raptors that may utilize the study area for foraging.

San Joaquin County

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

San Joaquin County has developed and implemented a Multi-species Habitat Conservation and Open Space Plan (SJMSCP). In accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, the SJMSCP provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan. Pertinent to the Reynolds Ranch Development Project, Permittees of the SJMSCP include San Joaquin County and the City of Lodi. Covered activities include the conversion of Open Space to urban development. Six of the eight special-status species with potential to occur in the study area are covered under the SJMSCP, including burrowing owl, Swainson's hawk, white-tailed kite, loggerhead shrike, California horned lark, greater western mastiff bat. As such, compensation for any project-related impacts to these species may be undertaken by one or a combination of the three mitigation options provided for each covered species, pursuant to the SJMSCP. Rufous hummingbird and pallid bat are not covered under the SJMSCP.

Tree Protection Ordinance

San Joaquin County has a tree ordinance for the purpose of preserving the County's tree resources (San Joaquin County 1995). The ordinance is found in Division 15, Natural Resources Regulations; Chapter 9-1505, Trees. According to Section 9-1505.2, the provisions of the chapter apply to all development projects requiring discretionary approval that have Native Oak Trees, Heritage Oak Trees, or Historical Trees on the property. Division 1 Chapter 9-110, of the San Joaquin County Ordinances defines these as follows:

- ***Heritage Oak Tree.*** "Heritage oak tree" means a native oak tree that has a single trunk diameter of 32 inches or greater measured at four and one-half feet above the average ground elevation of the tree.

- ***Historical Tree.*** "Historical tree" means any tree or groups of trees given special recognition because of the size, age, location, or history. Designation of historical trees shall be made by the Planning Commission following a Public Hearing.
- ***Native Oak Tree***. "Native oak tree" means a valley oak (*Quercus lobata*) with a trunk diameter of six (6) inches to less than thirty-two (32) inches for a single trunk tree…measured four and one-half feet above the average ground elevation of the tree…

According to these definitions, the valley oak tree at the southeastern corner of the study area is a Heritage Oak Tree; diameter at breast height is 38.2 inches. Any planned removal of this tree would be subject to Section 9-1505.3 (Removal Requirements), which requires an approved Improvement Plan application. In addition, removal is allowed only if the Review Authority finds that one of more of the following situations exists: 1) removal is in the public interest; 2) the tree interferes with an existing structure, utility service, or road, and no reasonable alternative exists to correct the interference other than removal; 3) removal is necessitated because the tree is endangering another plant with infection or infestation, and/or 4) the tree interferes with the maintenance of flood control facilities.

According to Section 9-1505.4 (Replacement), removal of any Heritage Oak Tree would require replacement at a ratio of five (5) trees or acorns per Heritage Oak Tree. Replacement stock will be planted and maintained in such a manner as to ensure survival of replacements after three year from date of planting.

If the Heritage Oak Tree is to be retained on site, it must be protected from construction-related damage as described in Section 9-1505.5 (Development Constraints). These constraints include limitations on grade changes, trenching, construction of retaining walls, and paving; and the installation of protective fencing. In addition, any post-construction landscaping that is installed in the study area must be installed in a manner that does not compromise the health of retained Heritage Oak Trees. Landscaping guidelines are described in Section 9-1505.6 (Landscaping) of the Tree Protection Ordinance and include limitations on non-plant landscaping materials, a description of plants permitted, limitations on planting areas, and limitations on irrigation systems (San Joaquin County 1995).

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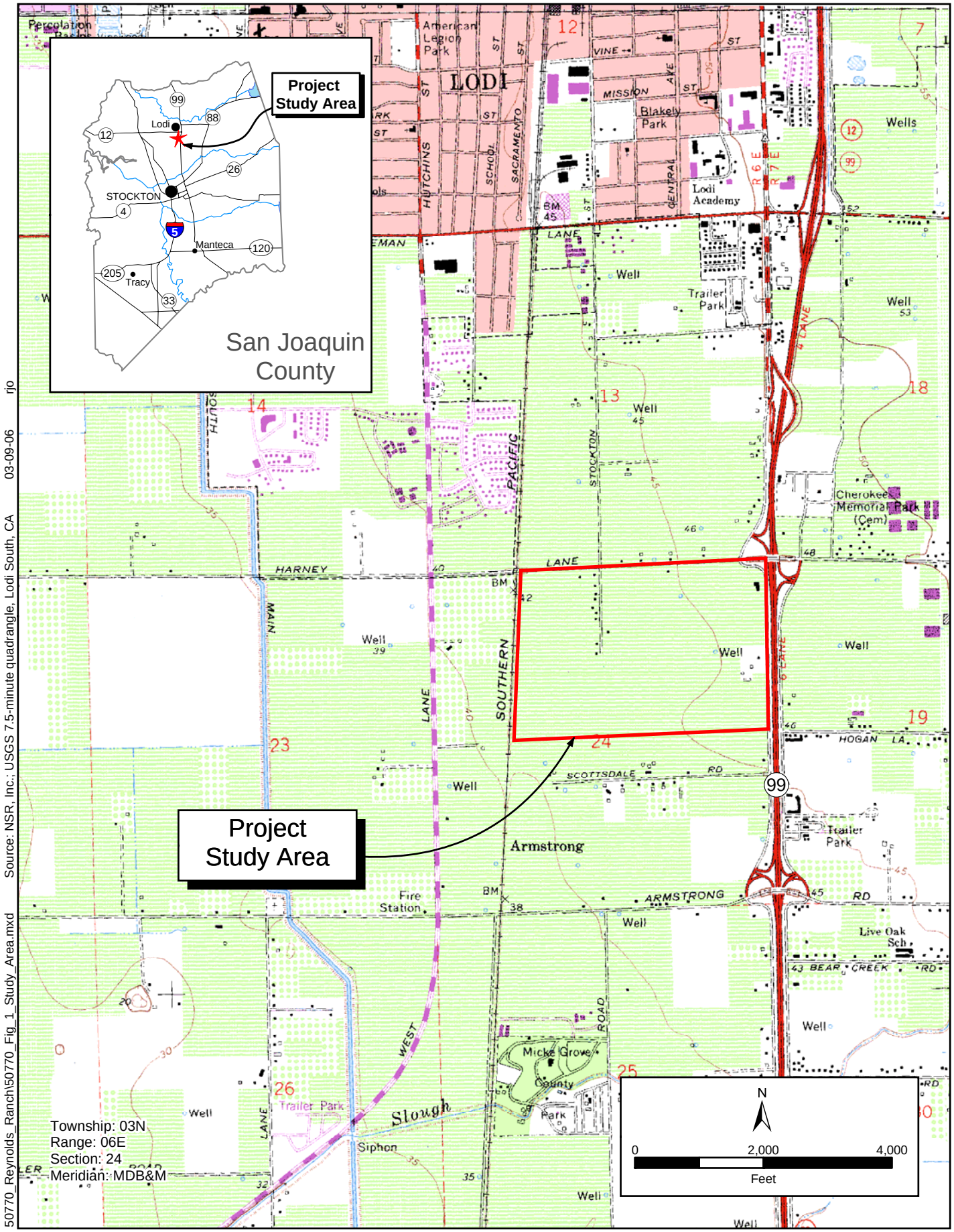
Thank you for this opportunity to assist with your project needs. Please contact me if you have any questions or require additional information. I can be reached by phone at (916) 446-2566 ext. 209 or by e-mail at stout@nsrnet.com.

Sincerely,
North State Resources, Inc.

Deborah Stout

Deborah Stout
Botanist / Environmental Analyst



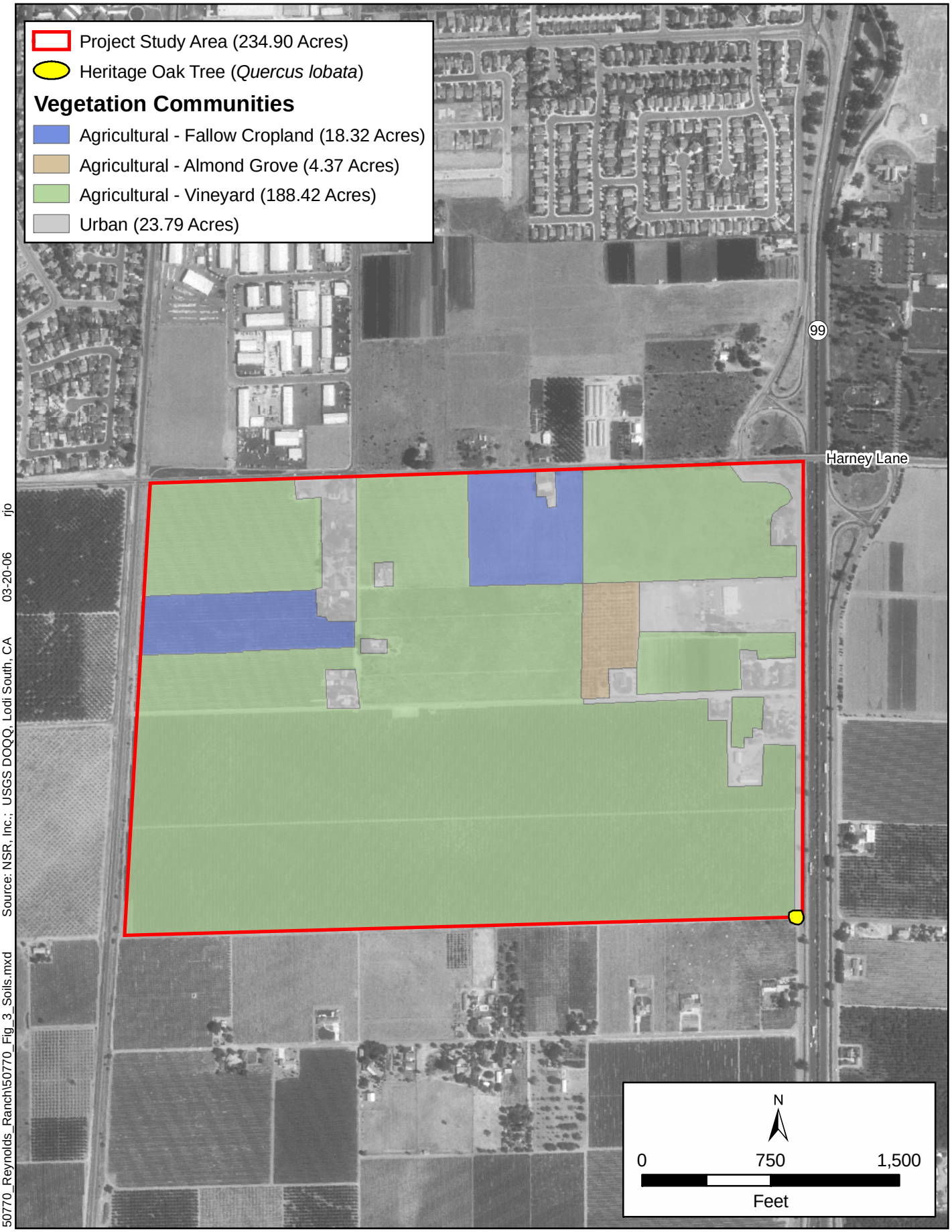
Source: NSR, Inc.; USGS 7.5-minute quadrangle, Lodi South, CA 03-09-06 rjo

50770_Reynolds_Ranch\50770_Fig_1_Study_Area.mxd

North State Resources, Inc.

Reynolds Ranch Development Project

Figure 1
Location of Project Study Area

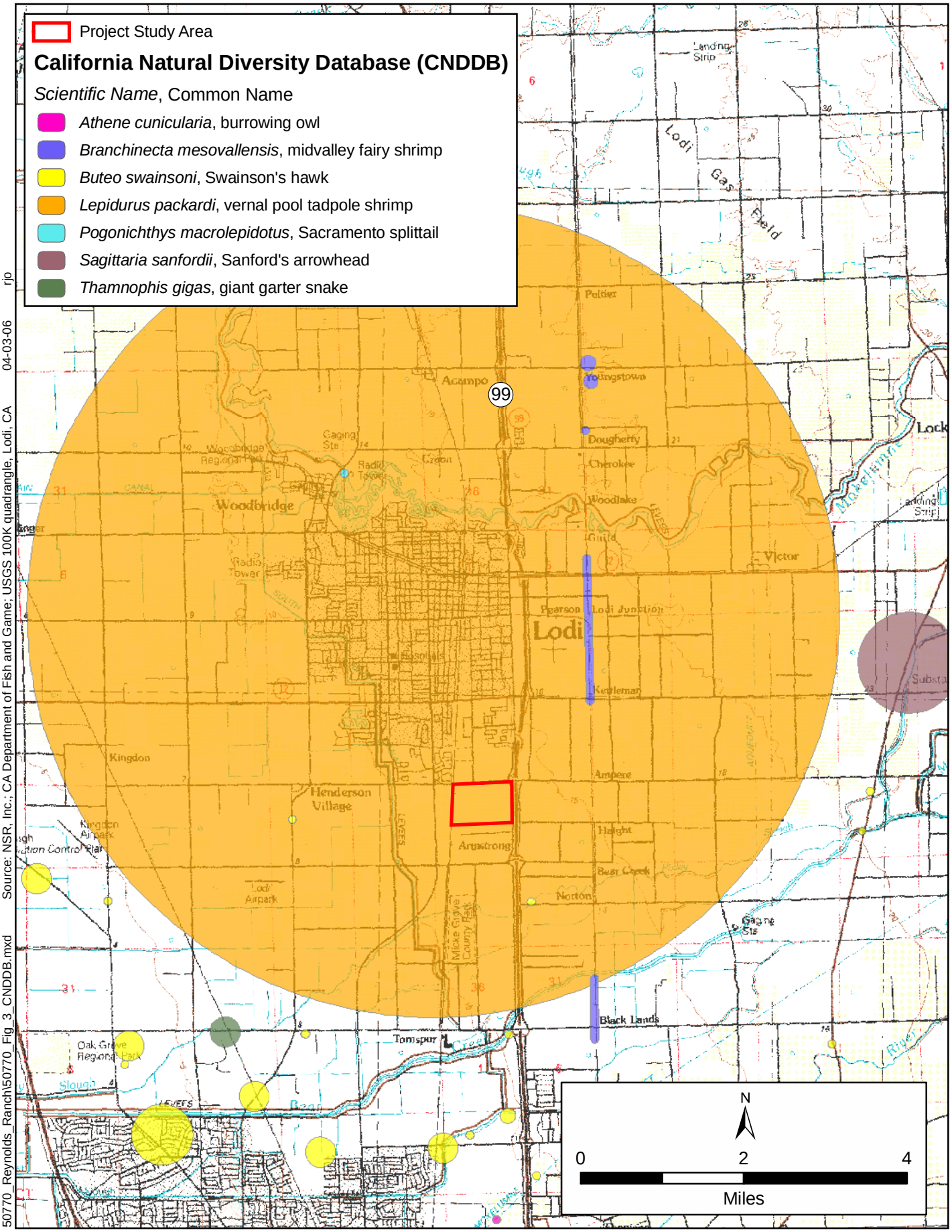


50770_Reynolds_Ranch\50770_Fig_3_Soils.mxd Source: NSR, Inc.; USGS DOQQ, Lodi South, CA 03-20-06 rjo

North State Resources, Inc.

Reynolds Ranch Development Project

Figure 2
Vegetation Communities



rjo 04-03-06 Source: NSR, Inc.; CA Department of Fish and Game; USGS 100K quadrangle, Lodi, CA 50770_Reynolds_Ranch\50770_Fig_3_CNDDB.mxd

North State Resources, Inc.

Reynolds Ranch Development Project

Figure 3
CNDDB Recorded Occurrences of Special-status Species

APPENDIX A

U.S. Fish and Wildlife Service Special-status Species List

<- Revise Selection

Make Official Letter ->

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 060228124020

Database Last Updated: February 14, 2006

Quad Lists

LODI SOUTH (479D)

Listed Species

Invertebrates

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - Critical habitat, delta smelt (X)

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (X)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Plants

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Proposed Species

Fish

Acipenser medirostris - green sturgeon (P)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Anthicus antiochensis - Antioch Dunes anthicid beetle (SC)

Anthicus sacramento - Sacramento anthicid beetle (SC)

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra hubbsi - Kern brook lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Anniella pulchra pulchra - silvery legless lizard (SC)

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Lilaeopsis masonii - Mason's lilaeopsis (SC)

County Lists

No county species lists requested.

Key:

- (E) Endangered - Listed (in the Federal Register) as being in danger of extinction.

- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (CA) Listed by the State of California but not by the Fish & Wildlife Service.
- (D) Delisted - Species will be monitored for 5 years.
- (SC) Species of Concern/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7Â½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.

- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game Wildlife and Habitat Data Analysis Branch for official information about these species.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR Â§17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or

protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 29, 2006.

APPENDIX B

California Natural Diversity Database Query Results

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait
Reynold's Ranch - Lodi South, Lodi North, Lockeford, Waterloo, Stockton East, Stockton West, Holt, Terminous, and Thornton 7.5-minute Topographic Quadrangles.

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
1	Agelaius tricolor tricolored blackbird	ABPBXB0020			G2G3	S2	SC
2	Ambystoma californiense California tiger salamander	AAAAA01180	Threatened		G2G3	S2S3	SC
3	Aster lentus Suisun Marsh aster	PDAST0T540			G2	S2.2	1B/2-2-3
4	Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1			G1T1	S1.1	1B/3-2-3
5	Athene cunicularia burrowing owl	ABNSB10010			G4	S2	SC
6	Atriplex joaquiniana San Joaquin spearscale	PDCHE041F3			G2	S2.1	1B/2-2-3
7	Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
8	Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150			G2	S2	
9	Buteo swainsoni Swainson's hawk	ABNKC19070		Threatened	G5	S2	
10	Carex comosa bristly sedge	PMCYP032Y0			G5	S2?	2/3-3-1
11	Castilleja campestris ssp. succulenta succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2	S2.2	1B/2-2-3
12	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
13	Cordylanthus palmatus palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1.1	1B/3-3-3
14	Delphinium recurvatum recurved larkspur	PDRAN0B1J0			G2	S2.2	1B/2-2-3
15	Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened		G3T2	S2	
16	Emys (=Clemmys) marmorata western pond turtle	ARAAD02030			G3G4	S3	SC
17	Emys (=Clemmys) marmorata marmorata northwestern pond turtle	ARAAD02031			G3G4T3	S3	SC
18	Erodium macrophyllum round-leaved filaree	PDGER01070			G4	S2.1	2/2-3-1
19	Great Valley Valley Oak Riparian Forest	CTT61430CA			G1	S1.1	
20	Hibiscus lasiocarpus rose-mallow	PDMAL0H0Q0			G4	S2.2	2/2-2-1
21	Laterallus jamaicensis coturniculus California black rail	ABNME03041		Threatened	G4T1	S1	
22	Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2			G5T2	S2.2	1B/2-2-3
23	Legenere limosa legenere	PDCAM0C010			G2	S2.2	1B/2-3-3

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
24	Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered		G3	S2S3	
25	Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030		Rare	G3	S3.1	1B/2-3-3
26	Limosella subulata Delta mudwort	PDSCR10050			G4?Q	S2.1	2/2-3-1
27	Northern Hardpan Vernal Pool	CTT44110CA			G3	S3.1	
28	Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020			G2	S2	SC
29	Rana boylii foothill yellow-legged frog	AAABH01050			G3	S2S3	SC
30	Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B/2-2-3
31	Scutellaria lateriflora blue skullcap	PDLAM1U0Q0			G5	S1.2	2/3-2-1
32	Thamnophis gigas giant garter snake	ARADB36150	Threatened	Threatened	G2G3	S2S3	
33	Valley Oak Woodland	CTT71130CA			G3	S2.1	

APPENDIX C

Regionally Occurring Special-status Plant and Wildlife Species

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Federal or State Listed Species				
Plants				
Castilleja campestris ssp. *succulenta* Succulent owl's-clover	T/E/1B	Vernal pools, often in acidic soils. 164-2,460 feet in elevation. Blooms April-May.	A	Vernal pool habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Cordylanthus palmatus Palmate-bracted bird's-beak	E/E/1B	Chenopod scrub, cismontane woodland, and valley and foothill grassland; in alkaline soils. 16-508 feet in elevation. Blooms May-October.	A	Alkaline soils are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Invertebrates				
Branchinecta lynchi Vernal pool fairy shrimp	T/--	Vernal pool crustaceans live in vernal pools, swales, and ephemeral freshwater habitats. None are known to occur in riverine waters or marine waters.	A	Vernal pools do not occur in study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T/--	Elderberry shrubs associated with riparian forests that occur along rivers and streams.	A	Elderberry shrubs were not observed in the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Vernal pool tadpole shrimp *Lepidurus packardi*	E/--	Vernal pool crustaceans live in vernal pools, swales, and ephemeral freshwater habitats. None are known to occur in riverine waters or marine waters.	A	Vernal pools do not occur in study area. There is a 1990 CNDDB recorded occurrence of this species in the Lodi area (CDFG 2006).
Fish				
Acipenser medirostris Green sturgeon	P/SC	Spawn in the Sacramento River when temperatures range between 8-14°C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Hypomesus transpacificus Delta smelt	T/T	Estuarine systems in the Sacramento-San Joaquin Delta.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Oncorhynchus mykiss irideus Central Valley steelhead	T/--	Spawn and rear in Sacramento River and its tributaries. Require cool, swift shallow water; clean, loose gravel for spawning; and runs and suitable large pools in which to rear and over-summer.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Oncorhynchus tshawytscha Central Valley spring-run chinook salmon ESU	T/T	Spawn and rear in main-stem Sacramento River and suitable perennial tributaries. Require cool year-round water temperatures and deep pools for over-summering habitat. Spawn in riffles with gravel and cobble substrate.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Oncorhynchus tshawytscha Winter-run chinook salmon ESU	E/E	Spawn and rear in main-stem Sacramento River. Require cool year-round water temperatures, since spawning occurs during the summer. Require deep pools and riffles, and clean gravel and cobble substrate to spawn.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Amphibians				
Abystoma californiense California tiger salamander	T/SC	Most commonly found in grassland habitats. Adults spend most of the year in subterranean refugia. Migrate up to 3,000 feet to breed in temporary ponds.	A	Suitable breeding habitat does not occur in the vicinity of the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Rana aurora draytonii California red-legged frog	T/SC	Require aquatic habitat for breeding, also uses a variety of other habitat types including riparian and upland areas. Adults utilize dense, shrubby or emergent vegetation associated with deep-water pools with fringes of cattails and dense stands of overhanging vegetation.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Reptiles				
Thamnophis gigas Giant garter snake	T/T	Require aquatic habitat with shrubby or emergent vegetation.	A	Aquatic habitats with emergent vegetation are not present within the study area. There is a 1976 CNDDB recorded occurrence of this species within five miles of the project area (CDFG 2006).
Birds				
Buteo swainsoni Swainson's hawk	--/T	Require large, open grasslands with abundant prey in association with suitable nest trees. Nest in Central Valley riparian habitat (e.g., valley oak, Fremont cottonwood, walnut, and large willow), and lone trees or groves of trees in agricultural fields.	**P**	There is marginal foraging habitat and breeding habitat within the study area. However, no large stick nests were observed on the site. There are 18 CNDDB recorded occurrences of this species within five miles of the project area; two of these are within two miles of the study area (CDFG 2006).
Empidonax traillii Willow flycatcher	--/E	Rare summer resident in wet meadow and montane riparian habitats at 2,000 to 8,000 feet elevation. No longer known to nest in Sacramento Valley but migrate through the north state region in spring and fall.	A	No longer nests in the Sacramento Valley. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Falco peregrinus anatum American peregrine falcon	D/E, FP	Forage in many habitats; require cliffs for nesting.	A	Cliffs required for nesting are not present within or in the vicinity of the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Grus canadensis tabida Greater sandhill crane	--/T, FP	Shallow wetlands required for breeding; forage in nearby pastures, fields, meadows.	A	Suitable breeding and foraging habitat is not present. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Haliaeetus leucocephalus Bald eagle	T/E	Forage on live and dead fish and nest in large trees or snags. Require large bodies of water, including ocean shorelines, lake margins, and large, open river courses for foraging, nesting, and wintering habitat.	A	Riparian habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Laterallus jamaicensis coturniculus California black rail	--/T	Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass.	A	Tidal emergent wetlands, or brackish or freshwater marshes are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Riparia riparia Bank swallow	--/T	Colonial nester on vertical banks or cliffs with fine-textured soils near water.	A	Vertical banks and cliffs are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Mammals				
California wolverine *Gulo gulo luteus*	--/T/ FP	A variety of habitats between elevations of 1,600 and 14,200 ft. Most commonly inhabit open terrain above timberline.	A	Study area is below the required elevation for suitable habitat. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Sierra Nevada red fox *Vulpes vulpes nector*	--/T	Red fir and lodgepole pine forests in the sub-alpine zone and alpine fell-fields of the Sierra Nevada.	A	Study area is below the required elevation for suitable habitat. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Pacific fisher *Martes pennanti pacifica*	C/SC	Den and forage in intermediate to large stands of old-growth forests or mixed stands of old-growth and mature trees with greater than 50% canopy closure. May use riparian corridors for movement.	A	Mixed hardwood conifer stands are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Other Special-Status Species				
Plants				
Aster lentus Suisun marsh aster	SC/--/1B	Marshes and swamps. 1-10 feet in elevation. Blooms May-November.	A	Marshes or swamps are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Astragalus tener var. *tener* Alkali milk-vetch	SC/--/1B	Playas, valley and foothill grassland in adobe clay, and vernal pools in alkaline soils. 3-197 feet in elevation. Blooms March-June.	A	Adobe clay soils and alkaline soils are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Atriplex joaquiniana San Joaquin speakscale	SC/--/1B	Chenopod scrub, meadows and seeps, playas, and valley and foothill grassland in alkaline soils. 3-2,740 feet in elevation. Blooms April-October.	A	Chenopod scrub, meadows and seeps, playas, and alkaline soils are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Carex comosa Bristly sedge	--/--/2	Coastal prairie, marshes and swamps, and valley and foothill grasslands in mesic sites. 1-2,051 feet in elevation. Blooms May-September.	A	Coastal prairie, marshes and swamps, or mesic sites are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Delphinium recurvatum Recurved larkspur	SC/--/1B	Chenopod scrub, cismontane woodland, and valley and foothill grassland in alkaline soils. 9-2,461 feet in elevation. Blooms March-May.	A	Chenopod scrub, cismontane woodland, or alkaline soils are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Erodium macrophyllum Round-leaved filaree	--/--/2	Cismontane woodland and valley and foothill grassland in clay soils. 49-3,937 feet in elevation. Blooms March-May.	A	Clay soils are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Hibiscus lasiocarpus Rose-mallow	--/--/2	Freshwater marshes and swamps. 0-394 feet in elevation. Blooms June-September.	A	Freshwater marshes or swamps are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Lathyrus jepsonii var. *jepsonii* Delta tule pea	SC/--/1B	Freshwater and brackish marshes and swamps. 1-13 feet in elevation. Blooms May-September.	A	Freshwater or brackish marshes or swamps are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Legenere limosa Legenere	SC/--/1B	Vernal pools, 0-3,000 feet in elevation. Blooms April-June.	A	Vernal pools are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Lilaeopsis masonii Mason's lilaeopsis	SC/R/1B	Brackish or freshwater marshes and swamps and riparian scrub. 0-33 feet in elevation. Blooms April-November.	A	Brackish or freshwater marshes and swamps or riparian scrub are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Limosella subulata Delta mudwort	--/--/2	Marshes and swamps. 0-10 feet in elevation. Blooms May-August.	A	Marshes or swamps are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Sagittaria sanfordii Sanford's arrowhead	SC/--/1B	Marshes and swamps, assorted shallow freshwater habitats. 0-2,001 feet in elevation. Blooms May-October.	A	Shallow freshwater habitats are not present within the study area. There is a 1940 CNDDB recorded occurrence of this species approximately four miles east of the project area; the species was not observed during a 1980 survey (CDFG 2006).
Scutellaria lateriflora Blue skullcap	--/--/2	Meadows and seeps, marshes and swamps. 0-1,640 feet in elevation. Blooms July-September.	A	Meadows, seeps, marshes, or swamps are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Invertebrates				
Anthicus antiochensis Antioch Dunes anthicid beetle	SC/--	Known only from the Antioch Dunes.	A	Study area is outside of the known distribution of this species. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Anthicus sacramento Sacramento anthicid beetle	SC/--	Sand slipfaces among bamboo and willow. Restricted to sand dunes in Sacramento – San Joaquin Delta.	A	Sand dunes are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Branchinecta mesovallensis Midvalley fairy shrimp	SC/--	Vernal pools.	A	Vernal pools are not present within the study area. There are four CNDDB recorded occurrences of this species within five miles and one occurrence within two miles of the project area (CDFG 2006).
Linderiella occidentalis California linderiella fairy shrimp	SC/--	Vernal pools, wet swales, intermittent pools, and seasonal wetlands.	A	Vernal pools or other seasonal wetlands are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Fish				
Lampetra ayresi River lamprey	SC/SC	An anadromous fish found in rivers from San Francisco Bay watershed north to Alaska	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Lampetra hubbsi Kern brook lamprey	SC/SC	The Kern brook lamprey is endemic to the east side of the San Joaquin Valley and is found only in the San Joaquin River drainage in California	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Spirinchus thaleichthys Longfin smelt	SC/SC	Sloughs of Suisun Bay and Delta.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Oncorhynchus tshawytscha Central Valley fall/late fall-run chinook salmon ESU	SC/SC	Spawn and rear in main-stem Sacramento River and suitable perennial tributaries. Require cool year-round water temperatures and deep pools for over-summering habitat. Spawn in riffles with gravel and cobble.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Pogonichthys macrolepidotus Sacramento splittail	SC/SC	Shallow, dead-end sloughs with submerged vegetation.	A	Aquatic habitats are not present within the study area. There is a 2003 CNDDB recorded occurrence of this species four miles northwest of the project area (CDFG 2006).
Amphibians				
Rana boylii Foothill yellow-legged frog	--/SC	Rocky streams in a variety of habitats. Found in coast ranges.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Spea hammondii Western spadefoot toad	SC/SC	Grasslands with temporary pools.	A	Grasslands with temporary pools are not present within the study area. Study area was surveyed approximately 48 hours after heavy rains and no ponding was observed. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Reptiles				
Anniella pulchra pulchra Silvery legless lizard	SC/SC	Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types. Require sandy or loose organic soils or where there is plenty of leaf litter.	A	Coastal dune, valley-foothill, chaparral, coastal scrub, or other habitats with suitable leaf litter are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Clemmys marmorata marmorata Northwestern pond turtle	SC/SC	Slow water aquatic habitat with available basking sites. Hatchlings require shallow water with dense submergent or short emergent vegetation. Require an upland oviposition site in the vicinity of the aquatic site	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Clemmys marmorata pallida Southwestern pond turtle	SC/SC	Western pond turtles require some slack- or slow-water aquatic habitat, preferably with aerial and aquatic basking sites.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Masticophis flagellum ruddocki San Joaquin coachwhip	SC/--	Occur below 6,000 feet in elevation in open terrain and are most abundant in grass, desert, scrub, chaparral, and pasture habitats.	A	Suitably large open terrain is not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Phrynosoma coronatum frontale California horned lizard	SC/SC	Found in a variety of habitats below 4,000 feet in elevation. Require open country, especially sandy areas, washes, flood plains.	A	Suitable habitat for this species (e.g. open rocky, sandy areas) does not occur within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Birds				
Accipiter cooperii Cooper's hawk	--/SC	Forage in broken woodlands and habitat edges. Dense tree stands with moderate crown depth used for nesting.	A	Woodlands or dense tree stands are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Accipiter striatus Sharp-shinned hawk	--/SC	Typically nest in dense conifer stands near water, winter in woodlands. Forage in many habitats in winter and migration.	A	Woodlands or conifer stands are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Agelaius tricolor Tricolored blackbird	SC/SC	Breed near fresh water in dense emergent vegetation.	A	Emergent vegetation is not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Aquila chrysaetos Golden eagle	--/SC, FP	Breed on cliffs or in large trees or electrical towers, forage in open areas.	A	Open habitats and cliffs do not occur in the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Asio flammeus Short-eared owl	--/SC	Found in open, treeless areas with elevated sites for perches, and dense vegetation for roosting and nesting	A	Dense vegetation and open, treeless areas are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Asio otus Long-eared owl	--/SC	Dense riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats; also found in dense conifer stands at higher elevations.	A	Dense vegetation and meadows do not occur within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Athene cunicularia hypugaea Western burrowing owl	SC/SC	Open habitats, dry grasslands and ruderal habitats with ground squirrel burrows.	**P**	Open habitats are present within the study area, and ground squirrel burrows were observed during the field survey. Therefore, suitable habitat is present within the study area. There is a 1999 CNDDB recorded occurrence of this species five miles south of the project area (CDFG 2006).
Branta canadensis leucopareia Aleutian Canada goose	D/	Lacustrine, fresh emergent wetlands, grasslands, croplands, pastures, and meadows.	A	Suitably large open fields for foraging are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Buteo regalis Ferruginous hawk	SC/SC	Forage in grasslands and occasionally in other open habitats during migration and winter.	A	Suitably large open fields for foraging are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Carduelis lawrencei Lawrence's goldfinch	SC/	Nest in open oak or other arid woodland near water.	A	Cliffs, deep canyons not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Chaetura vauxi Vaux's swift	SC/SC	Prefer redwood and Douglas-fir habitats, nest in hollow trees and snags or, occasionally, in chimneys; forage aerially.	A	Redwood or Douglas-fir habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Charadrius montanus Mountain plover	SC/SC	Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba counties southward. Do not nest in California.	A	Short grasslands or plowed fields are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Circus cyaneus Northern harrier	--/SC	Forage in marshes, grasslands, and ruderal habitats; nest in extensive marshes and wet fields or grasslands.	A	Suitably large open fields for foraging are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Dendroica petechia brewsteri California yellow warbler	--/SC	Breed in riparian woodlands, particularly those dominated by willows and cottonwoods.	A	Riparian habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Elanus leucurus White-tailed kite	SC/FP	Nest in lowland grasslands, agricultural areas, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas; forage over grassland, meadows, cropland and marshes.	**P**	Large trees suitable for nesting are present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Eremophila alpestris actia California horned lark	--/SC	Various open habitats, usually where trees and large shrubs are absent. Nest on the ground.	**P**	Fallow cropland and recently planted vineyard provide suitable foraging and nesting habitat. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Falco columbarius Merlin	--/SC	Favor low elevation habitats with water and tree stands.	A	Tree stands are not present within the study area, and study area is not in proximity to water. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Falco mexicanus Prairie falcon	D, SC/FP	Occur in open habitats such as grasslands, desert scrub, rangelands and croplands.	A	Suitably large open habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Lanius ludovicianus Loggerhead shrike	SC/SC	Forage in open grassland habitats throughout the Central Valley of California. Nest in shrubs and trees.	**P**	Foraging and nesting habitats for this species are present within the study area. Landscape trees and shrubs associated with rural residences are suitable for nesting. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Melanerpes lewis Lewis' woodpecker	SC/--	Open oak savannahs, broken deciduous and coniferous habitats. Require open habitats with scattered trees and snags with cavities.	A	Oak savannah, deciduous, or conifer habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Numenius americanus Long-billed curlew	SC/--	Large coastal estuaries, upland herbaceous areas, and croplands. Breed in wet meadow habitat.	A	Coastal estuaries, uplands, croplands, or wet meadows are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Pandion haliaetus Osprey	--/SC	Ocean shorelines, lake margins and large, open river courses for both nesting and wintering habitat.	A	Aquatic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Picoides nutallii Nuttall's woodpecker	SC/--	Nest and forage in woodland and riparian habitats.	A	Woodland or riparian habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Plegadis chihi White-faced ibis	SC/--	A rare visitor to the Central Valley, nest and forage in freshwater marshes.	A	Freshwater marshes are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Progne subis Purple martin	--/SC	Breeding habitat includes old-growth, multi-layered, open forest and woodland with snags; forage over riparian areas, forest, and woodlands.	A	Woodlands or forests are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Selasphorus rufus Rufous hummingbird	SC/--	Breed in Transition Life Zone of northwest coastal area from Oregon Border to southern Sonoma County.	**P**	Urban habitats provide foraging habitat for this species. However, this species does not breed in the San Joaquin Valley. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Toxostoma redivivum California thrasher	SC/--	Chaparral or riparian habitat with dense canopy and openings near the ground.	A	Chaparral or riparian habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Mammals				
Antrozous pallidus Pallid bat	--/SC	Forage over many habitats; roost in buildings, large oaks or redwoods, rocky outcrops and rocky crevices in mines and caves, and under bridges.	**P**	Buildings may provide suitable roosting habitat for this species. However, suitable hibernacula and maternity sites are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Corynorhinus townsendii Townsend's western big-eared bat	--/SC	Roost in colonies in caves, mines, tunnels, or buildings in mesic habitats. Forage along habitat edges, gleaning insects from bushes and trees. Habitat must include appropriate roosting, maternity and hibernacula sites free from disturbance by humans.	A	Mesic habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

Summary of Special-status Species Review
Reynolds Ranch Development Project: San Joaquin County, California

Scientific Name	Status[1] (Fed/State/ CNPS)	General Habitat Description	Suitable Habitat (Present/ Absent)	Rationale
Eumops perotis californicus Greater western mastiff bat	--/SC	Roost in rock outcrops, buildings and trees. Forage in open habitats	**P**	Buildings and trees provide suitable roosting habitat within the study area. However, suitable hibernacula and maternity sites are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Myotis ciliolabrum Small-footed myotis bat	FSC/--	Common bat of arid uplands preferring open stands, brushy, and woodland habitats. Use caves, mines, buildings, bark, and crevices to roost.	A	Arid uplands are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Myotis volans Long-legged myotis bat	FSC/--	Primarily in woodland and forest habitats above 4,000 feet. Trees are important day roosts; use caves and mines for night roosts.	A	Study area is outside of the known distribution of this species. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Myotis yumanensis Yuma myotis bat	FSC/--	Inhabit open forests and woodlands. Distribution is closely tied to bodies of water. Maternity colonies occur in caves, mines, buildings, or crevices. Roost in buildings, caves, mines, abandoned swallow nests, and under bark of large snags.	A	Water bodies are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).
Perognathus inornatus San Joaquin pocket mouse	FSC/--	Inhabit dry, open grasslands or scrub areas on fine-textured soils.	A	Dry, open grasslands or scrub habitats are not present within the study area. There are no CNDDB recorded occurrences of this species within five miles of the project area (CDFG 2006).

APPENDIX D

Incidental Wildlife Observations

Reynolds Ranch Development Project Incidental Wildlife Observations March 17, 2006	
Scientific Name	Common Name
Sceloporus occidentalis	Western fence lizard
Buteo jamaicensis	Red-tailed hawk
Carpodacus mexicanus	House finch
Cathartes aura	Turkey vulture
Corvus brachyrhynchos	American crow
Euphagus cyanocephalus	Brewer's blackbird
Mimus polyglottos	Northern mockingbird
Pica nutallii	Yellow-billed magpie
Pipilo fuscus	Brown towhee (?)
Sturnella neglecta	Western meadowlark
Turdus migratorius	American robin
Zonotrichia leucophrys	White-crowned sparrow
Lepus californicus	Black-tailed jackrabbit
Spermophilus beecheyi	California ground squirrel

Appendix D

Cultural Resources Inventory

Pacific Legacy

Incorporated

CULTURAL RESOURCES CONSULTANTS

CULTURAL RESOURCES INVENTORY REYNOLDS RANCH/BLUE SHIELD DEVELOPMENT PLAN CITY OF LODI, SAN JOAQUIN COUNTY, CALIFORNIA

Prepared for:

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May 2006

MANAGEMENT SUMMARY

Pacific Legacy, Inc. conducted a cultural resources inventory of a 220-acre area south of the City of Lodi. Proposed land use of the 220-acre parcel is described in a Master Plan. This 220-acre parcel comprises the Study Area for the cultural resources inventory. The proposed Reynolds Ranch/Blue Shield Development Plan project area is a proposed 60-acre commercial and Blue Shield corporate office development encompassing a 220-acre area. The 60-acre Development Plan area is referred to as the Project Area for the purpose of this report.

The cultural resources inventory was undertaken as a contribution to an Environmental Impact Report (EIR). The 1970 California Environmental Quality Act (CEQA) mandates consideration of effects on archaeological resources pursuant to Section 21083.2 (State of California, Office of Planning and Research [1992:21]).

Pre-field literature research and a pedestrian survey of the proposed project area did not identify any prehistoric resources but did identify one significant historic cultural resource within the 220-acre project area. This resource, the Morse/Skinner Ranch, is listed on the National Register of Historic Places.

Six residential structures, a barn, and a Moose Lodge building are present within the Project Area (60-acres), and twelve additional residential buildings and structures exist within the remaining 160-acres proposed for residential development. Other than the Morse/Skinner Ranch House, none of the buildings have been evaluated for eligibility to the California Register of Historical Resources.

Recommendations include preservation in place and avoidance of the Morse/Skinner House and the one acre parcel on which it sits. The remaining buildings and structures should be recorded and evaluated by a qualified architectural historian to determine whether they are eligible for the CRHR. Once evaluated, the effects of the Master Plan and Development Plan implementation on CRHR eligible properties (historical resources) should be assessed and treatment or mitigation measures should be developed for any historical resources that may be subject to adverse changes resulting from the project.

TABLE OF CONTENTS

Section	Page
MANAGEMENT SUMMARY	i
1.0 INTRODUCTION	1
1.1 Project Location and Description	1
2.0 BACKGROUND	6
2.1 Natural Environment	6
2.2 Prehistoric Archaeology	6
2.3 Ethnography	7
2.4 Historical Context	8
3.0 INVENTORY METHODS	9
3.1 Pre-field Research	9
3.2 Native American Consultation	10
3.3 Field Methods	11
4.0 STUDY FINDINGS	13
5.0 RECOMMENDATIONS	15
5.1 Evaluation Criteria	15
5.1.1 National Register of Historic Places	15
5.1.2 California Environmental Quality Act	16
5.2 Identified Resources	17
5.3 Master Plan Recommendations	18
5.4 Development Plan Recommendations	18
6.0 REFERENCES CITED	21

LIST OF FIGURES

Figure	Page
Figure 1-1. Project Vicinity Map	2
Figure 1-2. Project Location Map	3
Figure 1-3. Project Survey Area	4
Figure 1-4. 60-Acre Survey Area	5
Figure 3-1. Southern Half of Project Area	11
Figure 3-2. Northwest Quadrant of Project	11
Figure 3-3. Northeast Quadrant of Project	11
Figure 3-4. Moose Lodge and Vineyards	12
Figure 3-5. Morse/Skinner House Listed on NRHP	12
Figure 3-6. Morse/Skinner House Driveway and Water Tower	12

APPENDICES

Appendix A – Record Search
Appendix B – Native American Contacts
Appendix C – Native American Correspondence

1.0 Introduction

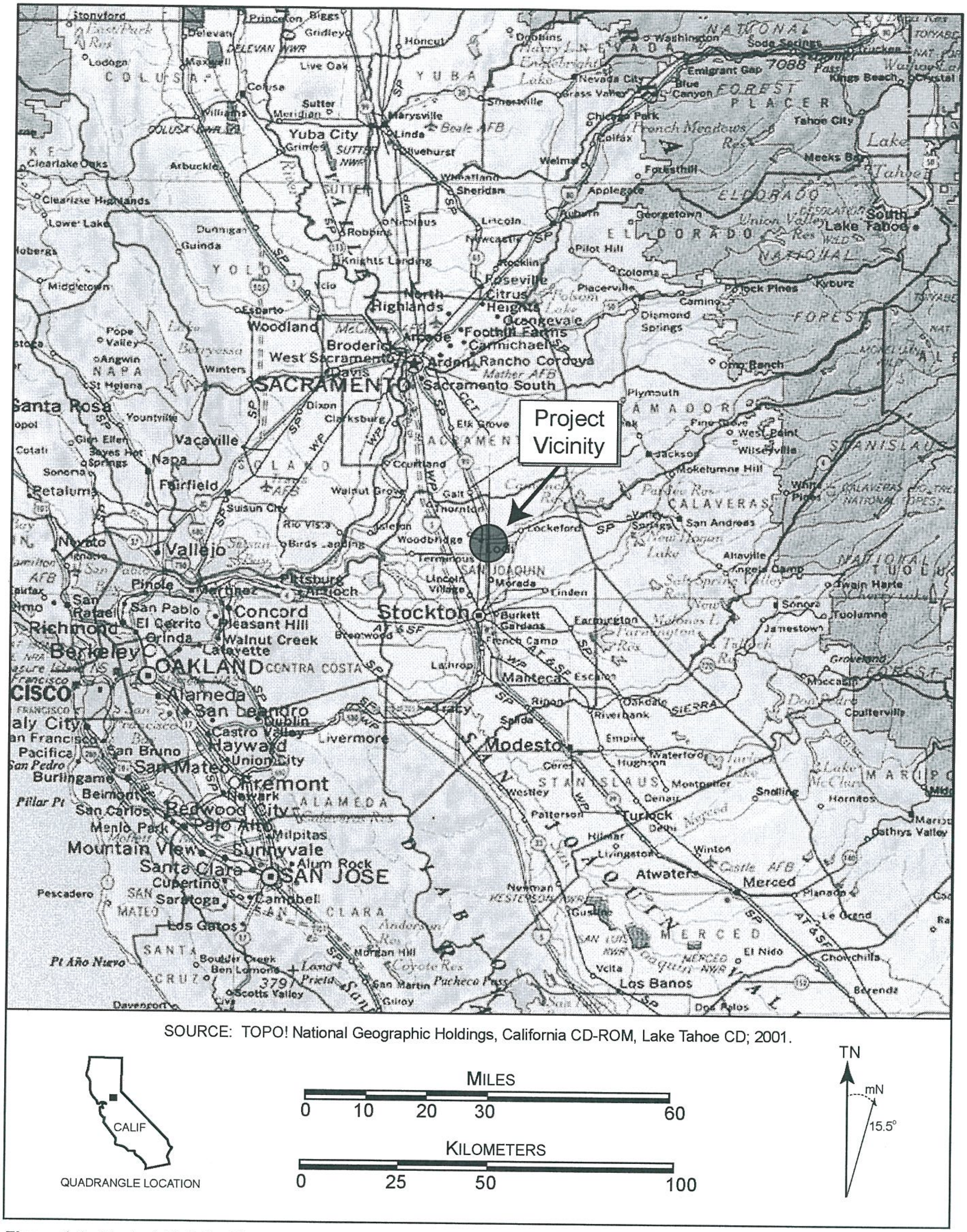
Pacific Legacy, Inc. was retained by WILLDAN to conduct a cultural resources inventory of the proposed Reynolds Ranch/Blue Shield Development Plan project within the City of Lodi, as a contribution to an Environmental Impact Report (EIR). This document describes that inventory and its findings.

1.1 Project Location and Description

The Study Area for the cultural resources inventory is 220-acres situated outside the current boundaries of the City of Lodi, but within the Planned Residential Reserve defined in the General Plan and within the LAFCo approved Sphere of Influence, within northern San Joaquin County, California (Figure 1-1). The Study Area, depicted in Figure 1-2, is bordered by the State Route 99 to the east, Southern Pacific Railroad to the west, Harney Lane to the north, and Scottsdale Road to the south. It is located within Township 3 north, Range 6 east, Northeast corner of Section 24, as depicted on Lodi South, CA 7.5' 1968 (PR 1976) (Figure 1-2).

Within this Study Area is a Development Plan area of 60-acres proposed for commercial and a Blue Shield corporate office development (Figure 1-4). The Master Plan describes the development of approximately 160-acres of residential buildings, including park and public uses, approximately 20 acres of office, and 40 acres of retail use. A determination of possible significant project effects on the environment was made by the City Environmental Review Officer, requiring the preparation of an Environmental Impact Report (EIR). The EIR will focus on the Project Area that includes office and retail use in areas totaling 60-acres (Figure 1-4).

WILLDAN contracted with Pacific Legacy, Inc. to complete a cultural resources inventory of the Study Area.



SOURCE: TOPO! National Geographic Holdings, California CD-ROM, Lake Tahoe CD; 2001.

Figure 1-1. Project Vicinity Map.

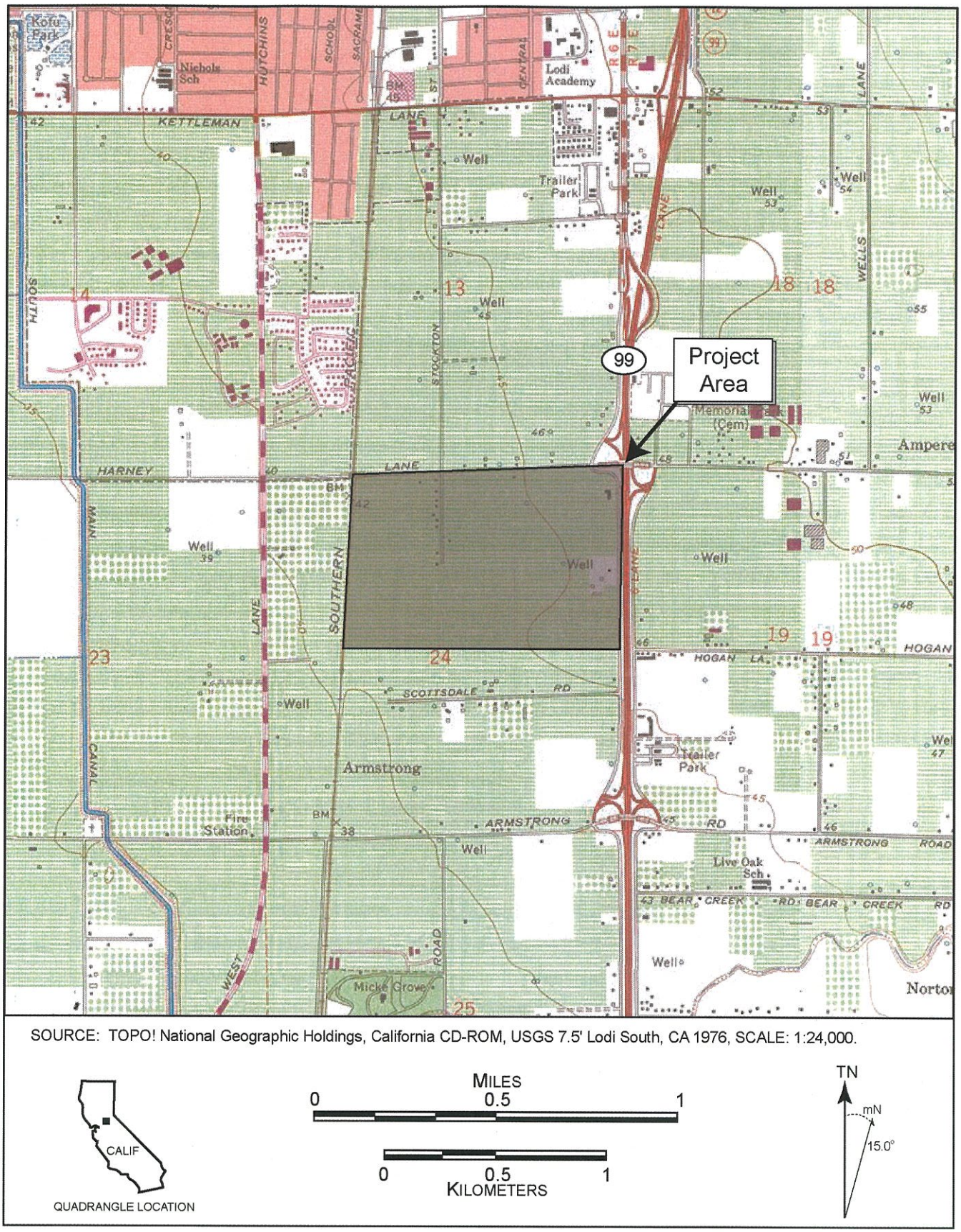


Figure 1-2. Project Location Map.

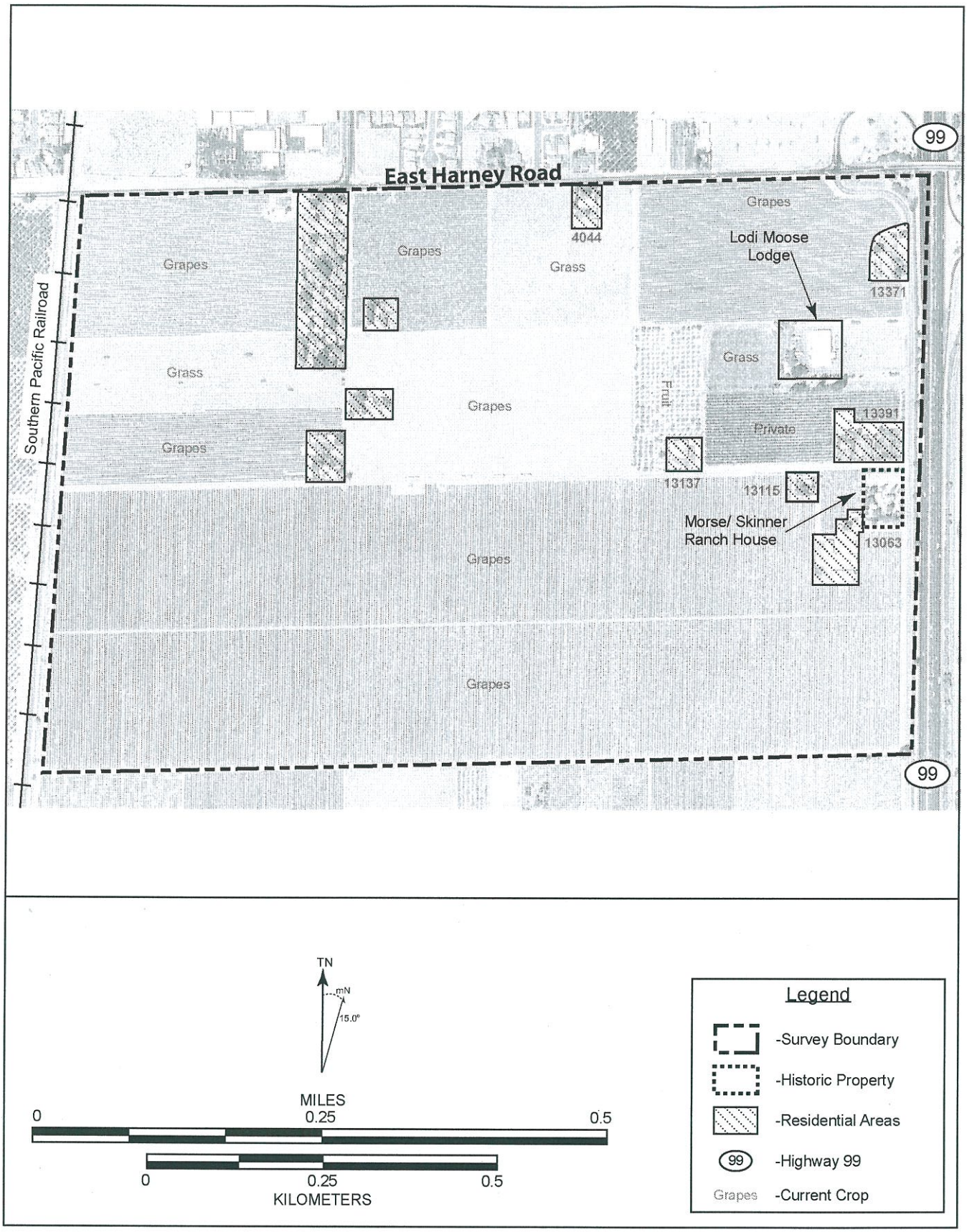


Figure 1-3. Project Survey Area.

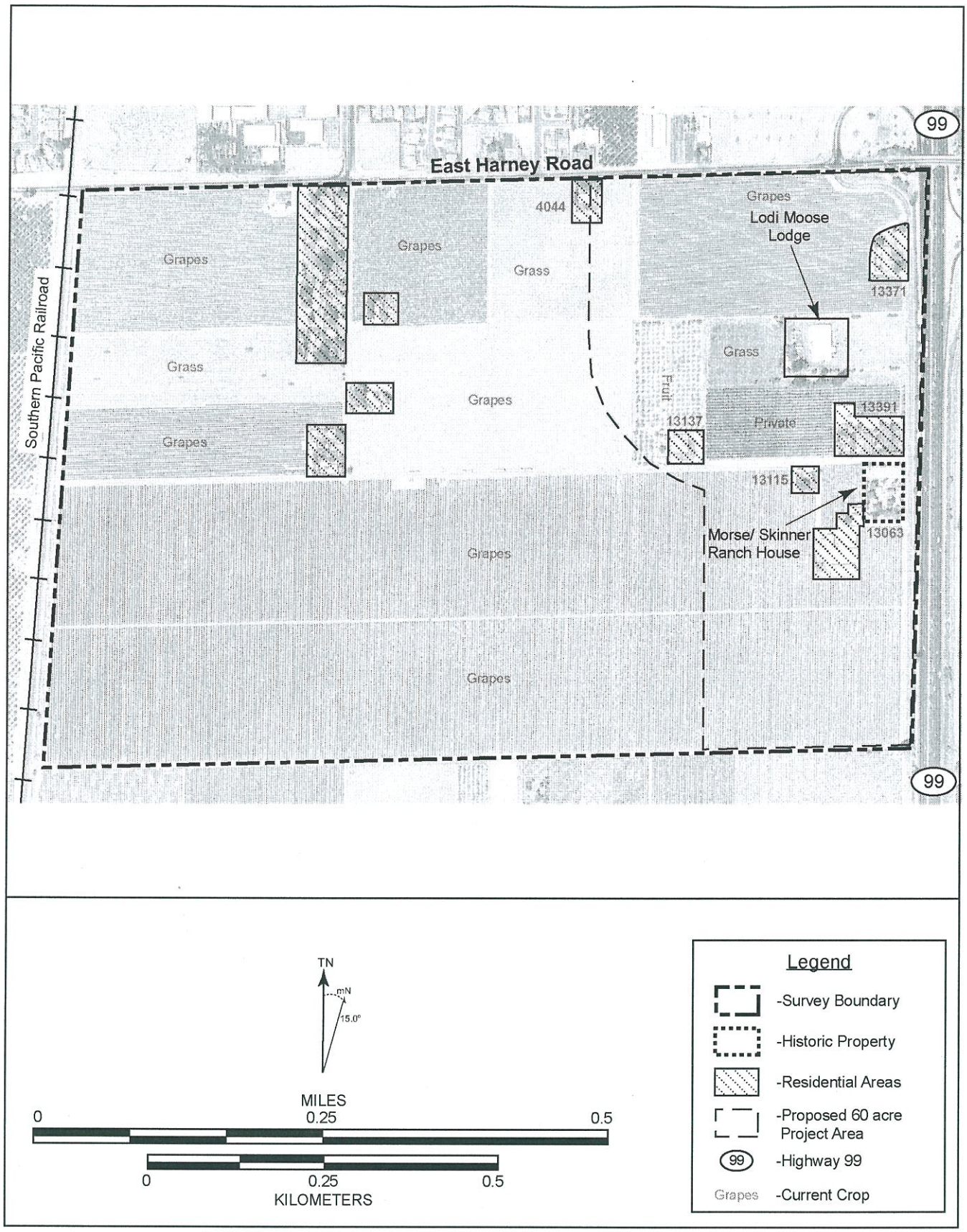


Figure 1-4. 60 Acre Study Area.

2.0 BACKGROUND

2.1 NATURAL ENVIRONMENT

The Study Area ranges in elevation between 45 to 55 ft. above mean sea level and experiences a Mediterranean climate characterized by warm summers and mild wet winters. The maximum temperature of the area is 92.1° F, with the hottest months falling between May and September. The area receives approximately 17 inches of annual precipitation, with the majority of rain falling between November and March.

The vegetation of the contemporary Study Area can be described as rural grasslands, planted with vineyards, orchards, and ornamentals. Ground disturbance over the last century includes plowing of agricultural fields and grading for roads and residential construction, resulting in the disappearance of most native plants and animals (Schultze 1988). The project area today supports small mammals and bird species. In the past, a more varied environment would have provided very different types of habitat that would have supported a variety of plant and animal species, including bear, elk, and pronghorn.

2.2 PREHISTORIC ARCHAEOLOGY

Native American groups first occupied the Central Valley at least 12,000 years ago, although evidence of early occupation in the valley is somewhat limited (Fagan 2003; Moratto 1984). More recent prehistoric human occupation is better-documented, and the archaeological record for later period sites provides a clearer understanding of human behavior and material culture. Amateur archaeologists conducted investigations in the Central Valley between 1893 and 1901. J. A. Barr focused on excavated mounds near Stockton, which were later interpreted and published by E. J. Dawson and W. E. Schenck who reported investigations of over 90 archaeological sites in the region (Schenck and Dawson 1929).

Based on numerous investigations in the 1930's, Lillard and Purves (1936) developed a three-stage cultural sequence comprised of "cultural levels": Early, Intermediate and Late. This sequence was later elaborated on by Lillard et al. (1939), proposing a Delta Sequence, composed of periods (Lillard et al 1939). The Delta Sequence evolved into the cultural horizons (Early, Middle and Late) of the Central California Taxonomic System (CCTS), as a result of elaboration by (Beardsley 1948, 1954), Heizer (1949), and Ragir (1972).

Many researchers believe that the CCTS did not reflect the diversity in the archaeological record of Central California. Frederickson (1973, 1974) addressed the shortcoming of the CCTS, proposing "patterns" that are spatially but not temporally bound unlike the previous chronological sequences of the 1930's. Fredrickson (1973) defines three patterns for central California: Windmiller (Early Horizon), Berkeley (Middle Horizon), and Augustine Patterns (Late Horizon).

The Windmiller Pattern spans from approximately 4500 to 3000 B.P., focusing primarily on the Central Valley and Delta region. The economy was based on exploitation of a wide variety of

terrestrial and aquatic animal species. A seasonal adaptation of winter habitation sites in the valley and summer camps in the foothills (Fredrickson 1973).

The Berkeley Pattern (3500-1500 B.P.), defined by a higher proportion of grinding implements to projectile points, implies a greater emphasis on the exploitation of the acorn as a food resource. Archaeological data from a number of Berkeley Pattern sites and depth of the cultural deposits suggest larger populations than the earlier Windmiller Pattern. The Berkeley Pattern suggests local and regional variation, gradual expansion or assimilation of different populations rather than abrupt population replacement, and gradual economic change (Fredrickson 1973:116-133).

The Augustine Pattern (1500-European contact) is defined by a change in the overall general subsistence patterns. Acorns become the dominant food source and bow and arrow technology is introduced during this period. Trade appears to have expanded during this period, and may represent Wintuan population expansion from the north, stimulating a blending of new traits with the established Berkeley Pattern (Johnson 1976:214). This period is identified by intensification of exchange and subsistence activities and population growth.

Investigations into Central Valley prehistory, San Joaquin County, affirm that Central Valley people generally occupied sites along the banks of major waterways, streams and wetland areas. However, it is possible that much of the archaeological record for the region is buried beneath vast alluvial deposits during the last 9,000 years. Consequently, cultural material can be revealed unexpectedly during excavation throughout the Central Valley.

2.3 Ethnography

Prior to European contact, the project area was inhabited by the Northern Valley Yokuts. The ethnographic territory of the Northern Valley Yokuts is defined by the crest of the Diablo Range to the west and the foothills of the Sierra Nevada to the east. The southern boundary extended to where the San Joaquin River bends northward, and their northern boundary was between the Calaveras and Mokelumne rivers.

The Southern Valley Yokuts and the Foothill Yokuts dialects formed the Yokutsan linguistic family of the Penutian Stock (Shipley 1978). Settlements composed of single-family dwellings, sweathouses, and ceremonial structures were located near or on banks of larger watercourses. They lead a semi-sedentary lifestyle, moving during seed procurement and spring flooding (Wallace 1978:462-470). The Yokuts relied heavily on salmon, waterfowl, large mammals and acorns for subsistence (Wallace 1978:464). Acorns were gathered from groves of valley oaks and ground into meal and cooked as a soup or gruel. Spawning salmon were caught in the fall and spring using harpoon and dragnets. Their technology included pottery, baskets, nets, bow and arrow, bedrock mortars, pestles, portable mortars, and flake stone stools to hunt and gather, process, cook and store various foods. Flake stone tools were made from cryptocrystalline silicates and obsidian provided by the Paiute and Shoshone groups on the eastern side of the Sierra. The Salinan and Coastanoan groups provided shell beads and mussels. The Yokuts traded with Miwok groups for baskets and bows and arrows.

Spaniards explored the Sacramento Delta in the early 1800's. As a result, Yokut populations declined due to relocation into Spanish missions. In 1833 Yokut populations were decimated

75% by the malaria outbreak. The 1848 discovery of gold in the Sierra Nevada increased California's European population substantially, and severely impacted the Yokuts. This influx of Europeans eventually resulted in the removal of the remaining Yokuts from their native lands (Latta 1977). Native populations were dislocated from their traditional territories by ranchers and farmers, altering their traditional resources, landforms and waterways. This caused many Yokuts to turn to wage labor on farms and ranches, and others to settle on land set aside for them on the Fresno and Tule River Reservations.

2.4 Historical Context

In 1859, local rural families organized to establish the Salem school that also served as a church and community center. Because of its proximity to the railroad crossing at the Mokelumne River, property owners approached the railroad in hopes of establishing a town (Hillman and Covello 1985). Lodi was first known as the Town of Mokelumne Station, founded by the Central Pacific Railroad. In 1874, to avoid confusion with two other towns, Mokelumne Hill in the foothills and Mokelumne City to the northwest, the name of Lodi was chosen (Gudde 1998:213).

The earliest industries in the area were agriculture, although a lumber mill established in 1877, and a flour mill established in 1876. Agricultural success was due to the unique qualities of the soil and climate in the area. The sandy loam south of the river is well adapted for vineyards and orchards. Airflow through Suisun Pass to the east cools the air at night, which is beneficial for grape crops. These conditions make Lodi well-suited to Flame Tokay grapes. In fact, L.M. Morse and his son Edmund are credited for having planted the first Tokay grapes in the Lodi area in 1892. The site of this notable economic event was the Morse/Skinner Ranch, which stands within the Study Area (and Project Area) today. Plantings of Tokay grapes increased in 1897 and irrigation started around 1920. Today, 97 percent of the Tokay grapes produced in the world are grown in the Lodi area.

Grape vines were superseded in importance during the 19th century by grain and watermelons (Hillman and Covello 1985). Melons became symbolic of local produce during the 1880's; many without irrigation and melon crops prepared the fields for wheat planting.

An 1887 mill fire burned all but three buildings in the center of Lodi, but reconstruction started almost immediately, mostly with inflammable brick. Post-fire building included the Lodi Opera House in 1905, a permanent library in 1909, and the first hospital established by Dr. R. A. Buchanan. Pacific Coast Producers, canners and can manufacturers; Holz Rubber Co., Valley Industries and Goehring Meat Company, producers of Victor brand products. The City of Lodi was incorporated in 1906.

3.0 Inventory Methods

Pacific Legacy was contracted to assist WILLDAN in identifying cultural resources within the project APE. Identification activities were scoped to include, if necessary:

- pre-field research and consultation;
- field survey;
- recording of no more than one archaeological site; and
- preparation of a report of findings.

All project personnel met the professional standards described in Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Robert Jackson, M.A., served as Principal Investigator, Patricia Welsh, M.A. was Project Manager, and Mike Taggart, M.A., directed fieldwork. Steve Hilton, B.A., Janelle Walker, B.A., Nichole Jordan, B.A., and Megan Dunning, B.A. provided field support.

3.1 Pre-field Research

A records search was conducted by the Central California Information Center of the California Historical Resources Information system (CCIC) in February 2006. Records of cultural resource studies and previously recorded cultural resources within ¼ mile of the project area were consulted. Additionally, the following inventories were consulted:

- The National Register of Historic Places
- The California Register of Historical resources
- The California Inventory of Historic Resource (1976)
- The California Historical Landmarks (1996)
- The California Point of Historical Interest listing (May 1992 and update)
- The Historic Property Data File
- Archaeological Determinations of Eligibility
- CALTRANS State and Local Bridge Survey (1989 and update)
- Survey of Surveys (1989)
- GLO Plats
- Other pertinent historic data available at the CCIC for San Joaquin County

Results of the records search received from the CCIC are as follows:

Within The Study Area

- No prehistoric resources were reported to the Information Center.

- The Southern Pacific Railroad is recorded adjacent (west) to the project area. However, no site records are on file with the CCIC for the portion of this line within this 7.5′ USGS quadrangle. Other recorded segments of the historic Southern Pacific Railroad in San Joaquin County have been designated P-39-000002 (CA-SJO-000250H).

- The Morse/Skinner Ranch, listed on the National Register of Historic Places is located within the 220-acre Study Area.

Within ¼ Mile of the Study Area

- No prehistoric resources have been reported to the Information Center.

- Cherokee Memorial Park (cemetery) is located within ¼ mile of the Study Area. No site records are on file for this resource and it is not in the current Historic Property Data File.

- No resources known to have value to local cultural groups have been reported to the CCIC within ¼ mile of the Study Area.

Previous Investigations Reported to CCIC within the Project Area

- Cultural Resources Survey for The Level (3) Communications Long Haul Fiber Optics Project Segment WS04: Sacramento to Bakersfield - SJ-3995 (Nelson 2000)

Previous Investigations Reported To CCIC within ¼ Mile of the Project Area

- Negative Archaeological Survey - SJ-4094 - Davis-King (2000)
- Cellular facility installation – Maggio Cir. /SC-13353A - SJ-6005 - Billat (2006)

Copies of the record search information are provided in Appendix A

3.2 Native American Consultation

The initial effort to consult with Native Americans regarding the project was a letter sent on February 24th, 2006 to the Native American Heritage Commission (NAHC) requesting a search of the Sacred Lands Inventory File, and a current list of interested Native Americans of the area. On March 7th, 2006, Pacific Legacy received a letter from Ms. Debbie Pilas-Treadway of the NAHC. The NAHC letter identified ten individuals and groups with potential interest in the project and stated that no Sacred Lands are on file within the project area. Letters requesting information and/or concerns regarding the proposed project area were sent to the listed Native American contacts on March 8th, 2006 (Appendix B). As of March 15th, 2006, no comments have been received from any of the notified NAHC contact persons. Follow-up phone calls were made to the NAHC contacts on March 16th, 2006. Conversations were held with four of the contacted NAHC persons (B. Elliston, R. Yonemura, G. Villa, Jr., and S. Burley). Ms. Billie Blue Elliston, Mr. Randy Yonemura and Mr. Glen Villa, Jr. expressed no concerns with the project. Silvia Burley, Chairperson of the California Valley Miwok Tribe stated that a response letter has been mailed, but that letter has not been received at this writing. Telephone messages were left with the other NAHC contacts, but no return calls have been received. Copies of correspondence with the NAHC and the contact persons are provided in Appendix C.

3.3 Field Methods

Pacific Legacy, Inc. conducted a systematic intensive pedestrian survey of the entire project area on March 7th, 2006. The project area was surveyed by a team of five archaeologists. The project APE was traversed in line abreast parallel transects spaced 15-30 meters apart. The spacing between transects varied slightly depending on terrain, vegetation, soil conditions, and residential structures. The southern portion of the survey area is planted with grape vines and visibility of mineral soils was between 85%-90%.

Figure 3-1. Southern half of Project Area

Figure 3-2. Northwest Quadrant of Project

The ground surface in the northern portion of the survey area was obscured approximately 75% by grape vines, grass, or both. Ground surface visibility was reduced to only 10%-20%in grassy areas.

Representative views of the Study Area were taken with an Olympus C-60 zoom Digital camera. Overview photos were taken from various locations and from different directions to show the area's environmental and physiographic setting, as well as ground visibility at the time of the survey.

Figure 3-3. Northeast Quadrant of Project

Figure 3-4. Moose Lodge and Vineyards

Figure 3-5. Morse/Skinner House Listed on NRHP

Figure 3-6. Morse/Skinner House Driveway and Water Tower

4.0 Study Findings

An intensive cultural resources survey of 220-acres near the City of Lodi resulted in no prehistoric cultural materials or archaeological deposit discoveries during the pedestrian survey. Pre-field research of the Study Area did not identify any prehistoric resources. Pre-field literature research did identify one historic cultural resource; the Morse/Skinner Ranch within the 220-acre Study Area. This ranch is listed in the National Register of Historic Places (NRHP #39-Z02052).

The survey identified a number of residences, unattached structures associated with the residences, a barn, and a commercial/industrial steel building housing a Moose Lodge within the 220-acre Study Area. Seven structures are situated within the 60-acres subject to the Development Plan for commercial and office space. The structures include the Morse/Skinner property (The Main Residence), a bungalow behind the main residence, a single family residence adjacent to the Morse/Skinner residence, the Moose Lodge, two single family residences, one at 13371 Highway 99 Frontage Road, the other at 13137 Highway 99 frontage Road, and a single family residence at 4044 E. Harney Road.

The Morse/Skinner Ranch House (13063 - 99 Frontage Road) is listed on the National Register of Historic Placed and the California Register of Historical Resources. The remaining structures have not been evaluated for inclusion in the NRHP or CRHR.

Twelve residences are located within the remaining 160-acres of the Master Plan. The addresses of these residences are: 13125, 13167, 13275, 13297, 13323, 13355, 13387, 13409, 13475, 13415 located on the west side of West Stockton Boulevard, 13216 and 13322 located on the east side of West Stockton Boulevard. None of these properties have been subjected to evaluation for the NRHP or CRHR by a qualified Architectural Historian.

The Morse/Skinner Ranch was listed on the National Register in 1986. While the specific criteria are not cited in the NRHP nomination, it is clear that the property is significant under criteria A, B, and C. As the first property in the Lodi area credited with the growing of Flame Tokay grapes, the ranch is the scene of an event important to the economic development of the Lodi area. The property meets Criteria B because, L.M. Morse and his son, E.E. are credited with planting the first Tokay grapes on their property, as well as contributing significantly to the agricultural, financial, and educational growth of Lodi. The significance of the Morse/Skinner house is primarily architectural (Criterion C); the earlier Greek Revival building was altered with later, but compatible, Colonial Revival details, creating a handsome turn of the century property.

While the environment surrounding the Morse/Skinner house includes agricultural fields planted in grapes, it also contains more modern buildings that are inconsistent with the rural, agricultural setting of the ranch, including an adjacent Moose Lodge and residential buildings north and south of the Morse/Skinner ranch buildings (Figure 1-3). Since its nomination in 1984, a three and a half foot chain link fence that surrounded the ranch building complex has been replaced by a six-foot, white iron fence which visually separates the Morse/Skinner Ranch

buildings from the remnant agricultural environment that still exists. The public would have difficulty associating the ranch buildings with surrounding agricultural enterprises that characterizes its history. Therefore, the agricultural setting or environment of the ranch has been substantially compromised and no longer contributes to an appreciation of the historic events and individuals that render the Morse/Skinner Ranch significant.

Recommendations for further consideration of this and the other cultural resources identified within the Study Area are offered in Section 5.0 of this report.

5.0 Recommendations

5.1 Evaluation Criteria

5.1.1 National Register of Historic Places

The National Register of Historic Places (NRHP) is authorized under the National Historic Preservation Act of 1966, as amended. The significance criteria for evaluating cultural resources for listing in the NRHP are defined in 36 CFR 60.4 as follows.

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and

> A. that are associated with events that have made a significant contribution to the broad patterns of our history;
>
> B. that are associated with the lives of persons significant in our past;
>
> C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. that have yielded, or may be likely to yield, information important to prehistory or history.

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

An integral part of assessing cultural resource significance, aside from applying the above criteria, is determining the physical integrity of the resource. Prior to assessing a resource's potential for listing in the NRHP, it is important to understand the seven kinds of integrity mentioned above. To summarize a National Park Service bulletin titled How to Apply the National Register Criteria for Evaluation (National Park Service 1991), the types of integrity are defined as:

Location is the place where the historic property was constructed or the place where the historic event occurred.

Design is the combination of elements that create the form, plan, space, structure, and style of a property.

Setting is the physical environment of a historic property.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.

Association is the direct link between an important historic event or person and a historic property.

To qualify for listing in the NRHP, a property must be significant. That is, it must represent a significant part of the history, architecture, archeology, engineering, or culture of an area, and it must have the characteristics that make it a good representative of properties associated with that aspect of the past.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics to be eligible for listing in the NRHP. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define both why a property is significant and when it was significant. A property that is significant for its historic association is eligible for listing in the NRHP if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or persons. A property important for association with an event, historical pattern, or person ideally might retain some feature of all seven aspects of integrity. A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today (National Park Service 1984:6, 46, 48).

5.1.2 California Environmental Quality Act

The California Environmental Quality Act Guidelines Section 15064.5 includes provisions for significance criteria related to archaeological and historical resources. A significant archaeological or historical resource is defined as one which meets the criteria of the California Register of Historical Resources (CRHR), is included in a local register of historical resources, or is determined by the lead agency to be historically significant. A significant impact is characterized as a "substantial adverse change in the significance of a historical resource."

Public Resource Code Section 5024.1 authorizes the establishment of the CRHR. Any identified cultural resources must therefore be evaluated against the CRHR criteria. In order to be determined eligible for listing in the CRHR, a property must be significant at the local, state, or national level under one or more of the following four criteria, modeled on the NRHP criteria.

1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.

2. It is associated with the lives of persons important to the nation or to California's past.

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. It has yielded, or may be likely to yield, information important to the prehistory or history of the state and the nation.

In addition to meeting one or more of the above criteria, a significant property must exhibit a measure of integrity. Properties eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historic properties and to convey the reasons for their significance. Integrity is judged in relation to location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a property is thought to be eligible.

Public Resource Code Section 21083.2 governs the treatment of unique archaeological resources, defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated" as meeting any of the following criteria:

Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

Has a special and particular quality such as being the oldest of its type or the best available example of its type.

Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a project will cause damage to a unique resource, appropriate mitigation measures shall be required to preserve the resource in place and in an undisturbed state. Mitigation measures may include, but are not limited to 1) planning construction to avoid the site, 2) deeding conservation easements, or 3) capping the site prior to construction. If a resource is determined to be a "non-unique archaeological resource," no further consideration of the resource by the lead agency is necessary.

5.2 Identified Resources

Resources Within the Study Area

The Study Area, defined as the 220-acre parcel subject to the infrastructure Master Plan, contains several residences, a Moose Lodge, and barn, as well as agricultural fields. Literature research and a pedestrian survey of the Study Area identified the Morse/Skinner Ranch house located on 99 Frontage Road, less than one mile south of Lodi, California. The ranch house and water tank stands on a one-acre remnant of a once larger, 200-acre ranch. The residence was built in vernacular Greek Revival style in 1869 and was altered in 1912 with the addition of Colonial Revival details. The Morse/Skinner Ranch and associated water tank are included in the National Register of Historic Places (NRHP) under three criteria (36 CFR 60.4(a-c). An NRHP property is defacto, eligible for the California Register of Historic Resources (CRHR).

A number of other residential structures, several unattached structures associated with these residences, a Moose Lodge, and barn, are present within the 220-acre Study Area. These commercial and residential buildings have not been evaluated.

Resources within the Project Area
Seven properties are within the 60-acre Development Project, proposed for the development of a Blue Shield Office and commercial buildings. The remainder of the residences are within the 160-acre parcel subject to the Master Plan.

5.3 Master Plan Recommendations

The 220-acre parcel is proposed for office and commercial development within 60-acres along the 99 Frontage Road. The commercial and office development is described within the Development Plan and comprises the 60-acre Project Area. The residential development within the remaining 160-acres is described in the Master Plan. Planning for the residential development is preliminary, but appears to entail the demolition of existing buildings and structures in advance of a planned medium and low density residential development.

An Architectural Historian should evaluate the existing structures within the 160-acre residential development. The structures should be evaluated for their inclusion in the NRHP and/or CRHR. Once the resources have been evaluated, the effects of the proposed project can be determined, and further recommendations can be made to mitigate adverse effects.

5.4 Development Plan Recommendations

Recommendation 1: The Morse/Skinner Ranch and water tank, including the one acre parcel on which it is situated, is listed on the NRHP and it is therefore a historical resource eligible for the CRHR. The one acre parcel should be preserved in place. The Development Plan should exclude development of the one acre parcel and protect the property from damage or destruction. If effects to the Morse/Skinner house can not be avoided, then the rehabilitation of the Morse/Skinner house should follow the Secretary of Interior's Standards for Rehabilitation, provided below:

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed in or eligible for listing in the National Register of Historic Places.

The Standards for Rehabilitation (codified in 36 CFR 67 for use in the Federal Historic Preservation Tax Incentives program) address the most prevalent treatment. "Rehabilitation" is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."

The Standards (Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Adherence to the above-mentioned standards will ensure that the integrity and distinguishing characteristics, which make the Morse/Skinner house a significant resource and property listed on the NRHP and CRHR, will be properly maintained, thereby causing no effect to any Historic Properties.

Recommendation 2: The six other structures including several unattached structures within the 60-acres included in the Development Plan should be evaluated for the NRHP and CRHR. Some of these resources, such as the Moose Lodge, were clearly constructed within the last 50 years and are unlikely to be eligible for the NRHP or CRHR. However, some of the residences

may be more than 50 years old and their architectural significance should be evaluated by a qualified architectural historian. This process includes the recording of the buildings and structures on Department of Parks and Recreation Historic Structures Forms (DPR 523). Any structures that are found to be not eligible for the NRHP or CRHR warrant no further consideration. If any of those structures are determined to be eligible for the NRHP or CRHR, the effects of the proposed projects should be assessed and mitigation of adverse changes should be developed.

Recommendation 3: The Yokuts who inhabited the project area prehistorically left no apparent archaeological remains on the ground surface within the Study Area. Previous studies in the Central Valley have shown that archaeological sites are sometimes buried (Moratto 1984). If buried Native American archaeological resources are discovered during the project activities, work should stop immediately in the vicinity of the discovery. The appropriate agency official and a qualified archaeologist should be consulted to determine the significance of the discovery, and plans should be developed to mitigate adverse changes to significant (CRHR eligible) resources. Cultural resources include, but are not limited to artifacts of stone, bone, shell, wood, and/or features that include hearths, structural remains, or dumps.

Recommendation 4: In the event that If human remains are discovered during project construction, work should stop immediately within a reasonable distance of the discovery (e.g., 20 meters (66 feet)), as well as any nearby suspected associations (public Resource Code, Section 7050.5). The San Joaquin County coroner's office should be contacted for investigation purposes. If the remains are determined to be Native American in origin, the coroner will contact both the Native American Heritage Commission (NAHC). Any identified descendants must be notified, and work should not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treating and disposing of, with appropriate respect and dignity, the human remains and any associated grave goods as provided in CEQA Section 15064.5; Health and Safety Code Section 7050.5; Public Resource Code, Section 5097.94 and 5097.98.

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APPENDIX A

RECORD SEARCH

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System

Department of Anthropology - California State University, Stanislaus
801 W. Monte Vista Avenue, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

Date: February 27, 2006

Patricia Welsh, Project Manager
Pacific Legacy, Incorporated
Sierra/Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

CCIC File #: 6104L
Project: City of Lodi--Reynolds Ranch/Blue Shield Development Plan

Dear Ms. Welsh,

We have conducted a records search as per your request for the above-referenced project area located on the Lodi South USGS 7.5-minute quadrangle map in San Joaquin County.

Search of our files includes review of our maps for the specific project area and a one-quarter-mile radius of the project area (as specified by the client), and review of the National Register of Historic Places, the California Register of Historical Resources, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1996), and the *California Points of Historical Interest* listing (May 1992 and updates), the Historic Property Data File (Office of Historic Preservation current computer list dated 1/13/2006), the CALTRANS State and Local Bridge Survey (1989 and updates), the *Survey of Surveys* (1989), GLO Plats, and other pertinent historic data available at the CCIC for each specific county.

The following details the results of the records search:

Prehistoric or historic resources within the project area:

No prehistoric resources reported to the Information Center.

Southern Pacific Railroad, in or immediately adjacent to the project area: no site records have been submitted to us for the portion of this line within this 7.5' USGS quadrangle. Recorded segments elsewhere in San Joaquin County are designated P-39-000002 (CA-SJO-000250H). No copy attached.

National Register site within the project area: Morse/Skinner Ranch. Primary file number P-39-000492. National Register nomination form and page 6 of the Historic Property Data File attached.

Background information for the Lodi area, material attached: *Cities & Towns of San Joaquin County, Since 1847* (Hillman and Covello 1985:31-33, 35-37).

Historic map data, copies attached:

> Estates that may be pertinent to the project area, referenced on Map Number One in *History of San Joaquin County, California, With Illustrations* (Thompson and West 1879; 1968 reprint): L. M. Morse, 280 acres; A. Villinger, 320 acres.
>
> April 1910 (1942 reprint) Castle, CA USGS (1:31680 scale): two buildings, several roads, and the Southern Pacific Railroad (Niles and Sacramento Line) are shown in the project area.
>
> 1939 Lodi 15' USGS (1939-1941 USACE version): the railroad line, several roads, and 12 buildings are shown in the project area.

Prehistoric or historic resources within a one-quarter-mile radius of the project area:

No prehistoric resources reported to the Information Center.

Cherokee Memorial Park (cemetery)—no site records or other forms on file and not in the current Historic Property Data File.

No historic archaeological sites or other historic properties reported within the search radius. But see the attached historic maps for possible cultural resource locations:

April 1910 (1942 reprint) Castle, CA USGS (1:31680 scale): other roads and 9 buildings are shown within ¼-mile.

1939 Lodi 15' USGS (1939-1941 USACE version): see map for buildings and structures.

Map Number One in *History of San Joaquin County, California, With Illustrations* (Thompson and West 1879; 1968 reprint): see map for other estates that may be pertinent to ¼-mile.

GLO Plat maps, copies attached:

T3N/R6E (sheet #41-202, dated 1853-1865): "Fences" (section 13); "Fence" (section 24).

T3N/R7E (sheet #41-203, dated 1853-1865): no cultural references found for the project or radius.

Resources known to have value to local cultural groups:

None have been formally reported to the Information Center.

Previous investigations within the project:

One reported to the Information Center; title page attached for SJ-3995 (Nelson 2000).

Previous investigations within a one-quarter-mile radius of the project Area:

Two reported to the Information Center; title pages attached:

SJ-4094	Davis-King (2000)
SJ-6005	Billat (2006)

Recommendations/Comments:

Please be advised that a historical resource is defined as a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old. There may be unidentified features 45 years or older within your project that are considered as historical resources requiring further study and evaluation by a qualified professional of the appropriate discipline.

In accordance with State law, if any historical resources are found during construction, work is to stop and the lead agency and a qualified professional are to be consulted to determine the importance and appropriate treatment of the find.

We understand that you will be conducting an archaeological survey of the proposed project that is the subject of this records search. We look forward to receiving one copy of your report of findings which should include two copies each complete site record for all historical resources discovered as a result of the survey.

We thank you for contacting this office regarding historical resource preservation. Please let us know when we can be of further service. We would also like to request that you send us a current copy of your vitae, as we do not yet have a copy for our files. Please sign and return the attached Agreement of Confidentiality form. As previously instructed, the original invoice has been sent to the Seabright Avenue office of Pacific Legacy, but a courtesy copy is attached for your reference.

Sincerely,

R Hards

Robin Hards, staff
Central California Information Center
California Historical Resources Information System

CENTRAL CALIFORNIA INFORMATION CENTER
California Historical Resources Information System
Department of Anthropology – California State University, Stanislaus
801 W. Monte Vista Avenue, Turlock, Ca. 95382
(209) 667-3307 FAX (209) 667-3324
Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties, Ca.

CCIC File #:_____

Records Search Request Form

Date: 2-24-06

Name of Requestor/Firm: Pacific Legacy, Inc.
Billing Address: 3081 Alhambra Drive, Suite 208, Cameron Park, Ca. 95682
Phone: 530.677.9713 X21 FAX: 530.677.9762 Email: welsh@pacificlegacy.com
Project Name: City of Lodi – Reynolds Ranch/Blue Shield Development Plan
USGA Quadrangles/s: 7.5' Series Topo Map Township 3N, Range 6 East, Section 24 NE
Street Address:

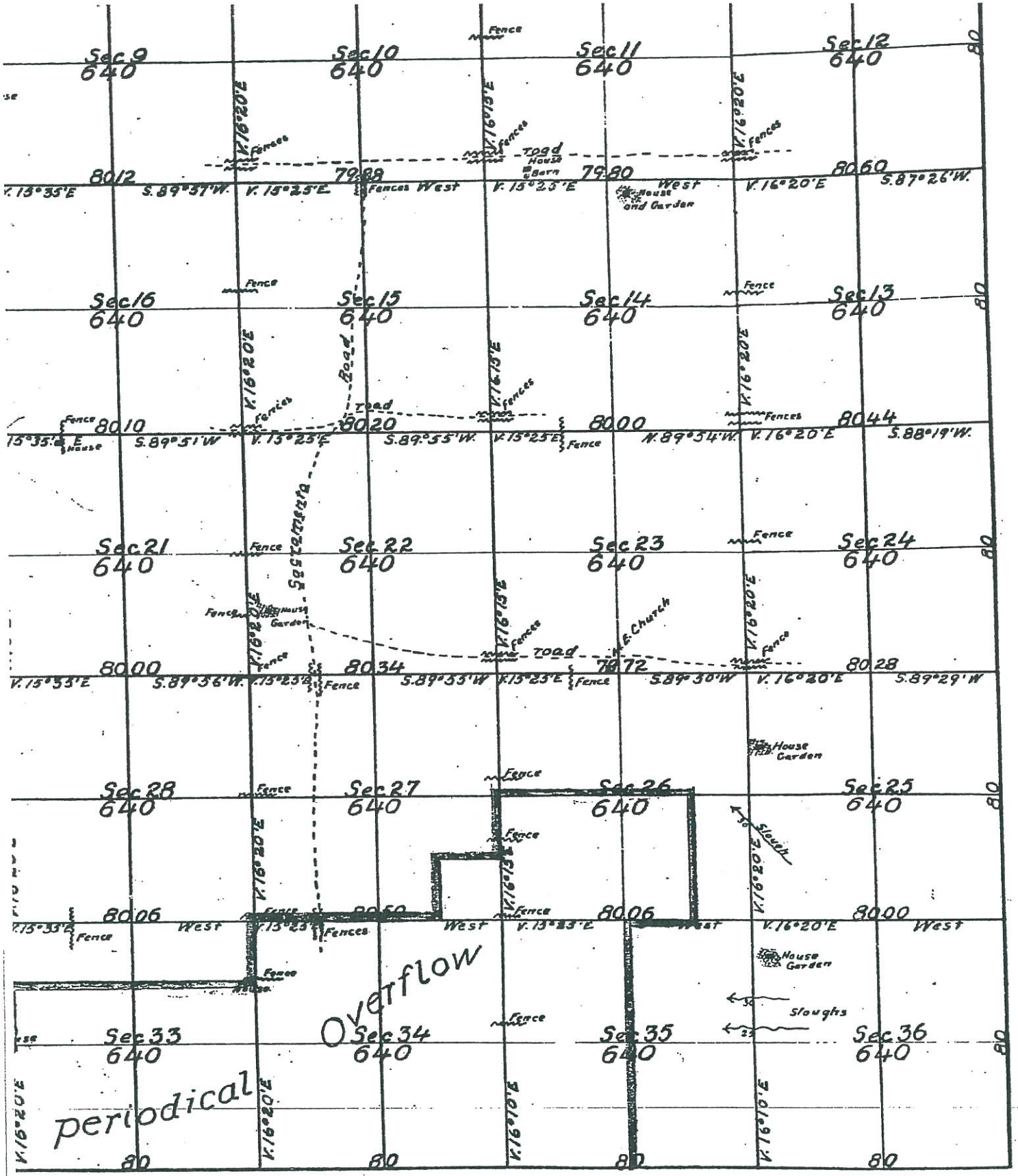
__X__Regular Records Search @120/hr
_____ Expedited Search @50% surcharge

Study area/radius of search:
____Project area only ____ 1-mile radius ____1/2-mile radius _X__1/4 mile radius

In addition to Maps of Record/Archaeological Records/Reports, please also consult:
__X_OHP Directory of Properties in the Historic Property Data file (address listings of evaluated properties, National Register of historic Places, Ca. Register of Historical Resources, Ca. Historical Landmarks, Ca. Points of Historic Interest, and Archeological Determinations of Eligibility)
__X_ California Inventory of Historic Resources (1976)
__X_ CALTRANS State and Local Bridge Surveys
__X_ Survey of Surveys (1989)
__X_ Historic Spots in California (1990)
__X_ Historical Atlas of California (Beck and Haase 1988)
__X_ Gold Districts of California (Clark 1970)
__X_ GLO Plots
__X_ Other historical data on file pertinent to the subject project area

Copies desired @15 cents/page:
__X_ Entire site resource records _X_ within project _X__ within radius specified
____ Summaries of resources ___within project ___within radius specified
____ Entire copies of reports ___within project ___within radius specified
__X_ Title pages of reports _X_ within project __X_ within radius specified
____Complete copies of historic data (for example, National Register forms, HRI forms, CHL forms, CPHI, etc. ____within project ____within radius specified
____Narrative summary of historic data ____within project ____within radius specified

____**FAX RECORDS SEARCH RESULTS** ($10.00 [1-10 pages], $1.00/page [over 10 pages])
_X__**PLEASE TELEPHONE TO DISCUSS OPTIONS IF SEARCH WILL TAKE OVER 2 HOURS**



G.L.O Plat T3N/R6E. MDM # 41-202

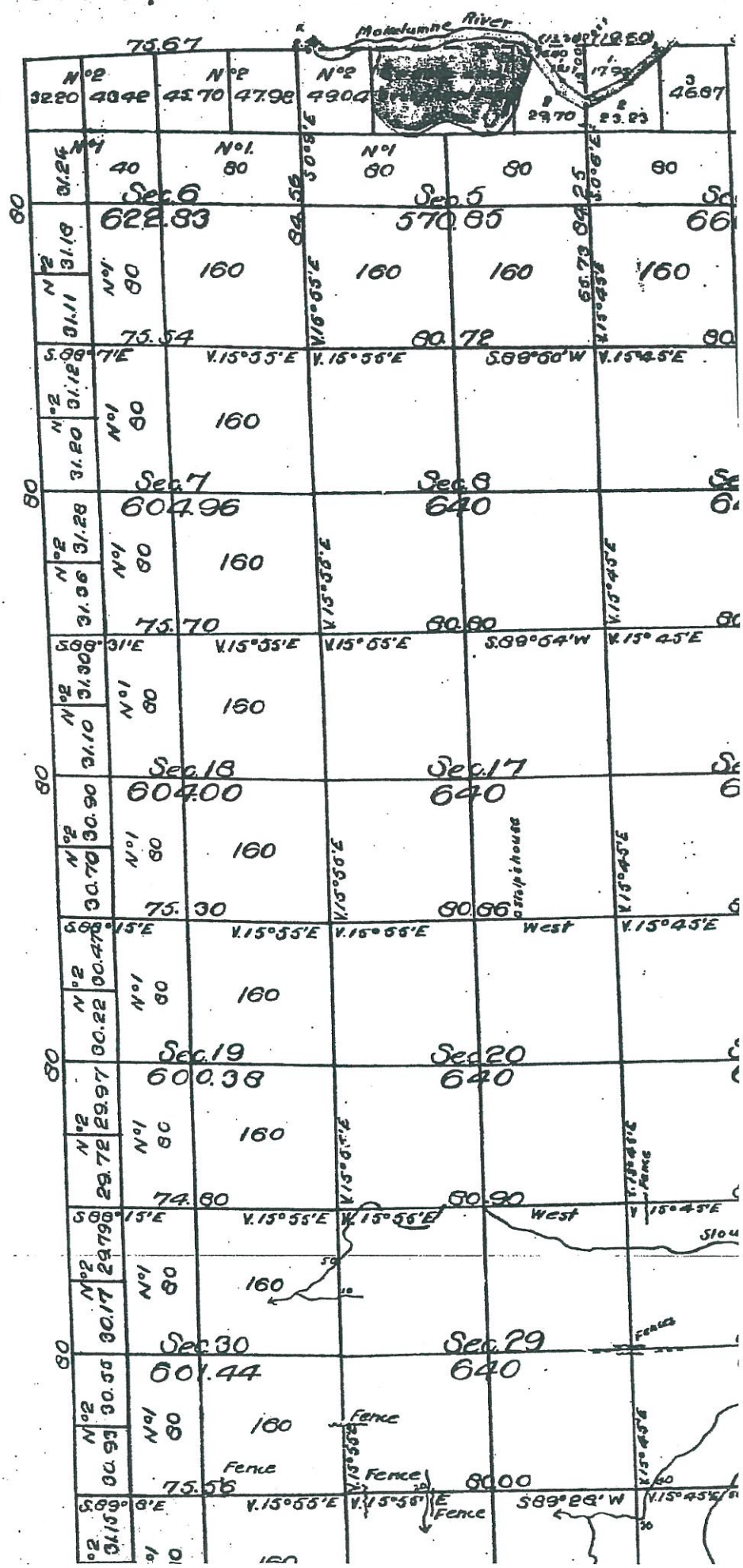
ct	Amount of Surveys	When Surveyed
3		1853
55	60mls 29chs 28lks	April 10th 1865

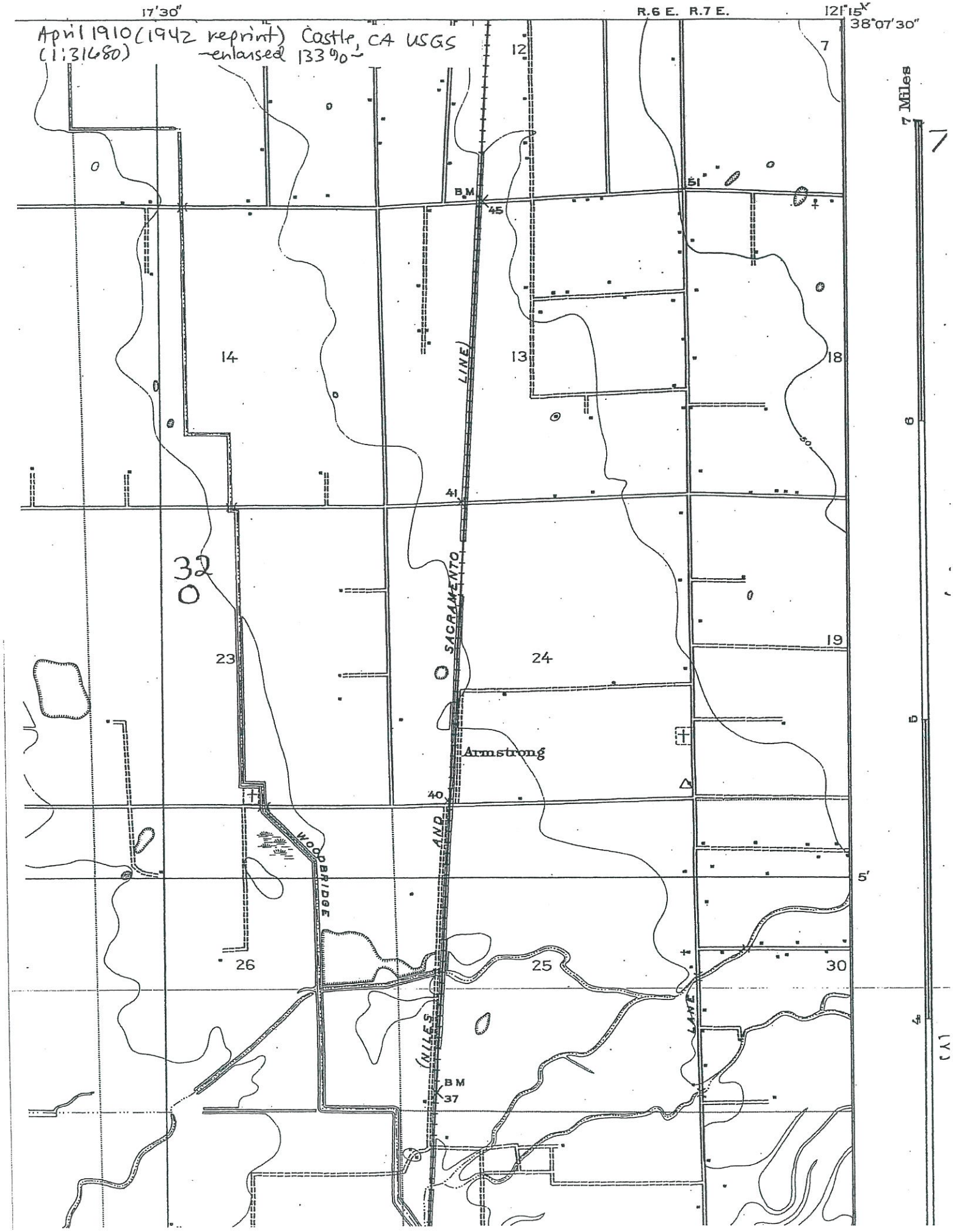
The above Map of Township No 3 North, Range No 6 E is strictly conformable to the field notes of the Surveys which have been examined and approved

GLO Plat
T3N/R7E
MDM

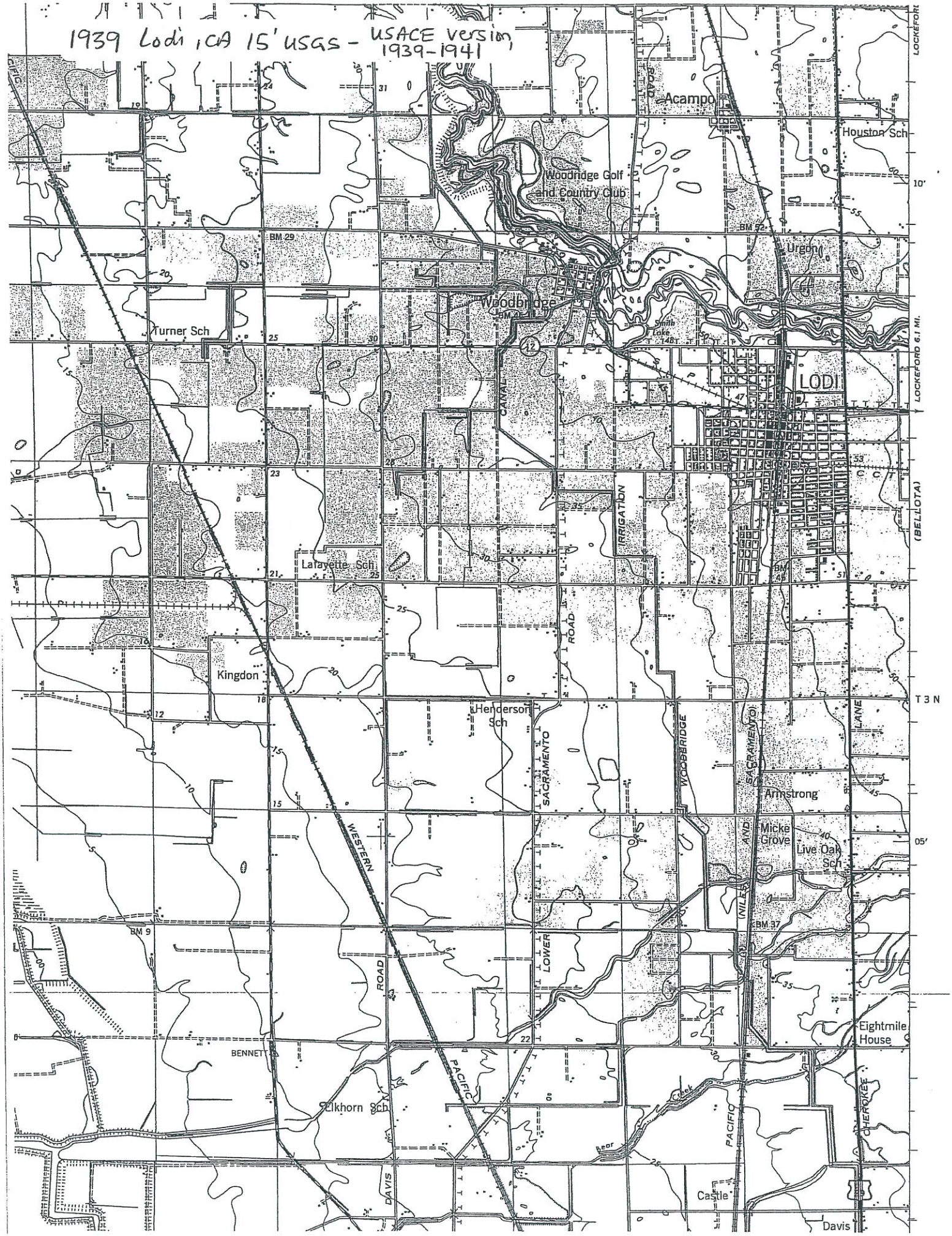
41-203
(1853-65)

Township No. 3 North




April 1910 (1942 reprint) Castle, CA USGS
(1:31680) -enlarged 133%-
17'30"
R.6 E. R.7 E.
121°15'
38°07'30"
7 Miles
12
7
51
B.M.
45
14
13
18
41
32
23
24
19
Armstrong
40
5'
26
25
30
37
B.M.
SACRAMENTO AND (NILES) LINE
WOODBRIDGE
LANE

1939 Lodi, CA 15' USGS - USACE version, 1939-1941



SJ-6005 SJ-6005 SJU

Lodi South

January 31, 2006

Office of Historic Preservation
Department of Parks and Recreation
Attn: Wayne Donaldson
PO Box 942896
Sacramento, CA 94296-0001

neg.

Re: SHPO Cover Letter
FCC Form 620 (Section 106) Submittal
EarthTouch Inc. (Consultants on behalf of Baran Telecom a subsidiary of Baran Group & Omnipoint Communications, Inc dba T-Mobile USA, Inc [T-Mobile])
Maggio Cir. / SC-13353A
Lodi, San Joaquin County, California

Dear Mr. Donaldson:

EarthTouch Inc. (36 CFR 61 qualified consultants), on behalf of T-Mobile, is providing FCC Form 620, New Tower (NT) Submission Packet, for the proposed antenna installation at the above-referenced location. In order to comply with Section 106 of the National Historic Preservation Act, the information on this form identifies cultural resources in the area surrounding our project area and considers the effect of our project upon these resources. The contents of the FCC Form 620 and all pertinent appendices immediately follow this cover letter.

The following is a summary of the submittal and its determinations:

Project Name:	Maggio Cir. / SC-13353A
Project Activity:	Cellular facility installation
Project Address:	2506 Maggio Circle Lodi, San Joaquin County, CA 95240
Federal Agency:	FCC (Delegated to T-Mobile / EarthTouch Inc.)
Historic Properties:	0
Nat. Reg. Properties	0
Nat. Reg. Eligible Properties.	0
Archaeological Sites:	0
Effect:	No Effect

Our (EarthTouch Inc., nee Omnipoint Communications, Inc dba T-Mobile USA, Inc.) signature of this cover sheet is to certify that all representations on this Form NT (FCC Form 620) and the accompanying attachments are true, correct, and complete.

Lorna Billat

Lorna Billat
EarthTouch Inc.
801.423.1014

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System

Department of Anthropology - California State University, Stanislaus
801 W. Monte Vista Avenue, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

INVOICE FOR SERVICES RENDERED

DATE: February 27, 2006

Submitted to:

Pacific Legacy, Inc.
1525 Seabright Avenue
Santa Cruz, CA 95062

COPY

For work performed for:

Patricia Welsh, Project Manager
Pacific Legacy, Incorporated
Sierra/Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

CCIC File #: 6104L
Project: City of Lodi--Reynolds Ranch/Blue Shield Development Plan

Please remit $126.45 for records search or other services rendered as outlined below.

1 hr. x $120.00/hour	= $120.00
43 copies @ $.15/page	= $ 6.45

Total = $126.45

PLEASE MAKE REMITTANCE PAYABLE TO:

CENTRAL CALIFORNIA INFORMATION CENTER

Remittance payable within 60 days of receipt.

Thank you.

[CSUS Foundation Federal TAX ID #77-0492-209]

~~CCIC~~ 4094 N1363782

SJO
Lodi South
Negative

DEPARTMENT OF TRANSPORTATION
NEGATIVE ARCHAEOLOGICAL SURVEY REPORT

I. HIGHWAY PROJECT DESCRIPTION

District	County	Route	Post Mile	Charge Unit	Expenditure Authorization
10	San Joaquin	Southbound West Lane Harney Lane to Armstrong Road			

The existing paved southbound roadway of West Lane between Harney Lane and Armstrong Road, immediately south of the Lodi City Limits, in northern San Joaquin County, California are proposed for resurfacing. The proposed work would be 1.0 mile south of State Route 12 at the city of Lodi, and approximately 1.0 miles west of State Route 99 (Exhibits 1 and 2; T3N R6E, intersection of Sections 23 and 24). The project consists of resurfacing the existing 34 foot-wide roadway (two 12 foot travel lanes, plus a two foot median and an eight foot outside shoulder) with asphalt concrete, and grading of an additional six feet on the outside edge of the pavement for shoulder tapers (Exhibits 3 and 4). All proposed work lies within the existing County right-of-way (ROW). An Area of Potential Effects (APE) map has been signed, and is attached to this ASR (Exhibit 5).

II. STUDY FINDINGS

No archaeological or other cultural resources were identified in the study area. No further archaeological work should be necessary unless project plans change to include unsurveyed areas. If buried cultural materials (an archaeological site) are encountered within the right of way during construction, it is Caltrans policy that the Permit Engineer will order work in the area of the resource to stop halt until a qualified archaeologist can evaluate the nature and significance of the find (Environmental Handbook, Volume 2, Chapter 7-9.4).

III. INTRODUCTION

NAME(S) OF SURVEYOR(S)	QUALIFICATIONS	DATE(S) OF FIELDWORK
Shelly Davis-King	M.A. Anthropology; Ph.C. Anthropology, 30 years archaeological experience	17 October 2000

PRESENT ENVIRONMENT: The project is located in what might have been Central Valley bottomland, but today the area has been subjected to grading for roads and agricultural fields. Vegetation observed is largely non-native and includes grasses, horse tail, mullein, grapes, roses, peaches, and green beans. No water source or fauna were observed during the field inspection. It is possible that imported fill was brought into the more northerly portion of the project as chert cobbles and alluvium were observed. The chert cobbles are fortuitously-fractured non-cultural flakes.

ETHNOGRAPHY: West Lane is located within a probable Northern Valley Yokuts territory. Barrett's (n.d., circa 1906) informant notations indicate that this region was probably inhabited by Yokuts speakers, specifically *Tcilamni*. The *Tcilamni* lived around Stockton and owned the tules or swamp lands up to about half way between the Calaveras and Mokelumne rivers. They may have possibly owned five miles or so toward Buena Vista from Stockton, that is five miles or so east of Stockton. Today the Northern Valley Yokuts in the Stockton/San Joaquin County area are represented by the Nototonme/North Valley Yokut Tribe, Inc., a group of native people represented by Spokesperson Katherine Erolinda Perez (Northern Valley Yokuts, Bay Miwok, Ohlone/Costanoan), who was taken to the project site on 1 October 2000 (see attached Contact Reports). The *Mokelumni* (Miwok speakers) were probably slightly to the north of this project area; what became Lodi may have been a territorial boundary, such as boundaries were ethnographically recognized. Ethnographic sources consulted include Barrett (n.d.), Kroeber (1925), Latta (1977), Merriam (1967) and Wallace (1978). A request was sent to the Native American Heritage Commission (NAHC; 10 October 2000), but no response has yet been received (see attached letter).

IV. SOURCES CONSULTED

NATIONAL REGISTER OF HISTORIC PLACES ■ Month and Year June 2000

CALIFORNIA INVENTORY OF HISTORIC RESOURCES ■ Year 1976

CALIFORNIA HISTORICAL LANDMARKS ■ Year 1996

ARCHAEOLOGICAL SITE RECORDS □ (Name(s) of institution(s))

Records Search conducted at Central California Information Center, California State University, Stanislaus, Turlock, California, 3 October 2000 (CCIC File # 3927L) on a ½ mile radius of project.

OTHER Notified Nototonme/North Valley Yokut Tribe, Inc, and the NAHC (Ethnography, above). Archives and historic records on file, Davis-King & Associates, Standard, California. K. Perez visited site 1 October 2000, with no concerns identified.

RESULTS: Background research indicated that the project area has not been surveyed previously and no cultural resources have been recorded. Within a ½ mile of the project, a linear survey of the Southern Pacific ROW was conducted for fiber optic cable installation, but there were negative results in this area (Nelson 2000).The GLO plat for the township depicts a road oriented east-west across the APE near the current Armstrong Road (Exhibit 6). Also indicated is a church, where a cemetery was plotted on the 1910 USGS map 0.5 mile west of the West Lane/Armstrong Road intersection (Exhibit 7). The 1910 map depicts four residences off West Lane; three of these are also depicted on the 1968 7.5' Lodi South quadrangle. West Lane, Harney Lane, and Armstrong Road were all present by 1910. The Woodbridge Irrigation Canal (now the South Main Canal) and a railroad siding named Armstrong are depicted on the 1910 map. All are outside the APE.

~~CUC~~ 3995
ME SJST
M1363956

SJU, (STA) MER

7.5' Quads Galt, Lodi North, Lodi South, Stockton West, Lathrop, Manteca, Ripon, Salida, Riverbank ~~South~~, Cercs, Denair, Turlock, Cressey, Arena, Atwater, Merced, Planada, Plainsburg, Le Grand, Berenda, Kismet

CULTURAL RESOURCES SURVEY FOR THE LEVEL (3) COMMUNICATIONS LONG HAUL FIBER OPTICS PROJECT

Segment WS04: Sacramento to Bakersfield

P-39-000354
CA-SJO-000241H
P-50-000439
P-39-000002
CA-SJO-000250H
P-50-000001
CA-STA-000350H
P-50-000619
So Pac RR Depot
+ structures and isolates NBNR

by

Wendy J. Nelson

Graphics by

Tammara Norton
Larry Chiea
Eugenia Mitsanis

Prepared by
Far Western Anthropological Research Group, Inc.
P.O. Box 413, Davis, California 95617

Some of the RR features — such as bridges, trestles, etc. are in a table but not on maps!!

Prepared for
Parsons Brinckerhoff Network Services
6689 Owens Drive, Suite A
Pleasanton, California 94588

Project Number 27101

June 30, 2000

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139261		14433 N LOWER SACRAMENTO RD	BLDG 4, UTILITY BLDG	LODI	P	1940	HIST.RES.	DOE-39-02-0057-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139259		14433 N LOWER SACRAMENTO RD	BLDG 2, TWO CAR GARAGE	LODI	P	1930	HIST.RES.	DOE-39-02-0055-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139266		14433 N LOWER SACRAMENTO RD	BLDG 9, STORAGE	LODI	P	1950	HIST.RES.	DOE-39-02-0062-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139272		14752 N LOWER SACRAMENTO RD	RESIDENCE	LODI	P		HIST.RES.	DOE-39-02-0068-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139268		14752 N LOWER SACRAMENTO RD	BLDEG 1, DUPLEX RESIDENCE	LODI	P	1965	HIST.RES.	DOE-39-02-0064-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139271		14752 N LOWER SACRAMENTO RD	BLDG 4, GARAGE	LODI	P		HIST.RES.	DOE-39-02-0067-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139270		14752 N LOWER SACRAMENTO RD	BLDG 3, DETACHED GARAGE	LODI	P		HIST.RES.	DOE-39-02-0066-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
139269		14752 N LOWER SACRAMENTO RD	BLDG 2, METAL FRAME STORAGE FACILI	LODI	P		HIST.RES.	DOE-39-02-0065-0000	12/16/02	6Y	
							PROJ.REVW.	FHWA021114A	12/16/02	6Y	
124898		15417 N LOWER SACRAMENTO RD		LODI	P	1950	HIST.RES.	DOE-39-00-0008-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124897		15431 N LOWER SACRAMENTO RD		LODI	P	1910	HIST.RES.	DOE-39-00-0007-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124896		15475 N LOWER SACRAMENTO RD		LODI	P	1945	HIST.RES.	DOE-39-00-0006-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124894		15485 N LOWER SACRAMENTO RD		LODI	P	1946	HIST.RES.	DOE-39-00-0005-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124893		15551 N LOWER SACRAMENTO RD		LODI	P	1947	HIST.RES.	DOE-39-00-0004-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124892		15567 N LOWER SACRAMENTO RD		LODI	P		HIST.RES.	DOE-39-00-0003-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
124891		15671 N LOWER SACRAMENTO RD		LODI	P	1918	HIST.RES.	DOE-39-00-0002-0000	06/01/00	6Y	
							PROJ.REVW.	FHWA000523A	06/01/00	6Y	
055807	39-Z02050	4 N MAIN ST	MIYAJIMA HOTEL	LODI	P	1937	HIST.SURV.	5240-0005-0000		7	
104054	39-Z02692	2 N SACRAMENTO ST	SOUTHERN PACIFIC RAILROAD DEPOT	LODI		1907	PROJ.REVW.	FHWA960731A	10/07/96	2S2	AC
154821		333 N WASHINGTON ST	LODI ARMORY	LODI	S	1930	PROJ.REVW.	USA030317K	03/26/03	2S2	AC
055806	39-Z02049	PINE ST	LODI ARCH; MISSION ARCH	LODI	M	1907	HIST.SURV.	5240-0004-0000	09/17/80	1S	
							HIST.RES.	SHL-0931-0000	05/13/80	1CL	
069202	39-Z02443	1035 S CENTRAL AVE		LODI	U	1920	PROJ.REVW.	HUD901004B	11/01/90	6Y	
116861	39-Z02844	53 S CHEROKEE LANE	LINCOLN SCHOOL	LODI	D	1916	REG.UNIT	39-0014			
096816	39-Z02591	19 S CRESCENT AVE		LODI	P	1907	PROJ.REVW.	HUD950608C	07/21/95	6Y	
143747		1230 S LEE AVE		LODI	P	1947	HIST.RES.	DOE-39-03-0032-0000	09/15/03	6Y	
							PROJ.REVW.	HUD030826P	09/15/03	6Y	
080951	39-Z02514	233 S LEE ST		LODI	U	1910	PROJ.REVW.	HUD930318D	04/27/93	6Y	
086831	39-Z02531	5 S SCHOOL ST	HOTEL LODI	LODI	P	1915	HIST.RES.	NPS-95001128-0000	09/29/95	1S	A
							NAT.REG.	39-0012	11/22/94	3S	A
							TAX.CERT.	537.9-39-0009	02/02/94		
137698		505 S WASHINGTON ST		LODI	P	1916	HIST.RES.	DOE-39-03-0008-0000	01/06/03	6Y	
							PROJ.REVW.	HUD021206M	01/06/03	6Y	
104056	39-Z02694	SACRAMENTO ST	SOUTHERN PACIFIC RAILROAD TELEPHON	LODI		1925	PROJ.REVW.	FHWA960731A	10/07/96	6Y	
104055	39-Z02693	SACRAMENTO ST	SOUTHERN PACIFIC FREIGHT LOADING D	LODI		1951	PROJ.REVW.	FHWA960731A	10/07/96	6Y	
104057	39-Z02695	SACRAMENTO ST	SOUTHERN PACIFIC METAL STORAGE SHE	LODI			PROJ.REVW.	FHWA960731A	10/07/96	6Y	
055808	39-Z02051	14900 SR 12	TERMINOUS CULLING CHUTE, TOWER PAR	LODI	P	1927	HIST.SURV.	5240-0006-0000	01/01/84	1S	
055803	39-Z02046	SR 99	BR #29-2R	LODI	S	1930	HIST.SURV.	5240-0001-0000		7	
055809	39-Z02052	13063 SR 99	MORSE/SKINNER RANCHHOUSE	LODI	P	1869	HIST.SURV.	5240-0007-0000	01/01/86	1S	
073870	39-Z02476	1150 W KETTLEMAN LANE	THEODORE H BECKMAN RANCH HOUSE	LODI	P	1902	TAX.(NPS)	013081CA820111	01/18/82	2D3	
							HIST.RES.	SPHI-SJO-004	12/21/81	7L	

Nat. Reg. Site.

MORSE/SKINNER RANCH HOUSE

P-39-000492
Lodi South 7.5'

Property has been viewed on site by staff. Integrity is moderate. The 1869 ranch house was remodeled in 1912, but the alterations have their own significance, contributing positively to the architectural character of the building; subsequent alterations are minor. The major alteration has been in the loss of the surrounding ranch and outbuildings, reducing the property to its current one acre site containing the house and its associated tank house. Significance is primarily architectural (criterion C); the earlier Greek Revival building was altered with later, but compatible, Colonial Revival details creating a handsome turn of the century structure. Additional importance is justified under criterion B (persons) for the direct association with several generations of a prominent local family. The property is appears to meet National Register criteria at the local level of significance.

AAG
4/28/86

NPS Form 10-900
(3-82)

OMB No. 1024-0018
Exp. 10-31-84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only

received

date entered

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Morse/Skinner Ranchhouse

and/or common Morse/Skinner Ranchhouse

2. Location

street & number 13063 N. Highway 99, Frontage Road N/A not for publication

city, town Lodi N/A vicinity of

state California code 06 county San Joaquin code 077

3. Classification

Category	Ownership	Status	Present Use	
___ district	___ public	___ occupied	___ agriculture	___ museum
X building(s)	X private	X unoccupied	___ commercial	___ park
___ structure	___ both	X work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	X yes: restricted	___ government	___ scientific
	___ being considered	___ yes: unrestricted	___ industrial	___ transportation
	X N/A	___ no	___ military	X other: vacant

4. Owner of Property

name Raye Churchman, Danny Zendejas

street & number 8069 Mariner Drive #2204

city, town Stockton N/A vicinity of state CA 95209

5. Location of Legal Description

courthouse, registry of deeds, etc. County Recorder's Office

street & number 24 South Hunter

city, town Stockton state CA

6. Representation in Existing Surveys

title N/A has this property been determined eligible? ___ yes X no

date ___ federal ___ state ___ county ___ local

depository for survey records

city, town state

7. Description

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	_x_ original site
_x_ good	___ ruins	_x_ altered	___ moved date N/A
___ fair	___ unexposed		

Describe the present and original (if known) physical appearance

The Morse-Skinner Ranch house stands on the frontage road paralling Highway 99, less than one mile south of Lodi, California, on a one-acre remnant of a once-larger ranch. The property includes two additional structures: a water tank and a more recent non-contributing garage. The residence, built in vernacular Greek Revival style in 1869, was altered in 1912 with the addition of Colonial Revival details. Subsequent alterations are minor.

Stylistically, the residence is a vernacular representative of the Greek Revival style with Colonial Revival modifications. The Greek Revival influence is most strongly seen in the proportions and forms of the two principal gabled rectangles with their eave returns and simple detailing. The original porch was replaced by the current Colonial Revival design with its Tuscan columns and ornamented pediment.

The wood frame residence is two stories in height and roughly rectangular in form. The building is comprised essentially of two gabled rectangles. The largest one is oriented east/west, and is intersected by the other rectangle which extends to the south. The gabled rectangles contain eave returns on the facades, and double hung windows of both four lights over four and two lights over two. A slatted vent occurs in the center of the front facade gable. The largest rectangle appears to have been the original house. The southern wing may have been constructed at the same time or perhaps slightly later. The wood frame building is surfaced with wide channel rustic siding. The walls of the residence were originally constructed on the ground and raised into place on a brick foundation.

An angled one-story bay projects from the north elevation on the east end. A long one-story rectangle projects from the gabled wing along the south elevation. This sun porch contains steps and an entry, flanked by a row of windows on either side.

The original porch with its paired post columns and second floor balustrade was replaced by E.E. Morse, c. 1912, with the current Colonial Revival-inspired design. This one story porch is supported by Tuscan columns and contains a balustrade of turned balusters. The entrance is marked by an ornamented pediment and dramatized by a rounded projection on its southern side.

The southern sun porch was converted from an earlier screened porch, apparently added to the residence early in E.E. Morse's occupancy. A one story roofed addition on the northwest and a gabled extension of the sun porch to the west are connected by a small addition at the rear (west)

The interior contains a stairway with turned balusters leading to the upper floor. Decorative moldings of Greek Revival derivation enframe doors and windows. The interior framing of the angled bay is embellished with decorative brackets. Upstairs doors still contain transoms. Other detailing is simple and standard to ranch house construction of the era.

8. Significance

Period	Areas of Significance—Check and justify below			
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture
___ 1600–1699	X architecture	___ education	___ military	___ social/ humanitarian
___ 1700–1799	___ art	___ engineering	___ music	___ theater
___ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation
X 1900–	___ communications	___ industry	___ politics/government	___ other (specify)
		___ invention		

Specific dates 1869; remod.1912 **Builder/Architect** unknown

Statement of Significance (in one paragraph)

The Morse-Skinner Ranch house in Lodi, California, possesses historic significance due to its associations with three successive generations of a prominent pioneer Lodi family, each of which contributed substantially to the evolution of the community. This family also played a principal role in the naming of the City of Lodi. The ranch residence is additionally important as a handsome and distinctive architectural design, combining Gree Revival and Colonial Revival styles, and reflecting the major periods of its significant associations. The structure is an unusual survivor of its type and era still remaining in the Lodi area. It has retained its ranch setting, and its design integrity reflects the principal periods of significant occupation by family members.

The Morse-Skinner Ranch house was built by the prominent Lodi pioneer, Lorenzo Marion Morse in 1869. Morse, born in Maine of English immigrant parents, met and married Evelin Sarah Elliott in Illinois in the 1850s. The family, and infant son Fred, traveled by ox-drawn wagons to California in 1859 with members of the Elliott family, and settled in the Lodi area where Mrs. Morse's father was waiting.

In its earliest days, Lodi was called Mokelumne Station. Due to the mail confusion between Mokelumne Station and Mokelumne Hill, it was determined to change the name of the former settlement. Lorenzo Morse's brother Charles, a U.S. Marshall and later a prominent figure in the Bay Area, called a mass meeting of townspeople to vote upon another name for the town. The name Lodi was strongly advocated by Morse family members, and particularly Charles Morse, after a town in Illinois containing many members of the Elliott and Morse families. Lodi was chosen by town members as the new name of their settlement.

L.M. Morse purchased the ranch land that was to hold his house in 1867. The house, constructed in 1869, served as the residential focus of the Morse ranch which was purchased for $ 12.50 an acre. At the time of the construction of the house, the couple's second son, Edmund (E.E.) Morse, born in 1861, was eight years old.

The land, covered with live oaks and underbrush, was cleared and the family first raised grain and watermelons. Later Morse planted fruit orchards, drying and shipping the harvested apricots and peaches. Morse and son Edmund are credited for having planted, in 1892, the first Tokay grapes in Lodi on this ranch. Lodi has since become particularly well known for this highly successful crop.

9. Major Bibliographical References

See Continuation Sheet

10. Geographical Data

Acreage of nominated property 1

Quadrangle name Lodi South, CA

Quadrangle scale 1:24000

UTM References

	Zone	Easting	Northing		Zone	Easting	Northing
A	10	652 610	4125 1780	B			
C				D			
E				F			
G				H			

Verbal boundary description and justification

See Continuation Sheet

List all states and counties for properties overlapping state or county boundaries

state	N/A	code	county	N/A	code
state	N/A	code	county	N/A	code

11. Form Prepared By

name/title Eleanor Young

organization Historic Environment Consultants date 10/5/84

street & number 8579 La Riviera Drive telephone (916) 386-2428

city or town Sacramento state CA 95826

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national ___ state ___ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature

title date

For NPS use only

I hereby certify that this property is included in the National Register

date

Keeper of the National Register

Attest: date

Chief of Registration

In 1936, the interior was remodeled with the addition of a bathroom, enclosure of the screened porch, and the replacement of some downstairs doors with French doors.

Tank House (Contributor)

A two story wood frame tank house, c. 1912, stands to the west and behind the residence. The structure is almost square in floor plan and topped with a hip roof.

The small wood frame building is surfaced with wood siding and contains a ground floor door on the east elevation. The small gabled addition of wood on the north end of the tank house was added after World War II to accommodate the washer and dryer.

Garage (Non-contributor)

A one story, two car garage stands between the residence and tank house, slightly north of the latter.

The small flat-roofed building is surfaced with wood siding and was apparently constructed during the 1940s. There are windows on the east and west elevations and paired doors on the south. Modifications appear to be minor.

The property occupies a one acre portion of the original ranch which formerly also contained a stable and carriage house, demolished in the 1970s. The larger property was reduced to its present size through subdivision, primarily over the twenty five years between 1950 and 1975.

Additional features on the property include several mature deciduous and evergreen trees, a wide lawn and shrubbery. A fence separates the property from the frontage road, buffered from the parallel Highway 99 by dense planting.

L.M. Morse's real interest, however, lay in raising pacers and trotting horses. Perhaps the best known member of his stable was the trotter Dexter Prince, out of the famous Hambletonian, purchased from Leland Stanford and eventually sold back to him. L.M. and a partner had a harness racing track near the present Micke Grove.

Unfortunately Morse's "hobby" became a financial drain upon the family, and Morse's two sons, E.E. and Fred, farmed to offset the losses. Morse's death in 1899 left debts that had to be paid by auctioning horses, colts, buggies, carts, harnesses and furniture. Upon Morse's death, his widow Eveline went to live with her married daughter, and dmund and his family moved into the ranch house. Edmund continued to farm the original ranch, and purchased additional acreage known as the "Lower Ranch", bringing the total acreage then under cultivation approximately 66 acres.

With his college background in business, E.E. soon added financ and business activities to his agricultural concerns. He became a founder of the First National Bank of Lodi. This bank was subsequently purchased by the Bank of America, and E.E. served as a Director of the Lodi Branch throughout his life.

Further expanding his financial activities, Morse helped found the Lodi Investment Co., formed in order to construct the Hotel Lodi and Lodi Theater. He remained a Director of this company as well until his death. Morse was also a founding member of Farmer's Mutual Fire Insurance Co. of Stockton, again remaining an active Director for many years.

As a member of the Lodi Union High School Board of Trustees, Morse helped to spearhead the bond issue for a new and accredited high school which was built in 1910, and utilized continuously until about 1975.

E.E. Morse participed actively in a number of community and social groups including the Lodi Masonic Lodge, Ben Ali Shrine in Sacramento, Stockton Lodge of Scottish Rites, Knights of Pythias, and the old Mokelumne Club (Mokelumne was the town's first name).

Morse's influence in the financial field in this region was significant and his agricultural contributions, particularly the first planting of Tokay grapes, important. His participation in the community was broad, ranging from educational concerns to a wide variety of community services. E.E. Morse was an important early twentieth century figure in Lodi and contributed significantly to the financial, agricultural, and educational growth of the community, virtually until his death in 1945.

A third family member of some prominence associated with the house

was John Carroll Skinner, husband of one of E.E. Morse's daughters. Skinner was an early twentieth century automobile dealer in Stockton. Mechanically inclined, he invented the Skinner vaporizer designed to obtain greater fuel efficiency from motor fuel consumption. Skinner was also a noted race driver, holding all of the automobile speed records for non professional racers in California c. 1915. Much of his mountain racing was done to publicize the type of cars he sold. At the time of the Corbett-Fitzsimmons prize fight, he carried the San Francisco Examiner's fight extras from San Francisco to Carson City, beating the train in a well publicized race where county sheriffs closed the roads to other traffic and crowds cheered him on.

In 1920. Skinner gave up the automobile business and moved, with his wife Evelyn (E.E. Morse's daughter) to the Morse Ranch, where he joined his father-in-law in ranching activities. He was active in the agricultural community in the ensuing years as an originator of the Tokay Marketing Agreement which set fresh market grape standards, and as a founder of the Del Rio Winery, now Guild, where he served on the Board of Directors. Additionally, he was a Rotarian, a member of the Ben Ali Shrine and active with the San Francisco Wine and Food Society. At the time of his death in 1967, he was a Director of the Lodi Branch of the Bank of America and of the Farmer's Mutual Fire Insurance Co. of Stockton, apparently following his father-in-law's lead.

Each generational member of this important Lodi family, from early ranching and agricultural innovations to later financial and educational contributions, participated significantly in the growth and evolution of the area.

The Morse-Skinner House is a handsome vernacular ranch residence whose appearance reflects the elegance, design, and character of two important architectural eras. It is an interesting example of its type and style representations, and an unusually attractive structure for its location and use as a ranch residence. The large residence is also one of the very few ranch houses of its age remaining in the area.

Essentially Greek Revival in design origins, the Residence stylistically reflects both of its two major periods of associative significance; the Greek Revival period associated with the Lodi pioneer builder of the house, and the Colonial Revival era of the early twentieth century associated with the builder's son who remodeled a portion of the house in 1912. The basic forms and proportions of the Greek Revival style of the original building are combined with the later Colonial Revival design of its porch. Though somewhat different in design approach, the two styles derive from the same architectural origins, and retain a compatibility.

The Greek Revival style aspects of the structure are most strongly reflected in the simple forms and elegant proportions of the two principal rectangles of the residence and in such detailing characteristic of the mode as the eave returns, window types and simple moldings. The crisp lines of the building create a visual counterpoint to the curvilinear ornament of the pediment, porch columns, and the curve of the porch, the principal Colonial Revival themes utilized in the building design.

The Greek Revival style was widely utilized in California during the 1850s and 1860s. The themes were brought to the West during and just after the Gold Rush, by immigrants from the eastern and southern areas of the country, where the style had been popular since the early decades of the nineteenth century. Vernacular representatives of the style range from farm homes and churches to commercial urban structures. The mode reflected the basic forms and ornament of Greek temple architecture, and often employed gabled or pedimented forms, eave returns that derive originally from pediments, and simple, refined proportions.

During the 1860s, the style gradually declined in popularity, giving way to Italianate or Second Empire modes. The construction of this Greek Revival house as late as 1869 reflects the fact that established styles tended to be retained longer in isolated or rural areas than in urban sites where new trends were more quickly adopted. The angled bay on the north elevation is more common to later Italianate design and may have been an early modification to the structure.

The Colonial Revival style evolved during the end of the nineteenth and early twentieth century, and characteristically employed such classical elements as columns, pediments, dentil courses and friezes, often embellished with formal floral ornament. The architectural return to simpler classical forms after the often excessive ornamentation of the late Victorian era reflected both a reaction to those excesses and to the grand versions of classicism represented at the Columbian Exposition of 1893 in Chicago that heralded architectural styles for the next quarter of a century. E.E. Morse's use of the mode to "modernize" the porch of the ranch house that had become his permanent home was in keeping with the era.

The Morse-Skinner Residence is an important and rare remnant of the early settlement of the Lodi region, a good example of residential ranch construction of the area, and an unusually handsome architectural representative for its location and relatively modest use.

Bewley, Marilyn, Grandaughter of E.E. Morse, Stockton, California, Interview. 7/27/84.

Bewley, Marily, Grandaughter of E.E. Morse, Stockton, California, Letter. 8/26/84.

Hillman, Raymond, Regional Vice President, Conference of California Historical Societies, Letter, 1/27/83.

History of San Joaquin County, illustrations descriptive of its scenery, residences, public buildings, fine blocks and manufactories..., Thompson and West, Oakland, 1879.

Irvine, Leigh H., A History of the New California, 1905.

Lodi News-Sentinel, 8/13/83.

Lodi News-Sentinel, 3/16/44

Personal Account of Eva S. Morse, 1859.

Norton, Maria Elliott, "Diary of a Trip Across the Plains in '59", 1913.

Pratt, Harry Noyes, "Lodi, a City of Progress", Commercial Encyclopedia of the Pacific, 1915.

Sacramento Bee, 11/20/45.

San Francisco Chronicle, 1/14/05.

San Joaquin Historian, "Early Banks in Stockton", V.11, no.1, January-March 1975.

Walker's Manual of Pacific Coast Securities, Walker's Manual Incorparated, San Francisco, California, 1927, 1928.

The Morse-Skinner Ranch house property to be designated lies along the frontage road of Highway 99, less than one mile south of Lodi. The ranch property included over 200 acres of land during the height of its operation. The residence and tank house are the only ranch buildings now remaining from the original ranch. The garage is included in the property to be designated due to its location between the buildings. The property nominated is the one acre remnant of the once larger ranch, and contains these three structures and a small garden area around them.

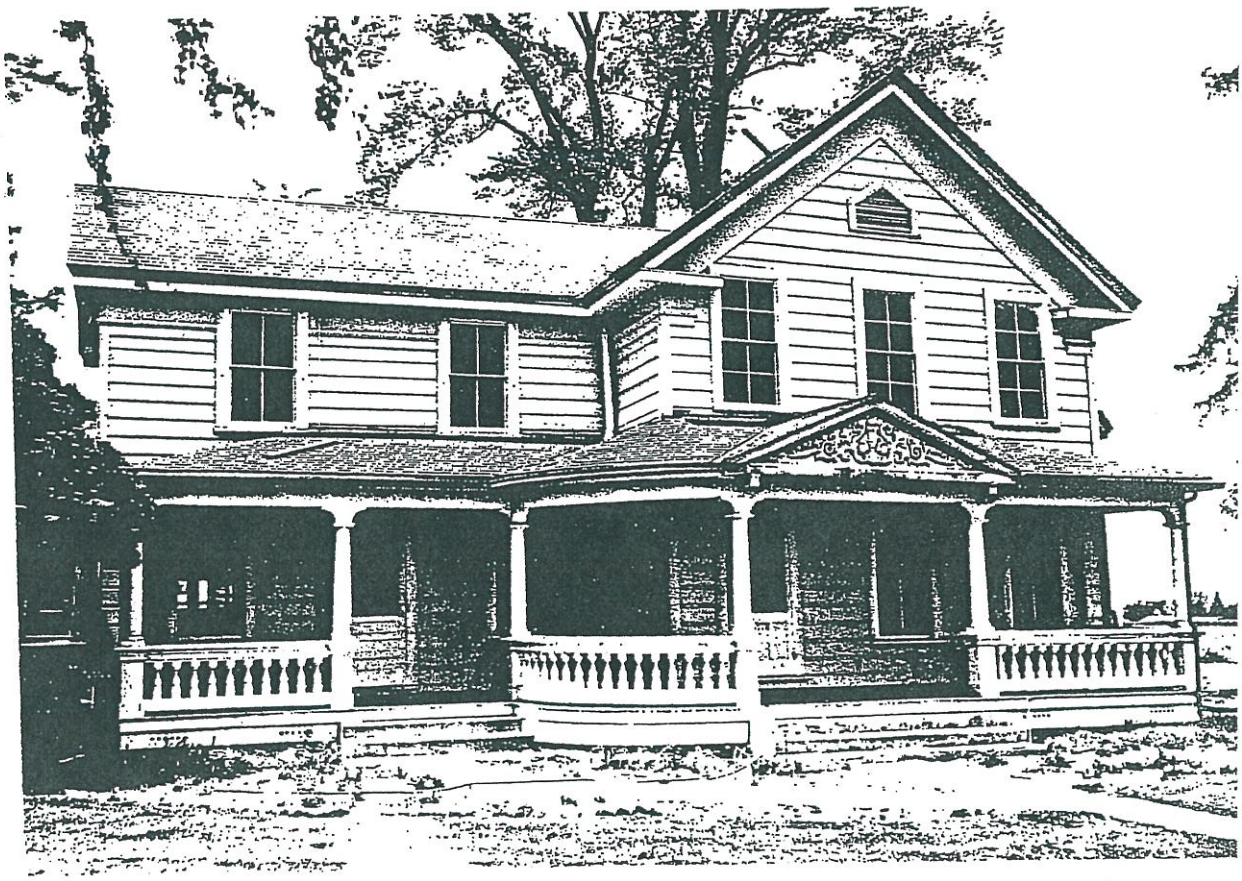
The property is described as a portion of the North ½ of Section 24, Township 3 North, Range 6 East, Mount Diablo Base and Meridian: Commencing at the Northeast corner of said Section 24; Thence South 0°34' East along the East line of Section 24, 1363.10 feet; thence South 89° 50'40" West along the boundary line as described in Instrument recorded November 8, 1907 in Book "G" of Miscellaneous Records, Vol. 23, page 564, San Joaquin County Records and as shown upon that certain Survey filed for record in Book of Surveys, Vol. 7, page 308, San Joaquin County Records, 101.06 feet to a point monumented with a pipe tagged R.C.E. 7029, marking the intersection of the above described boundary line and the West line of the frontage road as described in Book of Official Records, Vol. 2386, page 452, San Joaquin County Records; said point being the true point of beginning; thence South 0° 40' East along the West line of the frontage road, 250.00 feet, thence South 87° 50' 40" West, 175.00 feet; thence North 0° 40' West, 250.00 feet to the above described boundary line; thence North 87° 50' 40" East, 175.00 feet to the true point of beginning.

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, California San Joaquin County
Paula Boghosian
5/18/84, 2306 J Street, Sacramento, C
Ranch Complex, southeast elevation,
View to north west
1 of 12

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch Residence, southeast elevation,
View to northwest
2 of 12

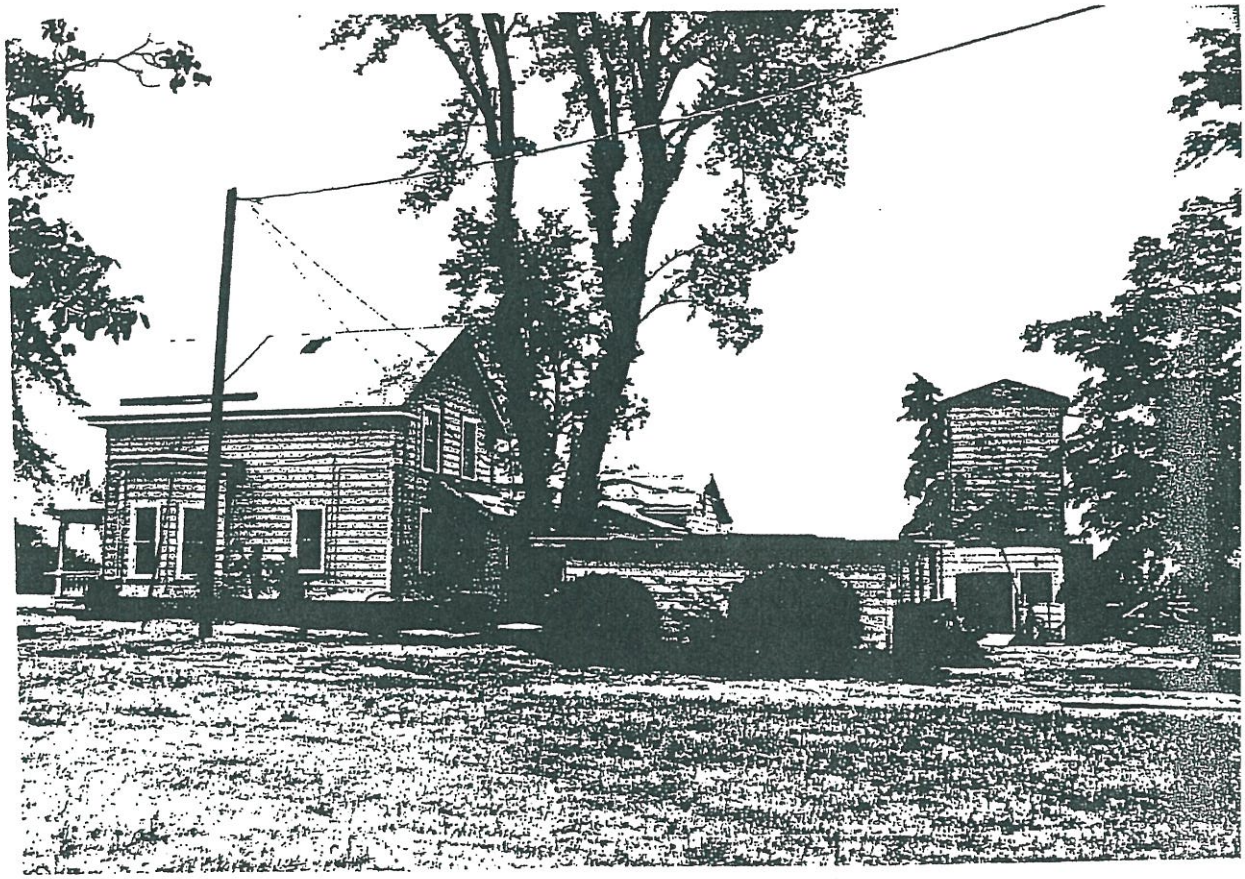
Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch Residence, east elevation,
View to west
3 of 12

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch Residence, east elevation
View to west (and slightly north)
4 of 12



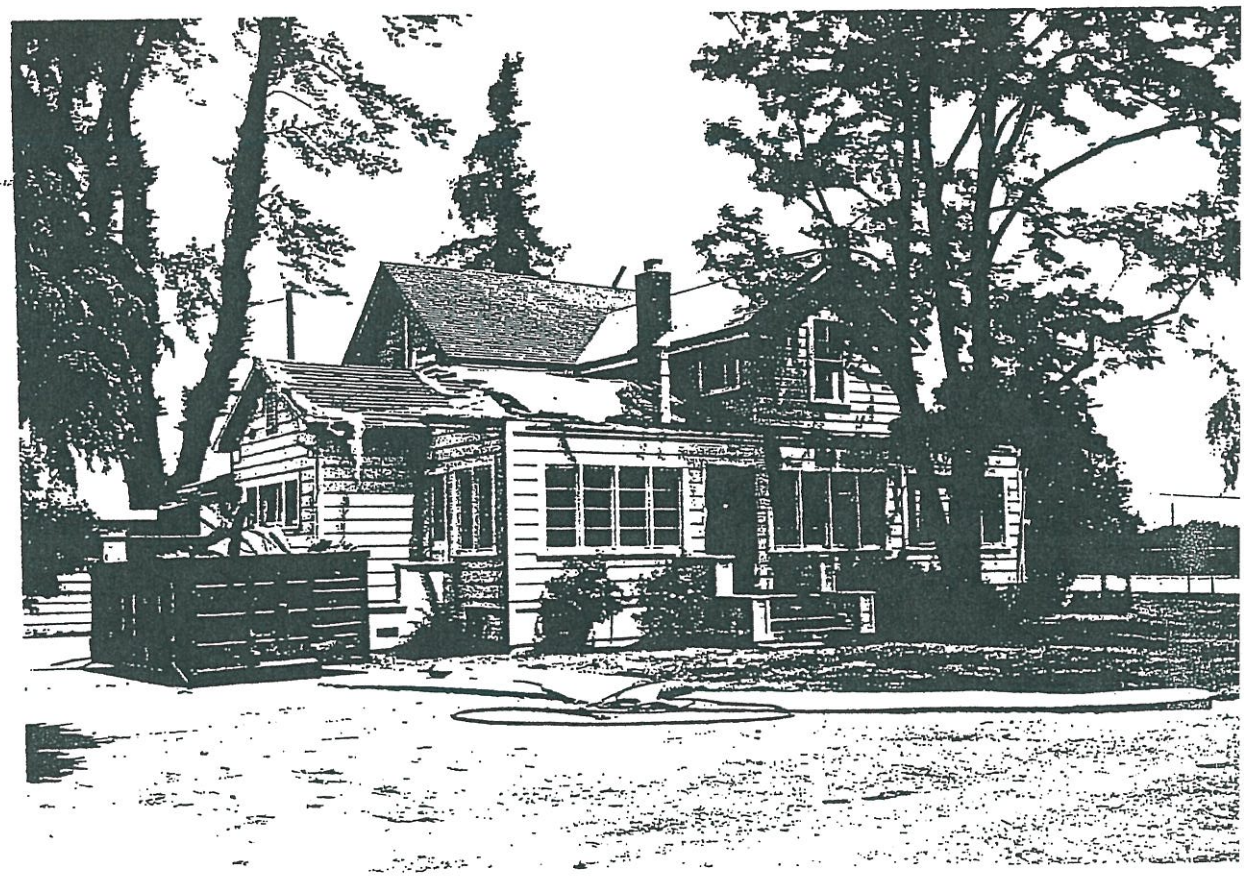
Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch Residence, northeast elevation,
View to southwest
5 of 12

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch complex, north elevation,
View to south
6 of 12



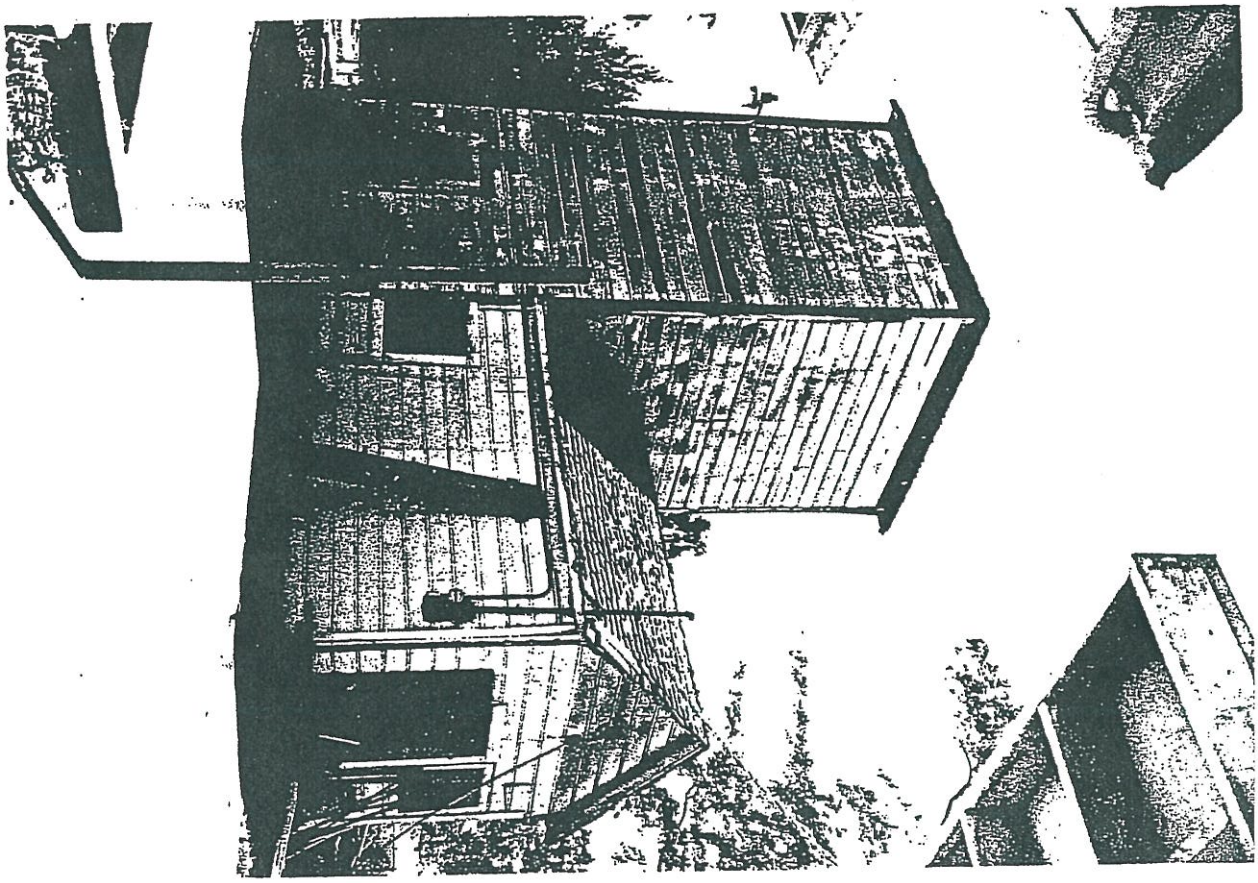
Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch complex, northwest elevation,
View to southeast
7 of 12

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch Residence, southwest elevation
View to north east
8 of 12



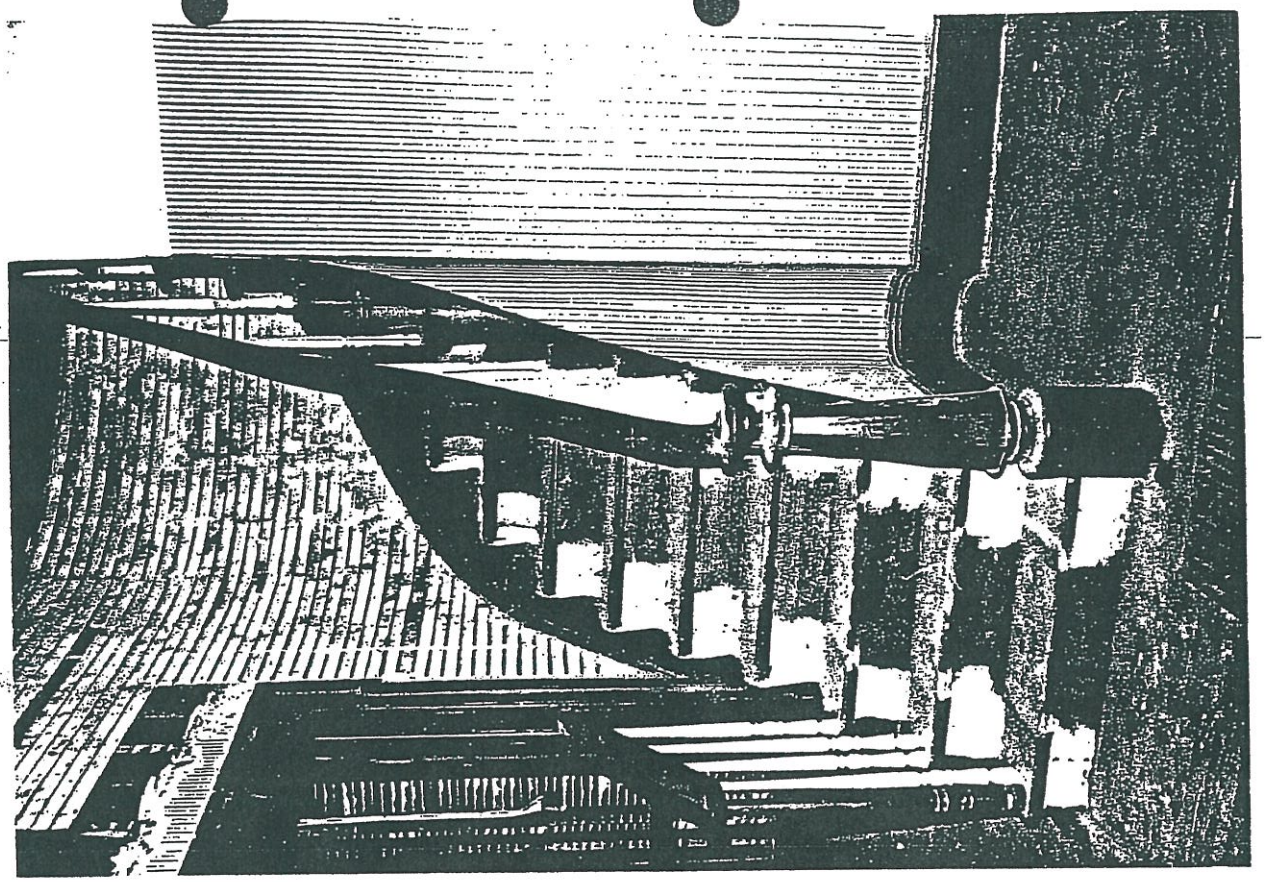
Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Ranch complex, south elevation
View to north. Tank house, garage, rear
of residence. 9 of 12

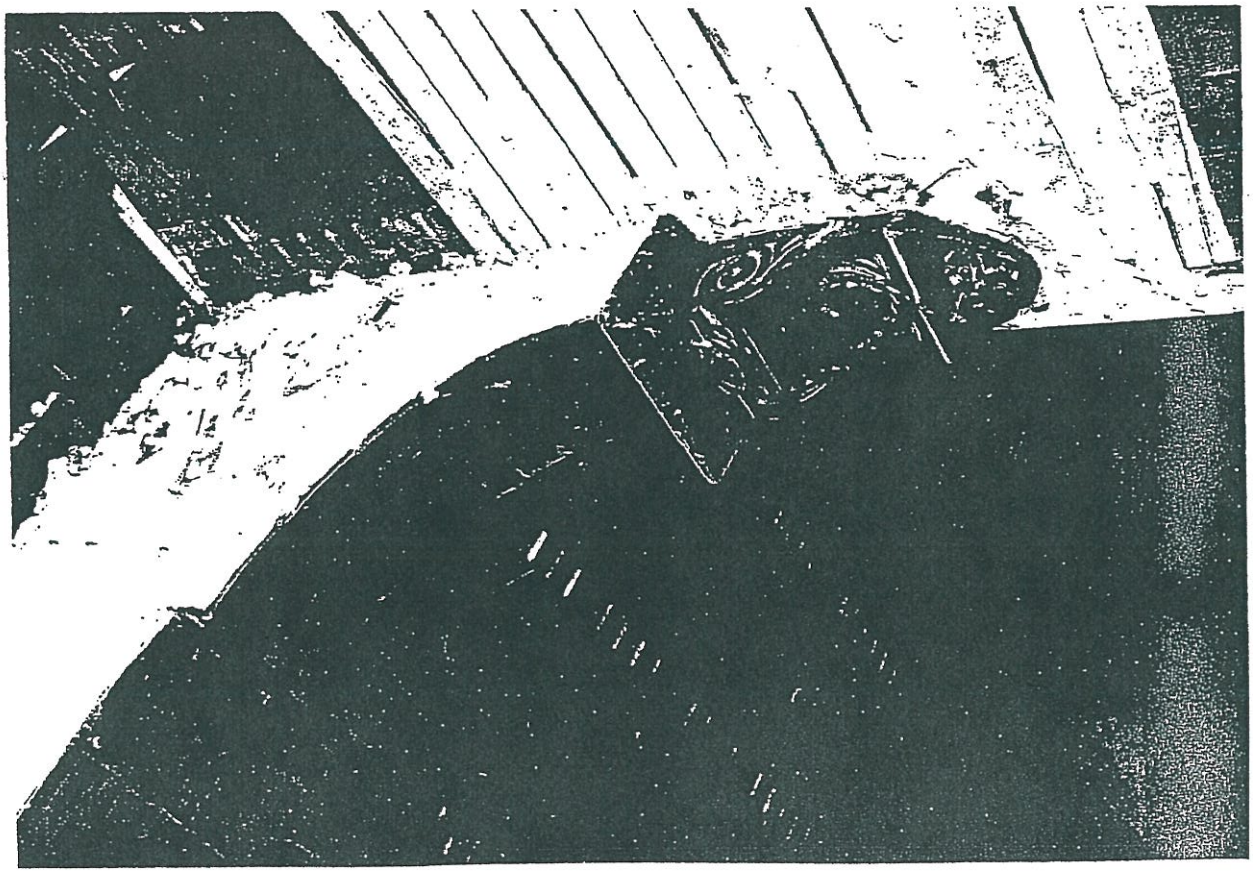
Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
5/18/84, 2306 J St., Sacramento, CA
Tank House, addition, northeast elevation, View to southwest
10 of 12

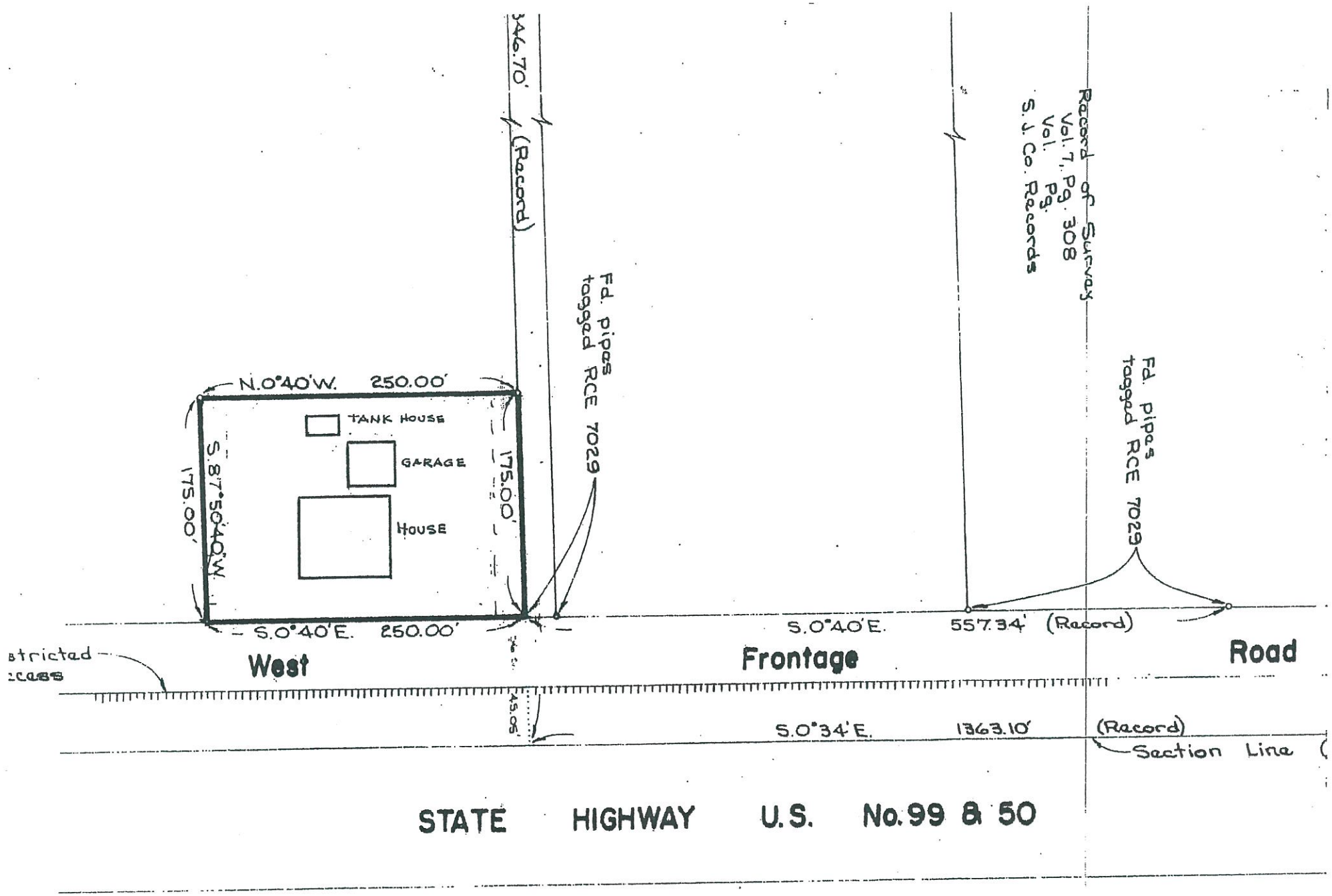


Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
Interior, Stairway, opposite main entry
on east elevation, View to west
11 of 12

Morse-Skinner Ranch
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
Paula Boghosian
Interior, corbel at arch of bay window,
north elevation, View to southwest
12 of 12



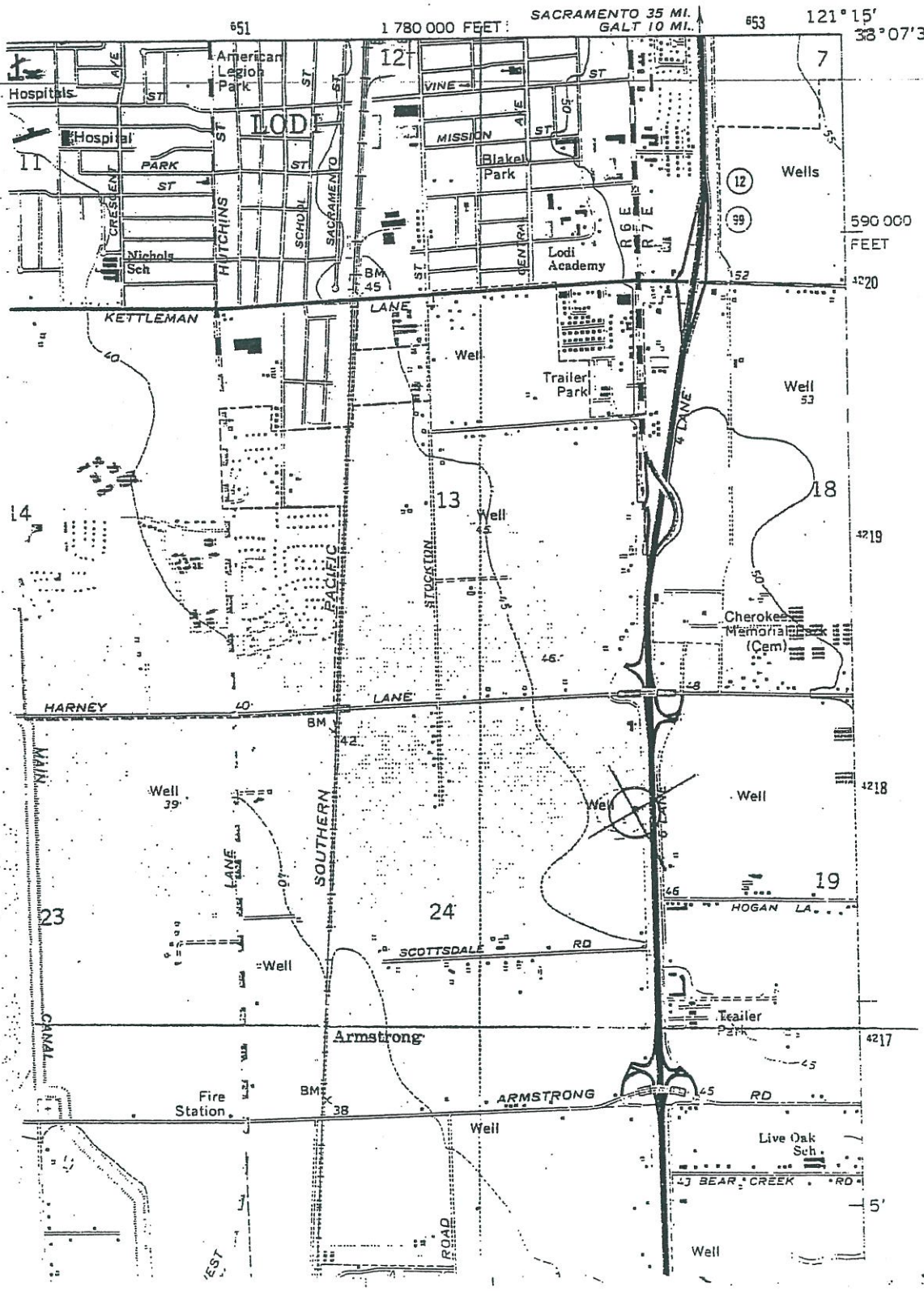




Morse-Skinner Ranch complex
13063 N. Highway 99,
Frontage Rd., Lodi, CA
San Joaquin County
Sketch Map of properties

LODI SOUTH QUADRANGLE
CALIFORNIA—SAN JOAQUIN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

1760 II NW (LOCKEFORD)



Morse-Skinner Ranch House
13063 N. Highway 99, Frontage Road
Lodi, San Joaquin County, California
USGS Topographic Map

UTM: 10/652600/4217860

APPENDIX B

NATIVE AMERICAN CONTACTS

Pacific Legacy Incorporated

Sierra/Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone (530) 677-9713
Fax (530) 677-9762
www.pacificlegacy.com

FAX TRANSMITTAL

DATE: February 24, 2006

TO: Debbie Pilas-Treadway
Native American Heritage Commission
915 Capitol Mall, #364
Sacramento, Ca. 95814

FAX: 916-657-5390

FROM: Patricia M. Welsh – 530-677-9713 Ext. 21

SUBJECT: Sacred Lands Database Search Request

PAGES: 2 (cover and map)

Dear Debbie,

Pacific Legacy, Inc. has been retained to conduct a cultural resources project in the southeast section of the City of Lodi, San Joaquin County, California. The project area, as delineated on the accompanying 7.5′ Series Topographic Map is located in Township 3N, Range 6 East, and Section 24 NE. . The project boundary is bordered by the State Route 99 to the east, the Union Pacific Rail Road to the west, Harney Lane to the North, and the property line that runs parallel and approximately 637 feet north of Scottsdale Road to the South.

I would greatly appreciate a list of Native American contacts and the results of a search of the sacred lands database for previously identified sites for this area so that we may seek comments from Native American representatives.

Thank you in advance for your assistance in this matter. We would greatly appreciate it if you could fax us a list of representatives at your earliest convenience as we are working within a very tight schedule. Again, thank you and please call me if you have any questions or concerns.

Sincerely,

Patricia M. Welsh, M.A.
Project Supervisor

Pacific Legacy Incorporated

Sierra/Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone (530) 677-9713
Fax (530) 677-9762
www.pacificlegacy.com

FAX TRANSMITTAL

DATE: February 24, 2006

TO: Elizabeth Greathouse, Coordinator

FAX: 209.667.3324

FROM: Patricia M. Welsh, Project Manager

SUBJECT: Record Search Request for Project in Southeast Section of City of Lodi
PAGES: 3 (cover and maps)

Dear Elizabeth:

As per our telephone conversation this morning I am requesting a formal record search for the above project. I am attaching your Record Search Request Form and 7.5′ Topographic Map. I am working within a budget of $160.00 and would appreciate it if you would call me when you receive this information so we can discuss any necessary alternatives.

Thank you in advance for your help on this project and I look forward to your call.

Patricia Welsh
Project Manager
530.677.9713 Ext. 21

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

March 7, 2006

Patricia M. Welsh, M.A.
Project Supervisor
Pacific Legacy

Sent by Fax: 530-677-9762
Number of Pages: 3

Re: Proposed southeast section of the city of Lodi project, San Joaquin County.

Dear Ms. Welsh:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Leland Daniels
7531 Maple Lane
Sacramento, CA
95828

Re: Cultural Resources Studies for a project in San Joaquin County.

Leland Daniels:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
We are seeking information from Native American representatives in the area regarding the existence of sites that could be affected by activities in the project area. A cultural resources records search is in progress and will be followed by an intensive pedestrian survey of the proposed project area.

Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Kathrine Erolinda Perez
1234 Luna Lane
Stockton, CA
95206

Re: Cultural Resources Studies for a project in San Joaquin County.

Kathrine Erolinda Perez:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Wilton Rancheria
Mary Daniels-Tarango, Chairperson
7916 Farnell Way
Sacramento, CA 95823

Re: Cultural Resources Studies for a project in San Joaquin County.

Mary Daniels-Tarango:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Bay Area	900 Modoc Street	◊ Berkeley, CA 94707	◊ 510-524-3991	◊ 510-524-4419 fax
Central Coast/Business	1525 Seabright Ave.	◊ Santa Cruz, CA 95062	◊ 831-423-0588	◊ 831-423-0587 fax
Pacific Basin	332 Uluniu St.	◊ Kailua, HI 96734	◊ 808-263-4800	◊ 808-263-4300 fax

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Sierra Native American Council
Dwight Dutschke, Chairperson
Box 12045
Ione, CA
95640

Re: Cultural Resources Studies for a project in San Joaquin County.

Dwight Dutschke:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Randy Yonemura
4305 – 39th Avenue
Sacramento, CA
95824

Re: Cultural Resources Studies for a project in San Joaquin County.

Randy Yonemura:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Ione Band of Miwok Indians
Pamela Baumgartner, Tribal Administrator
PO Box 1190
Ione, CA
95640

Re: Cultural Resources Studies for a project in San Joaquin County.

Pamela Baumgartner:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Ione Band of Miwok Indians
Glen Villa, Jr. Cultural Committee Chairperson
901 Quail Court
Ione, CA
95640

Re: Cultural Resources Studies for a project in San Joaquin County.

Glen Villa:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

Billie Blue Elliston
604 Pringle Ave., #42
Galt, CA
95632

Re: Cultural Resources Studies for a project in San Joaquin County.

Billie Blue Elliston:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Bay Area	900 Modoc Street	◇ Berkeley, CA 94707	◇ 510-524-3991	◇ 510-524-4419 fax
Central Coast/Business	1525 Seabright Ave.	◇ Santa Cruz, CA 95062	◇ 831-423-0588	◇ 831-423-0587 fax
Pacific Basin	332 Uluniu St.	◇ Kailua, HI 96734	◇ 808-263-4800	◇ 808-263-4300 fax

Pacific Legacy Incorporated

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Phone: 530.677.9713
Fax: 530.677.9762
www.pacificlegacy.com

March 8, 2006

California Valley Miwok Tribe
Silva Burley, Chairperson
10601 Escondido Place
Stockton, CA
95212

Re: Cultural Resources Studies for a project in San Joaquin County.

Silva Burley:

Pacific Legacy, Inc. is conducting a cultural resources study in Lodi, San Joaquin County; the City of Lodi survey project area is located in Township 3N, Range 6E, Section 24. The project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.
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Thank you for your assistance in this matter. Please call me at (530) 676-2993 if you have any questions.

Sincerely,

Pat Welsh

Pat Welsh

Enclosure: Figure 1. Project Vicinity Map and Figure 2. Project Location Map.

Native American Contacts
San Joaquin County
March 7, 2006

Katherine Erolinda Perez
1234 Luna Lane
Stockton , CA 95206
canutes@comcast.net
(209) 462-2680

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

California Valley Miwok Tribe
Silvia Burley, Chairperson
10601 Escondido Place
Stockton , CA 95212
council@calvalleymiwoktribe.
(209) 931-4197
(209) 931-4333 FAX

Miwok

Billie Blue Elliston
604 Pringle Ave., #42
Galt , CA 95632
billiebob@softcom.net
(209) 745-7112

Miwok

Ione Band of Miwok Indians
Glen Villa, Jr. Cultural Committee Chairperson
901 Quail Court
Ione , CA 95640
916-322-1617 w
209-274-5535 FAX

Miwok

Leland Daniels
7531 Maple Leaf Lane
Sacramento , CA 95828
(916) 689-7330

Miwok

Ione Band of Miwok Indians
Pamela Baumgartner, Tribal Administrator
PO Box 1190
Ione , CA 95640
admin@ionemiwok.org
(209) 274-6753
(209) 274-6636 Fax

Miwok

Randy Yonemura
4305 - 39th Avenue
Sacramento , CA 95824
(916) 421-1600

Miwok

Sierra Native American Council
Dwight Dutschke, Chairperson
Box 12045
Ione , CA 95640
(209) 274-2357

Miwok

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed southeast section of the city of Lodi project, San Joaquin County.

Native American Contacts
San Joaquin County
March 7, 2006

Wilton Rancheria
Mary Daniels-Tarango, Chairperson
7916 Farnell Way Miwok
Sacramento, , CA 95823
(916) 427-2909 Home
(916) 322-9867 Work

This list is current only as of the date of this document.

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APPENDIX C

NATIVE AMERICAN CORRESPONDENCE

CALIFORNIA VALLEY MIWOK TRIBE

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TRIBAL RESPONSE - PER YOUR REQUEST

March 16, 2006

Sierra & Central Valley Division
3081 Alhambra Drive, Suite 208
Cameron Park, CA 95682

Re: Cultural Resources Studies for a project in San Joaquin County.

Dear Mr. Welsh

This letter is in response to the letter (date posted) March 8, 2006 conducting a cultural resources study in Lodi, San Joaquin County. Project is located in Township 3N, Range 6E Section 24. Project area is indicated on the enclosed Lodi South, CA 7.5' Series Topographic Map.

As of this writing, the California Valley Miwok Tribe has no issues on the particular area regarding the project in Township 3N, Range 6E Section 24 indicated on Topographic Map in Lodi CA

The Tribe is concerned that since Miwok Indians regularly traveled through this area, there is a heightened possibility that Indian artifacts could be found. We are requesting as a courtesy, that we be kept apprised of Miwok artifacts if any are found at this location.

Thank you for allowing us to participate in your project by voicing any concerns we may have. Our Tribe appreciates your request for our input regarding the proposed project.

Contact our office if we can assist you in any way.

Respectfully,

Michelle Burley

Michelle Burley, Tribal Receptionist

Appendix E

Phase I Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT APPROXIMATELY 220-ACRES SOUTH OF EAST HARNEY LANE AND WEST OF STATE ROUTE 99. LODI, CALIFORNIA

May 18, 2006

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April 20, 2006

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An employee owned company

A Report Prepared for:

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PHASE I ENVIRONMENTAL SITE ASSESSMENT APPROXIMATELY 220-ACRES SOUTH OF EAST HARNEY LANE AND WEST OF STATE ROUTE 99. LODI, CALIFORNIA

Kleinfelder Job No: 65942.P01
May 18, 2006

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Important Information About Your Geoenvironmental Report

Geoenvironmental studies are commissioned to gain information about environmental conditions on and beneath the surface of a site. The more comprehensive the study, the more reliable the assessment is likely to be. But remember: Any such assessment is to a greater or lesser extent based on professional opinions about conditions that cannot be seen or tested. Accordingly, no matter how many data are developed, risks created by unanticipated conditions will always remain. *Have realistic expectations.* Work with your geoenvironmental consultant to manage known and unknown risks. Part of that process should already have been accomplished, through the risk allocation provisions you and your geoenvironmental professional discussed and included in your contract's general terms and conditions. This document is intended to explain some of the concepts that may be included in your agreement, and to pass along information and suggestions to help you manage your risk.

Beware of Change; Keep Your Geoenvironmental Professional Advised

The design of a geoenvironmental study considers a variety of factors that are subject to change. Changes can undermine the applicability of a report's findings, conclusions, and recommendations. *Advise your geoenvironmental professional about any changes you become aware of.* Geoenvironmental professionals cannot accept responsibility or liability for problems that occur because a report fails to consider conditions that did not exist when the study was designed. Ask your geoenvironmental professional about the types of changes you should be particularly alert to. Some of the most common include:

- modification of the proposed development or ownership group,
- sale or other property transfer,
- replacement of or additions to the financing entity,
- amendment of existing regulations or introduction of new ones, or
- changes in the use or condition of adjacent property.

Should you become aware of any change, *do not rely on a geoenvironmental report.* Advise your geoenvironmental professional immediately; follow the professional's advice.

Recognize the Impact of Time

A geoenvironmental professional's findings, recommendations, and conclusions cannot remain valid indefinitely. The more time that passes, the more likely it is that important latent changes will occur. *Do not rely on a geoenvironmental report if too much time has elapsed since it was completed.* Ask your environmental professional to define "too much time." In the case of Phase I Environmental Site Assessments (ESAs), for example, more than 180 days after submission is generally considered "too much."

Prepare To Deal with Unanticipated Conditions

The findings, recommendations, and conclusions of a Phase I ESA report typically are based on a review of historical information, interviews, a site "walkover," and other forms of noninvasive research. When site subsurface conditions are not sampled in any way, the risk of unanticipated conditions is higher than it would otherwise be.

While borings, installation of monitoring wells, and similar invasive test methods can help reduce the risk of unanticipated conditions, *do not overvalue the effectiveness of testing.* Testing provides information about actual conditions only at the precise locations where samples are taken, and only when they are taken. Your geoenvironmental professional has applied that specific information to develop a general opinion about environmental conditions. *Actual conditions in areas not sampled may differ (sometimes sharply) from those predicted in a report.* For example, a site may contain an unregistered underground storage tank that shows no surface trace of its existence. *Even conditions in areas that were tested can change*, sometimes suddenly, due to any number of events, not the least of which include occurrences at

adjacent sites. Recognize, too, that *even some conditions in tested areas may go undiscovered,* because the tests or analytical methods used were designed to detect only those conditions assumed to exist.

Manage your risks by retaining your geoenvironmental professional to work with you as the project proceeds. Establish a contingency fund or other means to enable your geoenvironmental professional to respond rapidly, in order to limit the impact of unforeseen conditions. And to help prevent any misunderstanding, identify those empowered to authorize changes and the administrative procedures that should be followed.

Do Not Permit Any Other Party To Rely on the Report

Geoenvironmental professionals design their studies and prepare their reports to meet the specific needs of the clients who retain them, in light of the risk management methods that the client and geoenvironmental professional agree to, and the statutory, regulatory, or other requirements that apply. The study designed for a developer may differ sharply from one designed for a lender, insurer, public agency...or even another developer. *Unless the report specifically states otherwise, it was developed for you and only you.* Do not unilaterally permit any other party to rely on it. The report and the study underlying it may not be adequate for another party's needs, and you could be held liable for shortcomings your geoenvironmental professional was powerless to prevent or anticipate. Inform your geoenvironmental professional when you know or expect that someone else—a third-party—will want to use or rely on the report. *Do not permit third-party use or reliance until you first confer with the geoenvironmental professional who prepared the report.* Additional testing, analysis, or study may be required and, in any event, appropriate terms and conditions should be agreed to so both you and your geoenvironmental professional are protected from third-party risks. *Any party who relies on a geoenvironmental report without the express written permission of the professional who prepared it and the client for whom it was prepared may be solely liable for any problems that arise.*

Avoid Misinterpretation of the Report

Design professionals and other parties may want to rely on the report in developing plans and specifications. They need to be advised, in writing, that their needs may not have been considered when the study's scope was developed, and, even if their needs were considered, they might misinterpret geoenvironmental findings, conclusions, and recommendations. *Commission your geoenvironmental professional to explain pertinent elements of the report to others who are permitted to rely on it, and to review any plans, specifications or other instruments of professional service that incorporate any of the report's findings, conclusions, or recommendations.* Your geoenvironmental professional has the best understanding of the issues involved, including the fundamental assumptions that underpinned the study's scope.

Give Contractors Access to the Report

Reduce the risk of delays, claims, and disputes by giving contractors access to the full report, *providing that it is accompanied by a letter of transmittal that can protect you* by making it unquestionably clear that: 1) the study was not conducted and the report was not prepared for purposes of bid development, and 2) the findings, conclusions, and recommendations included in the report are based on a variety of opinions, inferences, and assumptions and are subject to interpretation. Use the letter to also advise contractors to consult with your geoenvironmental professional to obtain clarifications, interpretations, and guidance (a fee may be required for this service), and that—in any event—they should conduct additional studies to obtain the specific type and extent of information each prefers for preparing a bid or cost estimate. Providing access to the full report, with the appropriate caveats, helps prevent formation of adversarial attitudes and claims of concealed or differing conditions. If a contractor elects to ignore the warnings and advice in the letter of transmittal, it would do so at its own risk. Your geoenvironmental professional should be able to help you prepare an effective letter.

Do Not Separate Documentation from the Report

Geoenvironmental reports often include supplemental documentation, such as maps and copies of regulatory files, permits, registrations, citations, and correspondence with regulatory agencies. If subsurface explorations were performed, the report may contain final boring logs and copies of laboratory data. If remediation activities occurred on site, the report may include: copies of daily field reports; waste manifests; and information about the disturbance of subsurface materials, the type and thickness of any fill placed on site, and fill placement practices, among other types of documentation. *Do not separate supplemental documentation from the report. Do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.*

Understand the Role of Standards

Unless they are incorporated into statutes or regulations, standard practices and standard guides developed by the American Society for Testing and Materials (ASTM) and other recognized standards-developing organizations (SDOs) are little more than aspirational methods agreed to by a consensus of a committee. The committees that develop standards may not comprise those best-qualified to establish methods and, no matter what, no standard method can possibly consider the infinite client- and project-specific variables that fly in the face of the theoretical "standard conditions" to which standard practices and standard guides apply. In fact, these variables can be so pronounced that geoenvironmental professionals who comply with every directive of an ASTM or other standard procedure could run afoul of local custom and practice, thus violating the standard of care.

Accordingly, when geoenvironmental professionals indicate in their reports that they have performed a service "in general compliance" with one standard or another, it means they have applied professional judgement in creating and implementing a scope of service designed for the specific client and project involved, and which follows some of the general precepts laid out in the referenced standard. To the extent that a report indicates "general compliance" with a standard, you may wish to speak with your geoenvironmental professional to learn more about what was and was not done. *Do not assume a given standard was followed to the letter.* Research indicates that that seldom is the case.

Realize That Recommendations May Not Be Final

The technical recommendations included in a geoenvironmental report are based on assumptions about actual conditions, and so are preliminary or tentative. Final recommendations can be prepared only by observing actual conditions as they are exposed. For that reason, you should retain the geoenvironmental professional of record to observe construction and/or remediation activities on site, to permit rapid response to unanticipated conditions. *The geoenvironmental professional who prepared the report cannot assume responsibility or liability for the report's recommendations if that professional is not retained to observe relevant site operations.*

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in the scope of professional service, a report is not likely to relate any findings, conclusions, or recommendations about the suitability of subsurface materials for construction purposes, especially when site remediation has been accomplished through the removal, replacement, encapsulation, or chemical treatment of on-site soils. The equipment, techniques, and testing used by geotechnical engineers differ markedly from those used by geoenvironmental professionals; their education, training, and experience are also significantly different. If you plan to build on the subject site, but have not yet had a geotechnical engineering study conducted, your geoenvironmental professional should be able to provide guidance about the next steps you should take. The same firm may provide the services you need.

Read Responsibility Provisions Closely

Geoenvironmental studies cannot be exact; they are based on professional judgement and opinion. Nonetheless, some clients, contractors, and others assume geoenvironmental reports are or certainly should be unerringly precise. Such assumptions have created unrealistic expectations that have led to wholly unwarranted claims and disputes. To help prevent such problems, geoenvironmental professionals have developed a number of report provisions and contract terms that explain who is responsible for what, and how risks are to be allocated. Some people mistake these for "exculpatory clauses," that is, provisions whose purpose is to transfer one party's rightful responsibilities and liabilities to someone else. Read the responsibility provisions included in a report and in the contract you and your geoenvironmental professional agreed to. *Responsibility provisions are not "boilerplate."* They are important.

Rely on Your Geoenvironmental Professional for Additional Assistance

Membership in ASFE exposes geoenvironmental professionals to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a geoenvironmental project. Confer with your ASFE-member geoenvironmental professional for more information.

ASFE

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TABLE OF CONTENTS

Chapter		Page
1	**SUMMARY**	**1**
2	**INTRODUCTION**	**4**
2.1.	PURPOSE	4
2.2.	DETAILED SCOPE-OF-SERVICES	4
2.3.	ADDITIONAL SERVICES	5
2.4.	SIGNIFICANT ASSUMPTIONS	6
2.5.	LIMITATIONS AND EXCEPTIONS	6
2.6.	SPECIAL TERMS AND CONDITIONS	6
2.7.	USER RELIANCE	6
3	**SITE SETTING**	**7**
3.1.	LOCATION AND LEGAL DESCRIPTION	7
3.2.	SITE AND VICINITY GENERAL CHARACTERISTICS	8
3.3.	CURRENT/PROPOSED USE OF THE PROPERTY	8
3.4.	DESCRIPTION OF STRUCTURES/IMPROVEMENTS	8
3.5.	CURRENT USES OF ADJOINING PROPERTIES	9
4	**RECORDS REVIEW**	**10**
4.1.	STANDARD ENVIRONMENTAL RECORD SOURCES	10
4.2.	ADDITIONAL AGENCY ENVIRONMENTAL RECORDS	13
4.3.	PHYSICAL SETTING SOURCE(S)	14
4.4.	USER PROVIDED INFORMATION	15
5	**HISTORICAL USE OF THE PROPERTY AND ADJOINING PROPERTIES**	**16**
5.1.	AERIAL PHOTOGRAPHY	16
5.2.	SANBORN FIRE INSURANCE MAPS	18
5.3.	POLK AND HAINES CRISS-CROSS DIRECTORIES	18
5.4.	HISTORICAL TOPOGRAPHIC MAP REVIEW	20
5.5.	BUILDING DEPARTMENT RECORDS	21
5.6.	PREVIOUS ASSESSMENTS	22
5.7.	PRELIMINARY TITLE REPORT	22
6	**SITE RECONNAISSANCE**	**23**
6.1.	METHODOLOGY AND LIMITING CONDITIONS	23
6.2.	GENERAL SITE SETTING	23
6.3.	SITE OBSERVATIONS	26
7	**INTERVIEWS**	**30**
7.1.	INTERVIEW WITH OWNER/MANAGER	30
7.2.	INTERVIEW WITH OCCUPANTS	32
7.3.	INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS	32

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8 EVALUATIONS 33
8.1. FINDINGS 33
8.1.1. Background Information *33*
8.1.2. Onsite Findings *33*
8.1.3. Off-Site Findings *35*
8.2. CONCLUSIONS AND RECOMMENDATIONS 37
8.3. DEVIATIONS 42
9 REFERENCES 43

TABLES

1 Location and Legal Description 8
2 Groundwater Information 9
3 Current/Proposed Uses 9
4 Structures/Improvements 9
5 Surrounding Properties 10
6 Records Review - Search Distance 11
7 Physical Setting 15
8 Regional Geology 16
9 Historical Sources 17
10 Aerial Photographs Reviewed 17
11 Site Observations 27

APPENDICES

A Plates:
1 Site Vicinity Map
2 Site Vicinity Map
3-5 Site Photographs
6 1993 Aerial Photograph
B Historical Research Documentation:
Aerial Photograph(s)
Historical Topographic Map(s)
C Environmental Data Resources Report
D Interview/Regulatory Agency Documentation
E Proposal

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1 SUMMARY

A Phase I Environmental Site Assessment (ESA) was performed for WILLDAN of the approximately 220-acre property, which is bound by State Route 99 to the east, Harney Lane to the north, Union Pacific Railroad to the west and near Scottsdale Road to the south in Lodi, California. The subject site consists of Assessor Parcel Number (APNs: 058-130-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14, 15, 16, 17, 18, 19, 21, 22, 24 and 058-110-04, 05, 41) and is currently agricultural land, residential property, and a Moose lodge. In summary, Kleinfelder's assessment revealed the following information associated with the subject site.

1. Due to the historical agricultural use of the site it is possible that environmentally persistent pesticides may have been applied to the site.

2. Standpipes were noted throughout the subject site. On properties with a history of agricultural use, underground pipelines may exist. It was common for said pipelines to contain asbestos (e.g. Transite pipe).

3. Approximately seventeen residential structures and associated barns, sheds and garages are located throughout the site. Additional structures include the Lodi Moose Lodge #634 located 13263 State Route 99. The onsite structures appear to have been built prior to 1980. Asbestos containing materials and/or lead containing paint may be present in these structures.

4. The address 4044 E. Harney Lane is located on the subject site. According to files reviewed at San Joaquin County Environmental Health Department (SJC/EHD) a 400-gallon regular gasoline UST was removed from the site on September 18, 1992.

5. The address 13371 N. Hwy 99 is located on the subject site. According to files reviewed at SJC/EHD a 550-gallon leaded gasoline UST was removed from the site on September 1, 1993 by Jim Thorpe Oil, Inc.

6. A 150-gallon diesel UST for a house furnace is present north of the residence located on APN 058-130-22.

7. Multiple pole-mounted transformers (PMTs) are located throughout the site. Blue stickers indicating that the PMTs are non-PCB containing were noted on several but not all of the PMTs.

8. Septic systems may be associated with the onsite residences.

9. Approximately ten domestic wells and seven irrigation wells were observed on the subject site.

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10. A burn pile is located to the west of the irrigation well/pump along the northern portion of APN 058-110-41. The burn area is approximately 10'x20' in size.

11. Miscellaneous debris was noted throughout the site and included concrete, tires, wood clippings, wood boards, PVC and metal pipes, machine parts, empty 5-gallon buckets, empty 55-gallon drums, miscellaneous farm equipment and vehicles.

12. Five propane ASTs were noted throughout the subject site.

13. Approximately nine pesticide and fertilizer ASTs were noted on the subject site.

14. Two barns and three pole sheds are located in the eastern portion of APN 058-110-41. The most southern barn was locked at the time of Keinfelder's site reconnaissance. The barn west of the pole sheds contained farm equipment, two misting tanks, and a pallet of sulfur. The floor of the barn is concrete and is cracked in places. The three pole sheds have gravel floors and contained farm equipment. A mobile (pesticide/fertilizer) AST is located in the middle shed.

15. Located on the west end of the southern barn on APN 058-110-41 is a concrete pad, which extends out from the barn. Approximately thirteen 5-gallon buckets and a 55-gallon drum are located on the southeast corner of the concrete pad. The buckets and drum appeared to contain petroleum type products. Staining was noted on the ground in the southeast corner of the concrete pad and the staining extended south to the soil adjacent to the concrete pad.

16. Located along the southern portion of APN 058-110-04 is a shed. The shed contained a vault of unknown purpose.

17. The small barn on APN 058-110-04 has a concrete floor (cracked in various locations) and contains automotive engines, 5-gallon buckets and approximately fourteen 55-gallon drums. The drums and buckets were full and the contents are unknown. Staining was noted throughout the floor of the barn.

18. A steel motor fuel AST is located east of the barn on APN 058-110-04.

19. A paved parking lot is located in the eastern portion of APN 058-130-18.

20. A water retention basin is located in the southeast corner of APN 058-130-18.

21. Adjacent to the east of the residence on APN 058-130-07 is debris consisting of tractors, cars, car parts, farm equipment, and 5-gallon buckets of unknown contents. Staining was noted throughout the debris area and under the tractor located in the northern end of the debris.

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22. A PG&E pad-mounted transformer and utility vault are located in the northeast corner of APN 058-130-24. A PG&E underground cable marker was noted on the northern border of the parcel.

23. According to Lisa Dowdy, Research Analyst in the Office of the State Fire Marshal, a 10 inch Kinder Morgan refined product pipeline is located in the vicinity of the subject site.

24. Tokay Cleaners, located at 2525 S. Hutchins, approximately 1,200 feet northwest of the site, appears on the Resource Conservation and Recovery Act Information-Small Quantity Generator (RCRA-SQG), FINDS, and CLEANERS databases.

25. Union Pacific Railroad Company was listed in the Orphan Summary of the EDR report. The facility is approximately half a mile north of the subject site and appears on the SLIC database. The Union Pacific Railroad track is adjacent to the west of the subject site.

26. Lodi Municipal Well, located north of the site, has reported detections of DBCP.

Kleinfelder's findings are discussed in Chapter 8 of this report. This report is subject to the limitations in Chapter 2. Any party other than the client who would like to use this report shall notify Kleinfelder of such intended use in writing for permission.

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2 INTRODUCTION

2.1. PURPOSE

Kleinfelder performed a Phase I Environmental Site Assessment (ESA) of the subject property. It is our understanding that this report will assist the client in recognizing environmental conditions associated with the subject property's past and current use. Kleinfelder performed this ESA in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM); Standard Practice for Phase I Environmental Site Assessment Process E1527-00 and our proposal ST06P053, dated January 30, 2006.

The purpose of this assessment is to assist the client in recognizing environmental conditions at the site. A recognized environmental condition is defined by the ASTM standard as "the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property." The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

Resumes of the personnel preparing this report are available upon request.

2.2. DETAILED SCOPE-OF-SERVICES

The following sections describe Kleinfelder's work scope:

- Chapter 2, **Introduction**, includes a discussion of the purpose/reason for performing the Phase I ESA; additional services requested by the client (e.g. an evaluation of business environmental risk factors associated with the property); significant assumptions (e.g. property boundaries if not marked in the field); limitations, exceptions, and special terms and conditions (e.g. contractual); and user reliance parameters.

- Chapter 3, **Site Setting**, is a compilation of information concerning the site location, legal description (if available), current and proposed use of the subject site, a description of structures and improvements on site at the time of Kleinfelder's assessment, and current uses of adjoining properties.

- Chapter 4, **Records Review**, is a compilation of Kleinfelder's review of several databases available from Federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the subject site; and for off-site facilities up to a mile radius from the site. Environmental liens or activity and use limitations are included in this chapter. Records provided by the client are

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summarized and copies of relevant documents are included in the Appendices of this report. Interviews and telephone conversations conducted by Kleinfelder with people knowledgeable about the site (including the client) and local regulatory personnel are included in Chapter 7.

- Chapter 5, **History of the Site**, summarizes the history of the site and adjoining properties. This history is based on various sources which may include: a review of aerial photographs, Sanborn Fire Insurance Maps, city or suburban directories, historical topographic maps, building department records, previous assessments, and a chain-of-title/ preliminary title report (if provided by the client).

- Chapter 6, **Site Reconnaissance**, describes Kleinfelder's site observations during the site reconnaissance. The methodology used and limiting conditions are described. This chapter also discusses non ASTM Scope items listed below in Chapter 2.3.

- Chapter 7, **Interviews**, is a summary of telephone and personal interviews conducted with "Key Managers" that may include the owner/manager of the facility, occupants/tenants, local government officials, and the client. Additional interview sources may be contacted if "Key Managers" are not available prior to production of this report and include adjacent landowners and people with historical knowledge of the area.

- Chapter 8, **Evaluation** is a presentation of our findings and opinions regarding the information in Chapters 3 through 7; and presents our conclusion regarding the presence of recognized environmental conditions at the site.

- Chapter 9, **References**, is a summary list of the resources used to compile this report.

- Pertinent documentation regarding the subject site is included in Appendices of this report.

2.3. ADDITIONAL SERVICES

An evaluation of business environmental risk associated with the parcel(s) was not included in Kleinfelder's scope of work. The ASTM Phase I ESA Scope does not incorporate non-scope considerations, such as (but not limited to) asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage powerlines. Kleinfelder performed limited soil and water sampling for the subject site in conjunction with the ESA. Our findings, conclusions and recommendations are summarized in a separate report.

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2.4. SIGNIFICANT ASSUMPTIONS

The subject property is hereafter referred to as the "site."

2.5. LIMITATIONS AND EXCEPTIONS

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. This report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help you understand and better manage your risks. Since such detailed services involve greater expense, we ask our clients to participate in identifying the level of service, which will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further. No warranty/guarantee is given either expressed or implied.

Kleinfelder performed this environmental assessment in general accordance with the guidelines set forth in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation E-1527-00) and our proposal ST06P053, dated January 30, 2006. No warranty, either express or implied, is made. Environmental issues not specifically addressed in the report were beyond the scope of our work and not included in our evaluation.

Land use, site conditions (both on-site and off-site), and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings and opinions can be considered valid only as of the date of the site visit. This report should not be relied upon after 180 days from the date of its issuance (per ASTM Standard E-1527, Section 4.6).

2.6. SPECIAL TERMS AND CONDITIONS

No special terms and conditions in addition to those discussed in the previous chapters were agreed to by the User and Kleinfelder.

2.7. USER RELIANCE

Any party other than the client who would like to use this document shall notify Kleinfelder by writing of such intended use. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

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3 SITE SETTING

The site setting is presented to assess the significance of potential on- and off-site contaminant migration, if present. The site location is shown on Plate 1 in Appendix A. Tables 1 through 5 provide the physical characteristics of the site and bordering properties.

3.1. LOCATION AND LEGAL DESCRIPTION

The information presented in Table 1 describes the physical location and legal description of the subject site. This information was obtained from maps, public records, and interviews.

TABLE 1
LOCATION AND LEGAL DESCRIPTION

ADDRESSES	13125, 13160, 13167, 13216, 13275, 13322, 13323, 13355, 13387, 13409 and 13475 N. Stockton Street; 4044 and 4300 E. Harney Lane; and 13063, 13101, 13137, 13191, 13263 and 13371 N. State Route 99.
HISTORICAL ADDRESSES	There are no known historical addresses associated with the subject site.
LOCATION	Bound by State Route 99 to the east, Harney Lane to the north and UPRR to the west.
TOWNSHIP & RANGE	Township 3 North, Range 6 East, Section 24.
ASSESSOR'S PARCEL NUMBER	058-130-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14, 15, 16, 17, 18, 19, 21, 22, 24 and 058-110-05, 04, and 41.
LEGAL DESCRIPTION	A legal description was not provided for this assessment.
ACREAGE	Approximately 220 acres.
POTABLE WATER	Approximately ten domestic wells.
SEWER	Septic systems may be associated with onsite structures.
ZONING	The site is zoned AG-40 (General Agriculture).

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3.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The site is located in an area of relatively level terrain. The site was agricultural with residence and a Moose lodge located onsite at the time of Kleinfelder's assessment. Groundwater information is included in Table 2 below.

TABLE 2
GROUNDWATER INFORMATION

DEPTH TO REGIONAL GROUNDWATER AND GROUNDWATER FLOW DIRECTION (Source: San Joaquin County, Flood Control and Water Conservation District, Groundwater Report, Lines of Equal Depth to Groundwater, Spring 1999, and Lines of Equal Groundwater Elevation, Spring 2003)	According to the "Lines of Equal Depth to Groundwater", the depth to groundwater is estimated at 60 to 70 feet below ground surface (bgs). According to the "Lines of Equal Elevation", the estimated direction of groundwater flow is to the south/southeast. Groundwater depth and flow direction may be influenced by local pumping, rainfall, and irrigation patterns. Evaluation of such factors is beyond the scope of this assessment.

3.3. CURRENT/PROPOSED USE OF THE PROPERTY

Current and proposed uses are described in Table 3.

TABLE 3
CURRENT/PROPOSED USES

CURRENT USE	Agricultural, residential, and an Moose lodge.
PROPOSED USE	Mixed use.

3.4. DESCRIPTION OF STRUCTURES/IMPROVEMENTS

Structures and/or improvements observed on site at the time of Kleinfelder's site reconnaissance are described in Table 4.

TABLE 4
STRUCTURES/IMPROVEMENTS

	GENERAL OBSERVATIONS
STRUCTURES	Approximately seventeen residential structures with associated barns, storage sheds, and garages and a Moose Lodge located in the eastern portion of the site.
IMPROVEMENTS	Septic systems, a water retention basin, paved roadways, paved parking areas, standpipes, transformers, irrigation wells, and domestic wells.

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3.5. CURRENT USES OF ADJOINING PROPERTIES

Kleinfelder performed a drive-by survey of the parcels adjoining the site on March 3, 2006. A summary of the surrounding properties is presented in Table 5.

TABLE 5
SURROUNDING PROPERTIES

North	Harney Lane, beyond which is residential.
South	Rural residential and agricultural land.
East	The Union Pacific Railroad, beyond which is agricultural land.
West	State Route 99, beyond which is agricultural land and residential property.

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4 RECORDS REVIEW

4.1. STANDARD ENVIRONMENTAL RECORD SOURCES

The purpose of the records review is to obtain and review records that would help to evaluate recognized environmental conditions in connection with the subject site and bordering properties.

Federal, State and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder contracted with a commercial database service, Environmental Data Resources (EDR), to review the regulatory agency lists for references to the site and any listings within the appropriate ASTM minimum search distance to the site for each list. The EDR database search results are included in Appendix C, Environmental Data Resources Summary. A description of the types of information contained in each of the databases reviewed and the agency responsible for compiling the data is included in the EDR Radius Report. The Federal and State databases reviewed by EDR are summarized in Table 6.

TABLE 6
RECORDS REVIEW – SEARCH DISTANCE

FEDERAL		STATE	
NPL	1-mile	Cal-Sites, BEP, AWP	1-mile
RCRA-CORRACTS TSDF	1-mile	CORTESE	½-mile
CERCLIS	½-mile	LUST	½-mile
RCRA-non CORRACTS TSD	½-mile	SLIC	½-mile
RCRA-GEN	Site & adjoining	SWIS/SWAT	½-mile
CERCLIS-NFRAP	Site & adjoining	UST	Site & adjoining
ERNS	Site only		

One onsite address was listed on regulatory agency databases researched by EDR.

- ERMA Bradley, located at 4044 E. Harney Lane, onsite, appears on the HIST UST database. The facility appears on the HIST UST database due to a 400-gallon regular fuel tank, which was installed in 1974. Leak detection on the tank is stock inventory and the tank construction is ¼ inches. No additional information is reported in association with this facility.

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There are fourteen off-site facilities listed within the ASTM regulatory agency databases researched by EDR:

- Tumura Bros, located at 1220 E. Harney Lane, adjacent to the north of the subject site appears on the California Underground Storage Tank Facility Inventory Database (CA FID UST) and the Statewide Environmental Evaluation and Planning System (SWEEPS UST) database. The facility appears on these databases due to an inactive 550-gallon underground storage tank (UST). The UST reportedly contained regular gasoline. No additional information is reported in association with this facility.

- Campbell Grinding, located at 2501 S Stockton Street, adjacent to the north of the subject site appears on the HAZNET database. The facility appears on the HAZNET database due to the handling of an unspecified oil-containing waste, waste oil and mixed oil that was disposed of by way of a transfer station.

- Cherokee Memorial Park, Inc., located at Highway 99 at Harney Lane, adjacent to the northeast of the site appears on the HIST UST database. The facility appears on the HIST UST database due to four tanks. Tank one is listed as a 1000-gallon regular fuel tank, which was installed in 1980. Tank two is listed as a diesel tank of unknown size. Tank three is listed as an unleaded tank of unknown size. No information is reported for tank four. No additional information is reported in association with this facility.

- Altamont Machine CO, located at 2501 S. Stockton Street Unit B, approximately 1,900 feet north of the subject site appears on the HAZNET database. The facility appears on the HAZNET database due to the handling of an unspecified oil-containing waste that was disposed of by way of a transfer station.

- Pete's Workshop, located at 2499 S. Stockton Street (2506 Maggio Circle), approximately 1,900 feet north of the subject site appears on the HAZNET database. The facility appears on the HAZNET database due to the handling of an unspecified oil-containing waste that was disposed of by way of a transfer station.

- Qualfab Machining, located at 2499 S. Stockton Street #3, approximately 1,900 feet north of the subject site appears on the HAZNET database. The facility appears on the HAZNET database due to the handling of an unspecified oil-containing waste that was disposed of by way of a transfer station and a recycler.

- Robert Edgar Richards, 13661 N. Cherokee Lane, approximately 1,200 feet north of the subject site appears on the CA FID UST and SWEEPS UST databases. The facility appears on these databases due to an inactive 500-gallon underground storage tank (UST). The UST was reportedly used to contain leaded gasoline. No additional information is reported in association with this facility.

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- Don Miller (Miller Farms), located at 4071 E. Harney Lane, approximately 1000 feet east of the subject site appears on the Historical UST (HIST UST), CA FID UST, and SWEEPS UST databases. The facility appears on these databases due to two inactive 500-gallon UST's. Tank number 1 contained unleaded gasoline and was installed in 1965. Tank number 2 contained regular gasoline and was installed in 1982. No additional information is reported in association with this facility.

- Felix J. Costa, located at 13160 N. West Lane, approximately 500 feet west of the subject site appears on the HIST UST database. The facility appears on the HIST UST database due to a 500-gallon regular fuel tank, which was installed in 1960. No additional information is reported in association with this facility.

- ARCO #760, located at 2251 Cherokee Road, approximately 1,200 feet northeast of the site appears on the "Cortese" Hazardous Waste and Substance Site List (Cortese). No other information is reported in association with this facility.

- Tokay Cleaners, located at 2525 S. Hutchins, approximately 1,200 feet northwest of the site appears on the Resource Conservation and Recovery Act Information-Small Quantity Generator (RCRA-SQG), FINDS, And CLEANERS databases. The facility appears on the RCRA-SQG and FINDS databases due to it being a Small Quantity Generator with one violation on record. The violation is reported as Generator-Land Ban Requirements. No other information is reported in association with this facility.

- None, located at 5154 Hogan Road, approximately 2,800 feet south of the subject site, appears on the Notify 65, LUST and Cortese databases. The facility appears on these databases due to the presence of lead in soil in association with a UST. A leak was discovered on June 17, 1986 during tank closure activities. The leak is reported to have impacted the soil only and according to EDR the case was closed December 21, 1998.

- Union Pacific Railroad Company was listed in the Orphan Summary of the EDR report. The facility is approximately one-half a mile north of the subject site and appears on the SLIC database. No other information is reported in association with this facility.

- Lodi Municipal Well, located north of the site, has reported detections of DBCP. Sampling data was reported for the well from November of 1988 to December of 1996. During that period reported concentrations of DBCP ranged from 0.11 to 1.2 micrograms/liter (μg/l).

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4.2. ADDITIONAL AGENCY ENVIRONMENTAL RECORDS

Local regulatory agencies were contacted for reasonably ascertainable and practically reviewable documentation regarding recognized environmental conditions present at the subject site and adjacent facilities. Interviews with local regulatory agency representatives are summarized in Chapter 7 of this report and copies of the documentation obtained by Kleinfelder are included in Appendix D of this report. The following agencies were contacted for documentation.

- ***San Joaquin County Environmental Health Department (SJC/EHD)*** was contacted on February 16, 2006 for information regarding leaking underground storage tanks and hazardous materials and/or petroleum product incidents. Information obtained from files at the SJC/EHD is summarized below.

  4044 E. Harney Lane located on the subject site. According to files at SJC/EHD a 400-gallon regular gasoline UST was removed from the site on September 18, 1992. According to Jim Thorpe Oil, Inc. the owner Erma Bradley removed the tank from the underground location. The tank was picked up by Jim Thorpe Oil, Inc. on September 18, 1992. Jim Thorpe Oil, Inc. noted the tank as being in good condition and there being no odor or soil discoloration noted in the excavation. According to the permits the estimated last date of use was September 18, 1992 and the tank contained 150 gallons.

  13371 N. Hwy 99 located on the subject site. According to files at SJC/EHD a 550-gallon leaded gasoline UST was removed from the site on September 1, 1993 by Jim Thorpe Oil, Inc. Jim Thorpe Oil, Inc., noted the tank as being in good condition and there being no odor or soil discoloration noted in the excavation. According to the permits the estimated last date of use was September 1, 1993.

- ***San Joaquin County Office of Emergency Services (SJCOES)*** was contacted on Febuary 16, 2006 for information regarding incidents with hazardous materials and/or petroleum products. According to Ms. Michele Halliwell of the OES there are no incidents associated with the site.

- ***The Department of Toxic Substance Control (DTSC)*** was contacted on February 16, 2006 for information regarding hazardous materials and petroleum product incidents for the following addresses in the vicinity of the site. According to DTSC there are no files in their database for the subject site.

- ***California State Fire Marshal Pipeline Safety Office (CSFMPSO)*** was contacted on February 16, 2006 regarding pipelines within the area of the subject site. According to Ms. Lisa Dowdy, Research Analyst for CSFMPSO, there is a 10 inch Kinder Morgan refined product pipeline jurisdictional to the State Fire Marshal in the site area.

- ***State Water Resource Control Board (SWRCB)*** was contacted February 16, 2005 for information regarding UST permits. Kleinfelder has not received

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information from the SWRCB at the time of the writing of this report. If Kleinfelder receives information from the SWRCB that changes the conclusions and recommendations of this report, an addendum to the report will be submitted to the client.

- ***State of California, Department of Conservation, Division of Oil and Gas (DOG)*** webpage ftp://ftp.consrv.ca.gov/pub/oil/maps/dist6/611/Map611.pdf was accessed to evaluate if oil and/or gas wells are associated with the subject site or adjacent properties. No oil or gas wells were mapped on the site or adjacent properties under this source.

- ***San Joaquin County Agricultural Commission*** was contacted for information regarding pesticides used at the site. Kleinfelder has not received information from this agency as of the writing of this report. If information is obtained from this agency at a later date that changes the conclusions and recommendations of this report, and addendum to the report will be submitted to the client.

4.3. PHYSICAL SETTING SOURCE(S)

Table 7 presents information about the physical setting of the site. This information was obtained from published maps.

TABLE 7
PHYSICAL SETTING

USGS TOPOGRAPHIC QUADRANGLE	US Geological Survey. Lodi South (1968 photorevised 1976), 7.5 Minute Series, Scale: 1 inch = 2,000 feet.	The site is depicted as vacant land at an elevation of 45 feet above mean sea level (msl). Two residences are depicted along Harney Lane. Ten residences are depicted along Stockton Road, which trends north/south through the western portion of the site. One large structure and four smaller structures are depicted on the eastern border of the site. Two wells are depicted in the eastern portion of the site. The majority of the site is depicted as agricultural land.
GEOLOGIC MAP	Regional Geologic Map Series, San Francisco-San Jose Quadrangle, Map No. 5A, 1991, Scale: 1 inch = 3.95 miles	The subject site and the adjoining properties are shown as being underlain by a lower member of the Modesto Formation.
SOIL TYPE	Soil Survey of San Joaquin County, California United States Department of Agriculture, October, 1992.	Onsite soil is listed as Tokay Fine Sandy Loam. This soil is on low fan terraces, very deep, well drained, and formed in alluvium derived from granitic rock sources. Permeability is moderately rapid and water capacity is high. Tujunga Loamy Sand is also located onsite. This is a very deep, somewhat excessively drained, nearly level soil on flood plains and elongated channel remnants, and formed in alluvium derived from granitic rock sources. Permeability is rapid and water capacity is low.
OIL AND GAS FIELDS	ftp://ftp.consrv.ca.gov/pub/oil /maps/dist6/611/Map611.pdf	According to the website, no gas or oil wells are associated with the site.

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Information about the regional geology is presented in Table 8. This information was obtained from published data and maps, interviews with public agencies, and/or from previous investigations conducted by Kleinfelder in the vicinity of the site.

TABLE 8
REGIONAL GEOLOGY

REGIONAL GEOLOGY	The site is in the western part of the Great Valley Geomorphic Province of California. The valley is 400 miles long, 50 miles wide, and comprises approximately 20,000 square miles. The valley has been filled with a thick sequence of marine and nonmarine sediments from the late Jurassic to Holocene. The uppermost strata of the Great Valley represents, for the most part, the alluvial, flood, and delta plains of two major rivers (Sacramento and San Joaquin Rivers) and their tributaries. The valley deposits are derived from the Coast Ranges to the west and the Sierra Nevada to the east. Granitic and metamorphic rocks outcrop along the eastern and southeastern flanks of the valley. Marine sedimentary rocks outcrop along most of the western, southwestern, southern, and southeastern flanks; and volcanic rocks and deposits outcrop along the northeastern flanks of the valley. The valley geomorphology includes dissected uplands, low alluvial plains and fans, river flood plains and channels, and overflow lands and lake bottoms.

4.4. USER PROVIDED INFORMATION

User provided information regarding this site is included in the interview section of this report (Section 7.1, Interview with Owner/Manager).

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5 HISTORICAL USE OF THE PROPERTY AND ADJOINING PROPERTIES

The history of the site was researched to identify obvious uses of the site from the present to first developed use, or back to 1940, whichever is earlier, from readily available resources. Table 9 summarizes the availability of information reviewed during this assessment.

TABLE 9
HISTORICAL SOURCES

	Years reviewed	Availability
AERIAL PHOTOGRAPHS	1957, 1963, 1984, 1993, 1998	EDR Aerial Photography.
SANBORN FIRE INSURANCE MAPS	None Available	EDR Sanborn Map searches.
POLK ANDHAINES CRISS-CROSS DIRECTORIES	1971, 1975, 1980, 1985, 1990, 2000	San Joaquin County Cesar Chavez Library.
HISTORICAL TOPOGRAPHIC MAP REPORT	1947, 1953, 1968, and 1968 *photorevised* 1976	EDR Historical Topographic Map Report.
BUILDING DEPARTMENT	All years available	San Joaquin County Community Development Department Website.
PREVIOUS ASSESSMENT(S)	None Available	No previous assessments were provided to Kleinfelder for this assessment.
CHAIN-OF-TITLE OR PRELIMINARY TITLE REPORT	None Available	A preliminary title report and/or chain of title report were not provided to Kleinfelder for this assessment.

5.1. AERIAL PHOTOGRAPHY

Historical aerial photographs were reviewed to evaluate past land use at the site and in the surrounding area. A summary of the aerial photographs reviewed is presented, as follows:

TABLE 10
AERIAL PHOTOGRAPHS REVIEWED

Date	Photo ID	Scale	Type	Source	Quality
1957	1611926.6	1 inch = 555 feet	Black and white, monoscopic	EDR	Fair
1963	1611926.6	1 inch = 555 feet	Black and white, monoscopic	EDR	Good
1984	1611926.6	1 inch = 690 feet	Black and white, monoscopic	EDR	Poor
1993	1611926.6	1 inch = 666 feet	Black and white, monoscopic	EDR	Good
1998	1611926.6	1 inch = 666 feet	Black and white, monoscopic	EDR	Good

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Year: 1957

Most of the subject site appears to be agricultural land. Approximately nine residential and farm structures are located east and west of Stockton Street, which trends north/south through the northwestern portion of the site. Approximately five structures are located along the eastern border of the site. Multiple unimproved roads separate individual parcels of property.

The adjacent properties consist primarily of agricultural fields and rural residences with associated structures. The Union Pacific Railroad trends north/south adjacent to the west of the subject site. Frontage Road beyond, which is Highway 99, is located to the east of the subject site.

Year: 1963

The subject site appears essentially unchanged from the 1957 aerial photograph. An additional structure is located along the northern border of the site along Harney Lane.

With some exceptions the adjacent properties appear essentially unchanged from the 1957 photograph. The Frontage Road in the northeast corner of the site has been moved to its current location.

Year: 1984

The subject site appears essentially unchanged from the 1963 aerial photograph. An additional large structure is located along the northeastern border of the site in the present location of the Moose Lodge. The area around this structure appears to have been disturbed.

With some exceptions the adjacent properties appear essentially unchanged from the 1963 photograph. Several large warehouse sized structures are located north of the site beyond Harney Lane and a residential development is located to the northwest of the subject site.

Year: 1993

The subject site appears essentially unchanged from the 1984 aerial photograph, with the exception of small structures and parking around the Moose Lodge located along the eastern portion of the site.

The properties surrounding the subject site appear essentially unchanged from the 1984 aerial photograph, with the exception of additional large warehouse sized structures north of the site beyond Harney lane.

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Year: 1998

The subject site and surrounding properties appear essentially unchanged from the 1993 aerial photograph.

With the exception of continued expansion of the commercial/industrial buildings north of the site, beyond Harney Lane, the surrounding properties appear essentially unchanged from the 1993 aerial photographs.

5.2. SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps provide historical land use information for some metropolitan and small, established towns. According to EDR, Sanborn Map coverage was not available for the site.

5.3. POLK AND HAINES CRISS-CROSS DIRECTORIES

Polk City Directories and Haines Criss-Cross Directories provide information regarding property occupants by address. EDR conducted a search of the Haines Criss-Cross Directory for the address of 13160 North Stockton Street and adjoining properties for approximately every five years from 1970 to 2005. EDR reported that the address 13160 North Stockton Street was not listed. In 2000 and 2005 the onsite addresses 13125, 13167, and 13216 North Stockton Street were listed as residences. The results of the EDR search are included in Appendix B.

Kleinfelder reviewed Polk Directories for the subject site addresses at the Cesar Chavez Library in Stockton, California. The streets associated with the subject site and adjoining properties are not included in the Lodi directory. Kleinfelder also reviewed the Haines Criss-Cross Directory at the Cesar Chavez Library for addresses associated with the site. A review of information obtained is summarized as follows:

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Address	1971	1976	1981	1986	1991	1996	2001	2006
3550 E. Harney Lane	Address Not Listed							
4000 E. Harney Lane	Address Not Listed						J. Mclean	Address Not Listed
4044 E. Harney Lane	J. E. Frey	J. H. Bradley						
4300 E. Harney Lane	Address Not Listed						B. Zachmeister	Address Not Listed
13137 Hwy 99	Address Not Listed		B. S. Bisla					
13191 Hwy 99	Address Not Listed					M. R. Delcastillo		
13371 Hwy 99	E. Zachmeister				*	Address Not Listed		
13263 Hwy 99	Address Not Listed				**Loyal Order of the Moose**	**Loyal Order of the Moose/ Women of the Moose**		
13101 Hwy 99	Address Not Listed	**Harney Village Inc.**	Address Not Listed					
13063 Hwy 99	Address Not Listed	L. Burke	*	**Moorse Skinner Ranch**				
13125 N. Stockton Street	R. Heier	B. Taggart	L. Wagner	Address Not Listed		S. Rios		
13160 N. Stockton Street	Address Not Listed						G. Niel	Address Not Listed
13167 N. Stockton Street	Address Not Listed		S. Johnson	E. Pelletti				
13216 N. Stockton Street	N. Gordon	*					N. Gordon/ T. Linder	I. Carillo/R. Reynolds
13275 N. Stockton Street	D. Seeman				*		Address Not Listed	
13322 N. Stockton Street	Address Not Listed					D. Parises		
13323 N. Stockton Street	D. Dellamaggiora							
13355 N. Stockton Street	Address Not Listed						I. Zarate	*
13387 N. Stockton Street	Address Not Listed	W. Griffitts	W. Griffitts/ **Griffitts PLMBNG & HM**			W. Griffitts/ **Griffitts PLMBNG & HM/ Griffitts PLBG RPR**	W. Griffitts **Century 21**	B. Griffitts
13409 N. Stockton Street	A. Wawro				A. Wawro/ **Andy's Rock Shop**		K. Hazelet	S. Hevansavath
13475 N. Stockton Street	H. Christensen			*			S. Varner	

* = No phone, no people or no published phone
Bold print indicates a business listing

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5.4. HISTORICAL TOPOGRAPHIC MAP REVIEW

Historical topographic maps (7.5 Minute Series) from the, "Historical Topographic Map Report by EDR", were reviewed (1947, 1953, 1968, and 1968 *photorevised* 1976). Copies of the topographic maps are included in Appendix B of this report.

1947
Lodi, CA Quad 15 Minute Series
Scale: 1 inch = 4,166 feet

The subject site is depicted as agricultural land. A road is depicted trending north/south through the northern portion of the site. Six structures are depicted adjacent to this road. Six structures are depicted on the eastern border of the site.

The adjacent properties are also depicted as agricultural properties with scattered rural residences. The Union Pacific Railroad is depicted west of the subject site. The road adjacent to the east of the site is labeled Cherokee Lane. Harney Lane is depicted adjacent to the north of the site.

1953
Lodi South and Waterloo, CA Quad 7.5 Minute series
Scale: 1 inch = 2,000 feet

The site continues to be depicted as agricultural land. Twelve structures are now depicted along Stockton Street in the northern portion of the site. Eleven structures are now depicted along the eastern site border, with three of the structures depicted as larger structures.

The surrounding areas continue to be depicted as agricultural areas, with residences and associated structures shown along Mettler (Harney) Lane.

1968
Lodi South, CA Quad 7.5 Minute series
Scale: 1 inch = 2,000 feet

The site and surrounding areas are essentially unchanged from the 1953 topographic map with a few exceptions. Only eleven structures are now depicted along Stockton Street in the northern portion of the site. Only three structures are located along the east central border of the site. And one larger structure is depicted in the northeast corner of the site. Several of the smaller structures in the previous 1953 topographical map are no longer depicted in the northeast corner of the site. Two wells are depicted in the eastern portion of the site and a structure is depicted along the northern border of the site.

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The adjacent properties continue to be depicted primarily as agricultural. The road east of the site beyond the frontage road is now labeled Highway 99 with six lanes. Additional structures are depicted north of the site beyond Harney Lane.

1968 photorevised 1976
Lodi South, CA Quad 7.5 Minute series
Scale: 1 inch = 2,000 feet

The subject site and surrounding properties appear essentially unchanged from the 1968 topographic map.

5.5. BUILDING DEPARTMENT RECORDS

The San Joaquin County Community Development Department (Building Department) website was accessed (http://www.co.san-joaquin.ca.us/) on February 10, 2006 for information regarding structures historically or currently on site. Building permits were researched online and obtained for the follwing addresses on site. A copy of permits are included in Appendix D.

13387 N Stockton Street
BP-0502042: ADDN/REM, Additional remodel, April 27, 2005 – Addition of Master Bedroom w/ bath & W.I.C., family room and service room to SFR.

13355 N Stockton Street
BP-0000020: BLDG: Building, January 05, 2005 – Tear off, and replace with comp (22 squares) to SFR.

BP-0000073: ELECSERV BLDG, January 10, 2000 – Re-locate existing 100 amp service from pole to house for existing SFR.

13323 N Stockton Street
BP-9402509: ADDN/REM BLDG, September 8, 1994.

BP-9402605: ADDN/REM V-N BLDG, September 16, 1994.

13322 N Stockton Street
BP-0204257: ADDN/REM: Addition Remodel, November 26, 2002 – Add free standing covered patio to MHI.

BP-9403102: MHI BLDG: Building, November 02, 1994.

13275 N Stockton Street
BP-0200060: Heat/Air BLDG: Building, January 08, 2002 – Install heat and air system for SFR.

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13167 N Stockton Street
BP-0100207: PUMPSERV BLDG: Building, January 24, 2001 – Replacement of 100 amp service and 10 hp for ag. pump.

4044 E Harney Lane
BP-9900774: ROOF BLDG: Building, March 22, 1999 – Tear off, reroof with built-up.

13409 N Stockton Street
BL-80-0197: BL80, June 11, 1992 - Hobby, craft and lapidary.

BP-0303719: BLDOTC ROOF: ROOF BLDG: Building, September 24, 2003 – Tearoff, resheaths reroof with comp. To SFR. (31 SQ.).

BP-9200296: SIDING BLDG: Buiding, June 06, 1992.

13475 N Stockton Street
PLUMFIX BLDG: Building, October 26, 1994.

5.6. PREVIOUS ASSESSMENTS

No previous assessments were provided to Kleinfelder for this assessment.

5.7. PRELIMINARY TITLE REPORT

A Preliminary Title Report or Chain of Title was not provided to Kleinfelder for review prior to production of this report. These documents may provide information about land including ownership and other interests in the land, easements, and liens. Not all liens, defects, and encumbrances affecting title to the land may be included in the title documents. A review of title documents is considered optional under the ASTM standard.

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6 SITE RECONNAISSANCE

6.1. METHODOLOGY AND LIMITING CONDITIONS

Kleinfelder Staff Environmental Scientist, Ryan Brosius, performed a site reconnaissance on March 3, 2006 and March 15, 2006. The approximate site boundaries are shown on Plate 2, "Site Map," and color photographs of the site are presented on Plates 3-5 (Appendix A). The site conditions discussed below are limited to readily apparent environmental conditions observed.

6.2. GENERAL SITE SETTING

The subject site is located west of State Highway 99 and south of East Harney Lane in Lodi, California. The site encompasses approximately 220 acres and includes the following parcels: APNs 058-130-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14, 15, 16, 17, 18, 19, 21, 22, 24 and 058-110-05, 04, and 41. The site is currently used as agricultural (grape vineyard and orchard) and residential.

APN 058-110-41 is predominately vineyard with two barns and a shed located in the eastern portion of the parcel. An irrigation well/pump is located in the northern central portion of the parcel. Staining was noted at the base of the well. A standpipe was noted adjacent to the irrigation well. A burn pile is located to the west of the irrigation well/pump along the northern portion of the parcel. The burn area is approximately 10'x20' in size. A wood debris pile was noted adjacent to the burn area. Two barns and three pole sheds are located in the eastern portion of the parcel. The three pole sheds have gravel floors and contained farm equipment. A mobile (pesticide/fertilizer) AST is located in the middle shed. No staining, leakage, or stressed vegetation was noted with the AST. Staining was noted under the farm equipment located in the most southern pole shed. The stain appeared to be "deminimus" per the ASTM Standard. Located north of the pole sheds are four mobile AST's. Three of the AST's are polyvinyl and the fourth AST is steel. The AST's appear to be pesticide/fertilizer tanks. No staining, leakage, or stressed vegetation was noted with the AST's. The most southern barn was locked at the time of Keinfelder's site reconnaissance. Located on the west end of the barn is a concrete pad, which extends out from the barn. Approximately thirteen 5-gallon buckets and a 55-gallon drum are located on the southeast corner of the concrete pad. The buckets and drum appeared to contain petroleum type products. Staining was noted on the ground in the southeast corner of the concrete pad and the staining extended south to the soil adjacent to the concrete pad. The extent of the soil stain appeared to extend 2-3 inches below the surface. The barn west of the pole sheds contained farm equipment, two misting tanks, and a pallet of sulfur. The floor of the barn is concrete and is cracked in places. Staining was noted on the floor of the barn.

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APN 058-110-04 (13101 State Route 99) is vineyard and residential. Located in the northwest corner of the parcel are a residence and two sheds. The sheds were locked at the time of Kleinfelder's site reconnaissance. Located along the southern portion of the parcel is a small residence, barn, shed, and domestic well. The shed contained a vault with a concrete base. The domestic well is located east of this shed. A propane AST is located adjacent to the domestic well. The small barn has a concrete floor (cracked in various locations) and contains automotive engines, 5-gallon buckets and approximately fourteen 55-gallon drums. The drums and buckets were full and the contents are unknown. Staining was noted throughout the floor of the barn. East of the barn is a debris pile that contained metal piping, irrigation well pump parts, and three AST's. Two of the AST's are steel and one is a mobile AST. One of the ASTs is a small motor fuel AST. There did not appear to be any staining, leaking, or stressed vegetation associated with the AST's or debris. The residence located north/east of the barn contained propane AST.

APN 058-110-05 is located on the eastern border of the site and contained a residence (13063 State Route 99), garage, and storage sheds. Access onto the parcel was not provided to Kleinfelder.

APN 058-130-17 contains a residence (13137 State Route 99) and an orchard. Three 55-gallon drums are located southwest of the residence. A pole-mounted transformer is located along the access road on the parcel. No staining or leakage was observed on or around the transformer. Access to this parcel was not provided to Kleinfelder.

APN 058-130-19 contains a residence (13191 State Route 99), barn, shed and an orchard. A domestic well and a propane AST are located southwest of the residence. Access onto the parcel was not provided to Kleinfelder.

APN 058-13-18 contains the Lodi Moose Lodge #634 (13263 State Route 99). A paved parking lot is located in the eastern portion of the parcel. A domestic well is located along the northern border of the site. What appears to be a water retention basin is located in the southeast corner of the parcel. The western portion of the parcel is a grass field. West of the building are RV's with RV hookups. Approximately three storage boxes were noted on the parcel. A debris pile of concrete, wood, metal, and empty drums is located in the northwest corner of the parcel. Access onto the parcel was not provided to Kleinfelder.

APN 058-13-10 contains a vineyard and a residence. The residence (133771 State Route 99) is located along the eastern border of the parcel. Household trash and debris was noted around the house and garage. Two standpipes, domestic well, an irrigation well, and two polyvinyl AST's are located north of the residence. No staining, leaking, or stressed vegetation was noted around the wells or AST's. No staining or stressed vegetation was noted in the location of the former UST.

APN 058-130-16 contains a vineyard.

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APN 058-130-08 and 09 contains a fallow field and a residence (4044 E. Harney Lane). Two standpipes and an irrigation well are located on the parcels. No staining, leakage or stressed vegetation was noted on or around the well. The residence and garage is located on parcel 058-130-09, along Harney Lane. A domestic well is located in the approximate location of the former UST. No staining or stressed vegetation was noted in the vicinity of the former UST. South of the garage is a debris pile of farm equipment, wood debris, metal piping, and five empty and full 55-gallon drums. The contents of the drums are unknown.

APN 058-130-15 contains a vineyard and a residence (13216 N Stockton Street). The residence is located in the western portion of the parcel and contained a covered parking area, a shed, and two mobile home trailers. The covered parking area contained a gravel floor. No stains were noted in the gravel. A domestic well is located south of the residence. Adjacent to the west of the domestic well is a fenced-in well and pump.

APN 058-130-07 contains a vineyard and a residence (13322 N. Stockton Street). Approximately four pole-mounted transformers are located along the northern border of the parcel. No staining or leakage was observed on or around the transformers. An irrigation well/pump, standpipe and polyvinyl (fertilizer/pesticide) AST are located in the northern portion of the parcel. No staining, leaking or stressed vegetation was associated with the well or AST. The residence is located in the southwest corner of the parcel. Adjacent to the east of the residence is debris consisting of tractors, cars, car parts, farm equipment, and 5-gallon buckets of unknown liquids. Staining was noted throughout the debris area and under the tractor located in the northern end of the debris. The extent of the soil stain under the tractor appeared to extend 2-3 inches below the surface.

APN 058-130-22 contains a vineyard and a residence (13167 N. Stockton Street). Located in the southeast portion of the parcel are an irrigation well/pump and a polyvinyl (fertilizer/pesticide) and steel AST. A box of empty containers of herbicide was noted adjacent to the well. No staining, leaking or stressed vegetation was associated with the well or AST. Access to the residence was not provided to Kleinfelder during the site reconnaissance. The residence contained a garage and three sheds. A domestic well and a propane AST is located south of the residence. A pole-mounted transformer is located along N. Stockton Street adjacent to the parcel. No staining, leaking or stressed vegetation was associated with the transformer.

APN 058-130-14 contains a residence (13125 N. Stockton Street). The residence contains a garage and a domestic well. Access to the parcel was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-21 contains a fallow field and two residences (13275 N. Stockton Street). Water valves were noted trending east/west through the center of the parcel. The residences contained a garage and two sheds. A standpipe and domestic well were noted south of the residence. A pole-mounted transformer is located along N. Stockton

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Street, adjacent to the parcel. No staining, leaking or stressed vegetation was associated with the transformer. Access to the residences was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-24 contains a vineyard and two sheds. The sheds are located in the northeast corner of the parcel. The eastern shed was locked at the time of Kleinfelder's site reconnaissance. The western shed contained irrigation piping and two 55-gallon polyvinyl drums. Adjacent to the south of the shed is a polyvinyl (fertilizer/pesticide) AST. Located west of the shed is an irrigation well. No staining, leaking or stressed vegetation was associated with the AST, drums or well. A PG&E pad-mounted transformer and utility vault is located in the northeast corner of the parcel. A PG&E underground cable marker was noted on the northern border of the parcel.

APN 058-130-06 contains a residence (13323 N. Stockton Street). The residence contains a domestic well. Access to the residence was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-05 contains a residence (13355 N. Stockton Street). Adjacent to the north of the residence is a propane AST. Access to the residence was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-04 contains a residence (13387 N. Stockton Street). Access to the residence was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-03 contains a residence (13409 N. Stockton Street). A swimming pool was noted west of the residence. Access to the residence was not provided to Kleinfelder during the site reconnaissance.

APN 058-130-02 contains a residence (13475 N. Stockton Street). Located west of the residence is debris, which consists of cars and car parts. Access to the residence was not provided to Kleinfelder during the site reconnaissance.

6.3. SITE OBSERVATIONS

TABLE 11
SITE OBSERVATIONS

General Observations	Remarks	Observed	Not Observed
Current use	Agricultural and rural residential, and a Moose Lodge.	X	
Past use	Agricultural and rural residential, and a Moose Lodge.		X
Structures	Approximately seventeen residential structures and associated barns, sheds, and garages. The Lodi Moose Lodge.	X	
Terrain	Level.	X	

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TABLE 11*(contined)*
SITE OBSERVATIONS

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products.		Observed	Not Observed
Aboveground storage tank (AST)	Approximately 19 motor fuel, pesticide, fertilizer and propane AST's are located throughout the subject site.	X	
Asbestos building materials and lead containing paint	Onsite structures appear to have been built before the 1980's.		
Below grade vaults	A utility vault is located on the northwest border of the site. An unknown vault is located on APN 058-110-04.	X	
Burned or buried debris	A burn area (10'x20') is located on APN 058-110-41 in the north center of the parcel.	X	
Chemical storage or agricultural chemical mixing areas	Chemicals were noted being stored in the barns located on APN 058-110-41. Numerous containers and drums of pesticides, and petroleum products observed in residential and barn areas.	X	
Discolored soil or water	Soil staining was noted east of the residence located on APN 058-130-07. Soil staining was noted south of the concrete pad located on the west side of the barn in APN 058-110-41.	X	
Drains and piping	Concrete and PVC standpipes and water valves were noted throughout the subject site.	X	
Drums	Numerous 55-gallon drums were located throughout the site.	X	
Electrical equipment (Polychlorinated biphenyls [PCBs])	Electrical transmission lines and pole-mounted transformers were noted throughout the subject site. A pad-mounted transformer was noted along the northwest border of the subject site.	X	
Fill dirt from an unknown source			X
Hazardous chemical and petroleum products in connection with known use	Pesticides and petroleum products.	X	
Hazardous chemical and petroleum products in connection with unknown use	Unmarked 55-gallon drums and containers either partially or mostly full.	X	
Hazardous waste storage	Storage sheds and barns with pesticides and petroleum products.	X	
Heating and cooling system			X

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TABLE 11*(contined)*
SITE OBSERVATIONS

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products.		Observed	Not Observed
Industrial waste treatment equipment			X
Loading and unloading areas			X
Odors			X
Pits, ponds, or lagoons	What appears to be a retention basin is located in the southeast corner of APN 058-130-18.	X	
Pools of liquid			X
Process waste water			X
Raw material storage or chemical storage areas	Storage sheds and barns with pesticides and petroleum products.	X	
Sanitary system (sewer)			X
Septic system (tank and leach fields)	Septic systems are associated with the residences.		X
Soil piles			X
Solid waste	Numerous piles and areas of miscellaneous debris and garbage around the residential areas. A debris pile of wood clipping is located along the north central border of APN 05-110-41. A debris pile of wood, metal, concrete, and empty drums was noted in the northwest corner of APN 058-130-18.	X	
Stained pavement or concrete	Stained pavement and concrete was noted in the parking area of APN 058-130-18 and on the concrete pad west of the barn located on APN 058-110-41.	X	
Stains or corrosion (interior)	Areas of staining located in the sheds and barns.	X	
Storm basins/catch	What appears to be a retention basin is located in the southeast corner of APN 058-130-18.	X	
Storm drains			X
Stressed vegetation			X
Sumps & clarifiers			X
Surface water			X
Underground storage tanks	UST's were reportedly removed from the onsite properties 4044 E. Harney Lane and 13371 State Route 99.		X
Unidentified substance containers	Numerous unmarked drums and containers located throughout the subject site.	X	

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TABLE 11 *(Continued)*
SITE OBSERVATIONS

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		Observed	Not Observed
Waste water			X
Water supplies (potable and process)	Approximately ten domestic wells were observed on the subject site.	X	
Wells (irrigation, monitoring, or domestic)	Approximately ten domestic wells and seven irrigation wells were observed on the subject site.	X	
Wells (dry)			X
Wells (oil and gas)			X

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7 INTERVIEWS

Kleinfelder attempted to contact key site managers to obtain current and historical environmental information concerning the subject site. Key site managers may include current or past owners of the site, managers, or current occupants on site. Mrs. Erma Bradley (property owner APN 058-130-09), Mr. Dan Parises (property owner APN 058-130-07), Mr. Gary Tsutsumi (property owner APN 058-130-24), Pat Stocker (property owner APN 058-130-10 and 11), Don Reynolds (owner of APN's 058-130-15, 16 and 058-110-41 and 04) and Dominic Della Maggiora (brother of the owner Mrs. Pelleti) (APN 058-130-22) were provided to Kleinfelder for this assessment.

Local government officials were interviewed to obtain further information about environmental enforcement actions pending or ongoing at the site and adjacent facilities, or relevant permits (e.g. building, air quality, well abandonment, etc.) for the site and adjacent facilities.

Copies of telephone conversation records included in Appendix D and summaries of the discussions are included in Chapter 4 of this report. The following sections highlight environmental conditions revealed during the interviews.

7.1. INTERVIEW WITH OWNER/MANAGER

Mrs. Erma Bradley (APN 058-130-09) was interviewed on March 15, 2006 during Kleinfelder's site reconnaissance. According to Mrs. Bradley the UST onsite was a 400-gallon motor fuel tank, which was in the ground for approximately six years. The tank was removed from the property in 1992. The property was used for agriculture of grapes. She has owned the property for approximately 35 years. According to Mrs. Bradley she has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. She stated that no chemicals were stored onsite.

Mr. Dan Parises (APN 058-130-07) was interview on March 20, 2006. The property was used for agriculture of grapes. He has owned the property since 1999 and leased the property for approximately 10 years prior to this. According to Mr. Parises he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. He stated that no chemicals were stored onsite. Mr. Parises stated he uses herbicides to spray between the rows and uses sulfur. The irrigation well is also used for the residence onsite. The septic tank is located east of the house.

Mr. Gary Tsutsumi (APN 058-130-24) was interview on March 20, 2006. He has owned the property for the past 40 years and has used the property for vineyards since he has owned it. A cherry orchard was on the property in the 50's. According to Mr. Tsutsumi

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he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. He stated that no chemicals were stored onsite. Herbicides and sulfur are used on the site. Two wells are located on the property. One well is located adjacent to the pump house and the second well is located west of the residence east of the shed. This residence (13475 N Stockton Street) was the original ranch house for the property. The septic tank is located south of the residence. The shed contains farm equipment. The parcel south of his (APN 058-130-21) has been fallow for approximately 8 years. The property contained vineyards in the past. Mr. Tsutsumi does not know of any underground tanks associated with this property.

Pat Stocker (APN 058-130-10 and 11) was interview on March 20, 2006. He has owned the property since 2000. According to Mr. Stocker the UST onsite was for farm use and had been removed prior to his ownership. A restaurant was located on the property approximately 50 years ago and was located in the northeast corner of the parcel where the Frontage Road is now located. The property has been used for agricultural purposes (vineyards). According to Mr. Stocker sulfur is used on the site and chemicals are not stored or mixed onsite. According to Mr. Stocker, he has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. There are two septic tanks onsite, one located east of the residence and one located south of the residence.

Don Reynolds (APN's 058-130-15, 16 and 058-110-41 and 04) was interview on March 20, 2006. According to Mr. Reynolds, the property has been in the family for the last 30 years. There have been vineyards on the property for the past 50 to 60 years. According to Mr. Reynolds, he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. According to Mr. Reynolds, the barns are used to store the harvesting equipment they use onsite, and there are no chemical mixing area onsite. Mr. Reynolds stated they use sulfur onsite. Septic tanks are associated with the residences onsite. Mr. Reynolds was unsure the purpose of the well in the shed located on APN 058-110-04. According to Mr. Reynolds the well located south of the residence located on APN 058-130-15 is a new well used for agricultural purposes but is also set up to use for domestic use. The well is approximately 150 feet deep.

Dominic Della Maggiora (brother of the owner Mrs. Pelleti) (APN 058-130-22) was interview on March 20, 2006. According to Mr. Della Maggiora the property has been in the family since the 1980's. The property has been used for vineyard since their ownership and prior to their ownership. A septic system is associated with the house and is north of the residence. A 150-gallon diesel UST for a furnace is located on the north side of the residence and has been in the ground for approximately 20 years. According to Mr. Della Maggiora he has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite. No chemicals are stored onsite and there are no chemical mixing areas onsite.

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7.2. INTERVIEW WITH OCCUPANTS

See Section 7.1.

7.3. INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

San Joaquin County Community Development Department website was accessed "http://www.co.san-joaquin.ca.us/" on February 22, 2006 for information regarding zoning onsite. According to the website the site is zoned AG-40.

7.4 INTERVIEWS WITH CLIENT/OTHERS

The client and others were not interviewed as part of this assessment.

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8 EVALUATIONS

Kleinfelder performed this ESA of the subject site in conformance with the scope and limitations of ASTM Practice E1527-00. In summary, Kleinfelder's assessment revealed the following information about the subject site:

8.1. FINDINGS

The following sections describe Kleinfelder's findings and provide general background information about the site. Findings include recognized environmental conditions, historically recognized environmental conditions, and deminimus quantities, as applicable to the subject site. In summary:

8.1.1. Background Information

Historical aerial photographs and topographic maps reveal that the site has been used for agricultural and residential purposes since at least 1947.

8.1.2. Onsite Findings

Based upon the results of our research, Kleinfelder makes the following observations regarding the property:

- Concrete standpipes were noted on the subject site. On properties with a history of agricultural use, underground pipelines may exist. It was common for said pipelines to contain asbestos (e.g. Transite pipe).

- Due to the historical agricultural, and current agricultural use of the site it is possible that environmentally persistent pesticides may have been applied to the site.

- Multiple pole-mounted transformers, including single and double canisters are located throughout the site. No staining or leaking was noted in association with the transformers.

- Approximately seventeen residential structures and associated barns, sheds and garages are located throughout the site. Access was not provided to all the residences and buildings onsite. Additional structures include the Lodi Moose Lodge #634 (13263 State Route 99). Many of the onsite structures appear to have been built prior to 1981.

- Septic systems may be associated with the onsite residences.

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- Approximately ten domestic wells and seven irrigation wells were observed on the subject site.

- A burn pile is located to the west of the irrigation well/pump along the northern portion of APN 058-110-41. The burn area is approximately 10'x20' in size.

- Miscellaneous debris was noted throughout the site and included concrete, tires, wood clippings, wood boards, PVC and metal pipes, machine parts, empty 5-gallon buckets, empty 55-gallon drums, miscellaneous farm equipment and vehicles.

- Five propane AST's were noted throughout the subject site.

- Two barns and three pole sheds are located in the eastern portion of APN 058-110-41. The most southern barn was locked at the time of Keinfelder's site reconnaissance. The barn west of the pole sheds contained farm equipment, two misting tanks, and a pallet of sulfur. The floor of the barn is concrete and is cracked in places. Staining was noted on the floor of the barn. The three pole sheds have gravel floors and contained farm equipment. A mobile (pesticide/fertilizer) AST is located in the middle shed. No staining, leakage, or stressed vegetation was noted with the AST. Staining was noted under the farm equipment located in the southern most pole shed. The stain appeared to be "deminimus" per the ASTM Standard.

- Located north of the pole sheds on APN 058-110-41 are four mobile AST's. Three of the AST's are polyvinyl and the fourth AST is steel. The AST's appear to be pesticide/fertilizer tanks. No staining, leakage, or stressed vegetation was noted in association with the AST's.

- Located on the west end of the southern barn on APN 058-110-41 is a concrete pad, which extends out from the barn. Approximately thirteen 5-gallon buckets and a 55-gallon drum are located on the southeast corner of the concrete pad. The buckets and drum appeared to contain petroleum type products. Staining was noted on the ground in the southeast corner of the concrete pad and the staining extended south to the soil adjacent to the concrete pad. The extent of the soil stain appeared to extend beyond 2-3 inches.

- Located along the southern portion of APN 058-110-04 is a shed. The shed contained a vault of unknown purpose with a concrete base.

- The small barn on APN 058-110-04 has a concrete floor (cracked in various locations) and contains automotive engines, 5-gallon buckets and approximately fourteen 55-gallon drums. The drums and buckets were full and the contents are unknown. Staining was noted throughout the floor of the barn.

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- Three AST's are located east of the barn on APN 058-110-04. Two of the AST's are steel and one is a mobile AST. One of the ASTs is a small motor fuel AST. There did not appear to be any staining, leaking, or stressed vegetation associated with the AST's.

- Two polyvinyl fertilizer/ pesticide AST's were noted north of the residence on APN 058-130-10. There did not appear to be any staining, leaking, or stressed vegetation associated with the AST's.

- A paved parking lot is located in the eastern portion of APN 058-130-18.

- Three locked storage boxes are located along the northern border of APN 058-130-18.

- What appears to be a water retention basin is located in the southeast corner of APN 058-130-18.

- A polyvinyl (fertilizer/pesticide) AST is located in the northern portion of APN 058-130-07. No staining, leaking or stressed vegetation was associated with the AST.

- Adjacent to the east of the residence on APN 058-130-07 is debris consisting of tractors, cars, car parts, farm equipment, and 5-gallon buckets of unknown contents. Staining was noted throughout the debris area and under the tractor located in the northern end of the debris. The extent of the soil stain under the tractor appeared to extend beyond 2-3 inches.

- Located in the southeast portion of APN 058-130-22 is a polyvinyl (fertilizer/pesticide) and steel AST. No staining, leaking or stressed vegetation was associated with the well or AST's.

- Water valves were noted trending east/west through the center of APN 058-130-21.

- A PG&E pad-mounted transformer and utility vault is located in the northeast corner of APN 058-130-24. A PG&E underground cable marker was noted on the northern border of the parcel.

Off-Site Findings

- Tumura Bros, located at 1220 E. Harney Lane, adjacent to the north of the subject site appears on the CA FID UST and the SWEEPS UST database.

- Campbell Grinding, located at 2501 S Stockton Street, adjacent to the north of the subject site appears on the HAZNET database.

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- Cherokee Memorial Park, Inc., located at Highway 99 at Harney Lane, adjacent to the northeast of the site appears on the HIST UST database.

- Altamont Machine CO, located at 2501 S. Stockton Street Unit B, approximately feet north of the subject site appears on the HAZNET database.

- Pete's Workshop, located at 2499 S. Stockton Street (2506 Maggio Circle), approximately feet north of the subject site appears on the HAZNET database.

- Qualfab Machining, located at 2499 S. Stockton Street #3, approximately feet north of the subject site appears on the HAZNET database.

- Robert Edgar Richards, 13661 N. Cherokee Lane, approximately 1200 feet north of the subject site appears on the CA FID UST and SWEEPS UST databases.

- Don Miller (Miller Farms), located at 4071 E. Harney Lane, approximately 1000 feet east of the subject site appears on the HIST UST, CA FID UST, and SWEEPS UST databases.

- Felix J. Costa, located at 13160 N. West Lane, approximately 500 feet west of the subject site appears on the HIST UST database.

- ARCO #760, located at 2251 Cherokee Road, approximately 1,200 feet northeast of the site appears on the Cortese database.

- Tokay Cleaners, located at 2525 S. Hutchins, approximately 1,200 feet northwest of the site appears on the RCRA-SQG, FINDS, And CLEANERS databases.

- None, located at 5154 Hogan Road, approximately 2,800 feet south of the subject site, appears on the Notify 65, LUST and Cortese databases.

- Union Pacific Railroad Company was listed in the Orphan Summary of the EDR report approximately half a mile north of the subject site and appears on the SLIC database.

- Lodi Municipal Well, located north of the site, has reported detections of DBCP.

- The Union Pacific Railroad is located adjacent to the west of the subject site.

- A Kinder Morgan pipeline is located in the vicinity of the subject site.

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8.2. CONCLUSIONS AND RECOMMENDATIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 of the property located south of East Harney Lane, west of Highway 99, and east of the Union Pacific Railroad, in Lodi, California.

In summary, this assessment has revealed evidence of recognized environmental conditions in connection with the property:

1. Due to the historical agricultural use of the site it is possible that environmentally persistent pesticides may have been applied to the site. Kleinfelder recommends soil sampling and analysis for potential residual organochlorine pesticides.

2. Standpipes were noted throughout the subject site. On properties with a history of agricultural use, underground pipelines may exist. It was common for said pipelines to contain asbestos (e.g. Transite pipe). Subsurface exploration is not part of a typical Phase I Environmental Site Assessment scope of work. In the event that any subsurface structures are encountered during site development or excavation on site, care should be exercised in determining whether or not the subsurface structures contain asbestos. If they contain asbestos, they should be removed, handled, transported, and disposed of in accordance with local, state, and federal laws and regulations. Additionally, if suspect materials are encountered, the signatories of this report should be notified. Kleinfelder can assist the client in performing a limited backhoe assessment (potholing) at locations throughout the site to evaluate whether or not subsurface piping contains asbestos cement pipe.

3. The onsite structures appear to have been built prior to 1980. These structures may contain asbestos containing materials and/or lead containing paints. Kleinfelder recommends that an asbestos and lead paint assessment be conducted for the structures, if they are to be renovated or demolished prior to further development. Asbestos removal activites are conducted per Cal OSHA and NESHAPS (EPA) regulations that are enforced locally by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). Lead paint that is detected above 0.5% by weight or 5,000 parts per million (ppm) and observed in poor condition will also need to be removed prior to building demolition/renovation. Kleinfelder can assist the client with performing said building material surveys prior to renovation/demolition.

4. 4044 E. Harney Lane is located on the subject site. According to files reviewed at SJC/EHD a 400-gallon regular gasoline UST was removed from the site on September 18, 1992. According to Jim Thorpe Oil, Inc., the owner Erma Bradley removed the tank from the underground location. The tank was picked up by Jim Thorpe Oil, Inc. on September 18, 1992. Jim Thorpe Oil, Inc. noted the tank as being in good condition and there being no odor or soil discoloration noted in the excavation. According to the permits the estimated last date of use was

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September 18, 1992 and the tank contained 150 gallons. The tank was listed as exempt in the SJC/EHD files and confirmation sampling was not required during the removal of the tank. Kleinfelder recommends that confirmation soil sampling and analyses should be conducted to confirm or deny evidence of past releases.

5. 13371 N. Hwy 99 is located on the subject site. According to files reviewed at SJC/EHD a 550-gallon leaded gasoline UST was removed from the site on September 1, 1993 by Jim Thorpe Oil, Inc. Jim Thorpe Oil, Inc. noted the tank as being in good condition and there being no odor or soil discoloration noted in the excavation. According to the permits the estimated last date of use was September 1, 1993. The tank was listed as exempt in the SJC/EHD files and confirmation sampling was not required during the removal of the tank. Kleinfelder recommends that confirmation soil sampling and analyses be conducted to confirm or deny evidence of past releases.

6. A 150 Gallon Diesel UST for a house furnace is located north of the residence located on APN 058-130-22. Kleinfelder does not have information as to previous releases associated with the UST. The tank should be removed prior to development with collection of soil samples.

7. Multiple pole-mounted transformers (PMTs) are located throughout the site. Blue stickers indicating that the PMTs are non-PCB containing were noted on several but not all of the PMTs. No staining, leakage, or evidence of stressed vegetation was noted on or around the transformers and they not currently expected to have an adverse impact on the site.

8. Septic systems may be associated with the onsite residences. Kleinfelder recommends that the septic tanks be abandoned in accordance with local, State and Federal regulations. The purpose of the septic system is to receive domestic sewage. Unauthorized or unintended discharge to septic systems of hazardous materials or petroleum projects may have potentially occurred. If the septic system is going to become inactive, it should be abandoned in accordance with applicable regulations. The signatories of this report should be contacted if contamination is suspected during proper septic system abandonment. Soil samples can be collected in the vicinity of the septic tank and leach lines to evaluate potential hazardous materials discharge with the septic system.

9. Approximately ten domestic wells and seven irrigation wells were observed on the subject site. If the wells are intended for future use, they should be tested for suitability. If the wells are to be removed, Kleinfelder recommends that the wells be abandoned in accordance with local, State and Federal regulations.

10. A burn pile is located to the west of the irrigation well/pump along the northern portion of APN 058-110-41. The burn area is approximately 10'x20' in size. No hazardous materials, staining, odors, or stressed vegetation was associated with the burn area; it is not currently expected to have an adverse impact on the site.

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11. Miscellaneous debris was noted throughout the site and included concrete, tires, wood clippings, wood boards, PVC and metal pipes, machine parts, empty 5-gallon buckets, empty 55-gallon drums, miscellaneous farm equipment and vehicles. No staining, leakage or stressed vegetation was noted in association with any of the debris. The debris should be removed prior to development. Any petroleum products and/ or hazardous materials encountered should be disposed of or recycled in accordance with local, State and Federal regulations. If any staining is encountered during removal, the signatories of this report should be contacted.

12. Five propane AST's were noted throughout the subject site. No staining, leaking or stressed vegetation was associated with the ASTs and are not currently expected to have an adverse impact on the site.

13. Approximately ten pesticide and fertilizer ASTs were noted on the subject site. No staining, leakage, or stressed vegetation was noted in association with the ASTs and are not currently expected to have an adverse impact on the site.

14. Two barns and three pole sheds are located in the eastern portion of APN 058-110-41. The most southern barn was locked at the time of Keinfelder's site reconnaissance. The barn west of the pole sheds contained farm equipment, two misting tanks, and a pallet of sulfur. The floor of the barn is concrete and is cracked in places. Staining was noted on the floor of the barn. The three pole sheds have gravel floors and contained farm equipment. A mobile (pesticide/fertilizer) AST is located in the middle shed. No staining, leakage, or stressed vegetation was noted with the AST. Staining was noted under the farm equipment located in the southern most pole shed. The stain appeared to be "deminimus" per the ASTM Standard. The contents of the sheds should be characterized and any petroleum products and/ or hazardous materials encountered should be disposed of or recycled in accordance with local, State and Federal regulations. If any soil staining or release of hazardous substances is observed during removal, the signatories of this report should be contacted.

15. Located west of the southern barn on APN 058-110-41 is a concrete pad, which extends out from the barn. Approximately thirteen 5-gallon buckets and a 55-gallon drum are located on the southeast corner of the concrete pad. The buckets and drum appeared to contain petroleum type products. Staining was noted on the ground in the southeast corner of the concrete pad and the staining extended south to the soil adjacent to the concrete pad. The extent of the soil stain appeared to extend beyond 2-3 inches. Kleinfelder recommends that the 55-gallon drum and the 5-gallon buckets be removed from the site in accordance with local, State and Federal regulations, and that soil sampling be conducted around the concrete pad, where staining was noted.

16. Located along the southern portion of APN 058-110-04 is a shed. The shed contained a vault of unknown purpose. Mr. Reynolds was unsure the purpose of

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the vault in the shed located on APN 058-110-04. The purpose/function of the vault should be further investigated prior to site development.

17. The small barn on APN 058-110-04 has a concrete floor (cracked in various locations) and contains automotive engines, 5-gallon buckets and approximately fourteen 55-gallon drums. The drums and buckets were full and the contents are unknown. Staining was noted throughout the floor of the barn. The contents of the sheds should be characterized and any petroleum products and/ or hazardous materials encountered should be disposed of or recycled in accordance with local, state and federal regulations. If any soil staining or release of hazardous substances is observed during removal, the signatories of this report should be contacted.

18. A steel motor fuel AST is located east of the barn on APN 058-110-04. There did not appear to be any staining, leaking, or stressed vegetation associated with the AST. The tank is not currently expected to have an adverse impact on the site.

19. A paved parking lot is located in the eastern portion of APN 058-130-18. The parking area is not currently expected to have an adverse impact on the site.

20. A water retention basin is located in the southeast corner of APN 058-130-18. The basin was empty at the time of Kleinfelder's site reconnaissance. The function of the basin and what has been discharged into the basin is unknown. Kleinfelder still needs to obtain information regarding the function/use of the pond to evaluate potential impacts to the site.

21. Adjacent to the east of the residence on APN 058-130-07 is debris consisting of tractors, cars, car parts, farm equipment, and 5-gallon buckets of unknown contents. Staining was noted throughout the debris area and under the tractor located in the northern end of the debris. The extent of the soil stain under the tractor appeared to extend beyond 2-3 inches. Light staining was observed around the debris area and the northern tractor. Kleinfelder recommends that the stained soil underneath the tractor and around the debris be sampled for the presence of petroleum products.

22. A PG&E pad-mounted transformer and utility vault is located in the northeast corner of APN 058-130-24. A PG&E underground cable marker was noted on the northern border of the parcel. The utilities are not expected to pose an environmental concern to the site.

23. According to Lisa Dowdy, Research Analyst for CSFMPSO, a 10 inch Kinder Morgan refined product pipeline is located in the vicinity of the subject site. It is likely the Kinder Morgan pipeline runs parallel to the railroad tracks, although this has not been verified as of the date of this report. Kleinfelder's research did not find evidence of a leak associated with these pipelines near the subject site. However, unidentified petroleum leaks can occur associated with said petroleum

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pipelines. If discolored soil or unusual odors are noted during development of this site the signatories of this report should be contacted.

24. There are fourteen off-site facilities listed within the ASTM regulatory agency databases researched by EDR. Based on the databases listed, limited extent of the releases and distance from the site, the following eleven locations are not expected to have an adverse impact on the subject site: Tumura Bros, located at 1220 E. Harney Lane, Campbell Grinding, located at 2501 S Stockton Street, Cherokee Memorial Park, Inc., located at Highway 99 at Harney Lane, Altamont Machine CO, located at 2501 S. Stockton Street Unit B, Pete's Workshop, located at 2499 S. Stockton Street (2506 Maggio Circle), Qualfab Machining, located at 2499 S. Stockton Street #3, Robert Edgar Richards, 13661 N. Cherokee Lane, Don Miller (Miller Farms), located at 4071 E. Harney Lane, Felix J. Costa, located at 13160 N. West Lane, ARCO #760 located at 2251 Cherokee Road, and None, located at 5154 Hogan Road.

25. Tokay Cleaners, located at 2525 S. Hutchins, approximately 1,200 feet northwest of the site appears on the RCRA-SQG, FINDS, And CLEANERS databases. The facility appears on the RCRA-SQG and FINDS databases due to it being a Small Quantity Generator with one violation on record. The violation is reported as Generator-Land Ban Requirements. No other information is reported in association with this facility. Based on this information, it does not appear that this facility poses an environmental concern to the site.

26. Union Pacific Railroad Company was listed in the Orphan Summary of the EDR report approximately half a mile north of the subject site and appears on the SLIC database. No other information is reported in association with this facility. Based on this information, it does not appear that this facility poses an environmental concern to the site.

27. Lodi Municipal Well 23, located north of the site, has reported detections of DBCP. Sampling data was reported for the well from November of 1988 to December of 1996. During that period reported concentrations of DBCP ranged from 0.11 to 1.2 μg/l. The EPA Maximum Contaminant Limits (MCL) for drinking water for concentrations of DBCP is 0.2 μg/l. The DBCP and elevated nitrate concentrations are a regional problem. The previous reported elevations of DBCP and nitrates should not pose an environmental concern to the site, since City of Lodi will be supplying water/sewer service for the site. Kleinfelder recommends that if onsite wells will be used as part of the future development, the wells be sampled and analyzed for DBCP and nitrates.

28. The Union Pacific Railroad is located adjacent to the west of the subject site. Various herbicides, metals and possibly even waste oil may have been used for weed control along the railroad tracks. Creosote or pentachlorophenol may have been used to treat the railroad ties in the rail bed. PCBs, oils, and solvents may be associated with said railroad/railcar/locomotive maintenance. If the client desires to confirm the presence or absence of these potential contaminants,

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Kleinfelder recommends soil sampling and analysis onsite adjacent to the railroad right of way.

29. Approximately seventeen residential structures and associated barns, sheds and garages are located throughout the site. Additional structures include the Lodi Moose Lodge #634 (13263 State Route 99). Since access was not provided onto the entire site, Kleinfelder's site observations during the site reconnaissance were made from areas Kleinfelder had access to. Many of the residential house onsite were not assessed and the observations made were from a distance. Complete access to the site is needed to provide a more detailed description of the onsite conditions and to ascertain if the subject site has been impacted by the use, storage or release of hazardous substance.

8.3. DEVIATIONS

No significant deviations were made from the ASTM E 1527-00 practice. No other "non-scope" considerations, such as asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality and high voltage powerlines were considered for this report.

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9 REFERENCES

1. Environmental Data Resources, Reynolds Ranch, N. Stockton Street, Lodi, Ca, 95240. Inquiry # 1611926.2s, February 10, 2006.

2. Environmental Data Resources, Reynolds Ranch, N. Stockton Street, Lodi, Ca, 95240. Historical Topographic Map Report, Inquiry # 1611926.4, February 13, 2006.

3. Environmental Data Resources, Reynolds Ranch, N. Stockton Street, Lodi, Ca, 95240. EDR Aerial Photo Decade Package, Inquiry # 1611926.5, February 14, 2006.

4. Environmental Data Resources, Reynolds Ranch, N. Stockton Street, Lodi, Ca, 95240. City Directory-Abstract, Inquiry Number 1611926.5 February 15, 2006.

5. Environmental Data Resources, Reynolds Ranch, N. Stockton Street, Lodi, Ca, 95240. Sanborn Map Report, Inquiry Number 1611926.3 February 13, 2006.

6. ftp://ftp.consrv.ca.gov/pub/oil/maps/dist6/606/Map606.pdf

7. Soil Survey of San Joaquin County, California United States Department of Agriculture, issued October 1992.

8. State of California, Resources Agency, Department of Water Resources, San Joaquin District, San Joaquin Valley, Lines of Equal Elevation of Groundwater, Spring 2003.

9. State of California, Resources Agency, Department of Water Resources, San Joaquin District, San Joaquin Valley, Lines of Equal Depth to Water in Wells, Spring1999.

10. State of California Department of Water Resources. Lodi South Ca Quadrangle, 7.5 Minute Series, 1968. Scale: 1 inch = 2,000 feet.

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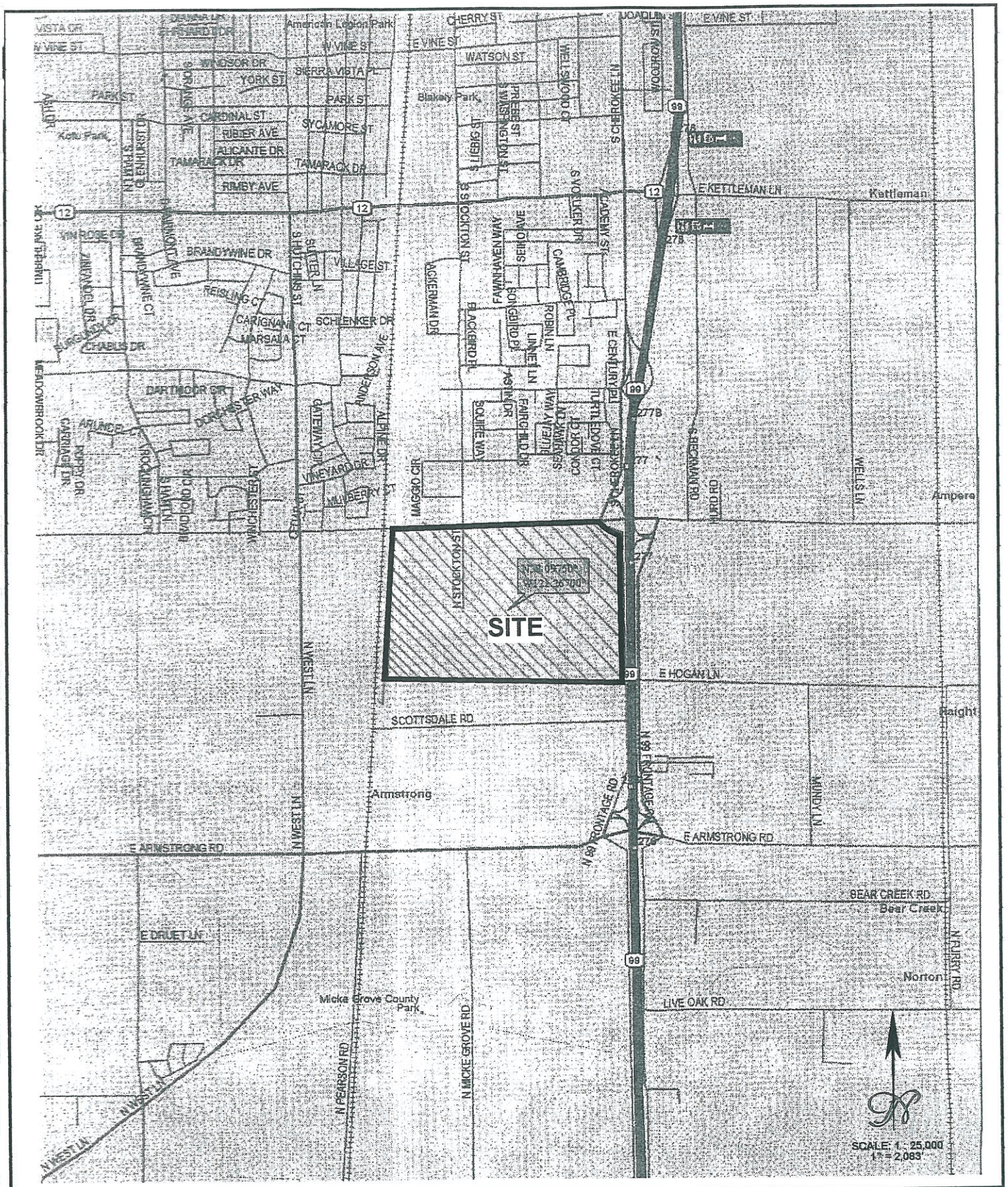
APPENDIX A

PLATES



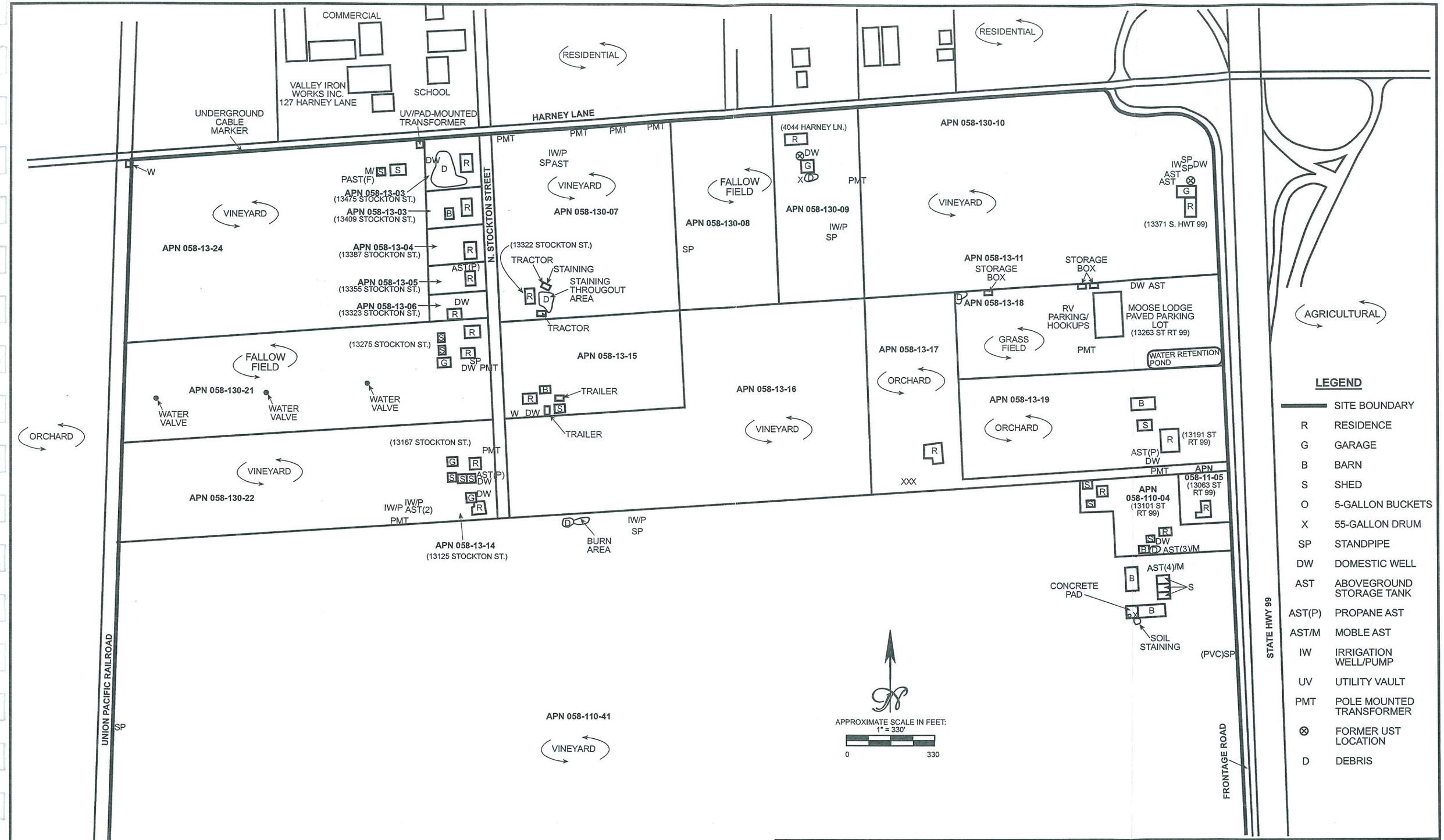
KLEINFELDER

DATE PRODUCED:3/20/2006	DATE REVISED:
PROJ. NO.:65942.P01	FILENAME:STO6D187.FH11

SITE VICINITY MAP
APPROXIMATELY 220-ACRES
SOUTH OF EAST HARNEY LANE AND
WEST OF STATE ROUTE 99
LODI, CALIFORNIA

PLATE No.

1



KLEINFELDER

DATE PRODUCED:320/2006	DATE REVISED:
PROJ. NO.:65942.P01	FILENAME:STO6D188.FH11

SITE MAP
APPROXIMATELY 220-ACRES
SOUTH OF EAST HARNEY LANE AND
WEST OF STATE ROUTE 99
LODI, CALIFORNIA

PLATE
2

Kleinfelder, Inc. 2006

PHOTO 1: Looking north from the southeast corner of the subject site along the western boundary of the site.

PHOTO 2: Looking west from the southeast corner of the subject site.

PHOTO 3: Looking south from the eastern border of the subject site at the residence located at 13063 N. Hwy 99.

PHOTO 4: Looking south at the residence located at 13101 N. Hwy 99 on the east central border of the site.

PHOTO 5: Looking southwest at the irrigation well/pump located in the center of the subject site.

PHOTO 6: Burn area and debris pile located in the center of the subject site.

PHOTO 7: Polyvinyl and steel AST's located adjacent to a irrigation well located in the west central portion of the site.

PHOTO 8: Looking northwest at an irrigation well/pump located in the west central portion of the site.

PHOTO 9: Looking north from the west central portion of the site.

PHOTO 10: Looking east from the western border of the subject site.

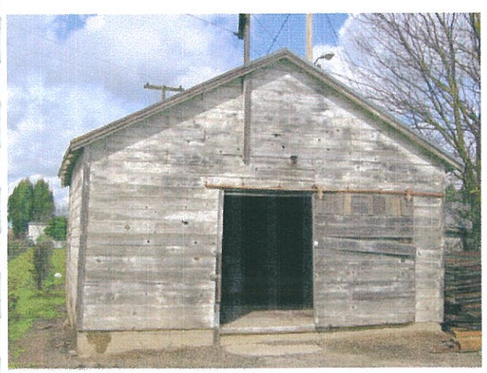


PHOTO 11: Looking north at the barn located on APN 058-110-04.

PHOTO 12: Looking southeast at the sheds located on APN 058-110-41.

PHOTO 13: Looking east at the mobile AST's located north of the sheds on APN 058-110-41.

PHOTO 14: Looking southwest at the barn located on APN 058-110-41.

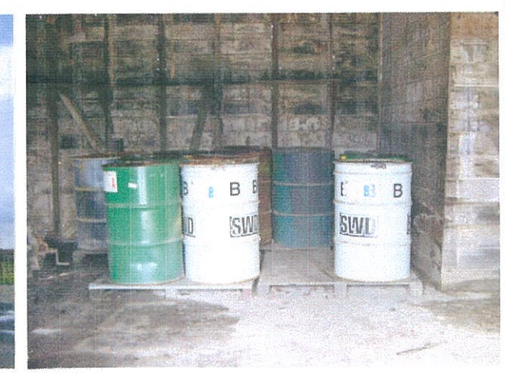


PHOTO 15: 55-gallon drums located in the barn on APN 058-110-04 (note staining on concrete floor).

KLEINFELDER		SITE PHOTOGRAPHS APPROXIMATELY 220-ACRES SOUTH OF EAST HARNEY LANe AND WEST OF STATE ROUTE 99 LODI, CALIFORNIA	PLATE 3
DATE PRODUCED:320/2006	DATE REVISED:		
PROJ. NO.:65942.P01	FILENAME:STO6D190.FH11		

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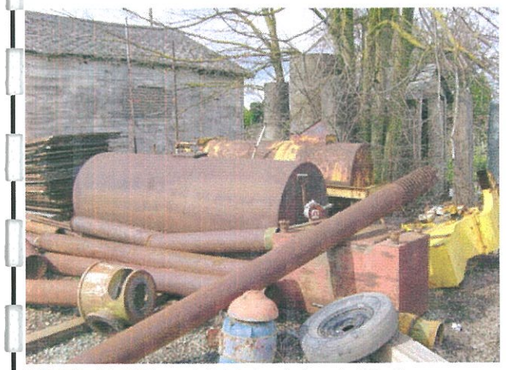

PHOTO 16: AST's and debris located east of the barn on APN 058-110-04.

PHOTO 17: Vault located in a shed on APN 058-110-04.

PHOTO 18: Staining on concrete floor of the barn on APN 058-110-41.

PHOTO 19: 5-gallon buckets and 55-gallon drum located on a concrete pad adjacent to the southern barn on APN 058-110-41 (note soil staining).

PHOTO 20: Looking northwest at the residence (13137 N Hwy 99) on APN 058-130-17.

PHOTO 21: Residence (13167 N. Stockton Street) located on APN 058-130-22.

PHOTO 22: Irrigation well/pump located on APN 058-130-15.

PHOTO 23: Looking north at the domestic well and residence (13216 N Stockton Street) located on APN 058-130-15.

PHOTO 24: Looking northeast at the residence (13322 N. Stockton Street) located on APN 058-130-07.

PHOTO 25: Tractor located on APN 058-130-07 (note soil staining under tractor).

PHOTO 26: Looking east from the eastern border of APN 058-130-07.

PHOTO 27: Looking east from the northwest corner of the subject site.

PHOTO 28: Residence (13125 N Stockton Street) located on APN 058-130-14.

PHOTO 29: Looking west at the residence located on APN 058-130-21.

PHOTO 30: Looking west at the residence (13323 N Stockton Street) on APN 058-130-06.

KLEINFELDER		SITE PHOTOGRAPHS APPROXIMATELY 220-ACRES SOUTH OF EAST HARNEY LANE AND WEST OF STATE ROUTE 99 LODI, CALIFORNIA	PLATE 4
DATE PRODUCED:320/2006	DATE REVISED:		
PROJ. NO.:65942.P01	FILENAME:STO6D191.FH11		

Kleinfelder, Inc. 2006

PHOTO 31: Looking west at the residence (13355 N Stockton Street) located on APN 058-130-05.

PHOTO 32: Looking northwest at the residence (13409 N Stockton Street) located on APN 058-130-03.

PHOTO 33: Looking west at the residence (13475 N Stockton Street) located on APN 058-130-02.

PHOTO 34: Looking northwest at the storage shed located in the northeast corner of APN 058-130-24.

PHOTO 35: Looking east at the shed located on APN 058-130-24.

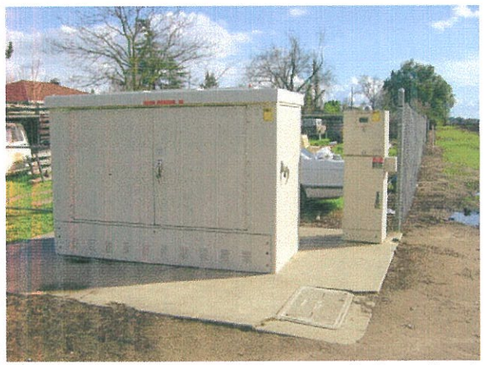

PHOTO 36: Pad-mounted transformer located in the northeast corner of APN 058-130-24.

PHOTO 37: Irrigation well/pump located in the northern portion of APN 058-130-07.

PHOTO 38: Looking southwest at the Moose Lodge located on APN 058-130-18.

PHOTO 39: Looking west from the eastern border of the site at the water retention basin on APN 058-130-18.

PHOTO 40: Looking northwest at the residence (4044 E. Harney Lane) on APN 058-130-09.

PHOTO 41: Looking southwest at the garage located on APN 058-130-09 (note the irrigation well located in the approximate location of the former UST).

PHOTO 42: Looking southwest at the AST's located north of the residence (13371 N Hwy 99) on APN 058-130-10.

PHOTO 43: Looking southeast from the northern border of APN 058-130-18 (note the RV's located adjacent to the Moose Lodge).

KLEINFELDER		SITE PHOTOGRAPHS APPROXIMATELY 220-ACRES SOUTH OF EAST HARNEY LANE AND WEST OF STATE ROUTE 99 LODI, CALIFORNIA	PLATE 5
DATE PRODUCED:320/2006	DATE REVISED:		
PROJ. NO.:65942.P01	FILENAME:STO6D192.FH11		

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KLEINFELDER

DATE PRODUCED:3/20/2006	DATE REVISED:
PROJ. NO.:65942.P01	FILENAME:STO6D189.FH11

A993 AERIAL PHOTOGRAPH
APPROXIMATELY 220-ACRES
SOUTH OF EAST HARNEY LANE AND
WEST OF STATE ROUTE 99
LODI, CALIFORNIA

PLATE No.

6

APPENDIX B

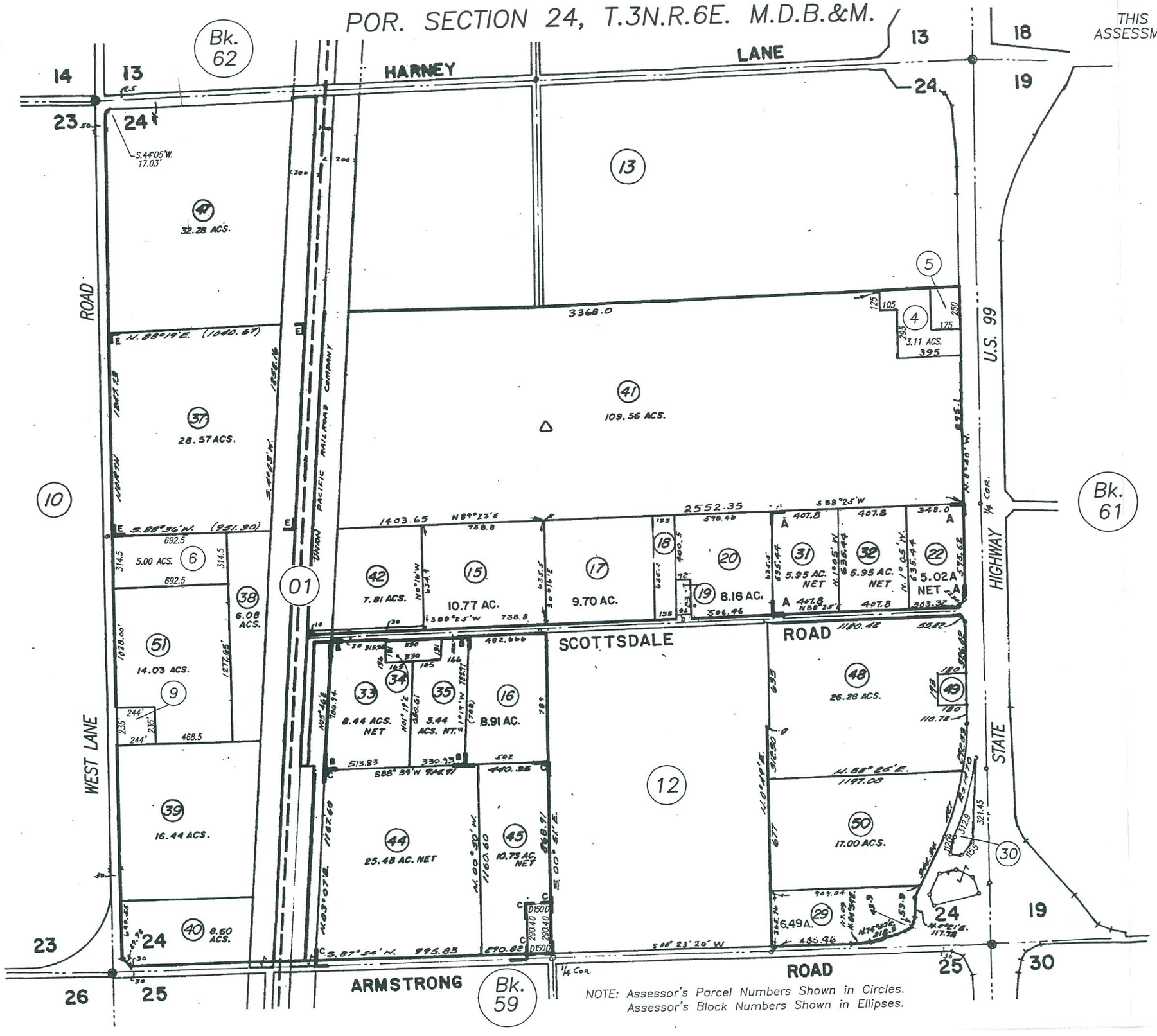
HISTORICAL RESEARCH DOCUMENTATION

POR. SECTION 24, T.3N.R.6E. M.D.B.&M.

THIS MAP IS FOR ASSESSMENT USE ONLY

058–11

1" = 600'



△ – WILLIAMSON ACT PARCELS

E – R.S. Bk. 32 Pg. 70
D – R.S. Bk. 22 Pg. 148
C – P.M. Bk. 18 Pg. 27
B – R.S. Bk. 31 Pg. 37
A – R.S. Bk. 26 Pg. 181

HIGHEST A.P.N. USED			
YEAR	PAR. #	PAR. #	PAR. #
99–00	50		
00–01	51		

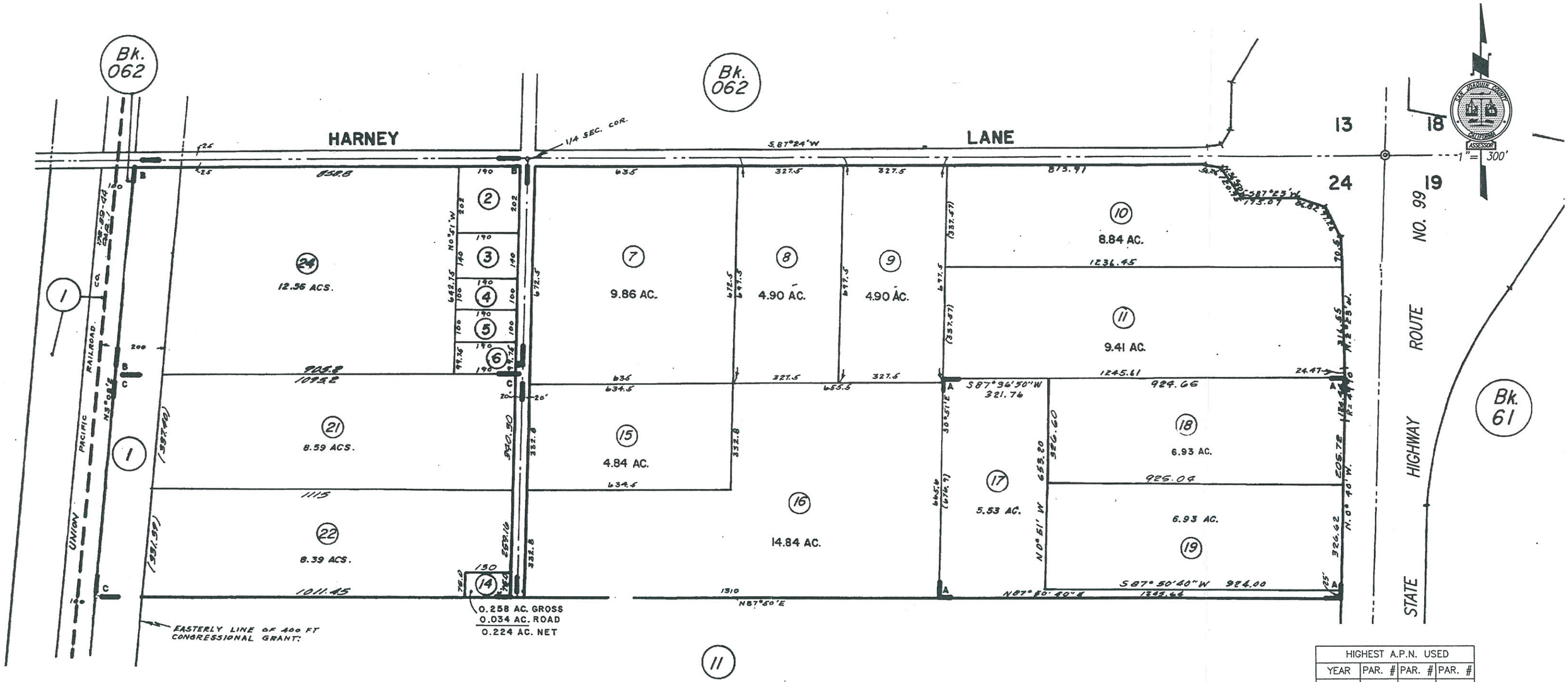
NOTE: Assessor's Parcel Numbers Shown in Circles.
Assessor's Block Numbers Shown in Ellipses.

Assessor's Map Bk.058 Pg.11
County of San Joaquin, Calif.

POR. SEC. 24, T.3N.R.6E., M.D.B.&M.

THIS MAP IS FOR ASSESSMENT USE ONLY

058–13



HIGHEST A.P.N. USED			
YEAR	PAR. #	PAR. #	PAR. #
93–94	24		

C – R.S. Bk. 15 Pg. 29
B – R.S. Bk. 07 Pg. 308
A – R.S. Bk. 25 pg. 04

NOTE: Assessor's Parcel Numbers Shown in Circles.
Assessor's Block Numbers Shown in Ellipses.

Assessor's Map Bk.058 Pg.13
County of San Joaquin, Calif.

EDR® Environmental
Data Resources Inc

The EDR Aerial Photo Decade Package

Reynolds Ranch
13160 N. Stockton Street
Lodi, CA 95240

Inquiry Number: 1611926.6

February 14, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

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PEP

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References

EPAs Standards and Practices for All Appropriate Inquiries (AAI), section 312.24, identifies the historical sources of information necessary to achieve the objectives and performance factors of section 312.20. According to AAI, *"historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."*

To meet the prior use requirements of ASTM E 1527-05, Section 8.3.2, the following standard *historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-05, Section 8.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historcal sources as are necessary and both reasonably ascertainable and likely to be useful."* (ASTM E 1527-05, Section 8.3.2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable.*

Data Gaps

In order to address *data gaps*, additional sources of information may be consulted. According the AAI, Section 312.20 (g), *"to the extent there are data gaps (as defined in section 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps."* According to ASTM E 1527-05, Section 8.3.2.3, *"historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met....If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion."*

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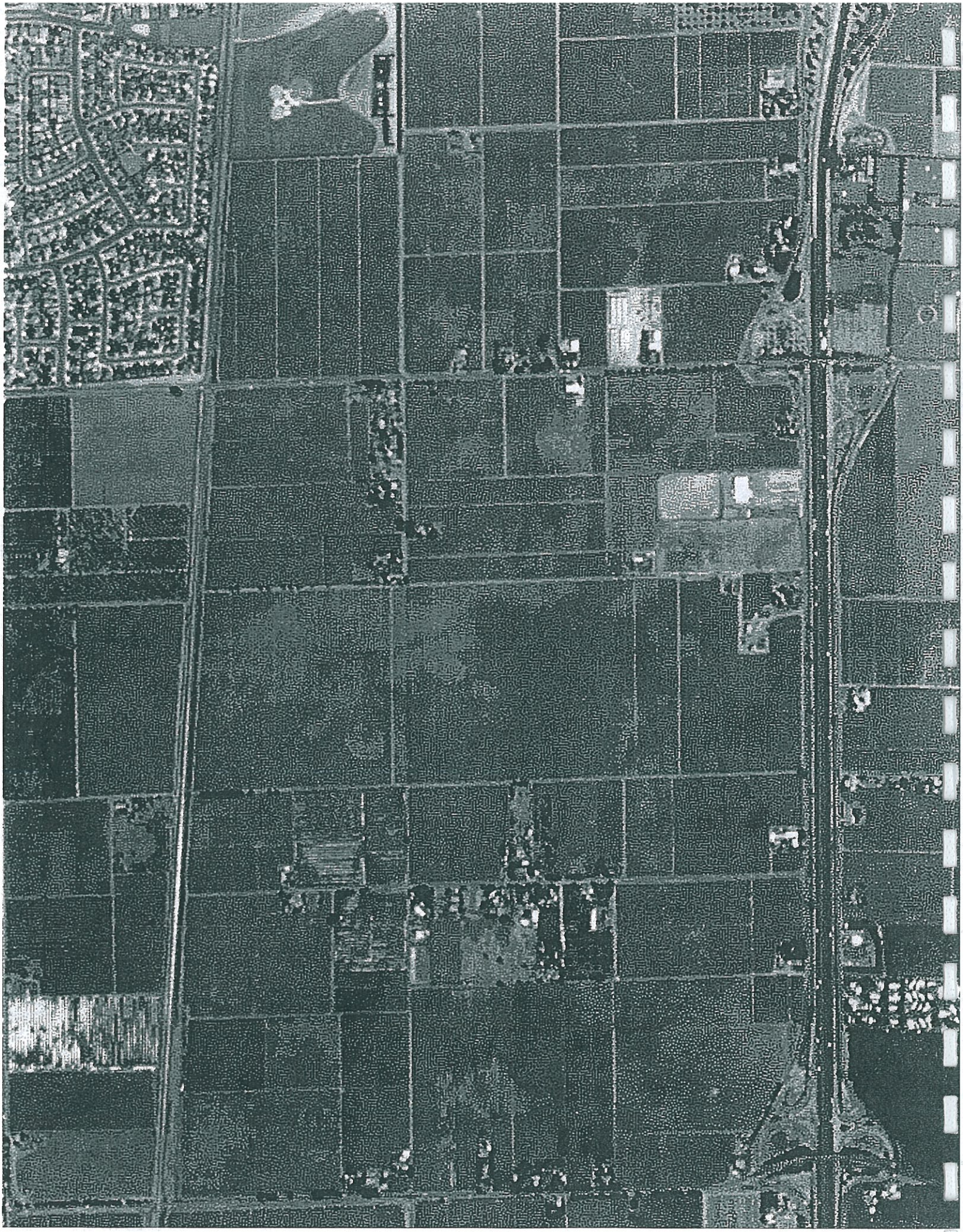
Inquiry: 1611926.6 Year: 1993 Flyer: USGS Scale: 1″=666′



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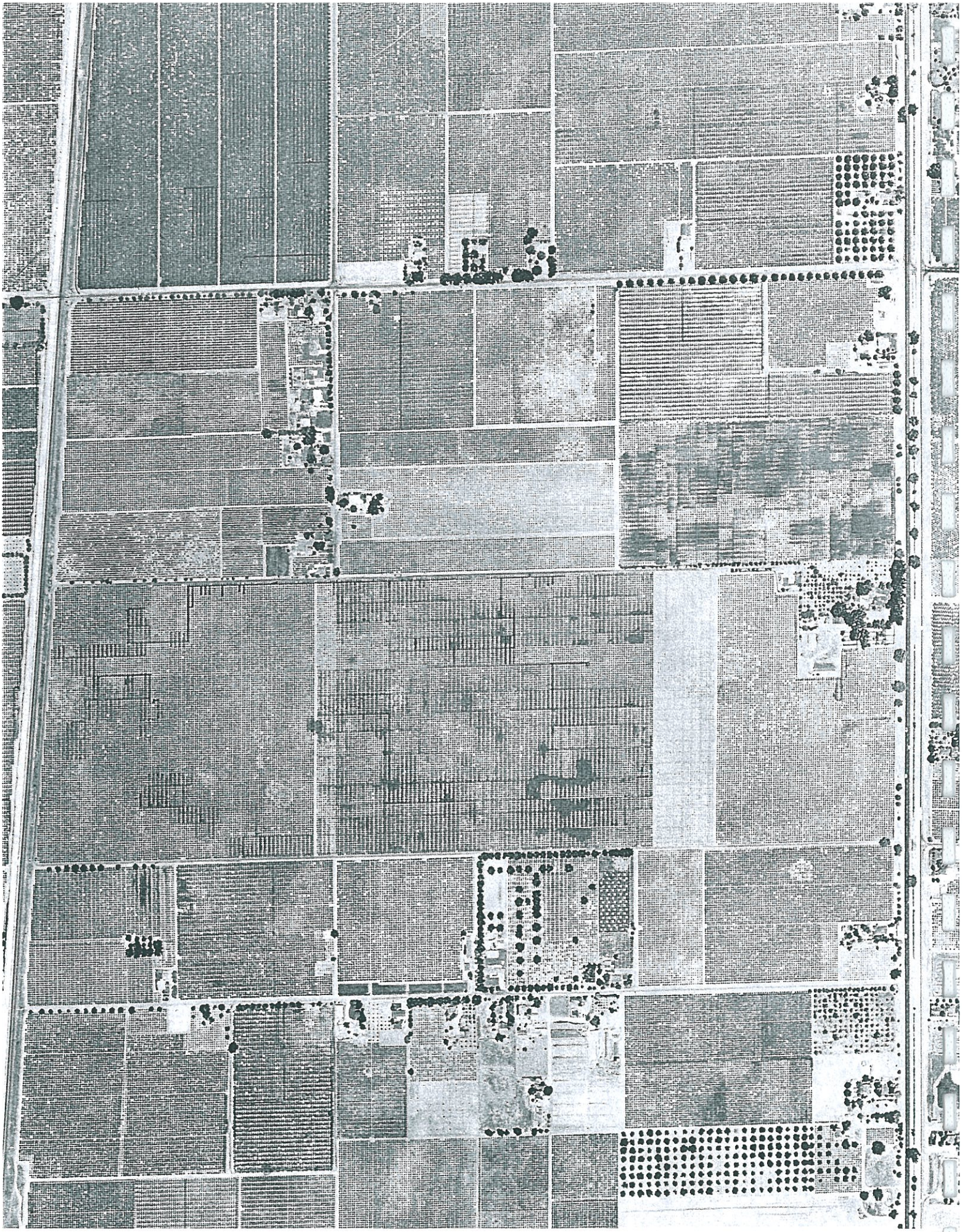
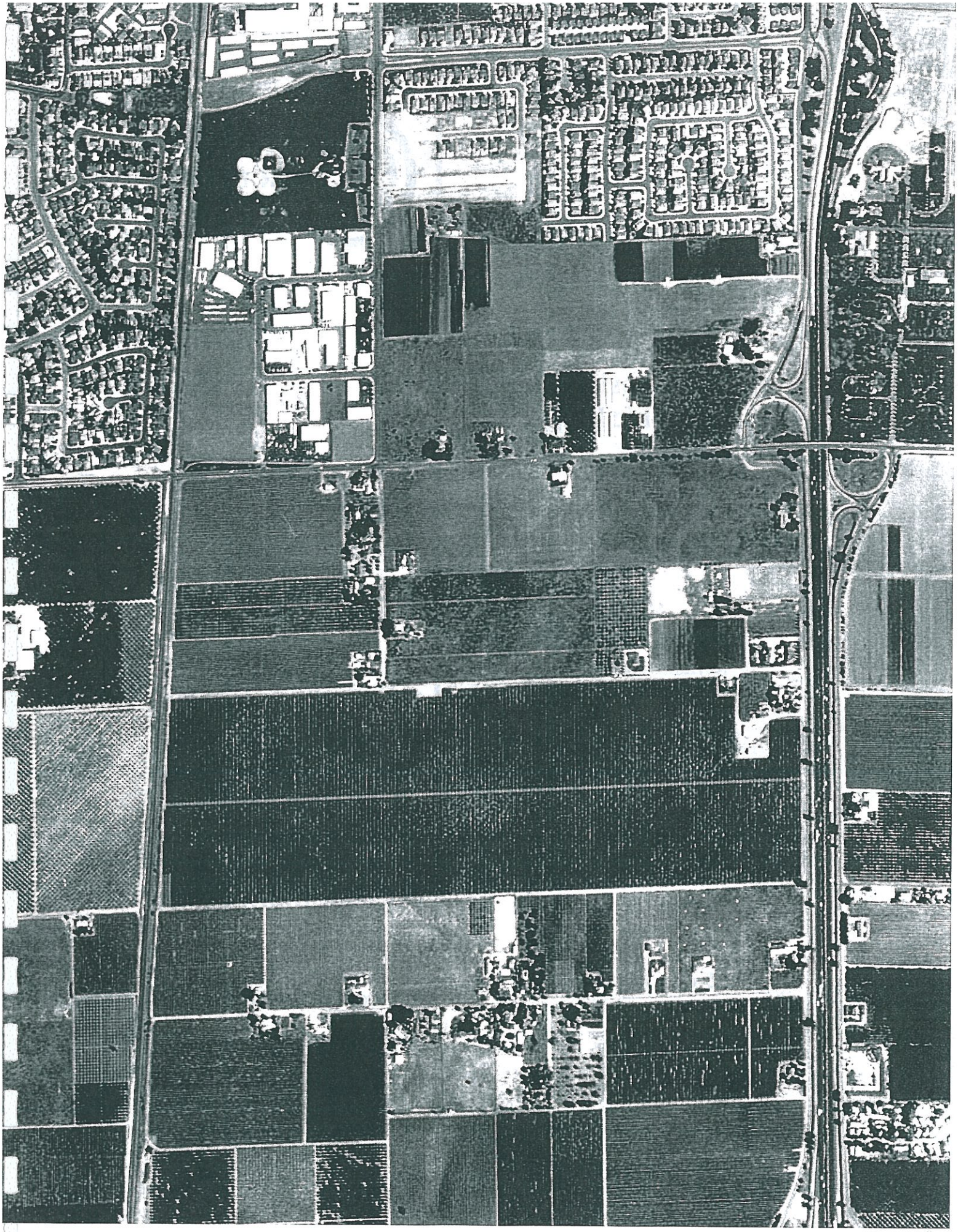
Inquiry: 1611926.6 Year: 1963 Flyer: Mark Hurd Scale: 1″=555′



Inquiry: 1611926.6 Year: 1957 Flyer: Cartwright Scale: 1″=555′



nquiry: 1611926.6 Year: 1998 Flyer: USGS Scale: 1″=666′

EDR Historical Topographic Map Report

Reynolds Ranch
13160 N. Stockton Street
Lodi, CA 95240

Inquiry Number: 1611926.4

February 13, 2006

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Form-PEP

EDR Historical Topographic Map Report

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References

To meet the prior use requirements of ASTM E 1527-05, Section 8 3 2, the following *standard historical sources* may be used aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records ASTM E 1527-05, Section 8 3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier This task requires reviewing only as many of the standard historcal sources as are necessary and both reasonably ascertainable and likely to be useful "* (ASTM E 1527-05, Section 8 3 2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints,and practically reviewable*

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Data Gaps

In order to address data gaps, additional sources of information may be consulted According the AAI, Section § 312 20 (g), *"to the extent there are data gaps (as defined in § 312 10) in the information developed that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps "* According to ASTM E 1527-05, Section 8 3 2 3, "historical research is complete when either (1) the objectives in 8 3 1 through 8 3 2 2 are achieved, or (2) data failure is encountered Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion "

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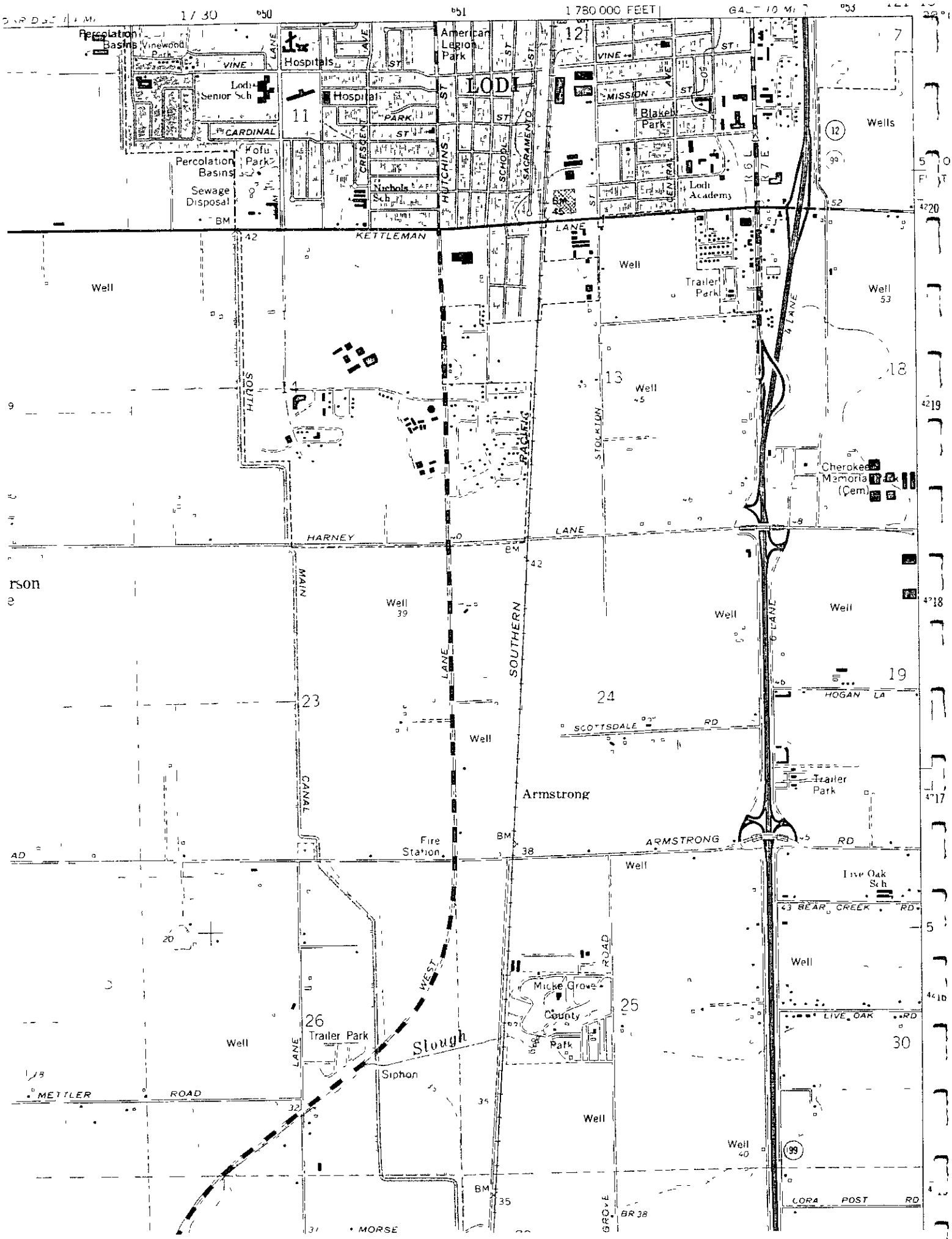

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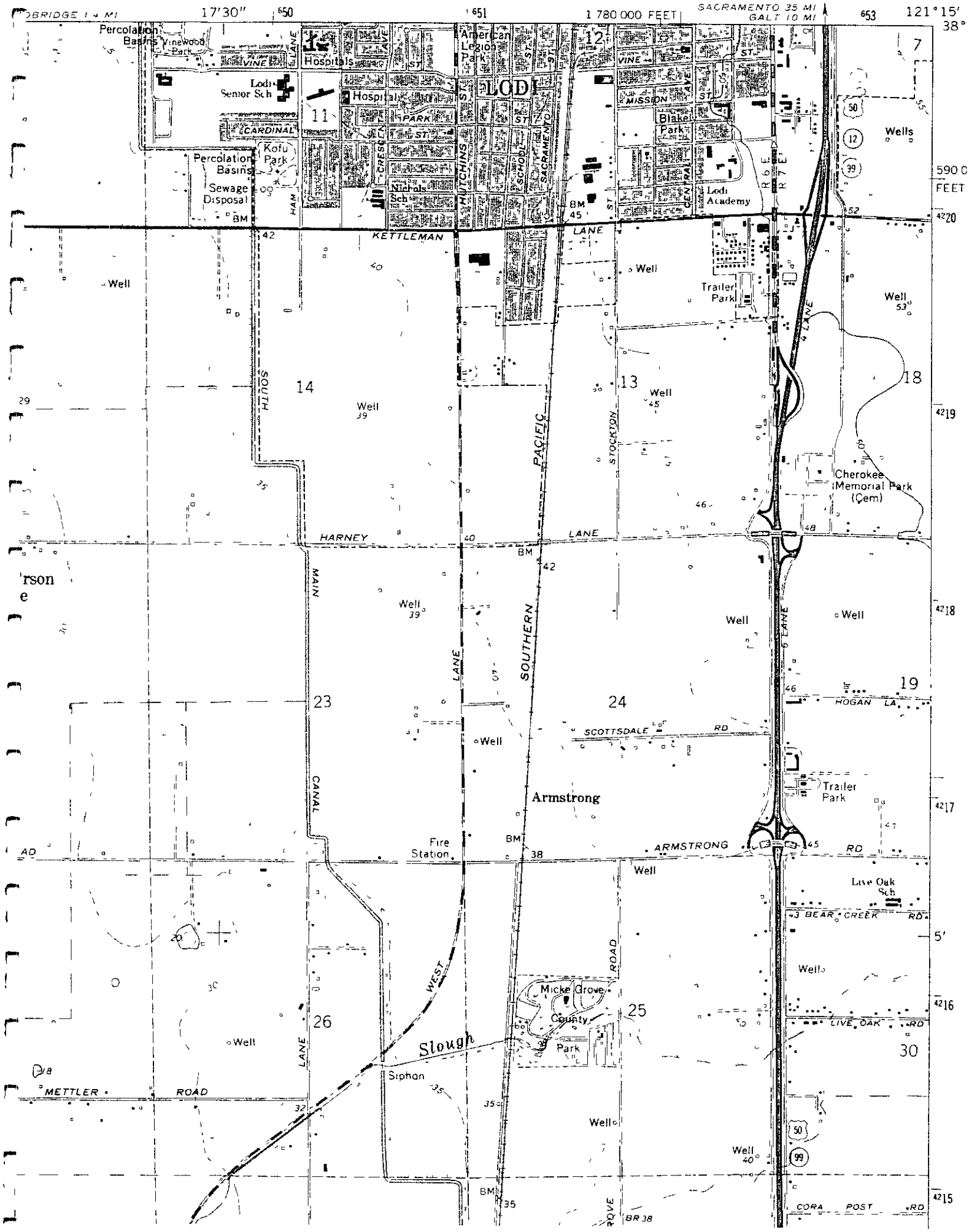

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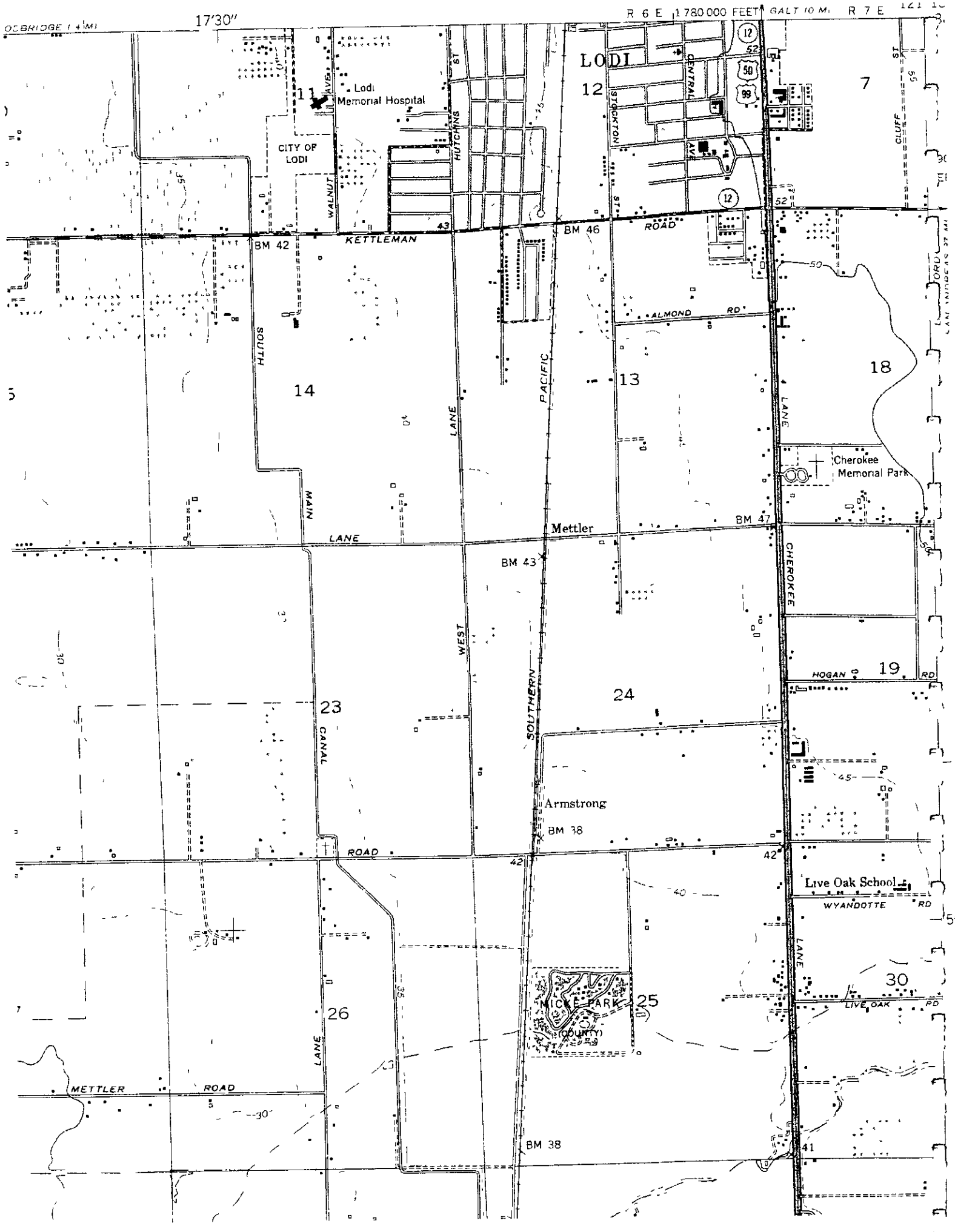

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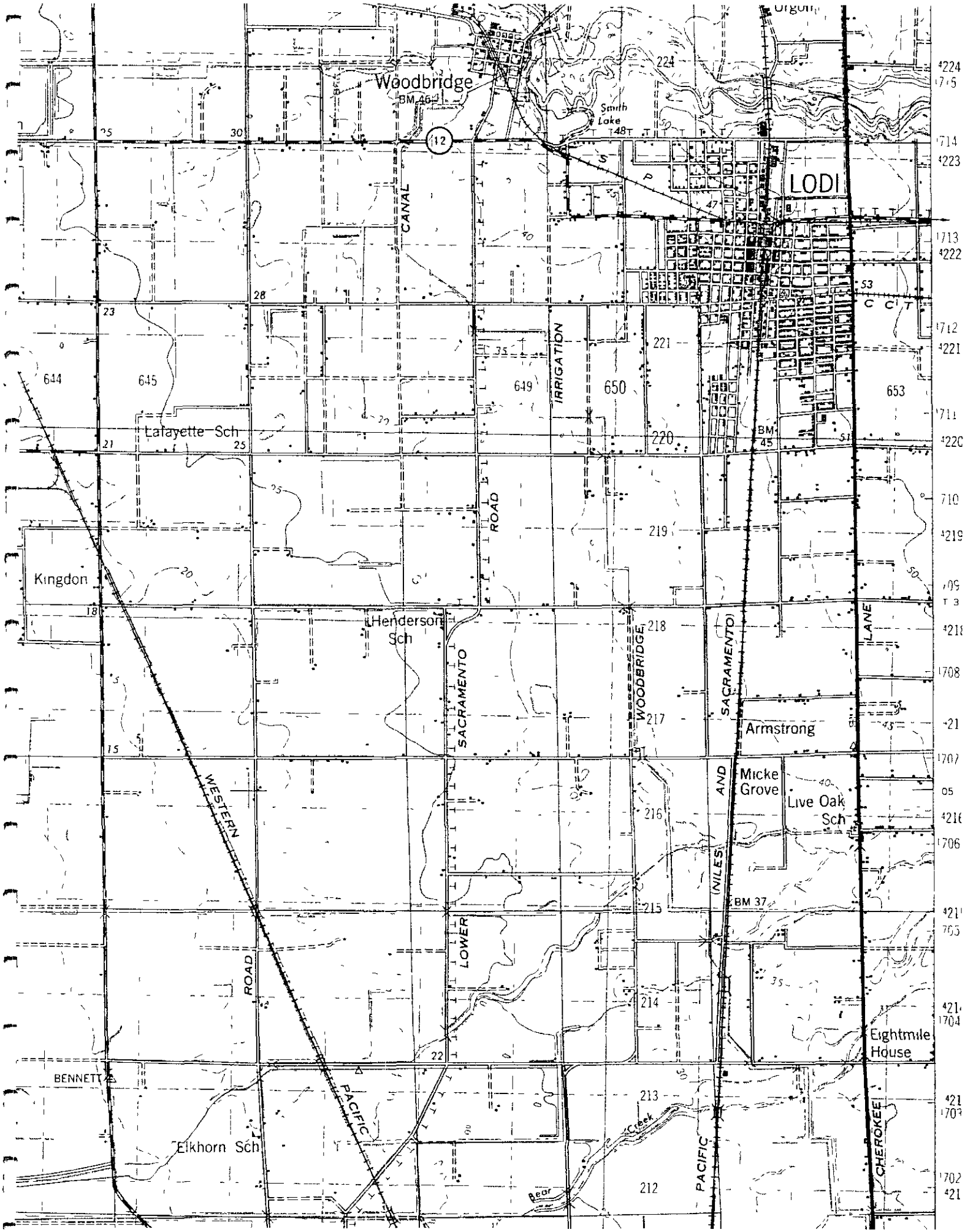

N ^ EDR INQUIRY# 1611926 4 TARGET QUAD LODI YEAR 1947 Series 15' Scale 1 50,000

EDR® Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Ryan Brosius
Kleinfelder, Inc
2825 E, Myrtle Street
Stockton, CA 95205

Order Date: 2/10/2006 **Completion Date:** 2/13/2006
Inquiry #: 1611926 3s
P.O. #: NA
Site Name: Reynolds Ranch
Address: 13160 N Stockton Street
City/State: Lodi, CA 95240
Cross Streets:

Customer Project: NA
1033791PEP 209-948-1345

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified

NO COVERAGE

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The EDR-City Directory
Abstract

Reynolds Ranch
13160 N. Stockton Street
Lodi, CA 95240

Inquiry Number: 1611926.5

Wednesday, February 15, 2006

EDR® Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone 1-800-352-0050
Fax 1-800-231-6802
Internet www edrnet com

City Directory Abstract

Environmental Data Resources, Inc 's (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities EDR's City Directory Abstract includes a search and abstract of available city directory data The city directory is a sophisticated tool for locating individuals and businesses With each address, the directory lists the name of the corresponding occupant

References

To meet the prior use requirements of ASTM E 1527-05, Section 8 3 2, the following *standard historical sources* may be used aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records ASTM E 1527-05, Section 8 3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier This task requires reviewing only as many of the standard historcal sources as are necessary and both reasonably ascertainable and likely to be useful "* (ASTM E 1527-05, Section 8 3 2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable*

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Thank you for your business

Please contact EDR at 1-800-352-0050
with any questions or comments

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SUMMARY

- *City Directories·*

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1961 through 2005 (These years are not necessarily inclusive) A summary of the information obtained is provided in the text of this report

Date EDR Searched Historical Sources 2/15/2006

Target Property
13160 N Stockton Street
Lodi, CA 95240

Year	Uses	Source
1961	Address Not Listed in Research Source	Polk's City Directory
1966	Address Not Listed in Research Source	Polk's City Directory
1970	Address Not Listed in Research Source	Polk's City Directory
1975	Address Not Listed in Research Source	Polk's City Directory
1980	Address Not Listed in Research Source	Polk's City Directory
1985	Address Not Listed in Research Source	Polk's City Directory
1990	Address Not Listed in Research Source	Polk's City Directory
1995	Address Not Listed in Research Source	Polk's City Directory
2000	Address Not Listed in Research Source	Polk's City Directory
2005	Address Not Listed in Research Source	Polk's City Directory

Adjoining Properties

SURROUNDING

North Stockton Street
Lodi, CA 95240

Year	Uses	Source
1961	Address Not Listed in Research Source	Polk's City Directory
1966	Address Not Listed in Research Source	Polk's City Directory
1970	Address Not Listed in Research Source	Polk's City Directory
1975	Address Not Listed in Research Source	Polk's City Directory
1980	Address Not Listed in Research Source	Polk's City Directory
1985	Address Not Listed in Research Source	Polk's City Directory

Year	Uses	Source
1990	Address Not Listed in Research Source	Polk's City Directory
1995	Address Not Listed in Research Source	Polk's City Directory
2000	**North Stockton Street**	Polk's City Directory
	Residence (13125)	Polk's City Directory
	Residence (13167)	Polk's City Directory
	Residence (13216)	Polk's City Directory
	No other addresses in 13000-13299 range	Polk's City Directory
2005	**North Stockton Street**	Polk's City Directory
	Residence (13125)	Polk's City Directory
	Residence (13167)	Polk's City Directory
	Residence (13216)	Polk's City Directory
	No other addresses in 13000-13299 range	Polk's City Directory

APPENDIX C

ENVIRONMENTAL DATA RESOURCES REPORT

The EDR Radius Map
with GeoCheck®

Reynolds Ranch
13160 N. Stockton Street
Lodi, CA 95240

Inquiry Number: 1611926.2s

February 10, 2006

EDR® Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone 1-800-352-0050
Fax 1-800-231-6802
Internet www edrnet com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	24
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
Physical Setting Source Map Findings	A-10
Physical Setting Source Records Searched	A-30

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR) The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate

TARGET PROPERTY INFORMATION

ADDRESS

13160 N STOCKTON STREET
LODI, CA 95240

COORDINATES

Latitude (North)	38 097500 - 38' 5' 51 0"
Longitude (West)	121 267000 - 121' 16' 1 2"
Universal Tranverse Mercator	Zone 10
UTM X (Meters)	651960 5
UTM Y (Meters)	4217845 0
Elevation	47 ft above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property	38121-A3 LODI SOUTH, CA
Source	USGS 7 5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL Liens..... Federal Superfund Liens
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRA-TSDF..... Resource Conservation and Recovery Act Information
RCRA-LQG..... Resource Conservation and Recovery Act Information

ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

AWP	Annual Workplan Sites
Cal-Sites	Calsites Database
CA BOND EXP PLAN	Bond Expenditure Plan
NFA	No Further Action Determination
NFE	Properties Needing Further Evaluation
REF	Unconfirmed Properties Referred to Another Agency
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
SWF/LF	Solid Waste Information System
CA WDS	Waste Discharge System
WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
SLIC	Statewide SLIC Cases
UST	Active UST Facilities
AST	Aboveground Petroleum Storage Tank Facilities
CHMIRS	California Hazardous Material Incident Report System
DEED	Deed Restriction Listing
VCP	Voluntary Cleanup Program Properties
WIP	Well Investigation Program Case List
EMI	Emissions Inventory Data

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
INDIAN UST	Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Auto Stations	EDR Proprietary Historic Gas Stations

EXECUTIVE SUMMARY

EDR Cleaners..... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES SEARCH RESULTS

Surrounding sites were identified

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis Relative elevation information between sites of close proximity should be field verified Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed

Sites listed in ***bold italics*** are in multiple databases

Unmappable (orphan) sites are not considered in the foregoing analysis

FEDERAL RECORDS

RCRAInfo RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS) The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste TSDFs treat, store, or dispose of the waste

A review of the RCRA-SQG list, as provided by EDR, and dated 12/15/2005 has revealed that there are 3 RCRA-SQG sites within approximately 0 75 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
HOME DEPOT USA INC HD FL0051	2411 STOCKTON ST	1/4 - 1/2 NNW	7	11
HOME DEPOT USA INC HD FL0046	2303 STOCKTON ST	1/2 - 1 NNW	12	13

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOKAY CLEANERS	***2525 S HUTCHINS***	***1/2 - 1 WNW***	***D21***	***18***

STATE AND LOCAL RECORDS

CORTESE This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration The source is the California Environmental Protection Agency/Office of Emergency Information

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there are 3

Cortese sites within approximately 1 mile of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ARCO #760	2251 CHEROKEE	1/2 - 1 NNE	18	16
NONE	***5154 HOGAN***	***1/2 - 1 ESE***	***25***	***21***
HANSEN PROPERTY	2001 CHEROKEE	1/2 - 1 NNE	26	23

LUST The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System

A review of the LUST list, as provided by EDR, and dated 01/09/2006 has revealed that there is 1 LUST site within approximately 1 mile of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
NONE	***5154 HOGAN***	***1/2 - 1 ESE***	***25***	***21***
Facility Status Case Closed				

CA FID The Facility Inventory Database contains active and inactive underground storage tank locations The source is the State Water Resource Control Board

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 5 CA FID UST sites within approximately 0 75 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TAMURA BROS	***1220 E HARNEY LANE***	***1/4 - 1/2 NNE***	***1***	***6***
ROBERT EDGAR RICHARDS	***13661 N CHEROKEE LN***	***1/4 - 1/2 NNE***	***8***	***11***
MILLER FARMS	***4071 E HARNEY LANE***	***1/2 - 1 ENE***	***B10***	***12***
LEONA REIMCHE	***4219 E HARNEY LANE***	***1/2 - 1 ENE***	***C14***	***14***

Lower Elevation	Address	Dist / Dir	Map ID	Page
STAR MARKET #2	***2525 S HUTCHINS***	***1/2 - 1 WNW***	***D20***	***17***

HIST UST Historical UST Registered Database

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 10 HIST UST sites within approximately 0 75 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
DON MILLER	4071 E HARNEY LN	1/2 - 1 ENE	B9	12
ERMA BRADLEY	4044 E HARNEY LN	1/2 - 1 ENE	B11	13
LEONA REIMCHE	4219 E HARNEY LN	1/2 - 1 ENE	C13	14
MRS ED THOMPSON	2250 S STOCKTON ST	1/2 - 1 NNW	15	15
CHEROKEE MEMORIAL PARK, INC	HIGHWAY 99 AT HARNEY LA	1/2 - 1 ENE	22	19

Lower Elevation	Address	Dist / Dir	Map ID	Page
FELIX J COSTA	13160 N WEST LN	1/2 - 1 W	16	15
BLODGETT RANCH	13050 N HIGHWAY 99	1/2 - 1 SSE	17	15
STAR MARKET #2	2525 S HUTCHINS ST	1/2 - 1 WNW	D19	16
FRY RANCH #40	12609 N WEST LN	1/2 - 1 WSW	23	20

Lower Elevation	Address	Dist / Dir	Map ID	Page
JOHN KISZLER	3861 E ARMSTRONG RD	1/2 - 1 S	24	21

SWEEPS Statewide Environmental Evaluation and Planning System This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's The listing is no longer updated or maintained The local agency is the contact for more information on a site on the SWEEPS list

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0 75 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TAMURA BROS	*1220 E HARNEY LANE*	*1/4 - 1/2 NNE*	*1*	*6*
ROBERT EDGAR RICHARDS	*13661 N CHEROKEE LN*	*1/4 - 1/2 NNE*	*8*	*11*
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LEONA REIMCHE	*4219 E HARNEY LANE*	*1/2 - 1 ENE*	*C14*	*14*

Lower Elevation	Address	Dist / Dir	Map ID	Page
STAR MARKET #2	*2525 S HUTCHINS*	*1/2 - 1 WNW*	*D20*	*17*

NOTIFY 65 Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk The data come from the State Water Resources Control Board's Proposition 65 database

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there is 1 Notify 65 site within approximately 1 5 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
NONE	*5154 HOGAN*	*1/2 - 1 ESE*	*25*	*21*

DRYCLEANERS A list of drycleaner related facilities that have EPA ID numbers These are facilities with certain SIC codes power laundries, family and commercial, garment pressing and cleaners' agents, linen supply, coin-operated laundries and cleaning, drycleaning plants except rugs, carpet and upholster cleaning, industrial launderers, laundry and garment services

A review of the CLEANERS list, as provided by EDR, and dated 04/18/2005 has revealed that there is 1 CLEANERS site within approximately 0 75 miles of the target property

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOKAY CLEANERS	*2525 S HUTCHINS*	*1/2 - 1 WNW*	*D21*	*18*

HAZNET The data is extracted from the copies of hazardous waste manifests received each year by the DTSC The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments Data from non-California manifests & continuation sheets are not included at the present time Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2003 has revealed that there are 5

EXECUTIVE SUMMARY

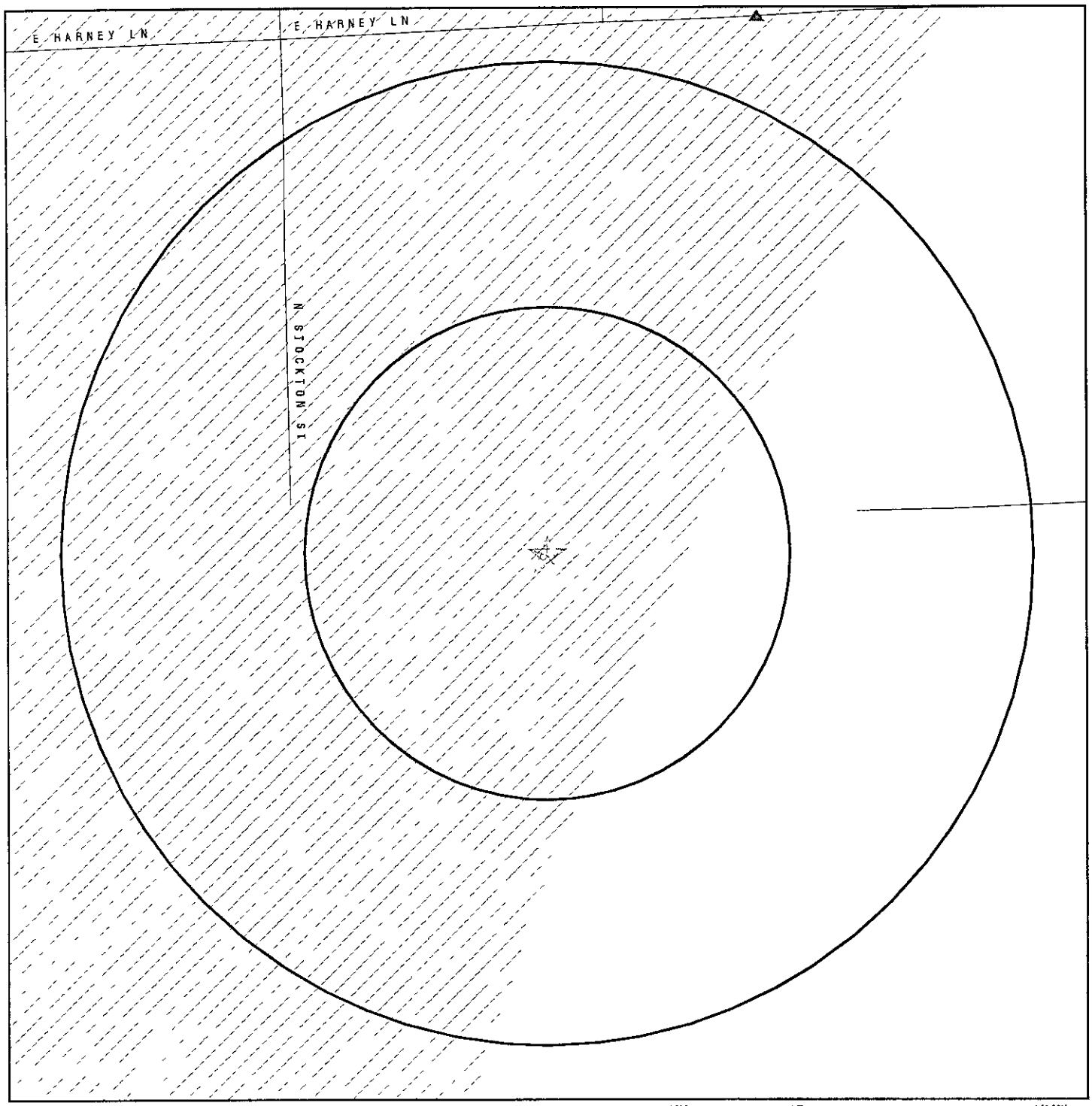
HAZNET sites within approximately 0 5 miles of the target property

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CAMPBELL GRINDING	2501 S STOCKTON ST	1/4 - 1/2 NNW	A2	6
ALTAMONT MACHINE CO	2501 S STOCKTON STREET	1/4 - 1/2 NNW	A3	8
PETE'S WORKSHOP	2499 S STOCKTON	1/4 - 1/2 NNW	A4	8
QUALFAB MACHINING	2499 S STOCKTON ST #3	1/4 - 1/2 NNW	A5	9
PETE'S WORKSHOP	2506 MAGGIO CIR	1/4 - 1/2 NW	6	10

Due to poor or inadequate address information, the following sites were not mapped

Site Name	Database(s)
CASTELANELLI BROS	CA FID UST, SWEEPS UST
CHEROKEE MEMORIAL PARK INC	CA FID UST, SWEEPS UST
CITY OF LODI WELL #16	CA FID UST, SWEEPS UST
W GALEN JOHNSON	CA FID UST, SWEEPS UST
MOKELUMNE RURAL FIRE DEPT	SWEEPS UST
HARNEY LANE AND BECKMAN RD EAS	CHMIRS, SLIC
WHISKEY SLOUGH ROAD 1/8 MILE N	CHMIRS, SLIC
CHARLEY JACOBS	LUST, Cortese
PG&E GAS PLANT LODI	CERC-NFRAP
VICTOR MEATS	LUST
HARRIS RANCH	UST
VICTOR FINE FOODS	UST, CA WDS
KEIZO OKUHARA	HIST UST
WELL 16	HIST UST
FRANK C ALEGRE TRUCKING INC	AST
P G & E/TERMINOUS SUBSTATION	HAZNET
EARTH GRAIN INC	HAZNET
WOODBRIDGE PARTNERS INC	HAZNET
DIESTRE TURKEY RANCH	HAZNET
R E SERVICE COMPANY INC	HAZNET
RICHARDS RANCH, LTD	HAZNET
LUSD - LINCOLN SCHOOL	HAZNET
HNL HOLDINGS	HAZNET
WESTERN CYLINDER HEAD REPAIR	HAZNET
COUNTRYSIDE MINI MART	HAZNET
MOHAMMED MALIK	HAZNET
RONALD SILACK	HAZNET
T&T TRUCKING INC	HAZNET
ELLSWORTH BECKMAN	HAZNET
HUNTER HARIS	HAZNET
QUIK STOP MARKETS INC MKT #148	HAZNET
SAN JOAQUIN PUBLIC WORKS DEPARTMME	HAZNET
PLASTAKET MGF CO INC	RCRA-SQG
PACIFIC BELL	RCRA-SQG, FINDS
UNION PACIFIC RAILROAD COMPANY **	SLIC
VICTOR FINE FOODS	SLIC
CERTAINTEED CORP	CA WDS
VAN RUITEN-TAYLOR WINERY	CA WDS
TOWER PARK MARINA/VILLAGE WWTF	CA WDS
RICHARDS RANCH ELEMENTARY SCHOOL	SCH
CENTRAL VALLEY CHEM CO	SSTS
TRIANGLE PACIFIC CORP	EMI
PLASTAKET MFG CO , INC	EMI

DETAIL MAP - 1611926.2s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information The legend includes only those icons for the default map view

SITE NAME	Reynolds Ranch	CLIENT	Kleinfelder, Inc
ADDRESS	13160 N Stockton Street Lodi CA 95240	CONTACT	Ryan Brosius
		INQUIRY #	1611926 2s
LAT/LONG	38 0975 / 121 2670	DATE	February 10, 2006

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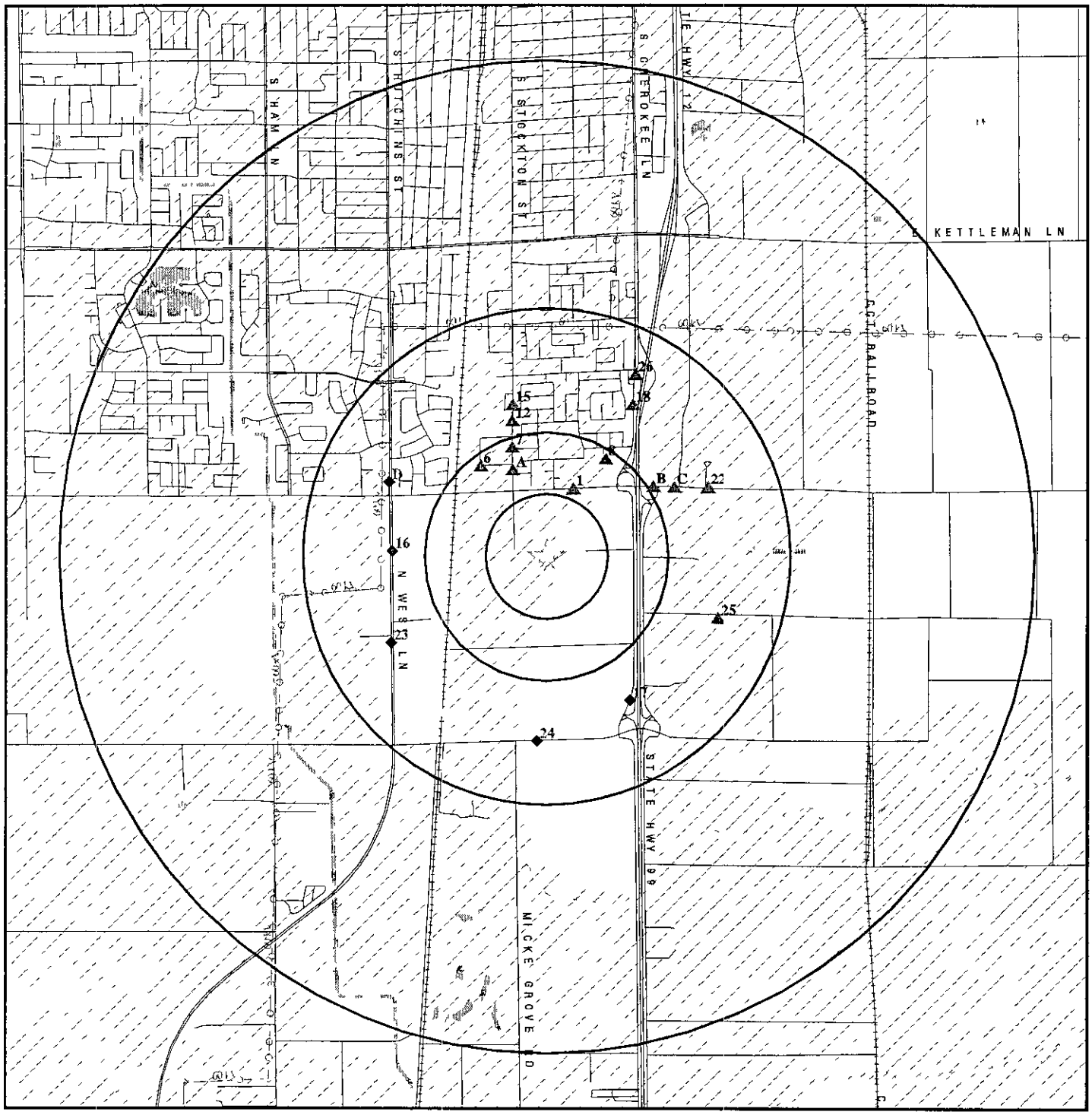
OVERVIEW MAP - 1611926.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information The legend includes only those icons for the default map view

SITE NAME	Reynolds Ranch	CLIENT	Kleinfelder, Inc
ADDRESS	13160 N Stockton Street Lodi CA 95240	CONTACT	Ryan Brosius
		INQUIRY #	1611926 2s
LAT/LONG	38 0975 / 121 2670	DATE	February 10, 2006

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1 500	0	0	0	0	0	0
Proposed NPL		1 500	0	0	0	0	0	0
Delisted NPL		1 500	0	0	0	0	0	0
NPL Liens		0 500	0	0	0	NR	NR	0
CERCLIS		1 000	0	0	0	0	NR	0
CERC-NFRAP		1 000	0	0	0	0	NR	0
CORRACTS		1 500	0	0	0	0	0	0
RCRA TSD		1 000	0	0	0	0	NR	0
RCRA Lg Quan Gen		0 750	0	0	0	0	NR	0
RCRA Sm Quan Gen		0 750	0	0	1	2	NR	3
ERNS		0 500	0	0	0	NR	NR	0
HMIRS		0 500	0	0	0	NR	NR	0
US ENG CONTROLS		1 000	0	0	0	0	NR	0
US INST CONTROL		1 000	0	0	0	0	NR	0
DOD		1 500	0	0	0	0	0	0
FUDS		1 500	0	0	0	0	0	0
US BROWNFIELDS		1 000	0	0	0	0	NR	0
CONSENT		1 500	0	0	0	0	0	0
ROD		1 500	0	0	0	0	0	0
UMTRA		1 000	0	0	0	0	NR	0
ODI		1 000	0	0	0	0	NR	0
TRIS		0 500	0	0	0	NR	NR	0
TSCA		0 500	0	0	0	NR	NR	0
FTTS		0 500	0	0	0	NR	NR	0
SSTS		0 500	0	0	0	NR	NR	0
PADS		0 500	0	0	0	NR	NR	0
MLTS		0 500	0	0	0	NR	NR	0
MINES		0 750	0	0	0	0	NR	0
FINDS		0 500	0	0	0	NR	NR	0
RAATS		0 500	0	0	0	NR	NR	0
STATE AND LOCAL RECORDS								
AWP		1 500	0	0	0	0	0	0
Cal-Sites		1 500	0	0	0	0	0	0
CA Bond Exp Plan		1 500	0	0	0	0	0	0
NFA		0 750	0	0	0	0	NR	0
NFE		0 750	0	0	0	0	NR	0
REF		0 750	0	0	0	0	NR	0
SCH		0 750	0	0	0	0	NR	0
Toxic Pits		1 500	0	0	0	0	0	0
State Landfill		1 000	0	0	0	0	NR	0
CA WDS		0 500	0	0	0	NR	NR	0
WMUDS/SWAT		1 000	0	0	0	0	NR	0
Cortese		1 000	0	0	0	3	NR	3
SWRCY		1 000	0	0	0	0	NR	0
LUST		1 000	0	0	0	1	NR	1
CA FID UST		0 750	0	0	2	3	NR	5

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC		1 000	0	0	0	0	NR	0
UST		0 750	0	0	0	0	NR	0
HIST UST		0 750	0	0	0	10	NR	10
AST		0 750	0	0	0	0	NR	0
SWEEPS UST		0 750	0	0	2	3	NR	5
CHMIRS		0 500	0	0	0	NR	NR	0
Notify 65		1 500	0	0	0	1	0	1
DEED		1 000	0	0	0	0	NR	0
VCP		1 000	0	0	0	0	NR	0
DRYCLEANERS		0 750	0	0	0	1	NR	1
WIP		0 750	0	0	0	0	NR	0
HAZNET		0 500	0	0	5	NR	NR	5
EMI		0 500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1 500	0	0	0	0	0	0
INDIAN LUST		1 000	0	0	0	0	NR	0
INDIAN UST		0 750	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1 500	0	0	0	0	0	0
EDR Auto Stations		0 750	0	0	0	0	NR	0
EDR Cleaners		0 750	0	0	0	0	NR	0

NOTES

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID / Direction / Distance / Distance (ft) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
1 / NNE / 1/4-1/2 / 1552 ft	**TAMURA BROS** / **1220 E HARNEY LANE** / **LODI, CA 95240**	**CA FID UST** / **SWEEPS UST**	**S101625739** / **N/A**

Relative Equal

Actual 47 ft

FID

Facility ID	39004094	Regulate ID	Not reported
Reg By	Inactive Underground Storage Tank Location		
Cortese Code	Not reported	SIC Code	Not reported
Status	Inactive	Facility Tel	(209) 369-7920
Mail To	Not reported 1220 E HARNEY LANE LODI, CA 95240		
Contact	Not reported	Contact Tel	Not reported
DUNs No	Not reported	NPDES No	Not reported
Creation	10/22/93	Modified	00/00/00
EPA ID	Not reported		
Comments	Not reported		

SWEEPS

Status	Not reported
Comp Number	4363
Number	Not reported
Board Of Equalization	Not reported
Ref Date	Not reported
Act Date	Not reported
Created Date	Not reported
Tank Status	Not reported
Owner Tank Id	Not reported
Swrcb Tank Id	39-000-004363-000001
Actv Date	Not reported
Capacity	550
Tank Use	M V FUEL
Stg	PRODUCT
Content	REG UNLEADED
Number Of Tanks	1

A2 / NNW / 1/4-1/2 / 1977 ft	**CAMPBELL GRINDING** / **2501 S STOCKTON ST** / **LODI, CA 95240**	**HAZNET**	**S103954691** / **N/A**

Site 1 of 4 in cluster A

Relative Equal

Actual 47 ft

HAZNET

Gepaid	CAL000111929
TSD EPA ID	CAL000161743
Gen County	San Joaquin
Tsd County	Santa Clara
Tons	0 688
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	CAMPBELL GRINDING
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	1003 E VINE ST LODI, CA 95240 - 8818
County	San Joaquin

CAMPBELL GRINDING (Continued) **S103954691**

Gepaid	CAL000111929
TSD EPA ID	CAT080012602
Gen County	San Joaquin
Tsd County	Solano
Tons	0 9174
Facility Address 2	Not reported
Waste Category	
Disposal Method	Transfer Station
Contact	CAMPBELL GRINDING
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	1003 E VINE ST LODI, CA 95240 - 8818
County	San Joaquin

Gepaid	CAL000111929
TSD EPA ID	CAD982446890
Gen County	San Joaquin
Tsd County	San Joaquin
Tons	3753
Facility Address 2	Not reported
Waste Category	Waste oil and mixed oil
Disposal Method	Transfer Station
Contact	CAMPBELL GRINDING
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	1003 E VINE ST LODI, CA 95240 - 8818
County	San Joaquin

Gepaid	CAC001489576
TSD EPA ID	CAT080012602
Gen County	San Joaquin
Tsd County	Solano
Tons	5 2125
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	DAN FRITZ
Telephone	(209) 339-8838
Mailing Name	Not reported
Mailing Address	1003 E VINE ST LODI, CA 95240
County	San Joaquin

Gepaid	CAC002299553
TSD EPA ID	CAL000161741
Gen County	San Joaquin
Tsd County	1
Tons	4 6495
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	CAMPBELL GRINDING INC
Telephone	(209) 339-8838
Mailing Name	Not reported
Mailing Address	1003 E VINE ST LODI, CA 95240

CAMPBELL GRINDING (Continued) **S103954691**

County San Joaquin

A3
NNW
1/4-1/2
1977 ft

Relative
Equal

Actual
47 ft

ALTAMONT MACHINE CO **HAZNET** **S105088308**
2501 S STOCKTON STREET UNIT B **N/A**
LODI, CA 95240

Site 2 of 4 in cluster A

HAZNET

Gepaid	CAC002328601
TSD EPA ID	CAL000161741
Gen County	San Joaquin
Tsd County	1
Tons	4587
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	ALTAMONT MACHINE CO
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	2501 S STOCKTON STREET UNIT B LODI, CA 95240
County	San Joaquin

A4
NNW
1/4-1/2
1985 ft

Relative
Equal

Actual
47 ft

PETE'S WORKSHOP **HAZNET** **S103981604**
2499 S STOCKTON **N/A**
LODI, CA 95240

Site 3 of 4 in cluster A

HAZNET

Gepaid	CAL000196581
TSD EPA ID	CAT080012602
Gen County	San Joaquin
Tsd County	Solano
Tons	6463
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	PETE WICK
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON LODI, CA 95240
County	San Joaquin

Gepaid	CAL000196581
TSD EPA ID	CAL000161743
Gen County	San Joaquin
Tsd County	Santa Clara
Tons	0 688
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	PETE WICK
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON LODI, CA 95240

PETE'S WORKSHOP (Continued) **S103981604**

County	San Joaquin
Gepaid	CAL000196581
TSD EPA ID	CAT080012602
Gen County	San Joaquin
Tsd County	Solano
Tons	0 6463
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Not reported
Contact	PETE WICK
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON LODI, CA 95240
County	San Joaquin
Gepaid	CAL000196581
TSD EPA ID	CAT080012602
Gen County	San Joaquin
Tsd County	Solano
Tons	1 4803
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	PETE WICK
Telephone	(000) 000-0000
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON LODI, CA 95240
County	San Joaquin

A5 **QUALFAB MACHINING** **HAZNET** **S106092112**
NNW **2499 S STOCKTON ST #3** **N/A**
1/4-1/2 **LODI, CA 95240**
1985 ft

Site 4 of 4 in cluster A

Relative
Equal

Actual
47 ft

HAZNET

Gepaid	CAL000222200
TSD EPA ID	Not reported
Gen County	San Joaquin
Tsd County	Yolo
Tons	0 56
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	GEORGE ATHANASIOU-OWNER
Telephone	(209) 365-0985
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON ST #3 LODI, CA 95240
County	Not reported

QUALFAB MACHINING (Continued) **S106092112**

Gepaid	CAL000222200
TSD EPA ID	Not reported
Gen County	San Joaquin
Tsd County	Alameda
Tons	0 29
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Recycler
Contact	GEORGE ATHANASIOU-OWNER
Telephone	(209) 365-0985
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON ST #3 LODI, CA 95240
County	Not reported

Gepaid	CAL000222200
TSD EPA ID	CAD044003556
Gen County	San Joaquin
Tsd County	San Joaquin
Tons	0 6
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	GEORGE ATHANASIOU-OWNER
Telephone	(209) 365-0985
Mailing Name	Not reported
Mailing Address	2499 S STOCKTON ST #3 LODI, CA 95240
County	San Joaquin

---

6 **PETE'S WORKSHOP** **HAZNET** **S107149255**
NW **2506 MAGGIO CIR** **N/A**
1/4-1/2 **LODI, CA 95240**
2399 ft

Relative Equal

Actual 47 ft

HAZNET

Gepaid	CAL000272990
TSD EPA ID	CAD044003556
Gen County	San Joaquin
Tsd County	San Joaquin
Tons	3 33
Facility Address 2	Not reported
Waste Category	Unspecified oil-containing waste
Disposal Method	Transfer Station
Contact	PETE WICK
Telephone	(209) 368-9678
Mailing Name	Not reported
Mailing Address	PO BOX 967 WOODBRIDGE, CA 95258
County	San Joaquin

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
7 NNW 1/4-1/2 2444 ft	**HOME DEPOT USA INC HD FL0051 2411 STOCKTON ST LODI, CA 95240**	**RCRA-SQG**	**1008879773 CAR000166124**

Relative Equal

Actual 47 ft

RCRAInfo

Owner	HOME DEPOT USA
EPA ID	CAR000166124
Contact	ROBERT PERKINS 760-602-8700
Classification	Small Quantity Generator
TSDF Activities	Not reported
Violation Status	No violations found

---

8 NNE 1/4-1/2 2446 ft	**ROBERT EDGAR RICHARDS 13661 N CHEROKEE LN LODI, CA 95240**	**CA FID UST SWEEPS UST**	**S101593345 N/A**

Relative Higher

Actual 50 ft

FID

Facility ID	39003761	Regulate ID	Not reported
Reg By	Inactive Underground Storage Tank Location		
Cortese Code	Not reported	SIC Code	Not reported
Status	Inactive	Facility Tel	(209) 369-4997
Mail To	Not reported 13737 N CHEROKEE LODI, CA 95240		
Contact	Not reported	Contact Tel	Not reported
DUNs No	Not reported	NPDES No	Not reported
Creation	10/22/93	Modified	00/00/00
EPA ID	Not reported		
Comments	Not reported		

SWEEPS

Status	Not reported
Comp Number	2434
Number	Not reported
Board Of Equalization	Not reported
Ref Date	Not reported
Act Date	Not reported
Created Date	Not reported
Tank Status	Not reported
Owner Tank Id	Not reported
Swrcb Tank Id	39-000-002434-000001
Actv Date	Not reported
Capacity	500
Tank Use	M V FUEL
Stg	PRODUCT
Content	LEADED
Number Of Tanks	1

B9 ENE 1/2-1 2763 ft — **DON MILLER, 4071 E HARNEY LN, LODI, CA 95240** — **HIST UST** — **U001604278, N/A**

Site 1 of 3 in cluster B

Relative Higher

Actual 51 ft

UST HIST

Facility ID	39126	Owner Name	DON W MILLER
Total Tanks	2	Region	STATE
Owner Address	4071 E HARNEY LN LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00000500	Year Installed	1965
Type of Fuel	UNLEADED	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	WILLIAM S ROBERTS	Telephone	(209) 368-3807
Facility Type	Other	Other Type	FARM

Facility ID	39126	Owner Name	DON W MILLER
Total Tanks	2	Region	STATE
Owner Address	4071 E HARNEY LN LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	2	Container Num	2
Tank Capacity	00000500	Year Installed	1982
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	WILLIAM S ROBERTS	Telephone	(209) 368-3807
Facility Type	Other	Other Type	FARM

B10 ENE 1/2-1 2763 ft — **MILLER FARMS, 4071 E HARNEY LANE, LODI, CA 95240** — **CA FID UST, SWEEPS UST** — **S101593415, N/A**

Site 2 of 3 in cluster B

Relative Higher

Actual 51 ft

FID

Facility ID	39004011	Regulate ID	Not reported
Reg By	Inactive Underground Storage Tank Location		
Cortese Code	Not reported	SIC Code	Not reported
Status	Inactive	Facility Tel	(209) 368-3807
Mail To	Not reported 4071 E HARNEY LANE LODI, CA 95240		
Contact	Not reported	Contact Tel	Not reported
DUNs No	Not reported	NPDES No	Not reported
Creation	10/22/93	Modified	00/00/00
EPA ID	Not reported		
Comments	Not reported		

SWEEPS

Status	Not reported
Comp Number	4265
Number	Not reported
Board Of Equalization	Not reported
Ref Date	Not reported
Act Date	Not reported
Created Date	Not reported
Tank Status	Not reported
Owner Tank Id	Not reported

MILLER FARMS (Continued) **S101593415**

Swrcb Tank Id	39-000-004265-000001
Actv Date	Not reported
Capacity	550
Tank Use	M V FUEL
Stg	PRODUCT
Content	LEADED
Number Of Tanks	2
Status	Not reported
Comp Number	4265
Number	Not reported
Board Of Equalization	Not reported
Ref Date	Not reported
Act Date	Not reported
Created Date	Not reported
Tank Status	Not reported
Owner Tank Id	Not reported
Swrcb Tank Id	39-000-004265-000002
Actv Date	Not reported
Capacity	550
Tank Use	M V FUEL
Stg	PRODUCT
Content	LEADED
Number Of Tanks	Not reported

B11
ENE
1/2-1
2914 ft

Relative
Higher

Actual
48 ft

ERMA BRADLEY **HIST UST** **U001604304**
4044 E HARNEY LN **N/A**
LODI, CA 95240

Site 3 of 3 in cluster B

UST HIST

Facility ID	54251	Owner Name	ERMA BRADLEY
Total Tanks	1	Region	STATE
Owner Address	4044 E HARVEY LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00000400	Year Installed	1974
Type of Fuel	REGULAR	Tank Construction	1/4 inches
Leak Detection	Stock Inventor		
Contact Name	Not reported	Telephone	(209) 369-8184
Facility Type	Other	Other Type	Not reported

12
NNW
1/2-1
2995 ft

Relative
Equal

Actual
47 ft

HOME DEPOT USA INC HD FL0046 **RCRA-SQG** **1008879772**
2303 STOCKTON ST **CAR000166116**
LODI, CA 95240

HOME DEPOT USA INC HD FL0046 (Continued) **1008879772**

RCRAInfo

Owner	HOME DEPOT USA
EPA ID	CAR000166116
Contact	ROBERT PERKINS 760-602-8700
Classification	Small Quantity Generator
TSDF Activities	Not reported
Violation Status	No violations found

C13 ENE 1/2-1 3146 ft — **LEONA REIMCHE, 4219 E HARNEY LN, LODI, CA 95240** — **HIST UST** — **U001604418, N/A**

Relative Higher — **Actual 49 ft**

Site 1 of 2 in cluster C

UST HIST

Facility ID	43958	Owner Name	LEONA REIMCHE
Total Tanks	1	Region	STATE
Owner Address	4219 E HARNEY LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00000550	Year Installed	Not reported
Type of Fuel	UNLEADED	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	LEONA REIMCHE	Telephone	(209) 369-7812
Facility Type	Other	Other Type	FARM

C14 ENE 1/2-1 3146 ft — **LEONA REIMCHE, 4219 E HARNEY LANE, LODI, CA 95240** — **CA FID UST, SWEEPS UST** — **S101625706, N/A**

Relative Higher — **Actual 49 ft**

Site 2 of 2 in cluster C

FID

Facility ID	39004010	Regulate ID	Not reported
Reg By	Inactive Underground Storage Tank Location		
Cortese Code	Not reported	SIC Code	Not reported
Status	Inactive	Facility Tel	(209) 369-7812
Mail To	Not reported 4219 E HARNEY LANE LODI, CA 95240		
Contact	Not reported	Contact Tel	Not reported
DUNs No	Not reported	NPDES No	Not reported
Creation	10/22/93	Modified	00/00/00
EPA ID	Not reported		
Comments	Not reported		

SWEEPS

Status	Not reported
Comp Number	4264
Number	Not reported
Board Of Equalization	Not reported
Ref Date	Not reported
Act Date	Not reported
Created Date	Not reported

LEONA REIMCHE (Continued) **S101625706**

Tank Status	Not reported
Owner Tank Id	Not reported
Swrcb Tank Id	39-000-004264-000001
Actv Date	Not reported
Capacity	500
Tank Use	M V FUEL
Stg	PRODUCT
Content	LEADED
Number Of Tanks	1

---

15 NNW 1/2-1 3325 ft **MRS ED THOMPSON** **HIST UST** **U001604459**
2250 S STOCKTON ST **N/A**
LODI, CA 95240

Relative Equal
Actual 47 ft

UST HIST

Facility ID	18614	Owner Name	MRS ED THOMPSON
Total Tanks	1	Region	STATE
Owner Address	2250 SOUTH STOCKTON LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00000300	Year Installed	Not reported
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	Not reported	Telephone	(209) 369-6865
Facility Type	Other	Other Type	FARM

---

16 West 1/2-1 3344 ft **FELIX J COSTA** **HIST UST** **U001604313**
13160 N WEST LN **N/A**
LODI, CA 95240

Relative Lower
Actual 42 ft

UST HIST

Facility ID	43212	Owner Name	FELIX J COSTA
Total Tanks	1	Region	STATE
Owner Address	13160 N WEST LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00000500	Year Installed	1960
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	Visual		
Contact Name	Not reported	Telephone	(209) 368-3670
Facility Type	Other	Other Type	FARM

---

17 SSE 1/2-1 3545 ft **BLODGETT RANCH** **HIST UST** **U001604237**
13050 N HIGHWAY 99 **N/A**
LODI, CA 95240

Relative Lower
Actual 45 ft

UST HIST

Facility ID	11511	Owner Name	JOHN MILLARD BLODGETT JR
Total Tanks	1	Region	STATE
Owner Address	2510 SUMMIT DRIVE ESCONDIDO, CA 92025		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1

BLODGETT RANCH (Continued) — **U001604237**

Tank Capacity	00000550	Year Installed	1970
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	Visual		
Contact Name	JOHN M BLODGETT JR	Telephone	(619) 489-5167
Facility Type	Other	Other Type	FARMER

---

18 NNE 1/2-1 3747 ft — **ARCO #760**, **2251 CHEROKEE**, **LODI, CA 95240** — **Cortese** — **S105024503**, **N/A**

Relative Higher

Actual 52 ft

CORTESE

Region	CORTESE
Fac Address 2	Not reported

D19 WNW 1/2-1 3756 ft — **STAR MARKET #2**, **2525 S HUTCHINS ST**, **LODI, CA 95240** — **HIST UST** — **U001604519**, **N/A**

Site 1 of 3 in cluster D

Relative Lower

Actual 42 ft

UST HIST

Facility ID	44597	Owner Name	C R STAR INC
Total Tanks	3	Region	STATE
Owner Address	2525 SO HUTCHINS LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	01
Tank Capacity	00010000	Year Installed	1984
Type of Fuel	UNLEADED	Tank Construction	1/4 inches
Leak Detection	Stock Inventor		
Contact Name	BILL STEWART	Telephone	(209) 368-0608
Facility Type	Other	Other Type	CONVENIENCE STORE

Facility ID	44597	Owner Name	C R STAR INC
Total Tanks	3	Region	STATE
Owner Address	2525 SO HUTCHINS LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	2	Container Num	02
Tank Capacity	00010000	Year Installed	Not reported
Type of Fuel	REGULAR	Tank Construction	1/4 inches
Leak Detection	Stock Inventor		
Contact Name	BILL STEWART	Telephone	(209) 368-0608
Facility Type	Other	Other Type	CONVENIENCE STORE

Facility ID	44597	Owner Name	C R STAR INC
Total Tanks	3	Region	STATE
Owner Address	2525 SO HUTCHINS LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	3	Container Num	03
Tank Capacity	00010000	Year Installed	1984
Type of Fuel	PREMIUM	Tank Construction	1/4 inches
Leak Detection	Stock Inventor		

STAR MARKET #2 (Continued) **U001604519**

Contact Name	BILL STEWART	Telephone	(209) 368-0608
Facility Type	Other	Other Type	CONVENIENCE STORE

D20 WNW 1/2-1 3756 ft **STAR MARKET #2** **2525 S HUTCHINS** **LODI, CA 95240** **CA FID UST** **S101625737** **SWEEPS UST** **N/A**

Site 2 of 3 in cluster D

Relative Lower

Actual 4.2 ft

FID

Facility ID	39001646	Regulate ID	Not reported
Reg By	Active Underground Storage Tank Location		
Cortese Code	Not reported	SIC Code	Not reported
Status	Active	Facility Tel	(209) 368-0608
Mail To	Not reported 2525 S HUTCHINS LODI, CA 95240		
Contact	Not reported	Contact Tel	Not reported
DUNs No	Not reported	NPDES No	Not reported
Creation	10/22/93	Modified	00/00/00
EPA ID	Not reported		
Comments	Not reported		

SWEEPS

Status	A
Comp Number	1337
Number	9
Board Of Equalization	44-024654
Ref Date	10-07-91
Act Date	10-07-91
Created Date	06-21-88
Tank Status	A
Owner Tank Id	01
Swrcb Tank Id	39-000-001337-000001
Actv Date	09-07-88
Capacity	10000
Tank Use	M V FUEL
Stg	P
Content	REG UNLEADED
Number Of Tanks	3

Status	A
Comp Number	1337
Number	9
Board Of Equalization	44-024654
Ref Date	10-07-91
Act Date	10-07-91
Created Date	06-21-88
Tank Status	A
Owner Tank Id	Not reported
Swrcb Tank Id	39-000-001337-000002
Actv Date	09-07-88
Capacity	10000
Tank Use	M V FUEL
Stg	P
Content	LEADED
Number Of Tanks	Not reported

Status	A

STAR MARKET #2 (Continued) **S101625737**

Comp Number	1337
Number	9
Board Of Equalization	44-024654
Ref Date	10-07-91
Act Date	10-07-91
Created Date	06-21-88
Tank Status	A
Owner Tank Id	03
Swrcb Tank Id	39-000-001337-000003
Actv Date	09-07-88
Capacity	10000
Tank Use	M V FUEL
Stg	P
Content	LEADED
Number Of Tanks	Not reported

D21
WNW
1/2-1
3756 ft

Relative
Lower

Actual
42 ft

TOKAY CLEANERS **RCRA-SQG** **1000160846**
2525 S HUTCHINS **FINDS** **CAD981964240**
LODI, CA 95240 **CLEANERS**

Site 3 of 3 in cluster D

RCRAInfo

Owner	JERRY DYONS
	(415) 555-1212
EPA ID	CAD981964240
Contact	Not reported
Classification	Small Quantity Generator
TSDF Activities	Not reported
Violation Status	Violations exist

Regulation Violated	Not reported
Area of Violation	GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined	08/19/1988
Actual Date Achieved Compliance	09/14/1988

There are 1 violation record(s) reported at this site

Evaluation	Area of Violation	Date of Compliance
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	19880914

FINDS

Other Pertinent Environmental Activity Identified at Site
NATIONAL EMISSIONS INVENTORY
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

CA Cleaners

Inactive Date	6/30/1997
EPA Id	CAD981964240
Facility Address 2	Not reported
NAICS Code	Not reported
Facility Active	No
Mail Name	Not reported
Mailing Address	2525 S HUTCHINS ST
	LODI, CA 95240
Owner Name	MARITZA LIMA
Mailing Address	--
	--, 99 --

TOKAY CLEANERS (Continued) **1000160846**

Owner Telephone	0000000000
Contact Name	MARITZA LIMS
Mailing Address	INACTIVE PER VQ97 NK --, 99 --
Contact Telephone	2093699444
Region Code	1
Create Date	07/03/1987
SIC Description	Not reported
NAICS Description	Not reported
Inactive Date	6/30/1998
EPA Id	CAL000095470
Facility Address 2	Not reported
NAICS Code	Not reported
Facility Active	No
Mail Name	Not reported
Mailing Address	2525 S HUTCHINS ST STE 9A LODI, CA 95240
Owner Name	TOKAY CLEANERS
Mailing Address	2525 S HUTCHINS ST STE 9A LODI, CA 95240
Owner Telephone	0000000000
Contact Name	M LIMA
Mailing Address	INACT PER NONDELIVERABLE VQ98 NK LODI, CA 95240
Contact Telephone	--
Region Code	1
Create Date	07/14/1993
SIC Description	Not reported
NAICS Description	Not reported

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22 ENE 1/2-1 3804 ft **CHEROKEE MEMORIAL PARK, INC**
HIGHWAY 99 AT HARNEY LANE
LODI, CA 95240

HIST UST **U001604260**
N/A

Relative Higher

Actual 51 ft

UST HIST

Facility ID	65254	Owner Name	CHEROKEE MEMORIAL PARK, INC
Total Tanks	4	Region	STATE
Owner Address	HIGHWAY 99 AT HARNEY LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00001000	Year Installed	1980
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	J CHARLES IRWIN	Telephone	(209) 334-9613
Facility Type	Other	Other Type	MEMORIAL PARK
Facility ID	65254	Owner Name	CHEROKEE MEMORIAL PARK, INC
Total Tanks	4	Region	STATE
Owner Address	HIGHWAY 99 AT HARNEY LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	2	Container Num	2
Tank Capacity	00000000	Year Installed	Not reported
Type of Fuel	DIESEL	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	J CHARLES IRWIN	Telephone	(209) 334-9613

CHEROKEE MEMORIAL PARK, INC (Continued) **U001604260**

Facility Type	Other	Other Type	MEMORIAL PARK
Facility ID	65254	Owner Name	CHEROKEE MEMORIAL PARK, INC
Total Tanks	4	Region	STATE
Owner Address	HIGHWAY 99 AT HARNEY LANE LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	3	Container Num	3
Tank Capacity	00000000	Year Installed	Not reported
Type of Fuel	UNLEADED	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	J CHARLES IRWIN	Telephone	(209) 334-9613
Facility Type	Other	Other Type	MEMORIAL PARK
Facility ID	65254	Owner Name	CHEROKEE MEMORIAL PARK, INC
Total Tanks	4	Region	STATE
Owner Address	HIGHWAY 99 AT HARNEY LANE LODI, CA 95240		
Tank Used for	WASTE		
Tank Num	4	Container Num	4
Tank Capacity	00000000	Year Installed	Not reported
Type of Fuel	Not reported	Tank Construction	Not Reported
Leak Detection	None		
Contact Name	J CHARLES IRWIN	Telephone	(209) 334-9613
Facility Type	Other	Other Type	MEMORIAL PARK

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23 WSW 1/2-1 3829 ft **FRY RANCH #40**
12609 N WEST LN
LODI, CA 95240

HIST UST **U001604324**
N/A

Relative Lower

Actual 41 ft

UST HIST

Facility ID	37338	Owner Name	MOHR FRY RANCH
Total Tanks	2	Region	STATE
Owner Address	12609 N WEST LN LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	2829
Tank Capacity	00000300	Year Installed	Not reported
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	Visual		
Contact Name	JERYL FRY, JR	Telephone	(209) 334-3808
Facility Type	Other	Other Type	RANCH FUEL
Facility ID	37338	Owner Name	MOHR FRY RANCH
Total Tanks	2	Region	STATE
Owner Address	12609 N WEST LN LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	2	Container Num	2830
Tank Capacity	00001000	Year Installed	Not reported
Type of Fuel	REGULAR	Tank Construction	Not Reported
Leak Detection	Visual		
Contact Name	JERYL FRY, JR	Telephone	(209) 334-3808
Facility Type	Other	Other Type	RANCH FUEL

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
24 South 1/2-1 3928 ft	**JOHN KISZLER 3861 E ARMSTRONG RD LODI, CA 95240**	**HIST UST**	**U001604387 N/A**

Relative Lower

Actual 42 ft

UST HIST

Facility ID	37629	Owner Name	JOHN KISZLER
Total Tanks	2	Region	STATE
Owner Address	3861 E ARMSTRONG RD LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	1	Container Num	1
Tank Capacity	00001000	Year Installed	1977
Type of Fuel	REGULAR	Tank Construction	10 gauge
Leak Detection	Stock Inventor		
Contact Name	Not reported	Telephone	(209) 334-3189
Facility Type	Other	Other Type	FARM

Facility ID	37629	Owner Name	JOHN KISZLER
Total Tanks	2	Region	STATE
Owner Address	3861 E ARMSTRONG RD LODI, CA 95240		
Tank Used for	PRODUCT		
Tank Num	2	Container Num	2
Tank Capacity	00000300	Year Installed	Not reported
Type of Fuel	DIESEL	Tank Construction	10 gauge
Leak Detection	Stock Inventor		
Contact Name	Not reported	Telephone	(209) 334-3189
Facility Type	Other	Other Type	FARM

25 ESE 1/2-1 3943 ft	**NONE 5154 HOGAN LODI, CA 93420**	**Notify 65 LUST Cortese**	**S100179199 N/A**

Relative Higher

Actual 49 ft

State LUST

Cross Street	HWY 99		
Qty Leaked	Not reported		
Case Number	Not reported		
Reg Board	Not reported		
Chemical	Lead		
Lead Agency	Local Agency		
Local Agency	39000L		
Case Type	Soil only		
Status	**Case Closed**		
Review Date	1988-12-07 00 00 00	Confirm Leak	1988-12-07 00 00 00
Workplan	Not reported	Prelim Assess	Not reported
Pollution Char	Not reported	Remed Plan	Not reported
Remed Action	Not reported		
Monitoring	Not reported		
Close Date	1998-12-21 00 00 00		
Release Date	Not reported		
Cleanup Fund Id	Not reported		
Discover Date	Not reported		
Enforcement Dt	1965-01-01 00 00 00		
Enf Type	None Taken		
Enter Date	Not reported		
Funding	Not reported		
Staff Initials	ML		
How Discovered	Tank Closure		
How Stopped	Not reported		

NONE (Continued) **S100179199**

Interim	Not reported
Leak Cause	Not reported
Leak Source	Not reported
MTBE Date	Not reported
Max MTBE GW	Not reported
MTBE Tested	Not Required to be Tested
Priority	Medium priority
Local Case #	4215
Beneficial	Not reported
Staff	JLB
GW Qualifier	Not reported
Max MTBE Soil	Not reported
Soil Qualifier	Not reported
Hydr Basin #	SAN JOAQUIN VALLEY (
Operator	Not reported
Oversight Prgm	LUST
Review Date	1998-12-21 00 00 00
Stop Date	Not reported
Work Suspended	No
Responsible Party	BURKHARDT, WILLIAM
RP Address	5154 HOGAN LANE, LODI, CA 95240
Global Id	T0607700307
Org Name	Not reported
Contact Person	Not reported
MTBE Conc	0
Mtbe Fuel	0
Water System Name	Not reported
Well Name	Not reported
Distance To Lust	0
Waste Discharge Global ID	Not reported
Waste Disch Assigned Name	Not reported
Summary	CLOSED PER RB CONCURRENCE LETTER DATED 12/21/98 MRL

LUST Region 5

Substance	Not reported		
Case Type	Soil only		
Program	LUST		
Staff Initials	JLB	Case Number	390398
Status	Case Closed		
MTBE Code	N/A		
Lead Agency	Local		

NOTIFY 65

Date Reported	Not reported	Staff Initials	Not reported
Board File Number	Not reported		
Facility Type	Not reported		
Discharge Date	Not reported		
Incident Description	93420		

CORTESE

Region	CORTESE
Fac Address 2	5154 HOGAN LN

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
26 NNE 1/2-1 4333 ft	**HANSEN PROPERTY 2001 CHEROKEE LODI, CA 95240**	**Cortese**	**S105024502 N/A**

Relative Higher

CORTESE
Region: CORTESE
Fac Address 2: Not reported

Actual 52 ft

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LODI	S104164855	CHARLEY JACOBS	13889 HWY 12 W	95240	LUST, Cortese
LODI	S105084006	P G & E/TERMINOUS SUBSTATION	8735 HWY 12	95240	HAZNET
LODI	S107141306	EARTH GRAIN INC	HWY 12 / HWY 99	95240	HAZNET
LODI	U003879543	HARRIS RANCH	17112 HWY 88	95240	UST
LODI	S104735713	VICTOR MEATS	18846 HWY 99 N	95240	LUST
LODI	S105083741	WOODBRIDGE PARTNERS INC	18846 HWY 99	95240	HAZNET
LODI	U003786367	VICTOR FINE FOODS	18846 HWY 99	95240	UST, CA WDS
LODI	S101625675	CASTELANELLI BROS	401 ARMSTRONG ROAD	95240	CA FID UST, SWEEPS UST
LODI	S103960726	DIESTRE TURKEY RANCH	6425 BANNER RD	95240	HAZNET
LODI	S101593486	CHEROKEE MEMORIAL PARK INC	2255 S BECKMAN RD	95240	CA FID UST, SWEEPS UST
LODI	S106104369	CERTAINTEED CORP	300 SO BECKMAN RD	95240	CA WDS
LODI	S106841384	TRIANGLE PACIFIC CORP	300 S BECKMAN ROAD	95240	EMI
LODI	S107146075	R E SERVICE COMPANY INC	500 S BECKMAN ROAD	95240	HAZNET
LODI	S105628945	RICHARDS RANCH ELEMENTARY SCHOOL	BLUE JAY WAY/CULBERTSON	95240	SCH
LODI	S101593200	CITY OF LODI WELL #16	W CENTURY BLVD	95240	CA FID UST, SWEEPS UST
LODI	S103645979	RICHARDS RANCH, LTD	2485 S CHEROKEE	95240	HAZNET
LODI	S107140691	LUSD - LINCOLN SCHOOL	53 CHEROKEE LN	95240	HAZNET
LODI	U001604396	KEIZO OKUHARA	13977 N CHEROKEE LANE	95240	HIST UST
LODI	1003878922	PG&E GAS PLANT LODI	SE COR S SACTO & SPRUCE STS	95240	CERC-NFRAP
LODI	U001604554	WELL 16	WEST END OF CENTURY BLVD	95240	HIST UST
LODI	S106230433	UNION PACIFIC RAILROAD COMPANY **	HARNEY LN, 1/2 MILE TO THE NOR		SLIC
LODI	S105638323		HARNEY LANE AND BECKMAN RD EAS		CHMIRS, SLIC
LODI	1004439617	CENTRAL VALLEY CHEM CO	6161 E HIGHWAY 12	95240	SSTS
LODI	S106203442	VAN RUITEN TAYLOR WINERY	340 W HIGHWAY 12		CA WDS
LODI	S107142385	HNL HOLDINGS	1720 S HUTCHINS #89 / 90	95240	HAZNET
LODI	1006248906	PLASTAKET MFG CO , INC	6220 E HWY 12	95240	EMI
LODI	1007569163	PLASTAKET MGF CO INC	6220 E HWY 12	95240	RCRA-SQG
LODI	S101625746	W GALEN JOHNSON	11205 N HWY 99	95240	CA FID UST, SWEEPS UST
LODI	S103669804	WESTERN CYLINDER HEAD REPAIR	7047 E HWY 12	95240	HAZNET
LODI	S103958740	COUNTRYSIDE MINI MART	14971 N HWY 88	95240	HAZNET
LODI	S103978160	MOHAMMED MALIK	6550 EAST HWY 12	95240	HAZNET
LODI	S103985366	RONALD SILACK	10910 N HWY 99 SPACE C91	95240	HAZNET
LODI	S105035363	T&T TRUCKING INC	11396 NORTH HWY 99	95240	HAZNET
LODI	S105035676	ELLSWORTH BECKMAN	7868 E HWY 12	95240	HAZNET
LODI	S107143554	HUNTER HARIS	17112 N HWY 88	95240	HAZNET
LODI	S106103597	TOWER PARK MARINA/VILLAGE WWTF	149 W HWY 12 BOX A 6		CA WDS
LODI	A100225992	FRANK C ALEGRE TRUCKING INC	5100 W HWY 12	95242	AST
LODI	S106486873	VICTOR FINE FOODS	18846 N HWY 99 FRONTAGE RD		SLIC
LODI	1000250927	PACIFIC BELL	KENNISON ROAD & HIGHWAY 88	95240	RCRA-SQG, FINDS
LODI	S104576275	QUIK STOP MARKETS INC MKT #148	205 WEST LOCKFORD	95240	HAZNET
LODI	S102808887	SAN JOAQUIN PUBLIC WORKS DEPARTMME	LODI SALAS PARK	95240	HAZNET
SAN JOAQUIN COUNTY	S105637094		WHISKEY SLOUGH ROAD 1/8 MILE N		CHMIRS, SLIC
VICTOR	S106929569	MOKELUMNE RURAL FIRE DEPT	8910 E HWY 26	95240	SWEEPS UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required

Number of Days to Update Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public

FEDERAL RECORDS

NPL National Priority List

National Priorities List (Superfund) The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program NPL sites may encompass relatively large areas As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices

Date of Government Version 10/14/05	Source EPA
Date Data Arrived at EDR 11/02/05	Telephone N/A
Date Made Active in Reports 12/07/05	Last EDR Contact 01/31/06
Number of Days to Update 35	Next Scheduled EDR Contact 05/01/06
	Data Release Frequency Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone 202-564-7333

EPA Region 1 Telephone 617-918-1143	EPA Region 6 Telephone 214-655-6659
EPA Region 3 Telephone 215-814-5418	EPA Region 8 Telephone 303-312-6774
EPA Region 4 Telephone 404-562-8033	

Proposed NPL Proposed National Priority List Sites

Date of Government Version 10/14/05	Source EPA
Date Data Arrived at EDR 11/02/05	Telephone N/A
Date Made Active in Reports 12/07/05	Last EDR Contact 01/31/06
Number of Days to Update 35	Next Scheduled EDR Contact 05/01/06
	Data Release Frequency Quarterly

DELISTED NPL National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL In accordance with 40 CFR 300 425 (e), sites may be deleted from the NPL where no further response is appropriate

Date of Government Version 10/14/05	Source EPA
Date Data Arrived at EDR 11/02/05	Telephone N/A
Date Made Active in Reports 12/07/05	Last EDR Contact 01/31/06
Number of Days to Update 35	Next Scheduled EDR Contact 05/01/06
	Data Release Frequency Quarterly

NPL LIENS Federal Superfund Liens

Federal Superfund Liens Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability USEPA compiles a listing of filed notices of Superfund Liens

Date of Government Version 10/15/91
Date Data Arrived at EDR 02/02/94
Date Made Active in Reports 03/30/94
Number of Days to Update 56

Source EPA
Telephone 202-564-4267
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency No Update Planned

CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL

Date of Government Version 10/24/05
Date Data Arrived at EDR 12/21/05
Date Made Active in Reports 01/30/06
Number of Days to Update 40

Source EPA
Telephone 703-413-0223
Last EDR Contact 12/21/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Quarterly

CERCLIS-NFRAP CERCLIS No Further Remedial Action Planned

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites

Date of Government Version 10/24/05
Date Data Arrived at EDR 12/21/05
Date Made Active in Reports 01/30/06
Number of Days to Update 40

Source EPA
Telephone 703-413-0223
Last EDR Contact 12/21/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Quarterly

CORRACTS Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity

Date of Government Version 10/13/05
Date Data Arrived at EDR 10/27/05
Date Made Active in Reports 12/07/05
Number of Days to Update 41

Source EPA
Telephone 800-424-9346
Last EDR Contact 12/06/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency Quarterly

RCRA Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste TSDFs treat, store, or dispose of the waste

Date of Government Version 12/15/05
Date Data Arrived at EDR 12/28/05
Date Made Active in Reports 01/30/06
Number of Days to Update 33

Source EPA
Telephone 800-424-9346
Last EDR Contact 12/28/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

ERNS Emergency Response Notification System

Emergency Response Notification System ERNS records and stores information on reported releases of oil and hazardous substances

Date of Government Version 12/31/04
Date Data Arrived at EDR 01/27/05
Date Made Active in Reports 03/24/05
Number of Days to Update 56

Source National Response Center, United States Coast Guard
Telephone 202-260-2342
Last EDR Contact 01/12/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Annually

HMIRS Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System HMIRS contains hazardous material spill incidents reported to DOT

Date of Government Version 08/17/05
Date Data Arrived at EDR 10/18/05
Date Made Active in Reports 12/07/05
Number of Days to Update 50

Source U S Department of Transportation
Telephone 202-366-4555
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency Annually

US ENG CONTROLS Engineering Controls Sites List

A listing of sites with engineering controls in place Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health

Date of Government Version 08/02/05
Date Data Arrived at EDR 08/12/05
Date Made Active in Reports 10/06/05
Number of Days to Update 55

Source Environmental Protection Agency
Telephone 703-603-8867
Last EDR Contact 02/10/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Varies

US INST CONTROL Sites with Institutional Controls

A listing of sites with institutional controls in place Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site Deed restrictions are generally required as part of the institutional controls

Date of Government Version 01/10/05
Date Data Arrived at EDR 02/11/05
Date Made Active in Reports 04/06/05
Number of Days to Update 54

Source Environmental Protection Agency
Telephone 703-603-8867
Last EDR Contact 02/10/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Varies

DOD Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U S Virgin Islands

Date of Government Version 12/31/04	Source USGS
Date Data Arrived at EDR 02/08/05	Telephone 703-692-8801
Date Made Active in Reports 08/04/05	Last EDR Contact 02/06/06
Number of Days to Update 177	Next Scheduled EDR Contact 05/08/06
	Data Release Frequency Semi-Annually

FUDS Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions

Date of Government Version 12/31/04	Source U S Army Corps of Engineers
Date Data Arrived at EDR 06/29/05	Telephone 202-528-4285
Date Made Active in Reports 08/08/05	Last EDR Contact 01/19/06
Number of Days to Update 40	Next Scheduled EDR Contact 04/03/06
	Data Release Frequency Varies

US BROWNFIELDS A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U S EPA EPA selects BCRLF cooperative agreement recipients based on a proposal and application process BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities

Date of Government Version 11/29/05	Source Environmental Protection Agency
Date Data Arrived at EDR 12/05/05	Telephone 202-566-2777
Date Made Active in Reports 01/30/06	Last EDR Contact 11/30/05
Number of Days to Update 56	Next Scheduled EDR Contact 03/13/06
	Data Release Frequency Semi-Annually

CONSENT Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites Released periodically by United States District Courts after settlement by parties to litigation matters

Date of Government Version 12/14/04	Source Department of Justice, Consent Decree Library
Date Data Arrived at EDR 02/15/05	Telephone Varies
Date Made Active in Reports 04/25/05	Last EDR Contact 01/26/06
Number of Days to Update 69	Next Scheduled EDR Contact 04/24/06
	Data Release Frequency Varies

ROD Records Of Decision

Record of Decision ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup

Date of Government Version 10/07/05	Source EPA
Date Data Arrived at EDR 10/20/05	Telephone 703-416-0223
Date Made Active in Reports 12/07/05	Last EDR Contact 01/04/06
Number of Days to Update 48	Next Scheduled EDR Contact 04/03/06
	Data Release Frequency Annually

UMTRA Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore Levels of human exposure to radioactive materials from the piles are low, however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized

Date of Government Version 11/04/05
Date Data Arrived at EDR 11/28/05
Date Made Active in Reports 01/30/06
Number of Days to Update 63

Source Department of Energy
Telephone 505-845-0011
Last EDR Contact 10/28/05
Next Scheduled EDR Contact 12/19/05
Data Release Frequency Varies

ODI Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria

Date of Government Version 06/30/85
Date Data Arrived at EDR 08/09/04
Date Made Active in Reports 09/17/04
Number of Days to Update 39

Source Environmental Protection Agency
Telephone 800-424-9346
Last EDR Contact 06/09/04
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

TRIS Toxic Chemical Release Inventory System

Toxic Release Inventory System TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313

Date of Government Version 12/31/03
Date Data Arrived at EDR 07/13/05
Date Made Active in Reports 08/17/05
Number of Days to Update 35

Source EPA
Telephone 202-566-0250
Last EDR Contact 12/21/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Annually

TSCA Toxic Substances Control Act

Toxic Substances Control Act TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list It includes data on the production volume of these substances by plant site

Date of Government Version 12/31/02
Date Data Arrived at EDR 04/27/04
Date Made Active in Reports 05/21/04
Number of Days to Update 24

Source EPA
Telephone 202-260-5521
Last EDR Contact 01/30/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency Every 4 Years

FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act) To maintain currency, EDR contacts the Agency on a quarterly basis

Date of Government Version 10/12/05
Date Data Arrived at EDR 10/31/05
Date Made Active in Reports 12/20/05
Number of Days to Update 50

Source EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone 202-566-1667
Last EDR Contact 12/20/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Quarterly

FTTS INSP FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version 10/12/05
Date Data Arrived at EDR 10/31/05
Date Made Active in Reports 12/20/05
Number of Days to Update 50

Source EPA
Telephone 202-566-1667
Last EDR Contact 12/20/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Quarterly

SSTS Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year

Date of Government Version 12/31/03	Source EPA
Date Data Arrived at EDR 01/03/05	Telephone 202-564-4203
Date Made Active in Reports 01/25/05	Last EDR Contact 01/16/06
Number of Days to Update 22	Next Scheduled EDR Contact 04/17/06
	Data Release Frequency Annually

PADS PCB Activity Database System

PCB Activity Database PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities

Date of Government Version 08/30/05	Source EPA
Date Data Arrived at EDR 09/13/05	Telephone 202-564-3887
Date Made Active in Reports 10/27/05	Last EDR Contact 02/08/06
Number of Days to Update 44	Next Scheduled EDR Contact 05/08/06
	Data Release Frequency Annually

MLTS Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements To maintain currency, EDR contacts the Agency on a quarterly basis

Date of Government Version 10/18/05	Source Nuclear Regulatory Commission
Date Data Arrived at EDR 10/31/05	Telephone 301-415-7169
Date Made Active in Reports 12/20/05	Last EDR Contact 02/08/06
Number of Days to Update 50	Next Scheduled EDR Contact 04/03/06
	Data Release Frequency Quarterly

MINES Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971 The data also includes violation information

Date of Government Version 11/08/05	Source Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR 12/27/05	Telephone 303-231-5959
Date Made Active in Reports 01/30/06	Last EDR Contact 12/27/05
Number of Days to Update 34	Next Scheduled EDR Contact 03/27/06
	Data Release Frequency Semi-Annually

FINDS Facility Index System/Facility Registry System

Facility Index System FINDS contains both facility information and 'pointers' to other sources that contain more detail EDR includes the following FINDS databases in this report PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System)

Date of Government Version 09/29/05	Source EPA
Date Data Arrived at EDR 10/04/05	Telephone N/A
Date Made Active in Reports 11/14/05	Last EDR Contact 01/03/06
Number of Days to Update 41	Next Scheduled EDR Contact 04/03/06
	Data Release Frequency Quarterly

RAATS. RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA For administration actions after September 30, 1995, data entry in the RAATS database was discontinued EPA will retain a copy of the database for historical records It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database

Date of Government Version 04/17/95
Date Data Arrived at EDR 07/03/95
Date Made Active in Reports 08/07/95
Number of Days to Update 35

Source EPA
Telephone 202-564-4104
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency No Update Planned

BRS Biennial Reporting System
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste BRS captures detailed data from two groups Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities

Date of Government Version 12/31/03
Date Data Arrived at EDR 06/17/05
Date Made Active in Reports 08/04/05
Number of Days to Update 48

Source EPA/NTIS
Telephone 800-424-9346
Last EDR Contact 09/12/05
Next Scheduled EDR Contact 12/12/05
Data Release Frequency Biennially

STATE AND LOCAL RECORDS

AWP Annual Workplan Sites
Known Hazardous Waste Sites California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 09/21/05
Number of Days to Update 23

Source California Environmental Protection Agency
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Annually

CAL-SITES Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 09/21/05
Number of Days to Update 23

Source Department of Toxic Substance Control
Telephone 916-323-3400
Last EDR Contact 01/31/06
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

CA BOND EXP PLAN Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds It is not updated

Date of Government Version 01/01/89
Date Data Arrived at EDR 07/27/94
Date Made Active in Reports 08/02/94
Number of Days to Update 6

Source Department of Health Services
Telephone 916-255-2118
Last EDR Contact 05/31/94
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

NFA No Further Action Determination
This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 10/06/05
Number of Days to Update 38

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

NFE Properties Needing Further Evaluation
This category contains properties that are suspected of being contaminated These are unconfirmed contaminated properties that need to be assessed using the PEA process PEA in Progress indicates properties where DTSC is currently conducting a PEA PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 09/21/05
Number of Days to Update 23

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

REF Unconfirmed Properties Referred to Another Agency

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight Accordingly, these sites have been referred to another state or local regulatory agency

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 10/06/05
Number of Days to Update 38

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

SCH School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 10/06/05
Number of Days to Update 38

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

TOXIC PITS Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed

Date of Government Version 07/01/95
Date Data Arrived at EDR 08/30/95
Date Made Active in Reports 09/26/95
Number of Days to Update 27

Source State Water Resources Control Board
Telephone 916-227-4364
Last EDR Contact 01/30/06
Next Scheduled EDR Contact 05/01/06
Data Release Frequency No Update Planned

SWF/LF (SWIS) Solid Waste Information System

Active, Closed and Inactive Landfills SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites

Date of Government Version 12/08/05
Date Data Arrived at EDR 12/13/05
Date Made Active in Reports 01/19/06
Number of Days to Update 37

Source Integrated Waste Management Board
Telephone 916-341-6320
Last EDR Contact 12/13/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Quarterly

CA WDS Waste Discharge System

Sites which have been issued waste discharge requirements

Date of Government Version 12/19/05
Date Data Arrived at EDR 12/21/05
Date Made Active in Reports 01/19/06
Number of Days to Update 29

Source State Water Resources Control Board
Telephone 916-341-5227
Last EDR Contact 12/21/05
Next Scheduled EDR Contact 03/20/06
Data Release Frequency Quarterly

WMUDS/SWAT Waste Management Unit Database

Waste Management Unit Database System WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units WMUDS is composed of the following databases Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information

Date of Government Version 04/01/00
Date Data Arrived at EDR 04/10/00
Date Made Active in Reports 05/10/00
Number of Days to Update 30

Source State Water Resources Control Board
Telephone 916-227-4448
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 12/19/05
Data Release Frequency Quarterly

CORTESE "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites) This listing is no longer updated by the state agency

Date of Government Version 04/01/01
Date Data Arrived at EDR 05/29/01
Date Made Active in Reports 07/26/01
Number of Days to Update 58

Source CAL EPA/Office of Emergency Information
Telephone 916-323-9100
Last EDR Contact 02/06/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency No Update Planned

SWRCY Recycler Database
A listing of recycling facilities in California

Date of Government Version 01/05/06
Date Data Arrived at EDR 01/09/06
Date Made Active in Reports 01/31/06
Number of Days to Update 22

Source Department of Conservation
Telephone 916-323-3836
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Quarterly

LUST REG 6L Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database

Date of Government Version 09/09/03
Date Data Arrived at EDR 09/10/03
Date Made Active in Reports 10/07/03
Number of Days to Update 27

Source California Regional Water Quality Control Board Lahontan Region (6)
Telephone 916-542-5424
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency No Update Planned

LUST REG 5 Leaking Underground Storage Tank Database

Date of Government Version 10/01/05
Date Data Arrived at EDR 10/20/05
Date Made Active in Reports 10/31/05
Number of Days to Update 11

Source California Regional Water Quality Control Board Central Valley Region (5)
Telephone 916-464-3291
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Quarterly

LUST REG 4 Underground Storage Tank Leak List
Los Angeles, Ventura counties For more current information, please refer to the State Water Resources Control Board's LUST database

Date of Government Version 09/07/04
Date Data Arrived at EDR 09/07/04
Date Made Active in Reports 10/12/04
Number of Days to Update 35

Source California Regional Water Quality Control Board Los Angeles Region (4)
Telephone 213-576-6600
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency No Update Planned

LUST REG 3 Leaking Underground Storage Tank Database

Date of Government Version 05/19/03
Date Data Arrived at EDR 05/19/03
Date Made Active in Reports 06/02/03
Number of Days to Update 14

Source California Regional Water Quality Control Board Central Coast Region (3)
Telephone 805-549-3147
Last EDR Contact 11/14/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency No Update Planned

LUST REG 2 Fuel Leak List

Date of Government Version 09/30/04
Date Data Arrived at EDR 10/20/04
Date Made Active in Reports 11/19/04
Number of Days to Update 30

Source California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone 510-286-0457
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Quarterly

LUST REG 1 Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties For more current information, please refer to the State Water Resources Control Board's LUST database

Date of Government Version 02/01/01
Date Data Arrived at EDR 02/28/01
Date Made Active in Reports 03/29/01
Number of Days to Update 29

Source California Regional Water Quality Control Board North Coast (1)
Telephone 707-576-2220
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency No Update Planned

LUST Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports LUST records contain an inventory of reported leaking underground storage tank incidents Not all states maintain these records, and the information stored varies by state

Date of Government Version 01/09/06
Date Data Arrived at EDR 01/09/06
Date Made Active in Reports 01/31/06
Number of Days to Update 22

Source State Water Resources Control Board
Contact San Joaquin County Environmental Health, (209) 468-3446
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Quarterly

LUST REG 6V Leaking Underground Storage Tank Case Listing

Date of Government Version 06/07/05
Date Data Arrived at EDR 06/07/05
Date Made Active in Reports 06/29/05
Number of Days to Update 22

Source California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone 760-346-7491
Last EDR Contact 01/04/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency No Update Planned

LUST REG 7 Leaking Underground Storage Tank Case Listing

Date of Government Version 02/26/04
Date Data Arrived at EDR 02/26/04
Date Made Active in Reports 03/24/04
Number of Days to Update 27

Source California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone 760-346-7491
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency No Update Planned

LUST REG 8 Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8) For more current information, please refer to the State Water Resources Control Board's LUST database

Date of Government Version 02/14/05
Date Data Arrived at EDR 02/15/05
Date Made Active in Reports 03/28/05
Number of Days to Update 41

Source California Regional Water Quality Control Board Santa Ana Region (8)
Telephone 951-782-4130
Last EDR Contact 02/06/06
Next Scheduled EDR Contact 05/08/06
Data Release Frequency Varies

LUST REG 9 Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties For more current information, please refer to the State Water Resources Control Board's LUST database

Date of Government Version 03/01/01
Date Data Arrived at EDR 04/23/01
Date Made Active in Reports 05/21/01
Number of Days to Update 28

Source California Regional Water Quality Control Board San Diego Region (9)
Telephone 858-467-2980
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency No Update Planned

CA FID UST Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board Refer to local/county source for current data

Date of Government Version 10/31/94
Date Data Arrived at EDR 09/05/95
Date Made Active in Reports 09/29/95
Number of Days to Update 24

Source California Environmental Protection Agency
Telephone 916-341-5851
Last EDR Contact 12/28/98
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

SLIC Statewide SLIC Cases
The Spills, Leaks, Investigations, and Cleanups (SLIC) listings includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites

Date of Government Version 01/09/06
Date Data Arrived at EDR 01/09/06
Date Made Active in Reports 01/31/06
Number of Days to Update 22

Source State Water Resources Control Board
Contact San Joaquin County Environmental Health, (209) 468-3446
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Varies

SLIC REG 1 Active Toxic Site Investigations

Date of Government Version 04/03/03
Date Data Arrived at EDR 04/07/03
Date Made Active in Reports 04/25/03
Number of Days to Update 18

Source California Regional Water Quality Control Board, North Coast Region (1)
Telephone 707-576-2220
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency No Update Planned

SLIC REG 2 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater

Date of Government Version 09/30/04
Date Data Arrived at EDR 10/20/04
Date Made Active in Reports 11/19/04
Number of Days to Update 30

Source Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone 510-286-0457
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Quarterly

SLIC REG 3 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater

Date of Government Version 11/16/05
Date Data Arrived at EDR 11/16/05
Date Made Active in Reports 12/12/05
Number of Days to Update 26

Source California Regional Water Quality Control Board Central Coast Region (3)
Telephone 805-549-3147
Last EDR Contact 11/14/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Semi-Annually

SLIC REG 4 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater

Date of Government Version 11/17/04
Date Data Arrived at EDR 11/18/04
Date Made Active in Reports 01/04/05
Number of Days to Update 47

Source Region Water Quality Control Board Los Angeles Region (4)
Telephone 213-576-6600
Last EDR Contact 01/23/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Varies

SLIC REG 5 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Unregulated sites that impact groundwater or have the potential to impact groundwater

Date of Government Version 04/01/05
Date Data Arrived at EDR 04/05/05
Date Made Active in Reports 04/21/05
Number of Days to Update 16

Source Regional Water Quality Control Board Central Valley Region (5)
Telephone 916-464-3291
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Semi-Annually

SLIC REG 6V Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version 05/24/05
Date Data Arrived at EDR 05/25/05
Date Made Active in Reports 06/16/05
Number of Days to Update 22

Source Regional Water Quality Control Board, Victorville Branch
Telephone 619-241-6583
Last EDR Contact 01/06/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Semi-Annually

SLIC REG 6L SLIC Sites

Date of Government Version 09/07/04
Date Data Arrived at EDR 09/07/04
Date Made Active in Reports 10/12/04
Number of Days to Update 35

Source California Regional Water Quality Control Board, Lahontan Region
Telephone 530-542-5574
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency No Update Planned

SLIC REG 7 SLIC List

Date of Government Version 11/24/04
Date Data Arrived at EDR 11/29/04
Date Made Active in Reports 01/04/05
Number of Days to Update 36

Source California Regional Quality Control Board, Colorado River Basin Region
Telephone 760-346-7491
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency No Update Planned

SLIC REG 8 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version 07/01/04
Date Data Arrived at EDR 08/10/04
Date Made Active in Reports 09/08/04
Number of Days to Update 29

Source California Region Water Quality Control Board Santa Ana Region (8)
Telephone 951-782-3298
Last EDR Contact 01/17/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Semi-Annually

SLIC REG 9 Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version 12/14/05
Date Data Arrived at EDR 12/14/05
Date Made Active in Reports 01/19/06
Number of Days to Update 36

Source California Regional Water Quality Control Board San Diego Region (9)
Telephone 858-467-2980
Last EDR Contact 12/12/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Annually

UST Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version 01/09/06
Date Data Arrived at EDR 01/09/06
Date Made Active in Reports 01/31/06
Number of Days to Update 22

Source SWRCB
Contact San Joaquin County Environmental Health, (209) 468-3446
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Semi-Annually

HIST UST Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites Refer to local/county source for current data

Date of Government Version 10/15/90
Date Data Arrived at EDR 01/25/91
Date Made Active in Reports 02/12/91
Number of Days to Update 18

Source State Water Resources Control Board
Telephone 916-341-5851
Last EDR Contact 07/26/01
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

AST Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks

Date of Government Version 11/01/05
Date Data Arrived at EDR 11/23/05
Date Made Active in Reports 12/15/05
Number of Days to Update 22

Source State Water Resources Control Board
Telephone 916-341-5712
Last EDR Contact 01/30/06
Next Scheduled EDR Contact 05/01/06
Data Release Frequency Quarterly

SWEEPS UST SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980?s The listing is no longer updated or maintained The local agency is the contact for more information on a site on the SWEEPS list

Date of Government Version 06/01/94
Date Data Arrived at EDR 07/07/05
Date Made Active in Reports 08/11/05
Number of Days to Update 35

Source State Water Resources Control Board
Telephone N/A
Last EDR Contact 06/03/05
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

CHMIRS California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System CHMIRS contains information on reported hazardous material incidents (accidental releases or spills)

Date of Government Version 12/31/04
Date Data Arrived at EDR 11/30/05
Date Made Active in Reports 01/19/06
Number of Days to Update 50

Source Office of Emergency Services
Telephone 916-845-8400
Last EDR Contact 10/26/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Varies

NOTIFY 65 Proposition 65 Records

Proposition 65 Notification Records NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk

Date of Government Version 10/21/93
Date Data Arrived at EDR 11/01/93
Date Made Active in Reports 11/19/93
Number of Days to Update 18

Source State Water Resources Control Board
Telephone 916-445-3846
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency No Update Planned

DEED Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit The list represents deed restrictions that are active Some sites have multiple deed restrictions The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners

Date of Government Version 01/03/06
Date Data Arrived at EDR 01/04/06
Date Made Active in Reports 01/19/06
Number of Days to Update 15

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 01/03/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Semi-Annually

VCP Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/29/05
Date Made Active in Reports 09/21/05
Number of Days to Update 23

Source Department of Toxic Substances Control
Telephone 916-323-3400
Last EDR Contact 11/30/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

CLEANERS Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers These are facilities with certain SIC codes power laundries, family and commercial, garment pressing and cleaner's agents, linen supply, coin-operated laundries and cleaning, drycleaning plants, except rugs, carpet and upholster cleaning, industrial launderers, laundry and garment services

Date of Government Version 04/18/05
Date Data Arrived at EDR 04/18/05
Date Made Active in Reports 05/06/05
Number of Days to Update 18

Source Department of Toxic Substance Control
Telephone 916-327-4498
Last EDR Contact 01/04/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Annually

WIP Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area

Date of Government Version 11/07/05
Date Data Arrived at EDR 11/07/05
Date Made Active in Reports 11/29/05
Number of Days to Update 22

Source Los Angeles Water Quality Control Board
Telephone 213-576-6726
Last EDR Contact 01/23/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Varies

HAZNET Facility and Manifest Data

Facility and Manifest Data The data is extracted from the copies of hazardous waste manifests received each year by the DTSC The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method

Date of Government Version 12/31/03
Date Data Arrived at EDR 10/11/05
Date Made Active in Reports 10/31/05
Number of Days to Update 20

Source California Environmental Protection Agency
Telephone 916-255-1136
Last EDR Contact 02/06/06
Next Scheduled EDR Contact 05/08/06
Data Release Frequency Annually

EMI Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

Date of Government Version 12/31/03
Date Data Arrived at EDR 07/19/05
Date Made Active in Reports 08/11/05
Number of Days to Update 23

Source California Air Resources Board
Telephone 916-322-2990
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency Varies

TRIBAL RECORDS

INDIAN RESERV Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres

Date of Government Version 12/31/04
Date Data Arrived at EDR 02/08/05
Date Made Active in Reports 08/04/05
Number of Days to Update 177

Source USGS
Telephone 202-208-3710
Last EDR Contact 02/06/06
Next Scheduled EDR Contact 05/08/06
Data Release Frequency Semi-Annually

INDIAN LUST Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington

Date of Government Version 09/07/05
Date Data Arrived at EDR 09/08/05
Date Made Active in Reports 10/31/05
Number of Days to Update 53

Source EPA Region 10
Telephone 206-553-2857
Last EDR Contact 01/10/06
Next Scheduled EDR Contact 05/22/06
Data Release Frequency Varies

INDIAN LUST Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version 12/01/05
Date Data Arrived at EDR 01/03/06
Date Made Active in Reports 01/19/06
Number of Days to Update 16

Source Environmental Protection Agency
Telephone 415-972-3372
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Varies

INDIAN UST Underground Storage Tanks on Indian Land

Date of Government Version 11/08/05
Date Data Arrived at EDR 11/09/05
Date Made Active in Reports 12/12/05
Number of Days to Update 33

Source EPA Region 9
Telephone 415-972-3368
Last EDR Contact 10/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination

Date of Government Version N/A
Date Data Arrived at EDR N/A
Date Made Active in Reports N/A
Number of Days to Update N/A

Source EDR, Inc
Telephone N/A
Last EDR Contact N/A
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

EDR Auto Stations EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc

Date of Government Version N/A
Date Data Arrived at EDR N/A
Date Made Active in Reports N/A
Number of Days to Update N/A

Source EDR, Inc
Telephone N/A
Last EDR Contact N/A
Next Scheduled EDR Contact N/A
Data Release Frequency Varies

EDR Cleaners EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc

Date of Government Version N/A
Date Data Arrived at EDR N/A
Date Made Active in Reports N/A
Number of Days to Update N/A

Source EDR, Inc
Telephone N/A
Last EDR Contact N/A
Next Scheduled EDR Contact N/A
Data Release Frequency Varies

COUNTY RECORDS

ALAMEDA COUNTY

Underground Tanks

Date of Government Version 11/08/05
Date Data Arrived at EDR 11/10/05
Date Made Active in Reports 12/08/05
Number of Days to Update 28

Source Alameda County Environmental Health Services
Telephone 510-567-6700
Last EDR Contact 01/23/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Semi-Annually

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs)

Date of Government Version 11/08/05
Date Data Arrived at EDR 11/15/05
Date Made Active in Reports 12/12/05
Number of Days to Update 27

Source Alameda County Environmental Health Services
Telephone 510-567-6700
Last EDR Contact 01/23/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Semi-Annually

CONTRA COSTA COUNTY

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs

Date of Government Version 12/09/05
Date Data Arrived at EDR 12/09/05
Date Made Active in Reports 01/19/06
Number of Days to Update 41

Source Contra Costa Health Services Department
Telephone 925-646-2286
Last EDR Contact 12/09/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Semi-Annually

FRESNO COUNTY

CUPA Resources List

Certified Unified Program Agency CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks

Date of Government Version 10/17/05
Date Data Arrived at EDR 10/18/05
Date Made Active in Reports 11/29/05
Number of Days to Update 42

Source Dept of Community Health
Telephone 559-445-3271
Last EDR Contact 01/18/06
Next Scheduled EDR Contact 05/08/06
Data Release Frequency Semi-Annually

KERN COUNTY

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing

Date of Government Version 12/09/05
Date Data Arrived at EDR 12/09/05
Date Made Active in Reports 01/11/06
Number of Days to Update 33

Source Kern County Environment Health Services Department
Telephone 661-862-8700
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 02/27/06
Data Release Frequency Quarterly

LOS ANGELES COUNTY

List of Solid Waste Facilities

Date of Government Version 11/01/05
Date Data Arrived at EDR 12/01/05
Date Made Active in Reports 01/19/06
Number of Days to Update 49

Source La County Department of Public Works
Telephone 818-458-5185
Last EDR Contact 11/23/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Varies

City of El Segundo Underground Storage Tank

Date of Government Version 11/14/05
Date Data Arrived at EDR 11/14/05
Date Made Active in Reports 12/08/05
Number of Days to Update 24

Source City of El Segundo Fire Department
Telephone 310-524-2236
Last EDR Contact 11/14/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Semi-Annually

City of Long Beach Underground Storage Tank

Date of Government Version 03/28/03
Date Data Arrived at EDR 10/23/03
Date Made Active in Reports 11/26/03
Number of Days to Update 34

Source City of Long Beach Fire Department
Telephone 562-570-2563
Last EDR Contact 11/22/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Annually

City of Torrance Underground Storage Tank

Date of Government Version 11/29/05
Date Data Arrived at EDR 12/01/05
Date Made Active in Reports 12/16/05
Number of Days to Update 15

Source City of Torrance Fire Department
Telephone 310-618-2973
Last EDR Contact 11/28/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Semi-Annually

City of Los Angeles Landfills

Date of Government Version 03/01/05
Date Data Arrived at EDR 03/18/05
Date Made Active in Reports 04/08/05
Number of Days to Update 21

Source Engineering & Construction Division
Telephone 213-473-7869
Last EDR Contact 12/13/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Varies

HMS Street Number List
Industrial Waste and Underground Storage Tank Sites

Date of Government Version 08/31/05
Date Data Arrived at EDR 10/26/05
Date Made Active in Reports 11/29/05
Number of Days to Update 34

Source Department of Public Works
Telephone 626-458-3517
Last EDR Contact 11/14/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Semi-Annually

Site Mitigation List
Industrial sites that have had some sort of spill or complaint

Date of Government Version 05/25/05
Date Data Arrived at EDR 05/27/05
Date Made Active in Reports 07/01/05
Number of Days to Update 35

Source Community Health Services
Telephone 323-890-7806
Last EDR Contact 11/14/05
Next Scheduled EDR Contact 02/13/06
Data Release Frequency Annually

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office

Date of Government Version 12/31/98
Date Data Arrived at EDR 07/07/99
Date Made Active in Reports N/A
Number of Days to Update 35

Source EPA Region 9
Telephone 415-972-3178
Last EDR Contact 07/06/99
Next Scheduled EDR Contact N/A
Data Release Frequency No Update Planned

MARIN COUNTY

Underground Storage Tank Sites
Currently permitted USTs in Marin County

Date of Government Version 08/08/05
Date Data Arrived at EDR 08/26/05
Date Made Active in Reports 09/28/05
Number of Days to Update 33

Source Public Works Department Waste Management
Telephone 415-499-6647
Last EDR Contact 01/30/06
Next Scheduled EDR Contact 05/01/06
Data Release Frequency Semi-Annually

NAPA COUNTY

Sites With Reported Contamination

Date of Government Version 12/27/05
Date Data Arrived at EDR 12/28/05
Date Made Active in Reports 01/19/06
Number of Days to Update 22

Source Napa County Department of Environmental Management
Telephone 707-253-4269
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency Semi-Annually

Closed and Operating Underground Storage Tank Sites

Date of Government Version 12/27/05
Date Data Arrived at EDR 12/28/05
Date Made Active in Reports 01/11/06
Number of Days to Update 14

Source Napa County Department of Environmental Management
Telephone 707-253-4269
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency Annually

ORANGE COUNTY

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST)

Date of Government Version 12/01/05
Date Data Arrived at EDR 12/20/05
Date Made Active in Reports 01/19/06
Number of Days to Update 30

Source Health Care Agency
Telephone 714-834-3446
Last EDR Contact 12/07/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST)

Date of Government Version 12/01/05	Source Health Care Agency
Date Data Arrived at EDR 12/16/05	Telephone 714-834-3446
Date Made Active in Reports 01/11/06	Last EDR Contact 12/07/05
Number of Days to Update 26	Next Scheduled EDR Contact 03/06/06
	Data Release Frequency Quarterly

List of Industrial Site Cleanups
Petroleum and non-petroleum spills

Date of Government Version 12/01/05	Source Health Care Agency
Date Data Arrived at EDR 12/20/05	Telephone 714-834-3446
Date Made Active in Reports 01/19/06	Last EDR Contact 12/07/05
Number of Days to Update 30	Next Scheduled EDR Contact 03/06/06
	Data Release Frequency Annually

PLACER COUNTY

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites

Date of Government Version 10/12/05	Source Placer County Health and Human Services
Date Data Arrived at EDR 10/12/05	Telephone 530-889-7312
Date Made Active in Reports 10/31/05	Last EDR Contact 12/20/05
Number of Days to Update 19	Next Scheduled EDR Contact 03/20/06
	Data Release Frequency Semi-Annually

RIVERSIDE COUNTY

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST)

Date of Government Version 11/22/05	Source Department of Public Health
Date Data Arrived at EDR 11/23/05	Telephone 951-358-5055
Date Made Active in Reports 12/12/05	Last EDR Contact 01/16/06
Number of Days to Update 19	Next Scheduled EDR Contact 04/17/06
	Data Release Frequency Quarterly

SACRAMENTO COUNTY

CS - Contaminated Sites

Date of Government Version 11/23/05	Source Sacramento County Environmental Management
Date Data Arrived at EDR 12/16/05	Telephone 916-875-8406
Date Made Active in Reports 01/19/06	Last EDR Contact 01/30/06
Number of Days to Update 34	Next Scheduled EDR Contact 05/01/06
	Data Release Frequency Quarterly

ML - Regulatory Compliance Master List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators

Date of Government Version 11/23/05	Source Sacramento County Environmental Management
Date Data Arrived at EDR 12/14/05	Telephone 916-875-8406
Date Made Active in Reports 01/19/06	Last EDR Contact 01/30/06
Number of Days to Update 36	Next Scheduled EDR Contact 05/01/06
	Data Release Frequency Quarterly

SAN BERNARDINO COUNTY

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers

Date of Government Version 12/21/05
Date Data Arrived at EDR 12/21/05
Date Made Active in Reports 01/19/06
Number of Days to Update 29

Source San Bernardino County Fire Department Hazardous Materials Division
Telephone 909-387-3041
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency Quarterly

SAN DIEGO COUNTY

Solid Waste Facilities

San Diego County Solid Waste Facilities

Date of Government Version 11/01/05
Date Data Arrived at EDR 12/29/05
Date Made Active in Reports 01/19/06
Number of Days to Update 21

Source Department of Health Services
Telephone 619-338-2209
Last EDR Contact 12/12/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Varies

Hazardous Materials Management Division Database

The database includes HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included)

Date of Government Version 05/16/05
Date Data Arrived at EDR 05/18/05
Date Made Active in Reports 06/16/05
Number of Days to Update 29

Source Hazardous Materials Management Division
Telephone 619-338-2268
Last EDR Contact 01/20/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Quarterly

SAN FRANCISCO COUNTY

Local Oversite Facilities

Date of Government Version 12/07/05
Date Data Arrived at EDR 12/07/05
Date Made Active in Reports 01/19/06
Number of Days to Update 43

Source Department Of Public Health San Francisco County
Telephone 415-252-3920
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency Quarterly

Underground Storage Tank Information

Date of Government Version 12/07/05
Date Data Arrived at EDR 12/07/05
Date Made Active in Reports 01/11/06
Number of Days to Update 35

Source Department of Public Health
Telephone 415-252-3920
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 03/06/06
Data Release Frequency Quarterly

SAN MATEO COUNTY

Fuel Leak List

Date of Government Version 01/11/06
Date Data Arrived at EDR 01/12/06
Date Made Active in Reports 01/31/06
Number of Days to Update 19

Source San Mateo County Environmental Health Services Division
Telephone 650-363-1921
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Semi-Annually

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks

Date of Government Version 01/09/06
Date Data Arrived at EDR 01/10/06
Date Made Active in Reports 01/31/06
Number of Days to Update 21

Source San Mateo County Environmental Health Services Division
Telephone 650-363-1921
Last EDR Contact 01/09/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Annually

SANTA CLARA COUNTY

LOP Listing

A listing of open leaking underground storage tanks

Date of Government Version 10/24/05
Date Data Arrived at EDR 11/28/05
Date Made Active in Reports 12/12/05
Number of Days to Update 14

Source Department of Environmental Health
Telephone 408-918-3417
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency No Update Planned

Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks This listing is no longer updated by the county Leaking underground storage tanks are now handled by the Department of Environmental Health

Date of Government Version 03/29/05
Date Data Arrived at EDR 03/30/05
Date Made Active in Reports 04/21/05
Number of Days to Update 22

Source Santa Clara Valley Water District
Telephone 408-265-2600
Last EDR Contact 12/27/05
Next Scheduled EDR Contact 03/27/06
Data Release Frequency Semi-Annually

Hazardous Material Facilities

Date of Government Version 12/12/05
Date Data Arrived at EDR 12/12/05
Date Made Active in Reports 01/19/06
Number of Days to Update 38

Source City of San Jose Fire Department
Telephone 408-277-4659
Last EDR Contact 12/05/05
Next Scheduled EDR Contact 12/19/05
Data Release Frequency Annually

SOLANO COUNTY

Leaking Underground Storage Tanks

Date of Government Version 12/13/05
Date Data Arrived at EDR 12/14/05
Date Made Active in Reports 01/19/06
Number of Days to Update 36

Source Solano County Department of Environmental Management
Telephone 707-784-6770
Last EDR Contact 12/12/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Quarterly

Underground Storage Tanks

Date of Government Version 10/13/05
Date Data Arrived at EDR 10/31/05
Date Made Active in Reports 12/08/05
Number of Days to Update 38

Source Solano County Department of Environmental Management
Telephone 707-784-6770
Last EDR Contact 12/12/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Quarterly

SONOMA COUNTY

Leaking Underground Storage Tank Sites

Date of Government Version 10/01/05
Date Data Arrived at EDR 10/24/05
Date Made Active in Reports 10/31/05
Number of Days to Update 7

Source Department of Health Services
Telephone 707-565-6565
Last EDR Contact 01/23/06
Next Scheduled EDR Contact 04/24/06
Data Release Frequency Quarterly

SUTTER COUNTY

Underground Storage Tanks

Date of Government Version 12/31/05
Date Data Arrived at EDR 01/05/06
Date Made Active in Reports 01/31/06
Number of Days to Update 26

Source Sutter County Department of Agriculture
Telephone 530-822-7500
Last EDR Contact 01/03/06
Next Scheduled EDR Contact 04/03/06
Data Release Frequency Semi-Annually

VENTURA COUNTY

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites

Date of Government Version 08/01/05
Date Data Arrived at EDR 09/20/05
Date Made Active in Reports 10/06/05
Number of Days to Update 16

Source Environmental Health Division
Telephone 805-654-2813
Last EDR Contact 11/21/05
Next Scheduled EDR Contact 02/20/06
Data Release Frequency Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST)

Date of Government Version 11/30/05
Date Data Arrived at EDR 01/03/06
Date Made Active in Reports 01/19/06
Number of Days to Update 16

Source Environmental Health Division
Telephone 805-654-2813
Last EDR Contact 12/14/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List

Date of Government Version 09/28/05
Date Data Arrived at EDR 10/27/05
Date Made Active in Reports 11/18/05
Number of Days to Update 22

Source Environmental Health Division
Telephone 805-654-2813
Last EDR Contact 01/11/06
Next Scheduled EDR Contact 04/10/06
Data Release Frequency Quarterly

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information

Date of Government Version 11/30/05
Date Data Arrived at EDR 01/04/06
Date Made Active in Reports 01/19/06
Number of Days to Update 15

Source Ventura County Environmental Health Division
Telephone 805-654-2813
Last EDR Contact 12/14/05
Next Scheduled EDR Contact 03/13/06
Data Release Frequency Quarterly

YOLO COUNTY

Underground Storage Tank Comprehensive Facility Report

Date of Government Version 10/18/05
Date Data Arrived at EDR 11/16/05
Date Made Active in Reports 12/08/05
Number of Days to Update 22

Source Yolo County Department of Health
Telephone 530-666-8646
Last EDR Contact 01/16/06
Next Scheduled EDR Contact 04/17/06
Data Release Frequency Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report

Oil/Gas Pipelines This data was obtained by EDR from the USGS in 1994 It is referred to by USGS as GeoData Digital Line Graphs from 1 100,000-Scale Maps It was extracted from the transportation category including some oil, but primarily gas pipelines

Electric Power Transmission Line Data
Source PennWell Corporation
Telephone (800) 823-6277
This map includes information copyrighted by PennWell Corporation This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose Such information has been reprinted with the permission of PennWell

Sensitive Receptors There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges These sensitive receptors typically include the elderly, the sick, and children While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located

AHA Hospitals
Source American Hospital Association, Inc
Telephone 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals

Medical Centers Provider of Services Listing
Source Centers for Medicare & Medicaid Services
Telephone 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U S Department of Health and Human Services

Nursing Homes
Source National Institutes of Health
Telephone 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States

Public Schools
Source National Center for Education Statistics
Telephone 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states

Private Schools
Source National Center for Education Statistics
Telephone 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States
Daycare Centers Licensed Facilities
Source Department of Social Services
Telephone 916-657-4041

Flood Zone Data This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA) Data depicts 100-year and 500-year flood zones as defined by FEMA

NWI National Wetlands Inventory This data, available in select counties across the country, was obtained by EDR in 2002 from the U S Fish and Wildlife Service

State Wetlands Data Wetlands Inventory
Source California Spatial Information Library
Telephone 916-654-9990

STREET AND ADDRESS INFORMATION

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GEOCHECK®-PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

REYNOLDS RANCH
13160 N STOCKTON STREET
LODI, CA 95240

TARGET PROPERTY COORDINATES

Latitude (North)	38 097500 - 38' 5' 51 0"
Longitude (West)	121 266998 - 121 16' 1 2"
Universal Tranverse Mercator	Zone 10
UTM X (Meters)	651960 5
UTM Y (Meters)	4217845 0
Elevation	47 ft above sea level

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration

Assessment of the impact of contaminant migration generally has two principle investigative components

1 Groundwater flow direction, and
2 Groundwater flow velocity

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells Groundwater flow velocity is generally impacted by the nature of the geologic strata

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers)

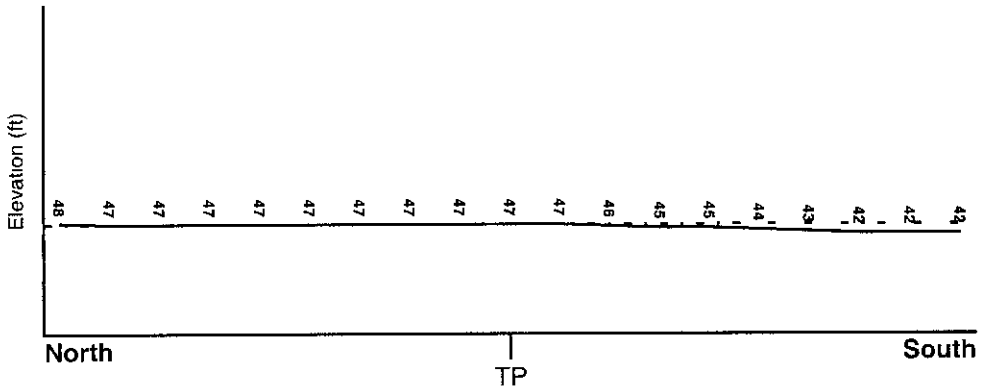
TOPOGRAPHIC INFORMATION

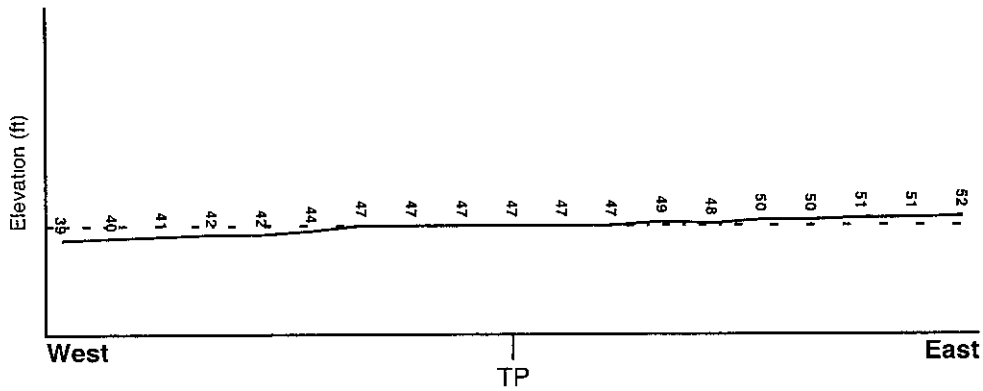
Surface topography may be indicative of the direction of surficial groundwater flow This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map	38121-A3 LODI SOUTH, CA
General Topographic Gradient	General SW
Source	USGS 7 5 min quad index

SURROUNDING TOPOGRAPHY ELEVATION PROFILES





Target Property Elevation 47 ft

0 1/2 1 Miles

Source Topography has been determined from the USGS 7 5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis Relative elevation information between sites of close proximity should be field verified

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water)

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SAN JOAQUIN, CA	YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property	0602990285B
Additional Panels in search area	0602990305B 0603000002E

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LODI SOUTH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted

Site-Specific Hydrogeological Data*

Search Radius	1 25 miles
Status	Not found

AQUIFLOW®

Search Radius 1 000 Mile

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts Inc Bainbridge Island WA All rights reserved All of the information and opinions presented are those of the cited EPA report(s) which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring

ROCK STRATIGRAPHIC UNIT

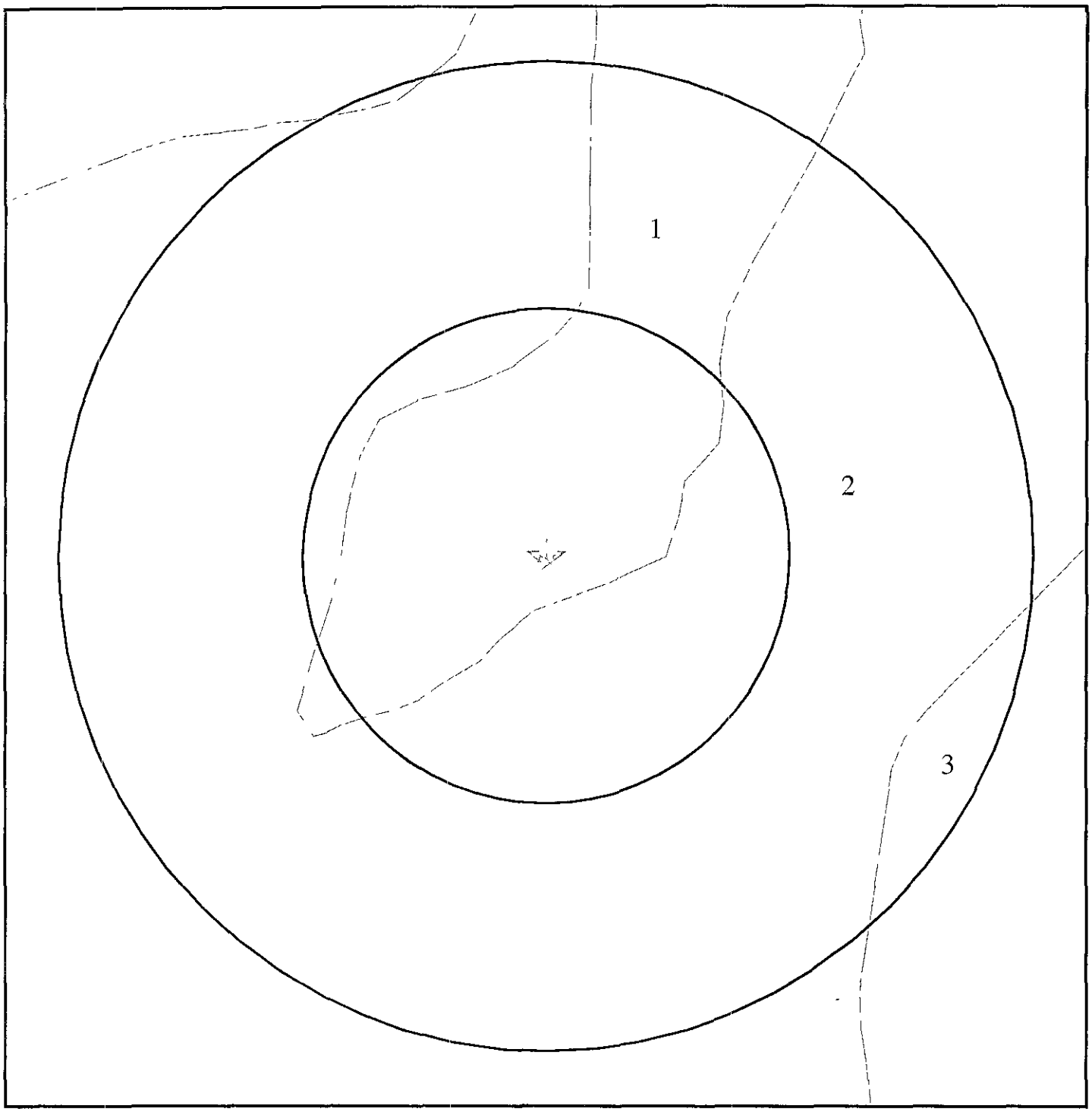
Era	Cenozoic
System	Quaternary
Series	Quaternary
Code	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source P G Schruben, R E Arndt and W J Bawiec, Geology of the Conterminous U S at 1 2,500,000 Scale - a digital representation of the 1974 P B King and H M Beikman Map, USGS Digital Data Series DDS - 11 (1994)

SSURGO SOIL MAP - 1611926.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME	Reynolds Ranch	CLIENT	Kleinfelder, Inc
ADDRESS	13160 N Stockton Street Lodi CA 95240	CONTACT	Ryan Brosius
		INQUIRY #	1611926 2s
LAT/LONG	38 0975 / 121 2670	DATE	February 10, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U S Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States A soil map in a soil survey is a representation of soil patterns in a landscape The following information is based on Soil Conservation Service SSURGO data

---

Soil Map ID 1

Soil Component Name	TUJUNGA
Soil Surface Texture	loamy sand
Hydrologic Group	Class A - High infiltration rates Soils are deep, well drained to excessively drained sands and gravels
Soil Drainage Class	Somewhat excessive Soils have high hydraulic conductivity and low water holding capacity Depth to water table is more than 6 feet

Hydric Status Soil does not meet the requirements for a hydric soil

Corrosion Potential - Uncoated Steel	MODERATE
Depth to Bedrock Min	> 0 inches
Depth to Bedrock Max	> 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	22 inches	loamy sand	Granular materials (35 pct or less passing No 200), Stone Fragments, Gravel and Sand	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 20 00 Min 6 00	Max 7 30 Min 6 10
2	22 inches	67 inches	loamy sand	Granular materials (35 pct or less passing No 200), Stone Fragments, Gravel and Sand	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 20 00 Min 6 00	Max 7 80 Min 6 10

Soil Map ID 2

Soil Component Name	TOKAY
Soil Surface Texture	fine sandy loam
Hydrologic Group	Class B - Moderate infiltration rates Deep and moderately deep, moderately well and well drained soils with moderately coarse textures
Soil Drainage Class	Well drained Soils have intermediate water holding capacity Depth to water table is more than 6 feet

Hydric Status Soil does not meet the requirements for a hydric soil

Corrosion Potential - Uncoated Steel	HIGH
Depth to Bedrock Min	> 0 inches
Depth to Bedrock Max	> 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	19 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct passing No 200), Silty Soils	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 6 00 Min 2 00	Max 7 80 Min 6 10
2	19 inches	45 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct passing No 200), Silty Soils	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 6 00 Min 2 00	Max 7 80 Min 6 10
3	45 inches	60 inches	fine sandy loam	Granular materials (35 pct or less passing No 200), Silty, or Clayey Gravel and Sand	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 6 00 Min 2 00	Max 8 40 Min 6 10

Soil Map ID 3

Soil Component Name	ACAMPO
Soil Surface Texture	sandy loam
Hydrologic Group	Class C - Slow infiltration rates Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures
Soil Drainage Class	Moderately well drained Soils have a layer of low hydraulic conductivity, wet state high in the profile Depth to water table is 3 to 6 feet

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status Soil does not meet the requirements for a hydric soil

Corrosion Potential - Uncoated Steel HIGH

Depth to Bedrock Min > 0 inches

Depth to Bedrock Max > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	19 inches	sandy loam	Silt-Clay Materials (more than 35 pct passing No 200), Silty Soils	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 6 00 Min 2 00	Max 7 80 Min 6 10
2	19 inches	47 inches	sandy loam	Silt-Clay Materials (more than 35 pct passing No 200), Silty Soils	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand	Max 6 00 Min 2 00	Max 8 40 Min 6 60
3	47 inches	49 inches	cemented	Not reported	Not reported	Max 0 00 Min 0 00	Max 0 00 Min 0 00
4	49 inches	60 inches	cemented	Not reported	Not reported	Max 0 00 Min 0 00	Max 0 00 Min 0 00

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1 000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1 000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3227503	1/4 - 1/2 Mile NNW
4	USGS3227483	1/4 - 1/2 Mile ESE
5	USGS3227519	1/4 - 1/2 Mile NE
6	USGS3227652	1/2 - 1 Mile SW
7	USGS3227499	1/2 - 1 Mile WNW
9	USGS3227639	1/2 - 1 Mile South
10	USGS3227513	1/2 - 1 Mile WNW
12	USGS3227641	1/2 - 1 Mile SSE
A13	USGS3227502	1/2 - 1 Mile ENE
14	USGS3227554	1/2 - 1 Mile NW
15	USGS3227630	1/2 - 1 Mile SSW
A16	USGS3227515	1/2 - 1 Mile ENE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

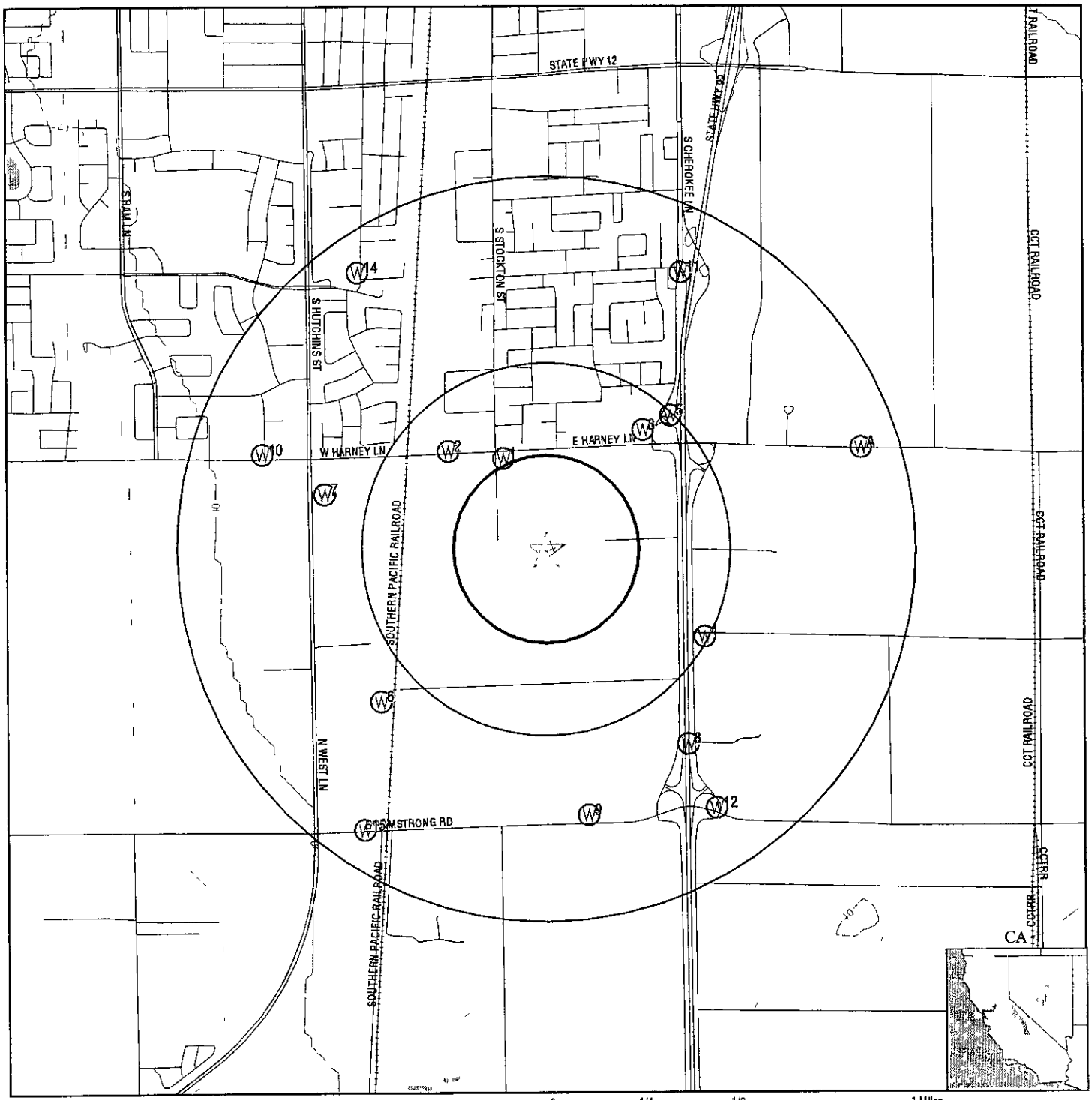
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note PWS System location is not always the same as well location

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	3314	1/4 - 1/2 Mile NW
3	3331	1/4 - 1/2 Mile NE
8	2046	1/2 - 1 Mile SE
11	3330	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 1611926.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

SITE NAME	Reynolds Ranch	CLIENT	Kleinfelder, Inc
ADDRESS	13160 N Stockton Street Lodi CA 95240	CONTACT	Ryan Brosius
		INQUIRY #	1611926 2s
LAT/LONG	38 0975 / 121 2670	DATE	February 10, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 **NNW** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS3227503**

Agency cd	USGS	Site no	380604121160501
Site name	003N006E24B007M		
Latitude	380604		
Longitude	1211605	Dec lat	38 10103097
Dec lon	-121 2691138	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	NWNWNES22T03NR06EM
Location map	LODI SOUTH	Map scale	24000
Altitude	44 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower Sacramento California Area = 1720 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19721116
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	143	Hole depth	203
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	0000-00-00
Water quality data end date	0000-00-00	Water quality data count	0
Ground water data begin date	1972-11-16	Ground water data end date	1972-11-16
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1972-11-16	52 00	

---

2 **NW** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**3314**

Water System Information

Prime Station Code	03N/06E-13P01 M	User ID	PTA
FRDS Number	3910004027	County	San Joaquin
District Number	10	Station Type	WELL/AMBNT/MUN/INTAKE
Water Type	Well/Groundwater	Well Status	Active Raw
Source Lat/Long	380605 0 1211615 0	Precision	1,000 Feet (10 Seconds)
Source Name	WELL 23 - RAW		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number 3910004
System Name LODI, CITY OF
Organization That Operates System
1331 SOUTH HAM LANE
LODI, CA 95242
Pop Served 53903 Connections 20963
Area Served LODI

Sample Information *** Only Findings Above Detection Level Are Listed**

Sample Collected	02/07/1990	Findings	110 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	03/12/1990	Findings	150 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	04/16/1990	Findings	190 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	08/12/1990	Findings	400 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	09/25/1990	Findings	470 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	09/26/1990	Findings	430 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	10/09/1990	Findings	420 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	11/07/1990	Findings	370 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	12/13/1990	Findings	460 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	01/09/1991	Findings	480 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	02/11/1991	Findings	440 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	03/07/1991	Findings	2 050 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	03/07/1991	Findings	480 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	07/08/1991	Findings	540 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	10/16/1991	Findings	510 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	01/07/1992	Findings	690 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	02/04/1992	Findings	1 820 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	03/27/1992	Findings	200 NTU
Chemical	TURBIDITY (LAB)		
Sample Collected	05/06/1992	Findings	400 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	07/15/1992	Findings	470 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	10/12/1992	Findings	1 680 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		

Sample Collected Chemical	10/12/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 200 UG/L
Sample Collected Chemical	11/12/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	980 UG/L
Sample Collected Chemical	01/06/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	400 UG/L
Sample Collected Chemical	04/22/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	110 UG/L
Sample Collected Chemical	05/19/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	06/11/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	380 UG/L
Sample Collected Chemical	07/08/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 000 UG/L
Sample Collected Chemical	08/24/1993 SPECIFIC CONDUCTANCE	Findings	570 000 UMHO
Sample Collected Chemical	08/24/1993 PH (LABORATORY)	Findings	6 900
Sample Collected Chemical	08/24/1993 TOTAL ALKALINITY (AS CACO3)	Findings	210 000 MG/L
Sample Collected Chemical	08/24/1993 BICARBONATE ALKALINITY	Findings	250 000 MG/L
Sample Collected Chemical	08/24/1993 TOTAL HARDNESS (AS CACO3)	Findings	270 000 MG/L
Sample Collected Chemical	08/24/1993 CALCIUM	Findings	49 000 MG/L
Sample Collected Chemical	08/24/1993 MAGNESIUM	Findings	21 000 MG/L
Sample Collected Chemical	08/24/1993 SODIUM	Findings	22 000 MG/L
Sample Collected Chemical	08/24/1993 POTASSIUM	Findings	7 400 MG/L
Sample Collected Chemical	08/24/1993 CHLORIDE	Findings	30 000 MG/L
Sample Collected Chemical	08/24/1993 BARIUM	Findings	130 000 UG/L
Sample Collected Chemical	08/24/1993 TOTAL DISSOLVED SOLIDS	Findings	340 000 MG/L
Sample Collected Chemical	08/24/1993 NITRATE (AS NO3)	Findings	6 200 MG/L
Sample Collected Chemical	08/24/1993 TURBIDITY (LAB)	Findings	200 NTU
Sample Collected Chemical	09/08/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 000 UG/L
Sample Collected Chemical	09/08/1993 NITRATE (AS NO3)	Findings	7 600 MG/L
Sample Collected Chemical	11/03/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	850 UG/L
Sample Collected Chemical	05/09/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 000 UG/L

Sample Collected Chemical	07/06/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	840 UG/L
Sample Collected Chemical	10/05/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 200 UG/L
Sample Collected Chemical	10/05/1994 CHLORIDE	Findings	29 000 MG/L
Sample Collected Chemical	10/05/1994 ARSENIC	Findings	2 500 UG/L
Sample Collected Chemical	10/05/1994 NITRATE (AS NO3)	Findings	6 900 MG/L
Sample Collected Chemical	02/17/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	360 UG/L
Sample Collected Chemical	05/05/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	880 UG/L
Sample Collected Chemical	08/22/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	460 UG/L
Sample Collected Chemical	08/22/1995 DI(2-ETHYLHEXYL)PHTHALATE	Findings	6 100 UG/L
Sample Collected Chemical	11/29/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	460 UG/L
Sample Collected Chemical	01/30/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	480 UG/L
Sample Collected Chemical	01/30/1996 NITRATE (AS NO3)	Findings	4 000 MG/L
Sample Collected Chemical	02/27/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	430 UG/L
Sample Collected Chemical	03/19/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	520 UG/L
Sample Collected Chemical	03/28/1996 GROSS ALPHA	Findings	3 500 PCI/L
Sample Collected Chemical	03/28/1996 GROSS ALPHA COUNTING ERROR	Findings	1 420 PCI/L
Sample Collected Chemical	04/16/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	410 UG/L
Sample Collected Chemical	05/08/1996 GROSS ALPHA	Findings	3 500 PCI/L
Sample Collected Chemical	05/08/1996 GROSS ALPHA COUNTING ERROR	Findings	1 420 PCI/L
Sample Collected Chemical	06/06/1996 ARSENIC	Findings	6 000 UG/L
Sample Collected Chemical	06/06/1996 BARIUM	Findings	120 000 UG/L
Sample Collected Chemical	06/06/1996 NITRATE (AS NO3)	Findings	4 600 MG/L
Sample Collected Chemical	06/06/1996 TURBIDITY (LAB)	Findings	060 NTU
Sample Collected Chemical	06/06/1996 NITRATE + NITRITE (AS N)	Findings	1000 000 UG/L
Sample Collected Chemical	06/11/1996 SPECIFIC CONDUCTANCE	Findings	360 000 UMHO

Sample Collected Chemical	06/11/1996 PH (LABORATORY)	Findings	7 500
Sample Collected Chemical	06/11/1996 TOTAL ALKALINITY (AS CACO3)	Findings	140 000 MG/L
Sample Collected Chemical	06/11/1996 BICARBONATE ALKALINITY	Findings	170 000 MG/L
Sample Collected Chemical	06/11/1996 TOTAL HARDNESS (AS CACO3)	Findings	300 000 MG/L
Sample Collected Chemical	06/11/1996 CALCIUM	Findings	71 000 MG/L
Sample Collected Chemical	06/11/1996 MAGNESIUM	Findings	30 000 MG/L
Sample Collected Chemical	06/11/1996 SODIUM	Findings	33 000 MG/L
Sample Collected Chemical	06/11/1996 POTASSIUM	Findings	9 500 MG/L
Sample Collected Chemical	06/11/1996 CHLORIDE	Findings	20 000 MG/L
Sample Collected Chemical	06/11/1996 TOTAL DISSOLVED SOLIDS	Findings	250 000 MG/L
Sample Collected Chemical	08/01/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	630 UG/L
Sample Collected Chemical	08/01/1996 GROSS ALPHA	Findings	3 500 PCI/L
Sample Collected Chemical	08/01/1996 GROSS ALPHA COUNTING ERROR	Findings	1 420 PCI/L
Sample Collected Chemical	10/10/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	800 UG/L
Sample Collected Chemical	10/10/1996 GROSS ALPHA	Findings	3 500 PCI/L
Sample Collected Chemical	10/10/1996 GROSS ALPHA COUNTING ERROR	Findings	1 420 PCI/L
Sample Collected Chemical	12/12/1996 DIBROMOCHLOROPROPANE (DBCP)	Findings	760 UG/L

3
NE
1/4 - 1/2 Mile
Higher

CA WELLS **3331**

Water System Information

Prime Station Code	03N/07E-18P09 M	User ID	39C
FRDS Number	3901015001	County	San Joaquin
District Number	69	Station Type	WELL/AMBNT/MUN/INTAKE
Water Type	Well/Groundwater	Well Status	Active Raw
Source Lat/Long	380608 0 1211540 0	Precision	1,000 Feet (10 Seconds)
Source Name	WELL 01		

System Number	3901015		
System Name	HACIENDA GAUNA		
Organization That Operates System	Not Reported		
Pop Served	Unknown, Small System	Connections	Unknown, Small System
Area Served	Not Reported		

4
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS3227483**

Agency cd	USGS	Site no	380539121152901
Site name	003N007E19M004M		
Latitude	380539		
Longitude	1211529	Dec lat	38 09408675
Dec lon	-121 25911356	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	NWNWSWS19T03NR07EM
Location map	LODI SOUTH	Map scale	24000
Altitude	46 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19660928
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	ALLUVIAL FAN DEPOSITS		
Well depth	213	Hole depth	268
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	1978-06-06
Water quality data end date	1978-06-06	Water quality data count	1
Ground water data begin date	0000-00-00	Ground water data end date	0000-00-00
Ground water data count	0		

Ground-water levels, Number of Measurements 0

5
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS3227519**

Agency cd	USGS	Site no	380610121153501
Site name	003N006E13R008M		
Latitude	380610		
Longitude	1211535	Dec lat	38 1026976
Dec lon	-121 2607803	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SESESES13T03NR06EM
Location map	LODI SOUTH	Map scale	24000

Altitude	45 60	Altitude method	L
Altitude accuracy	1	Altitude datum	NGVD29
Hydrologic	Lower Sacramento California Area = 1720 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	Not Reported
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	Not Reported	Hole depth	Not Reported
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	Not Reported	Daily flow data begin date	Not Reported
Daily flow data end date	Not Reported	Daily flow data count	Not Reported
Peak flow data begin date	Not Reported	Peak flow data end date	Not Reported
Peak flow data count	Not Reported	Water quality data begin date	Not Reported
Water quality data end date	Not Reported	Water quality data count	Not Reported
Ground water data begin date	Not Reported	Ground water data end date	Not Reported
Ground water data count	Not Reported		

Ground-water levels, Number of Measurements 0

6
SW
1/2 - 1 Mile
Lower

FED USGS **USGS3227652**

Agency cd	USGS	Site no	380530121162701
Site name	003N006E24M001M		
Latitude	380530		
Longitude	1211627	Dec lat	38 0915868
Dec lon	-121 275225	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SENWSWS24T03NR06EM
Location map	LODI SOUTH	Map scale	24000
Altitude	40 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	Not Reported
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	Not Reported	Hole depth	Not Reported
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	Not Reported	Daily flow data begin date	Not Reported
Daily flow data end date	Not Reported	Daily flow data count	Not Reported
Peak flow data begin date	Not Reported	Peak flow data end date	Not Reported
Peak flow data count	Not Reported	Water quality data begin date	Not Reported
Water quality data end date	Not Reported	Water quality data count	Not Reported
Ground water data begin date	Not Reported	Ground water data end date	Not Reported
Ground water data count	Not Reported		

Ground-water levels, Number of Measurements 0

Map ID Direction Distance Elevation	Database	EDR ID Number
7 **WNW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3227499**

Agency cd	USGS	Site no	380559121163701
Site name	003N006E24D003M		
Latitude	380559		
Longitude	1211637	Dec lat	38 0996421
Dec lon	-121 27800287	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	NWNWNWS24T03NR06EM
Location map	LODI SOUTH	Map scale	24000
Altitude	41 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19680424
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	132	Hole depth	330
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	0000-00-00
Water quality data end date	0000-00-00	Water quality data count	0
Ground water data begin date	1968-04-24	Ground water data end date	1968-04-24
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1968-04-24	50 00	

8 **SE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**2046**

Water System Information

Prime Station Code	02N/07E-19N03 M	User ID	39C
FRDS Number	3901011001	County	San Joaquin
District Number	69	Station Type	WELL/AMBNT/MUN/INTAKE
Water Type	Well/Groundwater	Well Status	Active Raw
Source Lat/Long	380524 0 1211532 0	Precision	1,000 Feet (10 Seconds)
Source Name	WELL 01		

System Number	3901011		
System Name	FREEWAY MOBILE HOME PARK		
Organization That Operates System	Not Reported		
Pop Served	Unknown, Small System	Connections	Unknown, Small System
Area Served	Not Reported		

Sample Information *** Only Findings Above Detection Level Are Listed**

Sample Collected	07/01/1986	Findings	060 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	09/04/1986	Findings	1 700 UG/L
Chemical	1,1,2,2-TETRACHLOROETHANE		
Sample Collected	10/17/1986	Findings	060 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	10/17/1986	Findings	1 400 UG/L
Chemical	1,1,2,2-TETRACHLOROETHANE		

9
South
1/2 - 1 Mile
Lower

FED USGS **USGS3227639**

Agency cd	USGS	Site no	380514121155001
Site name	003N006E24Q006M		
Latitude	380514		
Longitude	1211550	Dec lat	38 08714251
Dec lon	-121 26494699	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SESWSES24T03NR06EM
Location map	LODI SOUTH	Map scale	24000
Altitude	42 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19660825
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	ALLUVIAL FAN DEPOSITS		
Well depth	143	Hole depth	224
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	1978-05-31
Water quality data end date	1978-05-31	Water quality data count	1
Ground water data begin date	1966-08-25	Ground water data end date	1966-08-25
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1966-08-25	59 00	

Map ID Direction Distance Elevation	Database	EDR ID Number
10 **WNW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3227513**

Agency cd	USGS	Site no	380606121164501
Site name	003N006E14R005M		
Latitude	380604 6		
Longitude	1211648 1	Dec lat	38 1011976
Dec lon	-121 28108628	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	Not Reported
Location map	LODI SOUTH	Map scale	24000
Altitude	38 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower Sacramento California Area = 1720 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19800620
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	403	Hole depth	410
Source of depth data	Not Reported	Project number	479435800
Real time data flag	Not Reported	Daily flow data begin date	Not Reported
Daily flow data end date	Not Reported	Daily flow data count	Not Reported
Peak flow data begin date	Not Reported	Peak flow data end date	Not Reported
Peak flow data count	Not Reported	Water quality data begin date	Not Reported
Water quality data end date	Not Reported	Water quality data count	Not Reported
Ground water data begin date	Not Reported	Ground water data end date	Not Reported
Ground water data count	Not Reported		

Ground-water levels, Number of Measurements 0

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11 **NNE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**3330**

Water System Information

Prime Station Code	03N/07E-18M03 M	User ID	PTA
FRDS Number	3910004026	County	San Joaquin
District Number	10	Station Type	WELL/AMBNT/MUN/INTAKE
Water Type	Well/Groundwater	Well Status	Active Raw
Source Lat/Long	380630 0 1211533 0	Precision	1,000 Feet (10 Seconds)
Source Name	WELL 22 - RAW		
System Number	3910004		
System Name	LODI, CITY OF		
Organization That Operates System			
	1331 SOUTH HAM LANE		
	LODI, CA 95242		
Pop Served	53903	Connections	20963
Area Served	LODI		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Information *** Only Findings Above Detection Level Are Listed**

Sample Collected Chemical	11/16/1988 SPECIFIC CONDUCTANCE	Findings	397 000 UMHO
Sample Collected Chemical	11/16/1988 PH (LABORATORY)	Findings	7 800
Sample Collected Chemical	11/16/1988 TOTAL ALKALINITY (AS CACO3)	Findings	150 000 MG/L
Sample Collected Chemical	11/16/1988 BICARBONATE ALKALINITY	Findings	150 000 MG/L
Sample Collected Chemical	11/16/1988 TOTAL HARDNESS (AS CACO3)	Findings	140 000 MG/L
Sample Collected Chemical	11/16/1988 CALCIUM	Findings	34 000 MG/L
Sample Collected Chemical	11/16/1988 MAGNESIUM	Findings	14 000 MG/L
Sample Collected Chemical	11/16/1988 SODIUM	Findings	22 000 MG/L
Sample Collected Chemical	11/16/1988 POTASSIUM	Findings	5 400 MG/L
Sample Collected Chemical	11/16/1988 CHLORIDE	Findings	16 000 MG/L
Sample Collected Chemical	11/16/1988 FLUORIDE (TEMPERATURE DEPENDENT)	Findings	200 MG/L
Sample Collected Chemical	11/16/1988 GROSS ALPHA COUNTING ERROR	Findings	850 PCI/L
Sample Collected Chemical	11/16/1988 GROSS BETA COUNTING ERROR	Findings	12 830 PCI/L
Sample Collected Chemical	11/16/1988 TOTAL DISSOLVED SOLIDS	Findings	340 000 MG/L
Sample Collected Chemical	11/16/1988 NITRATE (AS NO3)	Findings	8 000 MG/L
Sample Collected Chemical	11/16/1988 TURBIDITY (LAB)	Findings	2 900 NTU
Sample Collected Chemical	11/16/1988 SPECIFIC CONDUCTANCE	Findings	397 000 UMHO
Sample Collected Chemical	11/16/1988 PH (LABORATORY)	Findings	7 800
Sample Collected Chemical	11/16/1988 TOTAL ALKALINITY (AS CACO3)	Findings	150 000 MG/L
Sample Collected Chemical	11/16/1988 BICARBONATE ALKALINITY	Findings	150 000 MG/L
Sample Collected Chemical	11/16/1988 TOTAL HARDNESS (AS CACO3)	Findings	140 000 MG/L
Sample Collected Chemical	11/16/1988 CALCIUM	Findings	34 000 MG/L
Sample Collected Chemical	11/16/1988 MAGNESIUM	Findings	14 000 MG/L
Sample Collected Chemical	11/16/1988 SODIUM	Findings	22 000 MG/L

Sample Collected Chemical	11/16/1988 POTASSIUM	Findings	5 400 MG/L
Sample Collected Chemical	11/16/1988 CHLORIDE	Findings	16 000 MG/L
Sample Collected Chemical	11/16/1988 FLUORIDE (TEMPERATURE DEPENDENT)	Findings	200 MG/L
Sample Collected Chemical	11/16/1988 TOTAL DISSOLVED SOLIDS	Findings	340 000 MG/L
Sample Collected Chemical	11/16/1988 NITRATE (AS NO3)	Findings	8 000 MG/L
Sample Collected Chemical	11/16/1988 TURBIDITY (LAB)	Findings	2 900 NTU
Sample Collected Chemical	11/16/1988 DIBROMOCHLOROPROPANE (DBCP)	Findings	200 UG/L
Sample Collected Chemical	11/16/1988 DIBROMOCHLOROPROPANE (DBCP)	Findings	250 UG/L
Sample Collected Chemical	09/06/1989 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	10/26/1989 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 600 UG/L
Sample Collected Chemical	11/16/1989 DIBROMOCHLOROPROPANE (DBCP)	Findings	920 UG/L
Sample Collected Chemical	12/14/1989 DIBROMOCHLOROPROPANE (DBCP)	Findings	870 UG/L
Sample Collected Chemical	01/10/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	970 UG/L
Sample Collected Chemical	02/06/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	03/12/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	840 UG/L
Sample Collected Chemical	04/17/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	05/17/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	940 UG/L
Sample Collected Chemical	11/08/1990 DIBROMOCHLOROPROPANE (DBCP)	Findings	970 UG/L
Sample Collected Chemical	01/09/1991 DIBROMOCHLOROPROPANE (DBCP)	Findings	990 UG/L
Sample Collected Chemical	03/07/1991 GROSS ALPHA COUNTING ERROR	Findings	2 710 PCI/L
Sample Collected Chemical	04/10/1991 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 200 UG/L
Sample Collected Chemical	07/08/1991 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 400 UG/L
Sample Collected Chemical	08/21/1991 SPECIFIC CONDUCTANCE	Findings	553 000 UMHO
Sample Collected Chemical	08/21/1991 PH (LABORATORY)	Findings	7 300
Sample Collected Chemical	08/21/1991 TOTAL ALKALINITY (AS CACO3)	Findings	190 000 MG/L

Sample Collected Chemical	08/21/1991 BICARBONATE ALKALINITY	Findings	230 000 MG/L
Sample Collected Chemical	08/21/1991 TOTAL HARDNESS (AS CACO3)	Findings	200 000 MG/L
Sample Collected Chemical	08/21/1991 CALCIUM	Findings	47 000 MG/L
Sample Collected Chemical	08/21/1991 MAGNESIUM	Findings	19 000 MG/L
Sample Collected Chemical	08/21/1991 SODIUM	Findings	31 000 MG/L
Sample Collected Chemical	08/21/1991 POTASSIUM	Findings	5 400 MG/L
Sample Collected Chemical	08/21/1991 CHLORIDE	Findings	27 000 MG/L
Sample Collected Chemical	08/21/1991 BARIUM	Findings	140 000 UG/L
Sample Collected Chemical	08/21/1991 TOTAL DISSOLVED SOLIDS	Findings	350 000 MG/L
Sample Collected Chemical	08/21/1991 NITRATE (AS NO3)	Findings	11 000 MG/L
Sample Collected Chemical	10/16/1991 DIBROMOCHLOROPROPANE (DBCP)	Findings	790 UG/L
Sample Collected Chemical	01/07/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	720 UG/L
Sample Collected Chemical	02/04/1992 GROSS ALPHA	Findings	1 400 PCI/L
Sample Collected Chemical	02/04/1992 GROSS ALPHA COUNTING ERROR	Findings	2 740 PCI/L
Sample Collected Chemical	05/06/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 720 UG/L
Sample Collected Chemical	07/15/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 300 UG/L
Sample Collected Chemical	10/12/1992 GROSS ALPHA COUNTING ERROR	Findings	1 720 PCI/L
Sample Collected Chemical	10/12/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 800 UG/L
Sample Collected Chemical	11/12/1992 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 400 UG/L
Sample Collected Chemical	01/06/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	530 UG/L
Sample Collected Chemical	04/22/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	520 UG/L
Sample Collected Chemical	07/08/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	09/08/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 200 UG/L
Sample Collected Chemical	09/08/1993 NITRATE (AS NO3)	Findings	11 000 MG/L
Sample Collected Chemical	11/03/1993 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 200 UG/L

Sample Collected Chemical	05/09/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 400 UG/L
Sample Collected Chemical	07/06/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 000 UG/L
Sample Collected Chemical	08/31/1994 SPECIFIC CONDUCTANCE	Findings	676 000 UMHO
Sample Collected Chemical	08/31/1994 PH (LABORATORY)	Findings	7 300
Sample Collected Chemical	08/31/1994 TOTAL ALKALINITY (AS CACO3)	Findings	230 000 MG/L
Sample Collected Chemical	08/31/1994 BICARBONATE ALKALINITY	Findings	280 000 MG/L
Sample Collected Chemical	08/31/1994 TOTAL HARDNESS (AS CACO3)	Findings	250 000 MG/L
Sample Collected Chemical	08/31/1994 CALCIUM	Findings	61 000 MG/L
Sample Collected Chemical	08/31/1994 MAGNESIUM	Findings	24 000 MG/L
Sample Collected Chemical	08/31/1994 SODIUM	Findings	46 000 MG/L
Sample Collected Chemical	08/31/1994 POTASSIUM	Findings	5 900 MG/L
Sample Collected Chemical	08/31/1994 CHLORIDE	Findings	31 000 MG/L
Sample Collected Chemical	08/31/1994 BARIUM	Findings	180 000 UG/L
Sample Collected Chemical	08/31/1994 TOTAL DISSOLVED SOLIDS	Findings	440 000 MG/L
Sample Collected Chemical	08/31/1994 NITRATE (AS NO3)	Findings	14 000 MG/L
Sample Collected Chemical	08/31/1994 TURBIDITY (LAB)	Findings	200 NTU
Sample Collected Chemical	08/31/1994 NITRATE + NITRITE (AS N)	Findings	3200 000 UG/L
Sample Collected Chemical	09/20/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 300 UG/L
Sample Collected Chemical	10/05/1994 CHLORIDE	Findings	33 000 MG/L
Sample Collected Chemical	10/05/1994 NITRATE (AS NO3)	Findings	14 000 MG/L
Sample Collected Chemical	10/05/1994 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 500 UG/L
Sample Collected Chemical	02/17/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	1 100 UG/L
Sample Collected Chemical	05/05/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	3 000 UG/L
Sample Collected Chemical	08/22/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	930 UG/L
Sample Collected Chemical	11/29/1995 DIBROMOCHLOROPROPANE (DBCP)	Findings	410 UG/L

Sample Collected	01/30/1996	Findings	400 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	01/30/1996	Findings	6 500 MG/L
Chemical	NITRATE (AS NO3)		
Sample Collected	02/27/1996	Findings	1 100 UG/L
Chemical	BERYLLIUM		
Sample Collected	02/27/1996	Findings	360 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	03/19/1996	Findings	410 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	03/26/1996	Findings	3 280 PCI/L
Chemical	GROSS ALPHA		
Sample Collected	03/26/1996	Findings	1 400 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	04/16/1996	Findings	410 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	05/08/1996	Findings	3 280 PCI/L
Chemical	GROSS ALPHA		
Sample Collected	05/08/1996	Findings	1 400 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	08/01/1996	Findings	520 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	08/01/1996	Findings	3 280 PCI/L
Chemical	GROSS ALPHA		
Sample Collected	08/01/1996	Findings	1 400 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	10/10/1996	Findings	620 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected	10/10/1996	Findings	3 280 PCI/L
Chemical	GROSS ALPHA		
Sample Collected	10/10/1996	Findings	1 400 PCI/L
Chemical	GROSS ALPHA COUNTING ERROR		
Sample Collected	12/12/1996	Findings	540 UG/L
Chemical	DIBROMOCHLOROPROPANE (DBCP)		

12
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS3227641**

Agency cd	USGS	Site no	380515121152701
Site name	003N007E19N002M		
Latitude	380515		
Longitude	1211527	Dec lat	38 08742029
Dec lon	-121 25855797	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SWSWSWS19T03NR07EM
Location map	LODI SOUTH	Map scale	24000

Altitude	45 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19670101
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	143	Hole depth	176
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	Not Reported	Daily flow data begin date	Not Reported
Daily flow data end date	Not Reported	Daily flow data count	Not Reported
Peak flow data begin date	Not Reported	Peak flow data end date	Not Reported
Peak flow data count	Not Reported	Water quality data begin date	Not Reported
Water quality data end date	Not Reported	Water quality data count	Not Reported
Ground water data begin date	Not Reported	Ground water data end date	Not Reported
Ground water data count	Not Reported		

Ground-water levels, Number of Measurements 0

A13
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS3227502**

Agency cd	USGS	Site no	380604121150101
Site name	003N007E19C002M		
Latitude	380604		
Longitude	1211501	Dec lat	38 10103101
Dec lon	-121 25133565	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	NENENWS19T03NR07EM
Location map	LODI SOUTH	Map scale	24000
Altitude	50 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19720825
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	172	Hole depth	294
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	Not Reported	Daily flow data begin date	Not Reported
Daily flow data end date	Not Reported	Daily flow data count	Not Reported
Peak flow data begin date	Not Reported	Peak flow data end date	Not Reported
Peak flow data count	Not Reported	Water quality data begin date	Not Reported
Water quality data end date	Not Reported	Water quality data count	Not Reported
Ground water data begin date	Not Reported	Ground water data end date	Not Reported
Ground water data count	Not Reported		

Ground-water levels, Number of Measurements 0

Map ID Direction Distance Elevation	Database	EDR ID Number
14 **NW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3227554**

Agency cd	USGS	Site no	380630121163101
Site name	003N006E13M002M		
Latitude	380630		
Longitude	1211631	Dec lat	38 10825295
Dec lon	-121 27633621	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	NENWSWS13T03NR06EM
Location map	LODI SOUTH	Map scale	24000
Altitude	43 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19750630
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	ALLUVIAL FAN DEPOSITS		
Well depth	498	Hole depth	505
Source of depth data	Not Reported	Project number	479435800
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	1978-06-01
Water quality data end date	1978-06-01	Water quality data count	1
Ground water data begin date	1975-06-30	Ground water data end date	1975-06-30
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1975-06-30	52 67	

15 **SSW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS3227630**

Agency cd	USGS	Site no	380512121163001
Site name	003N006E24N004M		
Latitude	380512		
Longitude	1211630	Dec lat	38 08658695
Dec lon	-121 27605833	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SESWSWS24T03NR06EM
Location map	LODI SOUTH	Map scale	24000

Altitude	38 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19660502
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	108	Hole depth	201
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	0000-00-00
Water quality data end date	0000-00-00	Water quality data count	0
Ground water data begin date	1966-05-02	Ground water data end date	1966-05-02
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1966-05-02	48 00	

A16
ENE
1/2 - 1 Mile
Higher

FED USGS USGS3227515

Agency cd	USGS	Site no	380607121150101
Site name	003N007E18P008M		
Latitude	380607		
Longitude	1211501	Dec lat	38 10186431
Dec lon	-121 25133565	Coor meth	M
Coor accr	S	Latlong datum	NAD27
Dec latlong datum	NAD83	District	06
State	06	County	077
Country	US	Land net	SESESWS18T03NR07EM
Location map	LODI SOUTH	Map scale	24000
Altitude	51 00	Altitude method	M
Altitude accuracy	2 5	Altitude datum	NGVD29
Hydrologic	Lower CosumnesLower Mokelumne California Area = 747 sq mi		
Topographic	Valley flat		
Site type	Ground-water other than Spring	Date construction	19750505
Date inventoried	Not Reported	Mean greenwich time offset	PST
Local standard time flag	Y		
Type of ground water site	Single well, other than collector or Ranney type		
Aquifer Type	Not Reported		
Aquifer	Not Reported		
Well depth	168	Hole depth	234
Source of depth data	Not Reported	Project number	8479423710
Real time data flag	0	Daily flow data begin date	0000-00-00
Daily flow data end date	0000-00-00	Daily flow data count	0
Peak flow data begin date	0000-00-00	Peak flow data end date	0000-00-00
Peak flow data count	0	Water quality data begin date	1978-06-06
Water quality data end date	1978-06-06	Water quality data count	1
Ground water data begin date	1975-05-05	Ground water data end date	1975-05-05
Ground water data count	1		

Ground-water levels, Number of Measurements 1

Date	Feet below Surface	Feet to Sealevel
1975-05-05	58 00	

AREA RADON INFORMATION

State Database CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct > 4 Pci/L
95240	8	0	0 00

Federal EPA Radon Zone for SAN JOAQUIN County 3

Note Zone 1 indoor average level > 4 pCi/L
Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L
Zone 3 indoor average level < 2 pCi/L

Federal Area Radon Information for Zip Code 95240

Number of sites tested 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0 600 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

TOPOGRAPHIC INFORMATION

USGS 7 5' Digital Elevation Model (DEM)
Source United States Geologic Survey
EDR acquired the USGS 7 5' Digital Elevation Model in 2002 7 5-Minute DEMs correspond to the USGS 1 24,000- and 1 25,000-scale topographic quadrangle maps

HYDROLOGIC INFORMATION

Flood Zone Data This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA) Data depicts 100-year and 500-year flood zones as defined by FEMA

NWI National Wetlands Inventory This data, available in select counties across the country, was obtained by EDR in 2002 from the U S Fish and Wildlife Service

State Wetlands Data Wetlands Inventory
Source California Spatial Information Library
Telephone 916-654-9990

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source P G Schruben, R E Arndt and W J Bawiec, Geology of the Conterminous U S at 1 2,500,000 Scale - A digital representation of the 1974 P B King and H M Beikman Map, USGS Digital Data Series DDS - 11 (1994)

STATSGO State Soil Geographic Database
Source Department of Agriculture, Natural Resources Conservation Services
The U S Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States A soil map in a soil survey is a representation of soil patterns in a landscape Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps

SSURGO Soil Survey Geographic (SSURGO) Database
Source Department of Agriculture, Natural Resources Conservation Services
Telephone 800-672-5559
SSURGO depicts information about soil features on or near the surface of the Earth

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS Public Water Systems
Source EPA/Office of Drinking Water
Telephone 202-564-3750
Public Water System data from the Federal Reporting Data System A PWS is any water system which provides water to at least 25 people for at least 60 days annually PWSs provide water from wells, rivers and other sources

PWS ENF Public Water Systems Violation and Enforcement Data
Source EPA/Office of Drinking Water
Telephone 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995 Prior to August 1995, the data came from the Federal Reporting Data System (FRDS)

USGS Water Wells USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater The groundwater data includes information on wells, springs, and other sources of groundwater

STATE RECORDS

California Drinking Water Quality Database
Source Department of Health Services
Telephone 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984 It consists of over 3,200,000 individual analyses along with well and water system information

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations for District 2, 3, 5 and 6
Source Department of Conservation
Telephone 916-323-1779

RADON

State Database CA Radon
Source Department of Health Services
Telephone 916-324-2208
Radon Database for California

Area Radon Information
Source USGS
Telephone 703-356-4020
The National Radon Database has been developed by the U S Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey The study covers the years 1986 - 1992 Where necessary data has been supplemented by information collected at private sources such as universities and research institutions

EPA Radon Zones
Source EPA
Telephone 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U S with the potential for elevated indoor radon levels

OTHER

Airport Landing Facilities Private and public use landing facilities
Source Federal Aviation Administration, 800-457-6656

Epicenters World earthquake epicenters, Richter 5 or greater
Source Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology

APPENDIX D

INTERVIEW & REGULATORY AGENCY DOCUMENTATION

INTERVIEW CONVERSATION RECORD

Date: 3/15/06 **Time:** 11:00AM

To X **From** Erma Bradley

Company: Property owner APN 058-13-09

Address:

Phone No.

Project Name: Reynolds Ranch **Project No:** 65942.P01

Mrs Erma Bradley (APN 058-13-09) was interviewed on March 15, 2006 during Kleinfelder's site reconnaissance According to Mrs Bradley the UST onsite was a 400-gallon motor fuel tank, which was in the ground for approximately six years The tank was removed from the property in 1992 The property was used for agriculture of grapes She has owned the property for approximately 35 years According to Mrs Bradley she has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite She stated that no chemicals were stored onsite

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TELEPHONE CONVERSATION RECORD

Date: 3/20/06 **Time:** 10:00M

ToX From Pat Stocker

Company:

Address:

Phone No. 479-1053

Project Name: Reynolds Ranch **Project No:** 65942.P01

Pat Stocker (APN 058-13-10 and 11) was interview on March 20, 2006 He has owned the property since 2000 According to Mr Stockar the UST on site was for farm use and had been removed prior to his ownership A restaurant was located on the property approximately 50 years ago and was located in the northeast corner of the parcel were the Frontage Road is now located The property has been used for agricultural purposes (vineyards) According to Mr Stockar sulfur is used on the site and chemicals are not stored or mixed onsite According to Mr Stockar he has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite There are two septic tanks onsite, one located east of the residence and one located south of the residence

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TELEPHONE CONVERSATION RECORD

Date: 3/20/06 **Time:** 9:45M

ToX From Don Reynolds

Company:

Address:

Phone No. 369-2725

Project Name: Reynolds Ranch **Project No:** 65942.P01

Don Reynolds (APN's 058-13-15, 16 and 058-11-41 and 04) was interview on March 20, 2006 According to Mr Reynolds the property has been in the family for the last 30 years There have been vineyards on the property for the past 50 to 60 years According to Mr Reynolds he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite According to Mr Reynolds the barns are used to store the harvesting equipment they use onsite And there are no chemical mixing area onsite Mr Reynolds stated they use sulfur onsite Septic tanks are associated with the residences onsite Mr Reynolds was unsure the purpose of the well in the shed located on APN 058-11-04 According to Mr Reynolds the well located south of the residence located on APN 058-13-15 is a new well used for agricultural purposes but is also set up to use for domestic use The well is approximately 150 feet deep

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TELEPHONE CONVERSATION RECORD

Date: 3/20/06 **Time:** 4:20M

ToX From Dominic Della Maggiora

Company:

Address:

Phone No. 369-2725

Project Name: Reynolds Ranch **Project No:** 65942.P01

Dominic Della Maggiora (brother of the owner Mrs Pelleti) (APN 058-13-22) was interview on March 20, 2006 According to Mr Dela Maggiora the property has been in the family since the 1980's The property has been used fro vineyard since there ownership and prior to there ownership A septic system is associated with the house and is north of the residence A 150-gallon diesel UST for a furnace is located on the north side of the residence and has been in the ground for approximately 20 years According to Mr Della Maggiora he has no knowledge of any buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite No chemicals are stored onsite and there are no chemical mixing areas onsite

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TELEPHONE CONVERSATION RECORD

Date: 3/20/06 **Time:** 2:00PM

ToX From Dan Parises

Company:

Address:

Phone No. 329-5135

Project Name: Reynolds Ranch **Project No:** 65942.P01

Mr Dan Parises (APN 058-13-07) was interview on March 20, 2006 The property was used for agriculture of grapes He has owned the property since 1999 and leased the property for approximately 10 years previouse to this According to Mr Parises he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite He stated that no chemicals were stored onsite Mr Parises stated he uses herbicides to spray between the rows and uses sulfur The irrigation well is also used for the residence onsite The septic tank is located east of the house

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TELEPHONE CONVERSATION RECORD

Date: 3/20/06 **Time:** 9:30M

ToX From Gary Tsutsumi

Company:

Address:

Phone No. 639-2554

Project Name: Reynolds Ranch **Project No:** 65942.P01

Mr Gary Tsutsumi (APN 058-13-24) was interview on March 20, 2006 He has owned the property for the past 40 years and has used the property for vineyards since he has owned it A cherry orchard was on the property in the 50's According to Mr Tsutsumi he has no knowledge of any UST's, buried debris, and was unaware of any hazardous materials and/or petroleum product releases or incidents onsite He stated that no chemicals were stored onsite Herbicides and sulfur are used on the site Two wells are located on the property One well is located adjacent to the pump house and the second well is located west of the residence east of the shed This residence (13475 N Stockton Street) was the original ranch house for the property The septic tank is located south of the residence The shed contains farm equipment The parcel south of his (APN 058-13-21) has been fallow for approximately 8 years The property contained vineyards in the past Mr Tsutsumi does not know of any underground tanks associated with this property

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TELEPHONE CONVERSATION RECORD

Date: 3/1/06 **Time:** 1:40PM

To **From X** Dianne

Company: SJC Environmental Health Department

Address:

Phone No.

Project Name: Reynolds Ranch **Project No:** 65942.P01

According to Dianne they have files for the Addresses 13371 N. Hwy 99 and 4044 E. Harney Lane.

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TELEPHONE CONVERSATION RECORD

Date: 2/21/06 **Time:** 3:00PM

To **From X** Michelle

Company: San Joaquin Office of Emergency Services

Address:

Phone No. 209-468-3962

Project Name: Reynolds Ranch **Project No:** 65942.P01

According to Michelle at SJOES there are no records in their database for the addresses listed on the subject site.

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Office of the State Fire Marshal

Pipeline Safety Division
P O Box 944246
Sacramento, CA 94244-2460

Request ID 03032006SFM001

TO KLEINFELDER, INC
RYAN BROSIUS
2825 E MYRTLE STREET
STOCKTON, CA 95205

Phone 209 948 1345
Fax 209 948 0621
EMail

FROM Lisa Dowdy

Phone (916) 445-8477
Fax (916) 445-8526

PIPELINE LOCATION REQUEST FOR

REYNOLDS RANCH
LODI, CA 95240

THE FOLLOWING COMPANY(S) HAVE STATE FIRE MARSHAL JURISDICTIONAL PIPELINES IN THE AREA YOU HAVE REQUESTED:

Kinder Morgan
CSFM ID 0274
SIZE 10
COMMODITY Refined Product (Gasoline, Jet Fuel, Gas Oil)

For more information and exact location of Kinder Morgan pipelines and any other pipelines they may have in the area please call the following representative

Don Quinn (714) 560-4940

- FOR NATURAL GAS PIPELINES PLEASE CONTACT YOUR LOCAL GAS COMPANY

- FOR OTHER TYPES OF PIPELINE PLEASE CONTACT THE DIVISION OF OIL AND GAS AT (714) 816-6847

- FOR PUBLIC UTILITIES PLEASE CONTACT THE PUBLIC UTILITIES COMMISSION AT (415) 703-2782

Lisa Dowdy
Research Analyst I
Office fo the State Fire Marshal

Jim Thorpe Oil, Inc.

351 N Beckman Road ● P O. Box 357 ● Lodi, CA 95241
(209) 368-6175 ● (209) 462-4581
Contractor's License #495699

September 27, 1993

RECEIVED
OCT 07 1993
ENVIRONMENTAL HEALTH
PERMIT/SERVICES

San Joaquin Health Services
448 N. San Joaquin Street
P. O. Box 2009
Stockton, CA 95201

Attention: Underground Tank Program

Re: 13371 N. Hwy 99, Lodi, CA 95240
Terry Zachmeister

Jim Thorpe Oil, Inc./dba Rich-Mart Construction removed one (1) 550 gallon EXCMPT underground fuel tank at the above site on September 1, 1993. Attached are the following:

Underground Storage Tank Program-Farm Tank Information Form
Exempt Underground Storage Tank Statement with plot plan
Copy of San Joaquin County Fire Prevention permit 4930709
Tank Tracking Record
Copies of Nor-Cal Oil invoice #4170 and Uniform Hazardous Waste Manifest #081 2381 for pump out and transportation of the product from the inside rinse of the tank.

Sincerely,

JIM THORPE OIL INC. dba
RICH-MART CONSTRUCTION

Tamra Thorpe

Tamra Thorpe
Secretary-Treasurer

TT
Attachments (7)
cc: San Joaquin Fire Prevention
Terry Zachmeister

WHERVRY "W WYOVRV TOOD TRVVOOV. TOOD TOOD INVOOVTVOV TOOD

FACILITY/SITE INFORMATION (Complete . .d Form for each FARM TANK location)

FACILITY				
FARM or BUSINESS NAME: JERRY ZECHMEISTER				CONTACT NAME:
ADDRESS (Street address of TANK location): 13371 N. Hwy 99				PHONE # WITH AREA CODE: (209) 368-4060
CITY: Lodi	STATE: CA	ZIP CODE: 95240	NEAREST CROSS STREET: Harney Lane	
☐ CHECK HERE if this ADDRESS should be used for Legal Notification				

OPERATOR INFORMATION & ADDRESS (Complete if Information Different from Above)

OPERATOR				
NAME:				OPERATOR CONTACT NAME:
MAILING or STREET ADDRESS:				OPERATOR PHONE # WITH AREA CODE:
CITY:	STATE:	ZIP CODE:		
☐ CHECK HERE if this ADDRESS should be used for Legal Notification				

PROPERTY OWNER INFORMATION & ADDRESS (Complete if Different from Above)

OWNER				
NAME: JERRY ZECHMEISTER				OWNER CONTACT NAME:
MAILING or STREET ADDRESS: 21671 Montbury Drive				OWNER PHONE # WITH AREA CODE: (714) 768-5992 - home (714) 587-0155 - work
CITY: El Toro	STATE: CA	ZIP CODE: 92630		
X CHECK HERE if this ADDRESS should be used for Legal Notification				

Check Appropriate Box

TYPE			
		ACTIVE FARM TANK SITE	(One or more underground TANKS > 1,100 gal. capacity)
	X	EXEMPT FARM TANK SITE	(ALL underground TANKS at site = to or < 1,100 gal. capacity)
		PERMANENTLY CLOSED FARM TANK SITE	(ALL underground TANKS at site removed or closed in place)

UNDERGROUND TANK INFORMATION (List Additional tank information on separate sheet if needed)

TANK INFO	TANK SIZE (GALLONS)	CHEMICALS STORED CURRENTLY OR PREVIOUSLY	ESTIMATED DATE LAST USED IF CURRENTLY EMPTY	METHOD OF CLOSURE IF PERMANENTLY CLOSED	DATE OF REMOVAL OR CLOSURE IN PLACE
	350	Regular gasoline	8/31/93	Tank Removal	9/1/93

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

NAME	TITLE	DATE
Jerry Zechmeister	Owner	9/10/93

OFFICE USE ONLY

SWEEPS #	COMP #	LOC CODE	DIST CODE	# ACTIVE UGT	# EXEMPT UGT	# CLOSED UGT	SWEEPS PRGM/SUB CODE	DATE

EH 23 044 (12/88)

EXEMPT UNDERGROUND STORAGE TANKS

OWNER: JERRY ZECHMEISTER

ADDRESS: 21671 Montbury Drive, El Toro, CA 92630

PHONE: (714) 768-5992-home; (714) 587-0155-work

DATE REMOVED: 9/1/93

TANK SIZE: 350

PRODUCT STORED: gasoline

LOCATION (IF DIFFERENT): 13371 N. Hwy 99, Lodi, CA 95240

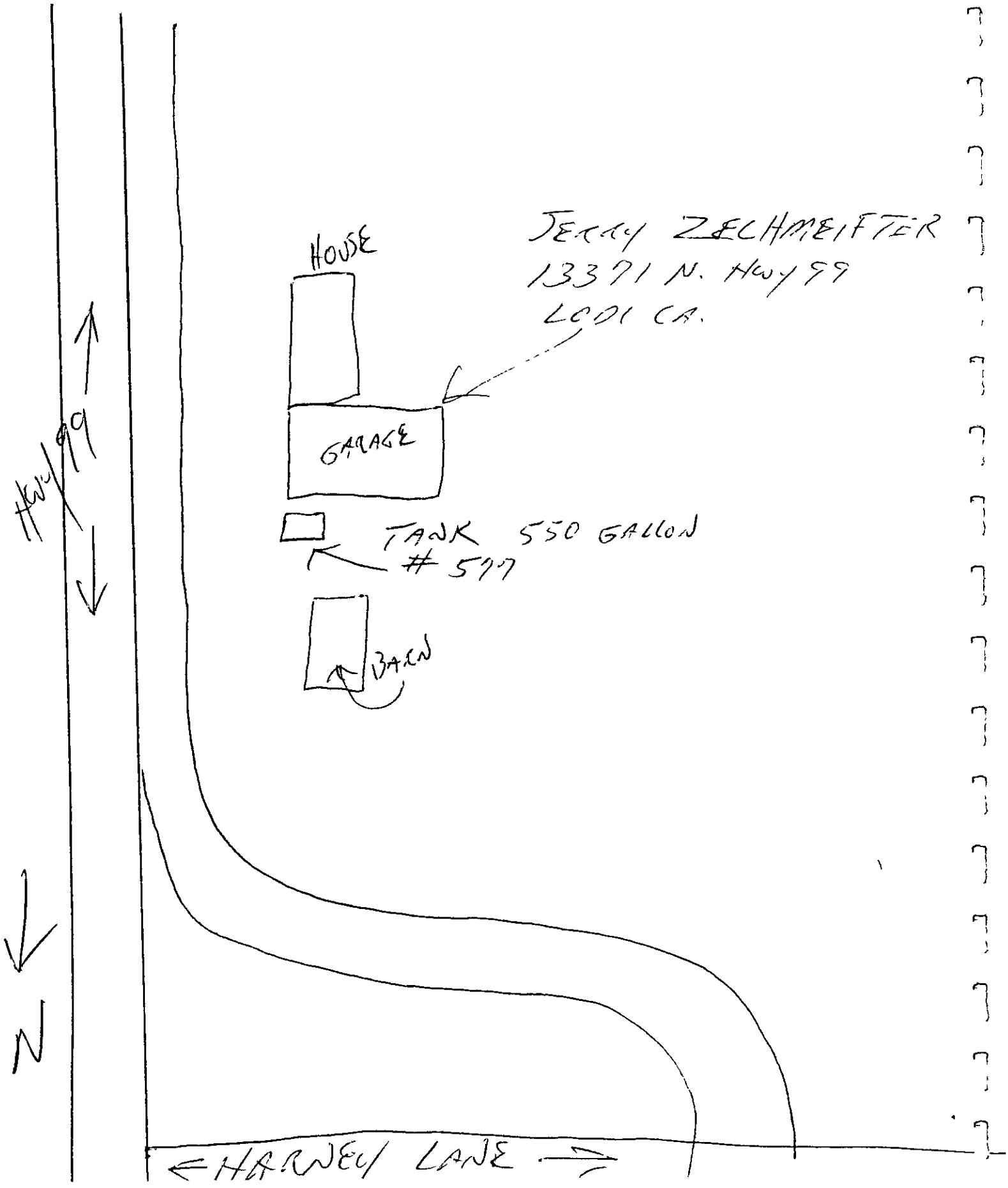
REMARKS: The tank was removed by Jim Thorpe Oil, Inc., dba Rich-Mart Construction, Hazardous Waste Hauler, Registration #2667. We triple rinsed, dry iced, and removed the tank. The tank was in good condition. There was no odor or soil discoloration noted in the excavation. The tank was transported to our yard at 807 E. Black Diamond Way, Lodi, CA CA EPA CAL 000012884 where it was destroyed, then transported by us to Schnitzer Steel Products, 12000 Folsom Blvd., Rancho Cordova, CA 94670 for disposal as scrap. Plot plan attached.

Sincerely,

JIM THORPE OIL, INC.
dba RICH-MART CONSTRUCTION

Martin Thorpe

Martin Thorpe
Vice-President


JERRY ZELHMEIFTER
13371 N. HWY 99
LODI CA.
HOUSE
GARAGE
TANK 550 GALLON
577
BARN
HWY 99
N
HARNEY LANE

Fire Permit

SAN JOAQUIN COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
1810 E. HAZELTON AVENUE, STOCKTON, CA 95205
BUSINESS PHONE (209) 468-3380

SITE LOCATION INFORMATION	PERMIT NUMBER: FP-9300209
Job Site Address: 13371 N ST RT 99 W FRON RD LODI	
Cross Street: HARNEY LANE	APN: 058-130-11

SCOPE OF WORK

REMOVAL 09-03-93 AT 9:00 A.M.

OWNER NAME AND ADDRESS		APPLICANT NAME AND ADDRESS	
Name ZECHMEISTER, B I CO-TRS ETAL		Name: RICH-MART	
Address: 13371 N 99 HWY LODI, CA		Address: P.O. BOX 357 LODI, CA	
Zip 952400000	Ph	Zip. 95241	Ph: 462-4581
CONTRACTOR INFORMATION		**DESIGNER INFORMATION**	
Name THORPE JIM OIL INC		Name:	
Address: 351 N. BECKMAN ROAD LODI, CA 95240		Address:	
Lic No 495699	Ph: 209 462-4581	Lic. No:	Ph:

PERMIT DESCRIPTION

THIS PERMIT MUST, AT ALL TIMES, BE KEPT ON THE PREMISES.

79.103F FLAM.COMB.LIQ./TANK REMOVAL Expires: Nov 26, 1993

This permit does not take the place of any License required by law and is not transferable Any changes in use or occupancy of premises shall require a new permit This permit shall, in no way, relieve the party to whom it is issued from full responsibility for damages incurred through its use

FIRE PERMIT INFORMATION

Total Sq Ft:	Occupancy:	Const Type.	Fee: 100.00
Accepted By: DF	Approved By: DF	Applied Date: 08/26/1993	Issue Date: 08/26/1993

UNDERGROUND STORAGE TANK DISPOSITION TRACKING RECORD

****

SECTION 1 - Public Health Services Tracking Sheet will accompany each tank affixed with its site identification number. The Tracking Sheet is to be returned to Public Health Services within 30 days of acceptance of the tank by the disposal or recycling facility. The permit holder is responsible for ensuring that this form is completed and returned.

FACILITY NAME: JERRY ZECHMEISTER EPA Site #CAC 000 872944

FACILITY ADDRESS: 13371 N. Hwy 99, Lodi, CA 95240

TANK ID #39 - Exempt Farm Tank **Tank Description:** 350 Gallon Diesel/ Gasoline/ Waste Oil

****

SECTION 2 - To be filled out by tank removal contractor:

Tank Removal Contractor: Jim Thorpe Oil, Inc. DBA Rich-Mart Construction

Address: 351 N. Beckman Rd./ P.O. Box 357 **City:** Lodi, CA **Zip:** 95241-0357

Phone #: (209) 462-4581 **Date Tank Removed:** 9/1/93

****

SECTION 3 - To be filled out by contractor "decontaminating tank":

Tank Decontamination Contractor: Jim Thorpe Oil,DBA Rich-Mart Construction

Address: 351 N. Beckman Rd./ P.O. Box 357 **City:** Lodi, CA **Zip:** 95241-0357

Phone #: (209) 462-4581

Authorized representative of contractor certifying through signature below that the tank has been decontaminated in an approved manner as required by Cal EPA.

Signature: Martin Thorpe **Title:** Vice-President

****

SECTION 4 - To be signed and dated by an authorized representative of the treatment, storage, or disposal facility accepting tank and/or piping.

Tank is free of all sludges and hydrocarbon vapors upon delivery to Schnitzer Steel.

Facility Name: Schnitzer Steel Products

Address 12000 Folsom Blvd. **City:** Rancho Cordova **Zip:** 95742

Phone #: (916) 985-4810

Date Tank Received: 9/9/93

Signature: **Title:**

****

Form Approved OMB No 2050—0039 (Expires 9 30 91)
Please print or type (Form designed for use on elite pitch typewriter)

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No: CAC000872944
Manifest Document No: 12981

2 Page 1 of 1

Information in the shaded areas is not required by Federal law

A State Manifest Document Number: 88112981

3 Generator's Name and Mailing Address
JERRY ZECHMEISTER
21671 Montbury Dr., El Toro, CA 92630

4 Generator's Phone (714) 768-0155

B State Generator's ID

5 Transporter 1 Company Name: NOR CAL OIL

6 US EPA ID Number: CAD982417255

C State Transporter's ID

D Transporter's Phone: (800) 332-8710

7 Transporter 2 Company Name

8 US EPA ID Number

E State Transporter's ID

F Transporter's Phone

9 Designated Facility Name and Site Address
REFINERIES SERVICE
13331 North Hwy. 33
Patterson, CA 95363

10 US EPA ID Number: CAD083166728

G State Facility's ID: CAD083166728

H Facility's Phone: (800) 874-4444

11 US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12 Containers No	12 Containers Type	13 Total Quantity	14 Unit Wt/Vol	1 Waste No
a HAZARDOUS WASTE LIQUID N.O.S. ORM-E NA-9189	001	TT	6	G	State 223 / EPA/Other
b					State / EPA/Other
c					State / EPA/Other
d					State / EPA/Other

J Additional Descriptions for Materials Listed Above
TANK BOTTOM WASTE
RINSATE

K Handling Codes for Wastes Listed Above
a
b
c
d

15 Special Handling Instructions and Additional Information
APPROPRIATE PROTECTIVE CLOTHING
SEE E.R.G. 31
"EMERGENCY CONTACT: 800-332-8710"

16
GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage or disposal currently available to me which minimizes the present and future threat to human health and the environment OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford

Printed/Typed Name: Richard Thorpe for Jerry Zechmeister
Signature
Month Day Year: 09 28 93

GENERATOR

TRANSPORTER

17 Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JOE PUETT
Signature
Month Day Year: 09 28 93

18 Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19 Discrepancy Indication Space

20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name
Signature
Month Day Year

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1 800-424-8802, WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev 9 88) Previous editions are obsolete

Do Not Write Below This Line

YELLOW GENERATOR RETAINS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A

"E"

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM: [ ] 1 NEW PERMIT [ ] 2 INTERIM PERMIT [ ] 3 RENEWAL PERMIT [ ] 4 AMENDED PERMIT [X] 5 CHANGE OF INFORMATION [ ] 6 TEMPORARY SITE CLOSURE [ ] 7 PERMANENTLY CLOSED SITE

61

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

DBA OR FACILITY NAME: JERRY ZECHMEISTER	NAME OF OPERATOR		
ADDRESS: 13371 N. HWY 99	NEAREST CROSS STREET: HARNEY		PARCEL # (OPTIONAL)
CITY NAME: LODI	STATE: CA	ZIP CODE: 95240	SITE PHONE # WITH AREA CODE: (209) 368-4060

✓ BOX TO INDICATE: [ ] CORPORATION [ ] INDIVIDUAL [ ] PARTNERSHIP [ ] LOCAL-AGENCY DISTRICTS* [ ] COUNTY-AGENCY* [ ] STATE AGENCY* [ ] FEDERAL AGENCY*

* If owner of UST is a public agency complete the following name of Supervisor of division section, or office which operates the UST _____

TYPE OF BUSINESS: [ ] 1 GAS STATION [ ] 2 DISTRIBUTOR [X] 3 FARM [ ] 4 PROCESSOR [ ] 5 OTHER	[ ] ✓ IF INDIAN RESERVATION OR TRUST LANDS	# OF TANKS AT SITE: 1	E P A I D # (optional)

EMERGENCY CONTACT PERSON (PRIMARY)		EMERGENCY CONTACT PERSON (SECONDARY) - optional	
DAYS NAME (LAST FIRST): ZECHMEISTER JERRY	PHONE # WITH AREA CODE: (209) 368-4060	DAYS NAME (LAST FIRST)	PHONE # WITH AREA CODE
NIGHTS NAME (LAST, FIRST): " "	PHONE # WITH AREA CODE: (714) 587-0155	NIGHTS NAME (LAST FIRST)	PHONE # WITH AREA CODE

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME: JERRY ZECHMEISTER	CARE OF ADDRESS INFORMATION		
MAILING OR STREET ADDRESS: 21671 MONTBURY DRIVE	✓ box to indicate: [ ] INDIVIDUAL [ ] LOCAL AGENCY [ ] STATE AGENCY [ ] CORPORATION [ ] PARTNERSHIP [ ] COUNTY AGENCY [ ] FEDERAL AGENCY		
CITY NAME: EL TORO	STATE: CA	ZIP CODE: 92630	PHONE # WITH AREA CODE: (714) 587-0155

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME OF OWNER: JERRY ZECHMEISTER	CARE OF ADDRESS INFORMATION		
MAILING OR STREET ADDRESS: 21671 MONTBURY DRIVE	✓ box to indicate: [ ] INDIVIDUAL [ ] LOCAL AGENCY [ ] STATE AGENCY [ ] CORPORATION [ ] PARTNERSHIP [ ] COUNTY-AGENCY [ ] FEDERAL AGENCY		
CITY NAME: EL TORO	STATE: CA	ZIP CODE: 92630	PHONE # WITH AREA CODE: (714) 587-0155

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 322-9669 if questions arise

TY (TK) HQ 44- [ ][ ][ ][ ][ ][ ]

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) – IDENTIFY THE METHOD(S) USED

✓ box to indicate: [ ] 1 SELF INSURED [ ] 2 GUARANTEE [ ] 3 INSURANCE [ ] 4 SURETY BOND [ ] 5 LETTER OF CREDIT [ ] 6 EXEMPTION [ ] 99 OTHER _____

VI LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I [ ] II [X] III [ ]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

OWNER'S NAME (PRINTED & SIGNED)	OWNER'S TITLE	DATE MONTH/DAY/YEAR

LOCAL AGENCY USE ONLY

RUC ID 503636

COUNTY #	JURISDICTION #	FACILITY #
39	[ ][ ][ ]	[ ][ ]5911[0]

E.T. 10/11/92

LOCATION CODE - *OPTIONAL*	CENSUS TRACT # - *OPTIONAL*	SUPVISOR - DISTRICT CODE - *OPTIONAL*
02	23.22	320

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

OWNER MUST FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

"E"

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM

MARK ONLY ONE ITEM				
	[ ] 1 NEW PERMIT	[ ] 3 RENEWAL PERMIT	[ ] 5 CHANGE OF INFORMATION	[ ] 7 PERMANENTLY CLOSED ON SITE
	[ ] 2 INTERIM PERMIT	[ ] 4 AMENDED PERMIT	[ ] 6 TEMPORARY TANK CLOSURE	[X] 8 TANK REMOVED [09]

DBA OR FACILITY NAME WHERE TANK IS INSTALLED 13371 N Hwy 99

I TANK DESCRIPTION

COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN

A OWNER'S TANK I D # V.K.	B MANUFACTURED BY V.K.
C DATE INSTALLED (MO/DAY/YEAR) V.K.	D TANK CAPACITY IN GALLONS 350

II TANK CONTENTS

IF A-1 IS MARKED COMPLETE ITEM C

A	[X] 1 MOTOR VEHICLE FUEL	[ ] 4 OIL	B	[X] 1 PRODUCT	C	[ ] 1a REGULAR UNLEADED	[ ] 3 DIESEL	[ ] 6 AVIATION GAS
	[ ] 2 PETROLEUM	[ ] 80 EMPTY		[ ] 2 WASTE		[ ] 1b PREMIUM UNLEADED	[ ] 4 GASAHOL	[ ] 7 METHANOL
	[ ] 3 CHEMICAL PRODUCT	[ ] 95 UNKNOWN				[X] 2 LEADED	[ ] 5 JET FUEL	
							[ ] 99 OTHER (DESCRIBE IN ITEM D BELOW)	

D IF (A 1) IS NOT MARKED ENTER NAME OF SUBSTANCE STORED C A S #

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A B AND C AND ALL THAT APPLIES IN BOX D AND E

A TYPE OF SYSTEM	[ ] 1 DOUBLE WALL	[ ] 3 SINGLE WALL WITH EXTERIOR LINER	[X] 95 UNKNOWN	
	[ ] 2 SINGLE WALL	[ ] 4 SECONDARY CONTAINMENT (VAULTED TANK)	[ ] 99 OTHER ____	
B TANK MATERIAL (Primary Tank)	[ ] 1 BARE STEEL	[ ] 2 STAINLESS STEEL	[ ] 3 FIBERGLASS	[ ] 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC
	[ ] 5 CONCRETE	[ ] 6 POLYVINYL CHLORIDE	[ ] 7 ALUMINUM	[ ] 8 100% METHANOL COMPATIBLE W/FRP
	[ ] 9 BRONZE	[ ] 10 GALVANIZED STEEL	[X] 95 UNKNOWN	[ ] 99 OTHER ____
C INTERIOR LINING	[ ] 1 RUBBER LINED	[ ] 2 ALKYD LINING	[ ] 3 EPOXY LINING	[ ] 4 PHENOLIC LINING
	[ ] 5 GLASS LINING	[ ] 6 UNLINED	[X] 95 UNKNOWN	[ ] 99 OTHER ____
	IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL ? YES ___ NO ___			
D CORROSION PROTECTION	[ ] 1 POLYETHYLENE WRAP	[ ] 2 COATING	[ ] 3 VINYL WRAP	[ ] 4 FIBERGLASS REINFORCED PLASTIC
	[ ] 5 CATHODIC PROTECTION	[ ] 91 NONE	[X] 95 UNKNOWN	[ ] 99 OTHER ____
E SPILL AND OVERFILL	SPILL CONTAINMENT INSTALLED (YEAR) ____		OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) ____	

IV PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND BOTH IF APPLICABLE

A SYSTEM TYPE	A U 1 SUCTION	A U 2 PRESSURE	A U 3 GRAVITY	A U 99 OTHER
B CONSTRUCTION	A U 1 SINGLE WALL	A U 2 DOUBLE WALL	A U 3 LINED TRENCH	A U 95 UNKNOWN A U 99 OTHER
C MATERIAL AND CORROSION PROTECTION	A U 1 BARE STEEL	A U 2 STAINLESS STEEL	A U 3 POLYVINYL CHLORIDE (PVC)	A U 4 FIBERGLASS PIPE
	A U 5 ALUMINUM	A U 6 CONCRETE	A U 7 STEEL W/ COATING	A U 8 100% METHANOL COMPATIBLE W/FRP
	A U 9 GALVANIZED STEEL	A U 10 CATHODIC PROTECTION	A U 95 UNKNOWN	A U 99 OTHER ____
D LEAK DETECTION	[ ] 1 AUTOMATIC LINE LEAK DETECTOR	[ ] 2 LINE TIGHTNESS TESTING	[ ] 3 INTERSTITIAL MONITORING	[ ] 99 OTHER ____

V TANK LEAK DETECTION

[ ] 1 VISUAL CHECK	[ ] 2 INVENTORY RECONCILIATION	[ ] 3 VADOZE MONITORING	[ ] 4 AUTOMATIC TANK GAUGING	[ ] 5 GROUND WATER MONITORING
[ ] 6 TANK TESTING	[ ] 7 INTERSTITIAL MONITORING	[ ] 91 NONE	[X] 95 UNKNOWN	[ ] 99 OTHER

VI TANK CLOSURE INFORMATION

1 ESTIMATED DATE LAST USED (MO/DAY/YR) 9/1/93	2 ESTIMATED QUANTITY OF SUBSTANCE REMAINING UNKNOWN GALLONS	3 WAS TANK FILLED WITH INERT MATERIAL ? YES [ ] NO [ ]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE

LOCAL AGENCY USE ONLY

THE STATE I D NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I D #	COUNTY #	JURISDICTION #	FACILITY #	TANK #
				5 0 3 6 4 3 E.T. 10/11/93

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED
FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

4/25/93 Rec'd

NOR-CAL OIL
P.O. Box 645
DENAIR, CA 95316
1-800-332-8710
E.P.A. CAD 982417255

CUSTOMER S ORDER NO	PHONE 209 462-4581	DATE 9/28/93
NAME THORPE OIL, INC.		
ADDRESS N. BECKMAN RD.		
LODI, CA 95240		

EPA #	CAL000012884	1 DRUM RINSATE	
QTY	DESCRIPTION	PRICE	AMOUNT
	WASTE OIL N O S COMBUSTIBLE LIQUID NA-1270	[redacted]	
135	WASTE WATER/RINSATE		
	WASTE ETHYLENE GLYCOL		
	TEST		
	USED OIL FILTERS-DRAINED 24 HRS.		
	SLUDGE	GAL	
S.M.D.N	88112981 Jerry Zechmeister	6	CAC000872944
	[redacted]		
S.M.D N.			
SHIP TO.			
	REFINERIES SERVICE / ROMIC CHEMICAL CORP		
	13331 N. HWY 33 / 2081 BAY ROAD		
	PATTERSON, CA 95363 / E. PALO ALTO, CA 94303		
	E P A. CAD083166728 / E P A. CAD009452657	TAX	
SIGNATURE T Thorpe		TOTAL	

04170

Thank You

Jim Thorpe Oil, Inc.

351 N. Beckman Road ● P O Box 357 ● Lodi, CA 95241
(209) 368-6175 ● (209) 462-4581
Contractor's License #495699

September 29, 1992

RECEIVED
SEP 30 1992
ENVIRONMENTAL HEALTH
PERMIT/SERVICES

San Joaquin Health Services
445 N. San Joaquin Street
P. O. Box 2009
Stockton, CA 95202

Attention: Underground Tank Program

Re: 4044 E. Harney Lane, Lodi, CA - Erma Bradley

Jim Thorpe Oil, Inc./dba Rich-Mart Construction removed one (1) 400 gallon EXEMPT underground fuel tank at the above site on September 18, 1992.

Attached are the following:

Underground Storage Tank Program-Farm Tank Information Form
Exempt Underground Storage Tank Statement with plot plan
Copy of San Joaquin County Fire Prevention permit #92-0148
Tank Tracking Record
Nor-Cal Oil invoice #0221, manifest #92287378 (copy) for pump out and transportation of the rinsate from the triple rinse of the tank.

Sincerely,

JIM THORPE OIL, INC.
dba RICH-MART CONSTRUCTION

Tamra Thorpe
Tamra Thorpe
Secretary-Treasurer

TT
attachments (6)
cc: San Joaquin Fire Prevention
Erma Bradley

UNDERGROUND STORAGE TANK PROGRAM - FARM TANK INFORMATION FORM

FACILITY/SITE INFORMATION (Complete this Form for each FARM TANK location)

FACILITY				
FARM or BUSINESS NAME: Erma Bradley (John)			CONTACT NAME:	
ADDRESS (Street address of TANK location): 4044 E. Harney Lane			PHONE # WITH AREA CODE: 209-369-8184	
CITY: Lodi Cal	STATE:	ZIP CODE: 95240	NEAREST CROSS STREET: Stockton St	
[X] CHECK HERE if this ADDRESS should be used for Legal Notification				

OPERATOR INFORMATION & ADDRESS (Complete if Information Different from Above)

OPERATOR			
NAME:		OPERATOR CONTACT NAME:	
MAILING or STREET ADDRESS:		OPERATOR PHONE # WITH AREA CODE:	
CITY:	STATE:	ZIP CODE:	
[ ] CHECK HERE if this ADDRESS should be used for Legal Notification			

PROPERTY OWNER INFORMATION & ADDRESS (Complete if Different from Above)

OWNER			
NAME:		OWNER CONTACT NAME:	
MAILING or STREET ADDRESS:		OWNER PHONE # WITH AREA CODE:	
CITY:	STATE:	ZIP CODE:	
[ ] CHECK HERE if this ADDRESS should be used for Legal Notification			

Check Appropriate Box

TYPE		
[ ]	ACTIVE FARM TANK SITE	(One or more underground TANKS > 1,100 gal. capacity)
[X]	EXEMPT FARM TANK SITE	(ALL underground TANKS at site = to or < 1,100 gal. capacity)
[ ]	PERMANENTLY CLOSED FARM TANK SITE	(ALL underground TANKS at site removed or closed in place)

UNDERGROUND TANK INFORMATION (List Additional tank information on separate sheet if needed)

TANK INFO	TANK SIZE (GALLONS)	CHEMICALS STORED CURRENTLY OR PREVIOUSLY	ESTIMATED DATE LAST USED IF CURRENTLY EMPTY	METHOD OF CLOSURE IF PERMANENTLY CLOSED	DATE OF REMOVAL OR CLOSURE IN PLACE
	400 gallons				
		Regular gas	Unknown	TANK REMOVAL	9/18/92

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

NAME	TITLE	DATE
Erma Bradley	Farmer	9-16-92

OFFICE USE ONLY

SWEEPS #	COMP #	LOC CODE	DIST CODE	# ACTIVE UGT	# EXEMPT UGT	# CLOSED UGT	SWEEPS PRGM/SUB CODE	DATE

EH 23 044 (12/88)

EXEMPT UNDERGROUND STORAGE TANKS

OWNER: ERMA BRADLEY

ADDRESS: 4044 E. Harney Lane, Lodi, CA 95240

PHONE: (209) 369-8184

DATE REMOVED: tank removed from underground location by owner

TANK SIZE: 400 gallon

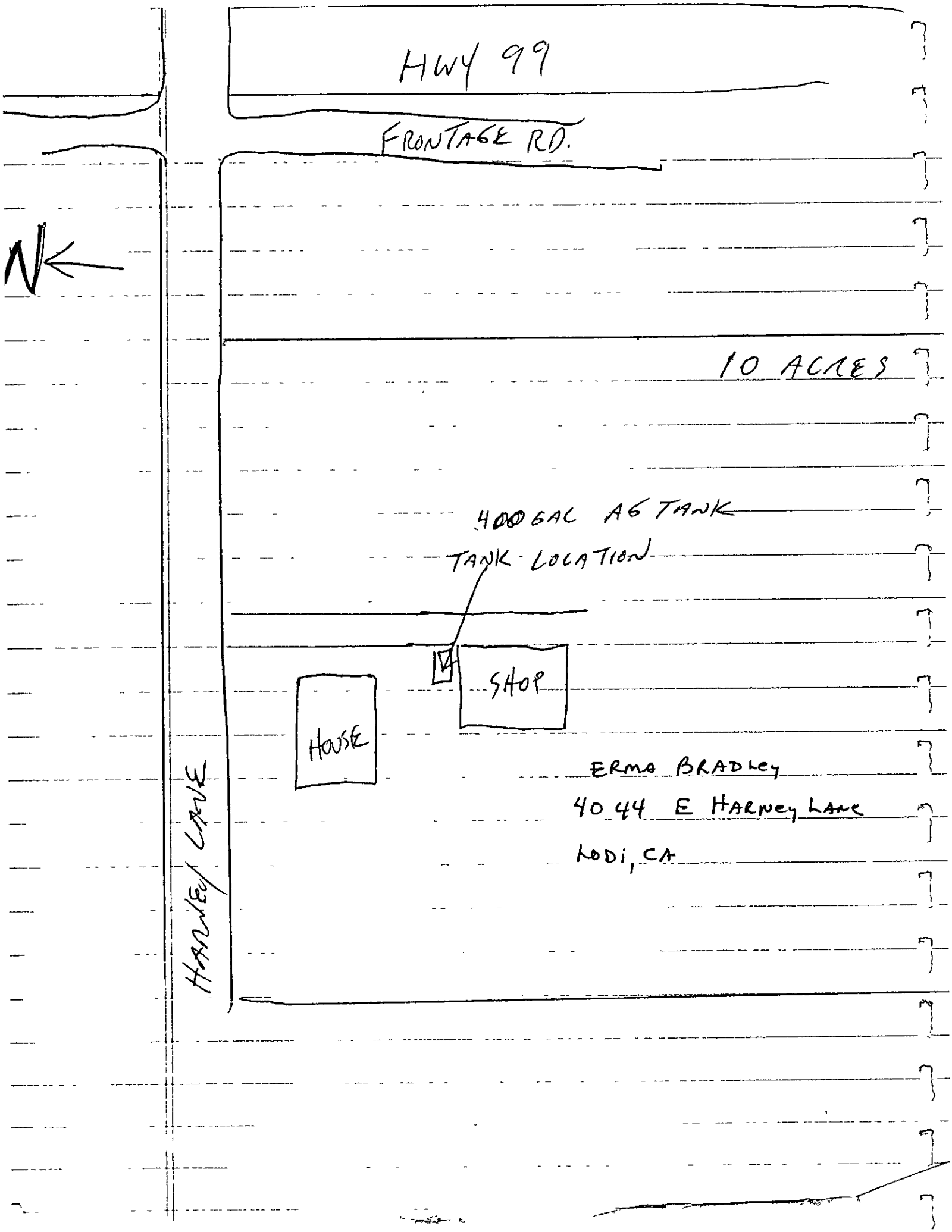
PRODUCT STORED: regular gasoline

LOCATION (IF DIFFERENT):

REMARKS: The tank was picked up by Jim Thorpe Oil, Inc., Contractor's license #495699, dba Rich-Mart Construction, Hazardous Waste Hauler Registration #2667. We triple rinsed, dry iced, and picked up the tank from the site September 18, 1992. The tank was in good condition. There was no odor or soil discoloration noted in the excavation. The tank was transported to our yard at 807 E. Black Diamond Way, Lodi, CA EPA CAL 000012884 where it was destroyed, then transported by us to Schnitzer Steel Products, 12000 Folsom Blvd., Rancho Cordova, CA 94670 for disposal as scrap. Plot plan attached.

JIM THORPE OIL, INC.
dba RICH-MART CONSTRUCTION

Martin Thorpe
Vice-President


HWY 99
FRONTAGE RD.
N
10 ACRES
400 GAL AG TANK
TANK LOCATION
SHOP
HOUSE
HARNEY LANE
ERMA BRADLEY
4044 E HARNEY LANE
LODI, CA

COUNTY OF SAN JOAQUIN

BUREAU OF FIRE PREVENTION

PERMIT

PERMIT NUMBER 92-0148 **DATE** September 18, 1992

U.F.C. SEC.: 79 **ART.:** 115

FACILITY: BRADLEY RESIDENCE - JIM THORPE OIL, INC.

ADDRESS: 4044 E. HARNEY LANE, LODI

REMOVE, ABANDON, PLACE TEMPORARILY OUT OF SERVICE OR OTHERWISE DISPOSE OF ANY FLAMMABLE OR COMBUSTIBLE LIQUID TANK.

EXPIRATION DATE Dec. 18, 1992 **ISSUED BY** Diane Fhantzjil

FEE $100.00 for STEVE THIENES

This Permit Must At All Times Be Kept on the Premises Mentioned Above.

This permit does not take the place of any License required by law and is not transferable. Any change in use or occupancy of premises shall require a new permit. This permit shall in no way relieve the party to whom it is issued from full responsibility for damages incurred through its use.

PUBLIC HEALTH SERVICES

SAN JOAQUIN COUNTY
JOGI KHANNA M.D., M.P.H.
Health Officer
P.O. Box 2009 • (1601 East Hazelton Avenue) • Stockton, California 95201
(209) 468 3400

UNDERGROUND TANK DISPOSITION TRACKING RECORD

SECTION 1 - Public Health Services Tracking Sheet will accompany each tank affixed with its site identification number. The Tracking Sheet is to be returned to Public Health Services within 30 days of acceptance of the tank by the disposal or recycling facility. The permit holder is responsible for ensuring that this form is completed and returned.

FACILITY NAME: JOHN H. BRADLEY

FACILITY ADDRESS: 4044 E. Harney Lane, Lodi, CA 95240

TANK ID #39: _____ Tank Description: 1 - 400 gallon EXEMPT gasoline tank

SECTION 2 - To be filled out by tank removal contractor:
Tank Removal Contractor: JIM THORPE OIL, INC. DBA RICH-MART CONSTR.

Address: 351 N. Beckman Rd., P. O. Box 357 City: Lodi, CA Zip: 95241-0357

Phone #: (209) 368-6175 Date Tank Removed: Tank removed from underground location by owner Tank removed from site by Jim Thorpe Oil 9/18/92

SECTION 3 - to be filled out by contractor "decontaminating tank"
Tank Decontamination Contractor: JIM THORPE OIL, INC. DBA RICH-MART CONSTR./Nor-Cal Oil, Hauler of rinsate

Address: 351 N. Beckman Rd., P. O. Box 357 City: Lodi, CA Zip: 95241-0357

Phone #: (209) 368-6175

Authorized representative of contractor certified by signing below that the tank has been decontaminated in an approved manner as required by the State Department of Health Services.

Signature: Martin Thorpe Title: Vice-President

Tank is free of all sludges and hydrocarbon vapors upon delivery to Schnitzer Steel.

SECTION 4 - To be signed and dated by an authorized representative of the treatment, storage, or disposal facility accepting tank and/or piping

Facility Name: Schnitzer Steel Products

Address: 12000 Folsom Blvd. City: Rancho Cordova Zip: 95742

Phone #: (916) 985-4810

Date Tank Received: 9/24/92

Signature: _____ Title: _____

EH 23 049 (Rev 2/8/91) wp

NOR-CAL OIL

P O Box 645
DENAIR, CA 95316
1-800-332-8710
E.P A. CAD 982417255

CUSTOMER S ORDER NO	PHONE	DATE
	(209) 982-1121	09/25/92

NAME [redacted] [redacted] JIM THURP OIL

[redacted]

[redacted] 100% Ind.

QTY	DESCRIPTION	U= PRICE	AMOUNT
150	WASTE OIL N O S. COMBUSTIBLE LIQUID NA-1270	[redacted]	
6	WASTE WATER/RINSATE		
	WASTE ETHYLENE GLYCOL		
	TEST		
	USED OIL FILTERS DRAINED 24 HRS		
	SLUDGE		
	[redacted]		
	John Bradley Legal Rinsate		
SMDN	92287378		
SHIP TO:			
	REFINERIES SERVICE / ROMIC CHEMICAL CORP		
	13331 N HWY 33 / 2081 BAY ROAD		
	PATTERSON, CA 95363 / E PALO ALTO, CA 94303		
	E P A. CAD083166728 / E P A CAD009452657	TAX	
SIGNATURE		TOTAL	[redacted]

0221

Thank You

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A

"I"

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM				
	☐ 1 NEW PERMIT	☐ 3 RENEWAL PERMIT	☒ 5 CHANGE OF INFORMATION	☐ 7 PERMANENTLY CLOSED SITE
	☐ 2 INTERIM PERMIT	☐ 4 AMENDED PERMIT	☐ 6 TEMPORARY SITE CLOSURE	61

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

DBA OR FACILITY NAME: ERMA Bradley / John Bradley		NAME OF OPERATOR: ERMA Bradley	
ADDRESS: 4044 E. Harney Ln		NEAREST CROSS STREET	PARCEL # (OPTIONAL)
CITY NAME: Lodi	STATE: CA	ZIP CODE: 95240	SITE PHONE # WITH AREA CODE: (209) 369-8184

5099

✓ BOX TO INDICATE ☐ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY DISTRICTS * ☐ COUNTY AGENCY * ☐ STATE AGENCY * ☐ FEDERAL-AGENCY *

* If owner of UST is a public agency complete the following name of Supervisor of division section or office which operates the UST _____

6390

TYPE OF BUSINESS				# OF TANKS AT SITE	E P A I D # (optional)
☐ 1 GAS STATION	☐ 2 DISTRIBUTOR	☐ ✓ IF INDIAN RESERVATION OR TRUST LANDS		1	
☒ 3 FARM	☐ 4 PROCESSOR	☐ 5 OTHER			

EMERGENCY CONTACT PERSON (PRIMARY)		EMERGENCY CONTACT PERSON (SECONDARY) - optional	
DAYS NAME (LAST, FIRST): Bradley, John	PHONE # WITH AREA CODE: (209) 369-8184	DAYS NAME (LAST, FIRST)	PHONE # WITH AREA CODE
NIGHTS NAME (LAST, FIRST): Same	PHONE # WITH AREA CODE	NIGHTS NAME (LAST, FIRST)	PHONE # WITH AREA CODE

II PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME: Same as above.		CARE OF ADDRESS INFORMATION	
MAILING OR STREET ADDRESS		✓ box to indicate ☐ INDIVIDUAL ☐ LOCAL AGENCY ☐ STATE AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY AGENCY ☐ FEDERAL-AGENCY	
CITY NAME	STATE	ZIP CODE	PHONE # WITH AREA CODE

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME OF OWNER		CARE OF ADDRESS INFORMATION	
MAILING OR STREET ADDRESS		✓ box to indicate ☐ INDIVIDUAL ☐ LOCAL AGENCY ☐ STATE AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY AGENCY ☐ FEDERAL AGENCY	
CITY NAME	STATE	ZIP CODE	PHONE # WITH AREA CODE

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 322-9669 if questions arise

TY (TK) HQ 4 4 - ☐☐☐☐☐☐

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) – IDENTIFY THE METHOD(S) USED

✓ box to indicate ☐ 1 SELF INSURED ☐ 2 GUARANTEE ☐ 3 INSURANCE ☐ 4 SURETY BOND ☐ 5 LETTER OF CREDIT ☒ 6 EXEMPTION ☐ 99 OTHER _____

VI. LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING I ☒ II ☐ III ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

OWNER'S NAME (PRINTED & SIGNED)	OWNER'S TITLE	DATE MONTH/DAY/YEAR

LOCAL AGENCY USE ONLY

COUNTY #	JURISDICTION #	FACILITY #
39		504891

LOCATION CODE - *OPTIONAL*	CENSUS TRACT # - *OPTIONAL*	SUPVISOR - DISTRICT CODE - *OPTIONAL*
99	23.22	0X84

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

OWNER MUST FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

FORM A (3/93) FOR0033A-R7

Exempt FARM TANK - removed
Put on data base

1-11-94 LTB

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

"I"

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM

MARK ONLY ONE ITEM				
	[ ] 1 NEW PERMIT	[ ] 3 RENEWAL PERMIT	[ ] 5 CHANGE OF INFORMATION	[ ] 7 PERMANENTLY CLOSED ON SITE
	[ ] 2 INTERIM PERMIT	[ ] 4 AMENDED PERMIT	[ ] 6 TEMPORARY TANK CLOSURE	[X] 8 TANK REMOVED 109

DBA OR FACILITY NAME WHERE TANK IS INSTALLED 4044 E Harney Ln, Lodi

I TANK DESCRIPTION

COMPLETE ALL ITEMS – SPECIFY IF UNKNOWN

A OWNER'S TANK I D # unk	B MANUFACTURED BY unk
C DATE INSTALLED (MO/DAY/YEAR) unk	D TANK CAPACITY IN GALLONS 400 gal

II TANK CONTENTS

IF A 1 IS MARKED COMPLETE ITEM C

A [X] 1 MOTOR VEHICLE FUEL	[ ] 4 OIL	B [X] 1 PRODUCT	C [ ] 1a REGULAR UNLEADED
[ ] 2 PETROLEUM	[ ] 80 EMPTY	[ ] 2 WASTE	[ ] 1b PREMIUM UNLEADED
[ ] 3 CHEMICAL PRODUCT	[ ] 95 UNKNOWN		[X] 2 LEADED
			[ ] 3 DIESEL
			[ ] 4 GASAHOL
			[ ] 5 JET FUEL
			[ ] 6 AVIATION GAS
			[ ] 7 METHANOL
			[ ] 99 OTHER (DESCRIBE IN ITEM D BELOW)

D IF (A 1) IS NOT MARKED ENTER NAME OF SUBSTANCE STORED C A S #

III TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A B AND C AND ALL THAT APPLIES IN BOX D AND E

A TYPE OF SYSTEM	[ ] 1 DOUBLE WALL	[ ] 3 SINGLE WALL WITH EXTERIOR LINER		[ ] 95 UNKNOWN
	[X] 2 SINGLE WALL	[ ] 4 SECONDARY CONTAINMENT (VAULTED TANK)		[ ] 99 OTHER
B TANK MATERIAL (Primary Tank)	[X] 1 BARE STEEL	[ ] 2 STAINLESS STEEL	[ ] 3 FIBERGLASS	[ ] 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC
	[ ] 5 CONCRETE	[ ] 6 POLYVINYL CHLORIDE	[ ] 7 ALUMINUM	[ ] 8 100% METHANOL COMPATIBLE W/FRP
	[ ] 9 BRONZE	[ ] 10 GALVANIZED STEEL	[ ] 95 UNKNOWN	[ ] 99 OTHER
C INTERIOR LINING	[ ] 1 RUBBER LINED	[ ] 2 ALKYD LINING	[ ] 3 EPOXY LINING	[ ] 4 PHENOLIC LINING
	[ ] 5 GLASS LINING	[X] 6 UNLINED	[ ] 95 UNKNOWN	[ ] 99 OTHER
	IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL ?		YES [X] NO [ ]	
D CORROSION PROTECTION	[ ] 1 POLYETHYLENE WRAP	[ ] 2 COATING	[ ] 3 VINYL WRAP	[ ] 4 FIBERGLASS REINFORCED PLASTIC
	[ ] 5 CATHODIC PROTECTION	[X] 91 NONE	[ ] 95 UNKNOWN	[ ] 99 OTHER
E SPILL AND OVERFILL	SPILL CONTAINMENT INSTALLED (YEAR) NA		OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) NA	

IV PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND BOTH IF APPLICABLE

A SYSTEM TYPE	A U 1 SUCTION	A U 2 PRESSURE	A U 3 GRAVITY	A (U) 99 OTHER unk
B CONSTRUCTION	A U 1 SINGLE WALL	A U 2 DOUBLE WALL	A U 3 LINED TRENCH	A (U) 95 UNKNOWN A U 99 OTHER
C MATERIAL AND CORROSION PROTECTION	A U 1 BARE STEEL	A U 2 STAINLESS STEEL	A U 3 POLYVINYL CHLORIDE (PVC)	A U 4 FIBERGLASS PIPE
	A U 5 ALUMINUM	A U 6 CONCRETE	A U 7 STEEL W/ COATING	A U 8 100% METHANOL COMPATIBLE W/FRP
	A U 9 GALVANIZED STEEL	A U 10 CATHODIC PROTECTION	A (U) 95 UNKNOWN	A U 99 OTHER
D LEAK DETECTION	[ ] 1 AUTOMATIC LINE LEAK DETECTOR	[ ] 2 LINE TIGHTNESS TESTING	[ ] 3 INTERSTITIAL MONITORING	[X] 99 OTHER NONE

V TANK LEAK DETECTION

[ ] 1 VISUAL CHECK	[ ] 2 INVENTORY RECONCILIATION	[ ] 3 VADOZE MONITORING	[ ] 4 AUTOMATIC TANK GAUGING	[ ] 5 GROUND WATER MONITORING
[ ] 6 TANK TESTING	[ ] 7 INTERSTITIAL MONITORING	[X] 91 NONE	[ ] 95 UNKNOWN	[ ] 99 OTHER

VI TANK CLOSURE INFORMATION

1 ESTIMATED DATE LAST USED (MO/DAY/YR) 9-18-92	2 ESTIMATED QUANTITY OF SUBSTANCE REMAINING 150 gal GALLONS	3 WAS TANK FILLED WITH INERT MATERIAL ? YES [ ] NO [X]

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE

LOCAL AGENCY USE ONLY

THE STATE I D NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I D #	COUNTY #	JURISDICTION #	FACILITY #	TANK #
	39		504891	504892

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED

FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

FORM B (12 91)

1-11-94 LTB

FOR0034B R6

Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0502042
Type / Classification	BLDRES ADDN/REM Addition Remodel BLDG Building
Address	13387 N STOCKTON ST LODI, CA
Parcel Number	05813004
File Date	2005-04-27
Status	ISSUED
Status Date	N/A
Valuation	$38,361 00
Fees	$1,182 07
Payments	$1,182 07
Balance	$0 00
Description	ADDITION OF MASTER BEDRM W/ BATH & W I C , FAMILY RM & SERVICE RM TO (E) SFR

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	GRIFFITTS, WILLIAM E & C R
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0000020
Type / Classification	ROOF BLDG Building N/A
Address	13355 N STOCKTON ST LODI, CA
Parcel Number	05813005
File Date	2000-01-05
Status	FINAL
Status Date	N/A
Valuation	$2,420 00
Fees	$78 25
Payments	$78 25
Balance	$0 00
Description	TEAR OFF, AND REPLACE WITH COMP (22 SQUARES) TO SFR

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	BAKER ROOFING COMPANY
Business	N/A
Relationship	APPLICANT
Phone	N/A

Name	BAKER ROOFING COMPANY
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0000073
Type / Classification	ELECSERV BLDG Building N/A
Address	13355 N STOCKTON ST LODI, CA
Parcel Number	05813005
File Date	2000-01-10
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$48 00
Payments	$48 00
Balance	$0 00
Description	RE-LOCATE EXISTING 100 AMP SERVICE FROM POLE TO HOUSE FOR EXISTING SFR

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	RYNDERS STEVEN RICHARD
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

Name	RYNDERS STEVEN RICHARD
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9402509
Type / Classification	ADDN/REM BLDG Building N/A
Address	13323 N STOCKTON ST LODI, CA
Parcel Number	05813006
File Date	1994-09-08
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$24 50
Payments	$24 50
Balance	$0 00
Description	N/A

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	DELLAMAGGIORA, DOMENICO & A
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9402605
Type / Classification	ADDN/REM V-N BLDG Building
Address	13323 N STOCKTON ST LODI, CA
Parcel Number	05813006
File Date	1994-09-16
Status	FINAL
Status Date	N/A
Valuation	$29,941 70
Fees	$694 97
Payments	$649 97
Balance	$45 00
Description	N/A

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	DELLAMAGGIORA, DOMENICO & A
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0204257
Type / Classification	BLDRES ADDN/REM Addition Remodel BLDG Building
Address	13322 N STOCKTON ST LODI, CA
Parcel Number	05813007
File Date	2002-11-26
Status	FINAL
Status Date	N/A
Valuation	$6,374 40
Fees	$213 96
Payments	$213 96
Balance	$0 00
Description	ADD FREE STANDING COVERED PATIO TO MHI

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	PARISES, ELISA ADELE
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

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San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9403102
Type / Classification	MHI BLDG Building N/A
Address	13322 N STOCKTON ST LODI, CA
Parcel Number	05813007
File Date	1994-11-02
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$194 00
Payments	$194 00
Balance	$0 00
Description	N/A

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	KAYAYAN, BEDROS TRUSTEE
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0200060
Type / Classification	HEAT/AIR BLDG Building N/A
Address	13275 N STOCKTON ST LODI, CA
Parcel Number	05813012
File Date	2002-01-08
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$48 00
Payments	$48 00
Balance	$0 00
Description	INSTALL HEAT AND AIR SYSTEM FOR SFR

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	BAKER REFRIGERATION AND AIR
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

Name	BAKER REFRIGERATION AND AIR
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0100207
Type / Classification	PUMPSERV BLDG Building N/A
Address	13167 N STOCKTON ST LODI, CA
Parcel Number	05813013
File Date	2001-01-24
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$48 00
Payments	$48 00
Balance	$0 00
Description	REPLACEMENT OF 100 AMP SERVICE AND 10 HP FOR AG PUMP

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	GOEHRING PUMP & IRRIGATION INC
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

Name	GOEHRING PUMP & IRRIGATION INC
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9900774
Type / Classification	ROOF BLDG Building N/A
Address	4044 E HARNEY LN LODI, CA
Parcel Number	05813009
File Date	1999-03-22
Status	FINAL
Status Date	N/A
Valuation	$3,300 00
Fees	$90 75
Payments	$90 75
Balance	$0 00
Description	TEAR OFF, REROOF WITH BUILT-UP

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	ACE HIGH ROOFING & CONSTRUCTION
Business	N/A
Relationship	APPLICANT
Phone	N/A

Name	ACE HIGH ROOFING & CONSTRUCTION
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

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Home Back

Permit Manager

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San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BL-80-0197
Type / Classification	BL80
	N/A
	N/A
Address	13409 N STOCKTON ST
	LODI, CA
Parcel Number	05813003
File Date	1992-06-11
Status	APPROVED
Status Date	N/A
Valuation	$0 00
Fees	$0 00
Payments	$0 00
Balance	$0 00
Description	HOBBY, CRAFT AND LAPIDARY

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	ANDYS ROCK SHOP
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

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San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-0303719
Type / Classification	BLDOTC ROOF ROOF BLDG Building
Address	13409 N STOCKTON ST LODI, CA
Parcel Number	05813003
File Date	2003-09-24
Status	FINAL
Status Date	N/A
Valuation	$7,285 00
Fees	$169 14
Payments	$169 14
Balance	$0 00
Description	TEAROFF, RESHEATHS, REROOF WITH COMP TO SFR (31 SQ)

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	HAZELET, KENNETH E & DEBRA
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Home Back

Permit Manager

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San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9200296
Type / Classification	SIDING BLDG Building N/A
Address	13409 N STOCKTON ST LODI, CA
Parcel Number	05813003
File Date	1992-06-03
Status	FINAL
Status Date	N/A
Valuation	$6,995 00
Fees	$92 70
Payments	$92 70
Balance	$0 00
Description	N/A

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	K DESIGNERS *JUDSON ENTER INC
Business	N/A
Relationship	APPLICANT
Phone	N/A

Name	K DESIGNERS *JUDSON ENTER INC
Business	N/A
Relationship	CONTRACTOR
Phone	N/A

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Home Back

Permit Manager

Welcome to San Joaquin County

San Joaquin County Community Development Department

Detail

Inspections

Case / Application / Permit Number	BP-9403044
Type / Classification	PLUMFIX BLDG Building N/A
Address	13475 N STOCKTON ST LODI, CA
Parcel Number	05813002
File Date	1994-10-26
Status	FINAL
Status Date	N/A
Valuation	$0 00
Fees	$24 50
Payments	$24 50
Balance	$0 00
Description	N/A

View Map *(Click the "Back" button on the browser to return to Permit Manager)*

Contacts

Name	VARNER, SAMUEL J & GAIL K
Business	N/A
Relationship	APPLICANT
Phone	N/A

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Supercedes, NMIG
ISSUED ON 1/3/2000

SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205

Office: (209)468-3300 Recorder (NOI): (209)468-3300 FAX: (209 2001 330

RESTRICTED MATERIALS PERMIT

Permit#: 39-01-3904314
County HQ District#: E

M & R PACKING
33 E TOKAY ST
LODI, CA 95240-

Expiration Date: 12/31/2001
Effective Date : 2/6/01

JIM QUASCHNICK
33 E TOKAY ST
LODI, CA 95240-

Home: (209)369-2725
Shop: (209)368-3300
Fax:
Mobile: ( ) -

Permittee Type	Permit Type	Possession	NOI Method of Submission	
Private App [ ]	Seasonal [X]	Poss & Use [X]	Phone [X]	Fax [ ]
Q A Cert [ ]	Job [ ]	Poss Only [ ]	Box [X]	Modem [ ]
Ag PCO [ ]			In Person [X]	
Non-Ag [X]				

NOI required 24 hours prior to application

Numb	Pesticide	Pest(s)	Form.	Method(s)		Applicator(s)	
1051	SEVIN	LARVAE	Liquid	Air	Ground	PCO	Grower
2000	DICAMBA	WEEDS	Liquid	Air	Ground	PCO	Grower
2302	DISYSTON	APHID	Liquid	Ground		PCO	Grower
3830	METHOMYL	LARVAE	Liquid	Air	Ground	PCO	Grower
3850	METHYL BROMIDE	LARVAE	Fumigant	Fumigate		PCO	
4840	ALUMINUM PHOSPH	RODENTS	Fumigant	Ground		PCO	Grower
5540	STRYCHNINE	GOPHERS	Bait	Ground		PCO	Grower
6260	ZINC PHOSPHIDE	RODENTS	Bait	Ground		PCO	Grower
6360	2,4-D		Liquid	Ground		PCO	Grower
16011	PARAQUAT	WEEDS	Liquid	Ground		PCO	Grower

****** PESTICIDES CONTINUED ON NEXT PAGE ******

Non-Ag Use:
Conditions: PQW QL32426

I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides. I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit. I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be used in the treatment. [Form PR-ENF-125 (Rev. 07/92) Pesticide Enforcement Branch]

Permit Applicant: [signature] Sign: 2/7/01

Title: Manager Date: 2/6/01

Issuing Officer: [signature] Date: 2/6/01

M & R PACKING Permit#: 39-01-3904314

PESTICIDES continued .....

Numb	Pesticide	Pest(s)	Form.	Method(s)	Applicator(s)	
16891	SUPRACIDE	LARVAE	Liquid	Ground	PCO	Grower
18571	NEMACUR	NEMATODE	Liquid	Ground	PCO	Grower

Employees handle pesticides (Y or N) [Y]

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Conditi
APPLE (4001-0)	68-3	F	35	04N	06E	M	12.00	A	P
						S/WOODBRIDGE 1/2 M E/LOWER SA			
16011									
CHERRY (5002-0)	07-1	H	3	02N	07E	M	7.00	A	PW
						W/END OF BUMBY 1/2M S/EIGHT M			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	08-3	E	19	03N	07E	M	40.00	A	PW
	MADONNA					N/HOGAN W/CCTRR			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	08-4	E	19	03N	07E	M	12.00	A	PW
	COSTA					S/HOGAN W/CCTRR			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	09-1	F	22	04N	06E	M	8.00	A	PW
	HARGRAVE					E/MAY 1/2M N/ACAMPO			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	11-1	E	15	03N	06E	M	102.00	A	PW
	SCHUMACHER 62					NW HARNEY & LOWER SACRAMENTO			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	12-1	E	28	03N	06E	M	40.00	A	PW
	SCHUMACHER 40					S/ARMSTORNG 1/8M W/LOWER SAC			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	25-1	D	14	02N	08E	M	80.00	A	PW
	B & R					SE FLOOD & HWY 26			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	26-1	F	27	04N	06E	M	35.00	A	PW
	STODDARD					SE ACAMPO & MAY			
1051, 4840, 5540, 6260, 16011, 16891, 18571									
	34-2	F	20	04N	08E	M	55.00	A	P
	PARKER RANCH					NW HWY 88 & DISCH			
1051, 4840, 5540, 6260, 16011, 16891, 18571									

M & R PACKING Permit#: 39-01-3904314

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
CHERRY (5002-0)	40-1	F	27	04N	06E	M	42.00	A	PW
	SOUROUR					N/WOODBRIDGE 1/4M W/LOWER SAC			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	46-1	F	19	04N	07E	M	20.00	A	PW
	KNIGHT					E/HWY 99 1/4M N/ACAMPO			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	47-1	F	23	04N	06E	M	17.00	A	PW
	PITTO					N/ACAMPO 1/4M W/SPRR			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	53-1	D	4	02N	07E	M	45.00	A	PW
	COWEN					W/ALPINE N/RATTO			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	57-1	F	23	04N	07E	M	80.00	A	PW
	HUMPHREY					NW TRETHEWAY & ACAMPO ROADS			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	60-1	E	20	04N	07E	M	43.00	A	P
	HOGAN RANCH					NE HWY 99 & ARMSTRONG			
	1051, 4840, 5540, 6260, 16011, 18571								
	63-2	G	1	03N	05E	M	30.00	A	PW
	KAHLER					N/W SARGENT & RAY RDS			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	64-1	H	8	02N	07E	M	25.00	A	PW
	SOLARI					NE CANEPA & FOPPIANO			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	67-2	F	32	04N	07E	M	10.00	A	P
	MAGGIO 2					S/WOODBRIDGE 1/4 M E/KENNEFICK			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
	68-2	F	35	04N	06E	M	10.00	A	P
						S/WOODBRIDGE 1/2 M E/LOWER SAC			
	1051, 4840, 5540, 6260, 16011, 16891, 18571								
ASPARAGUS (16002-0)	58-1	I	7	01N	05E	M	465.00	A	P
						N/MOKELUMNE AQ 3M W. LOW JONES			
	2000, 2302, 6360, 16011								
	59-1	F	20	04N	07E	M	38.00	A	PQ
	C & K RANCH					N/END NOLAN 1/4M N/ACAMPO ROAD			
	2000, 2302, 6360, 16011								

M & R PACKING

Permit#: 39-01-3904314

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
GRAPE (29141-0)	02-1 LEFEVER	F	23	04N	06E	M	95.00	A	P
	SW PELTIER & SPRR								
	1051, 3830, 18571								
	03-1 SKINNER	E	24	03N	06E	M	97.00	A	P
	E/HWY 99 1/4M S/HARNEY								
	1051, 3830, 16011, 18571								
	04-1 WAKEFIELD	F	11	04N	07E	M	80.00	A	P
	N/JAHANT 1/8M W/ELLIOT								
	1051, 3830, 16011, 18571								
	04-2 LOBENBERG	F	11	04N	07E	M	5.00	A	P
	W/ELLIOT 1/4M N/JAHANT								
	1051, 3830, 16011, 18571								
	05-1 AIRPORT	F	18	04N	07E	M	27.00	A	P
	E/HWY 99 1/2M N/PELTIER								
	1051, 3830, 16011, 18571								
	06-1 LEBARON	G	17	04N	06E	M	70.00	A	P
	NW END OF DAVIS								
	1051, 3830, 16011, 18571								
	08-1 COSTA	E	19	03N	07E	M	18.00	A	P
	S/HOGAN W/CCTRR								
	1051, 3830, 16011, 18571								
	08-2 BRADLEY	E	19	03N	07E	M	9.00	A	P
	S/HOGAN 1/4M W/CCTRR								
	1051, 3830, 16011, 18571								
	10-1 PADDLEFORD	F	26	04N	08E	M	80.00	A	P
	NW WOODBRIDGE & TRETHEWAY								
	1051, 3830, 16011, 18571								
	10-2 D & R	F	26	04N	08E	M	80.00	A	P
	NW WOODBRIDGE & TRETHEWAY								
	1051, 3830, 16011, 18571								
	13-1 BRUMM	F	10	04N	08E	M	17.00	A	P
	NW JAHANT & MACKVILLE								
	1051, 3830, 16011, 18571								
	14-1 WAKEHAM	F	15	04N	08E	M	15.00	A	P
	N/MEHRTEN 1/8M E/MACKVILLE								
	1051, 3830, 16011, 18571								

M & R PACKING Permit#: 39-01-3904314

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
GRAPE (29141-0)	15-1	F	3	04N	08E	M	39.00	A	P
	CAHILL					E/MACKVILLE 1/2M N/COLLIER			
	1051, 3830, 16011, 18571								
	15-2	F	3	04N	08E	M	47.00	A	P
	MACKVILLE					W/MACKVILLE 1/2M N/COLLIER			
	1051, 3830, 16011, 18571								
	16-1	F	25	04N	06E	M	28.00	A	P
	REYNOLDS					W/HWY 99 1/4M N/WOODBRIDGE			
	1051, 3830, 16011, 18571								
	19-1	E	10	03N	06E	M	37.00	A	P
	BECKMAN					S/SARGENT 1/8M W/LOWER SACRAME			
	1051, 3830, 18571								
	26-26A	F	27	04N	06E	M	7.00	A	P
	LIPPERT					SW MAY & ACAMPO			
	1051, 3830, 18571								
	26-26B	F	27	04N	06E	M	10.00	A	P
	BATCH 2					SE MAY & ACAMPO			
	1051, 3830, 16011, 18571								
	33-1	F	27	04N	06E	M	39.00	A	P
	BATCH 1					W/LOWER SAC 1/2M N/WOODBRIDGE			
	1051, 3830, 16011, 18571								
	34-1	F	20	04N	08E	M	70.00	A	P
	BARBOUR					NW HWY 88 & DISCH			
	1051, 3830, 16011, 18571								
	44-1	F	3	04N	08E	M	140.00	A	P
	OLSON					E/MACKVILLE 1/2M N/COLLIER			
	1051, 3830, 16011, 18571								
	45-1	F	15	04N	07E	M	18.00	A	P
	LANE					NW CLEMENTS & HWY 88			
	1051, 3830, 16011, 18571								
	45-2	F	15	04N	07E	M	22.00	A	P
	SCHOOLHOUSE					NW CLEMENTS & HWY 88			
	1051, 3830, 16011, 18571								
	45-3	F	15	04N	07E	M	47.00	A	P
	GILLIS					NE CLEMENTS & HWY 88			
	1051, 3830, 16011, 18571								

M & R PACKING Permit#: 39-01-3904314

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
GRAPE (29141-0)	52-1	E	27	03N	06E	M	80.00	A	P
	SOUROUR					SW METTLER & LOWER SACRAMENTO			
	1051, 3830, 16011, 18571								
	55-1	G	13	04N	05E	M	63.00	A	P
	MASSEY					S/KILE 1/4M W/RAY			
	1051, 3830, 16011, 18571								
	56-1	F	12	04N	08E	M	13.00	A	P
	GUANTONE					HWY 88 1/4M N COLLIER			
	1051, 3830, 16011, 18571								
	61-1	F	14	04N	08E	M	70.00	A	P
	HESSELTINE					SE CLEMENTS & HWY 12			
	1051, 4840, 5540, 6260, 16011, 18571								
	63-1	G	1	03N	05E	M	84.00	A	P
	KAHLER					NW SARGENT & RAY			
	1051, 4840, 5540, 6260, 16011, 18571								
	65-1	F	30	04N	07E	M	20.00	A	P
	SASAKI RANCH					S/ACAMPO 1/8 M W/KENNEFICK			
	1051, 3830, 16011, 18571								
	66-1	F	24	04N	06E	M	4.00	A	P
	JACINTO					NW ACAMPO & DESMOINES			
	1051, 3830, 16011, 18571								
	67-1	F	32	04N	07E	M	18.00	A	P
	MAGGIO 2					S/WOODBRIDGE 1/4 M E/KENNEFICK			
	1051, 3830, 16011, 18571								
	68-1	F	35	04N	06E	M	10.00	A	P
						S/WOODBRIDGE 1/2 M E/LOWER SAC			
	1051, 3830, 16011, 18571								
	68-4	F	35	04N	06E	M	20.00	A	P
	MARTIN					S/WOODBRIDGE 1/2 M E/LOWER SAC			
	1051, 3830, 16011, 18571								
	69-1	G	32	04N	06E	M	55.00	A	P
						SW WOODBRIDGE & DAVIS			
	1051, 3830, 18571								
UNCUL NON-AG (67000-0)	ALL		99	99	99	M	20.00	A	P
						ALL LOCATIONS			
	4840, 16011								

M & R PACKING Permit#: 39-01-3904314

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition

M & R PACKING Permit#: 39-01-3904314

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[X] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium (Vapam)
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9: Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[X] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[_] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true, and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

2-7-01
Date

M & R PACKING Permit#: 39-01-3904314

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

CONDITION - Q

DICAMBA AND PHENOXY HERBICIDES - CENTRAL VALLEY/HAZARDOUS AREA

In addition to all applicable laws, regulations and label restrictions, the CONDITIONS CHECKED BELOW APPLY to applications covered by this permit.

[X] 1. No ester formulation applications allowed.

[_] 2. A smoke column is reqired at the application site for all Phenoxy and Dicamba applications by aircraft begining March 16 and continuing through October 15.

[X] 3. Do not discharge material more than 10 feet above the crop or target.

[_] 4. A drift reducing agent shall be added to the spray mixture at label rates.

[X] 5. Maximum wind velocity for Phenoxy herbicides 10 m.p.h.

[X] 6. Maximum wind velocity for Dicamba - 10 m.p.h. EXCEPT when wind is moving in direction of sensitive crops, the maximum wind velocity - 5 m.p.h.

[_] 7. No Dicamba application allowed in the vicinity of sensitive crops when the maximum temperature on the day of application is predicted to exceed 85 degrees Fahenheit. Predicted temperature for the following day will be determined by the 3:30 p.m. prediction by the National Weather Station - Stockton Airport.

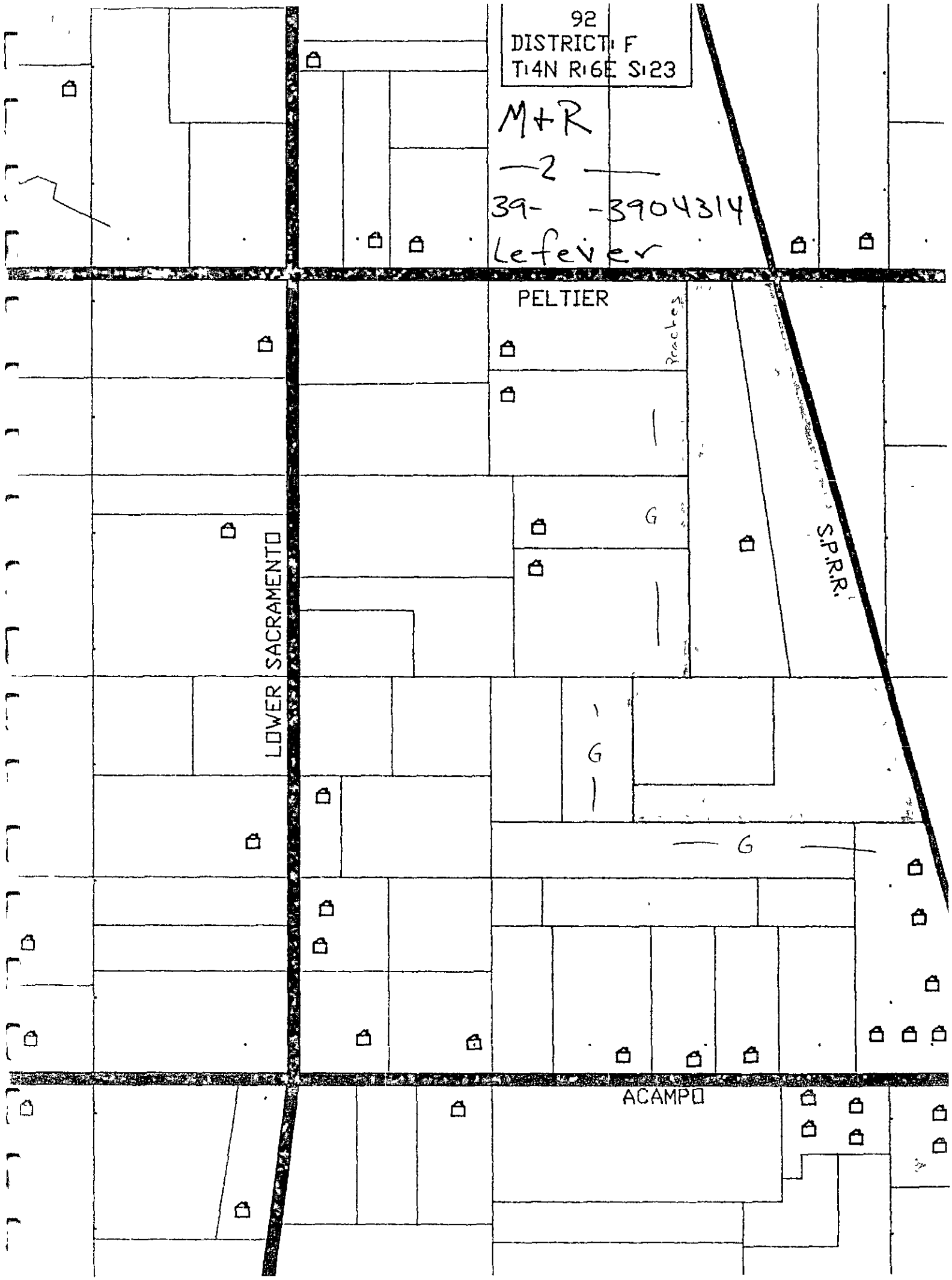
[_] 8. Dicamba applications by aircraft are restricted to a minimum distance of 2 miles from the following susceptible crops: beans, grapes, sunflower, tomato, safflower, curcurbits, potatoes.

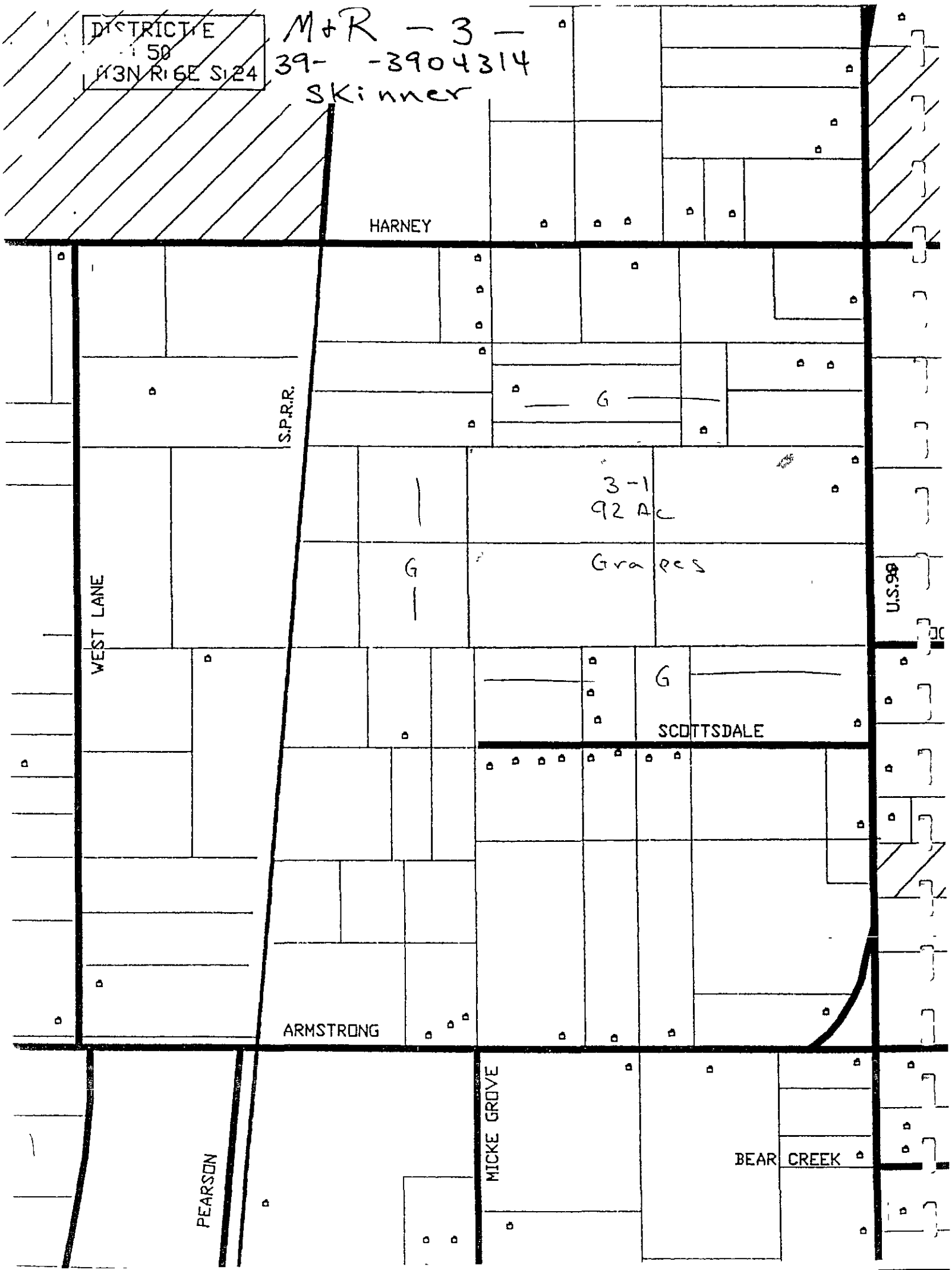
[_] 9. Dicamba applications by ground are restricted to a minimum distance of 20 feet from the following susceptible crops: beans, safflower, tomato, curcurbits, potatoes and 1/4 mile from grapes and sunflowers.

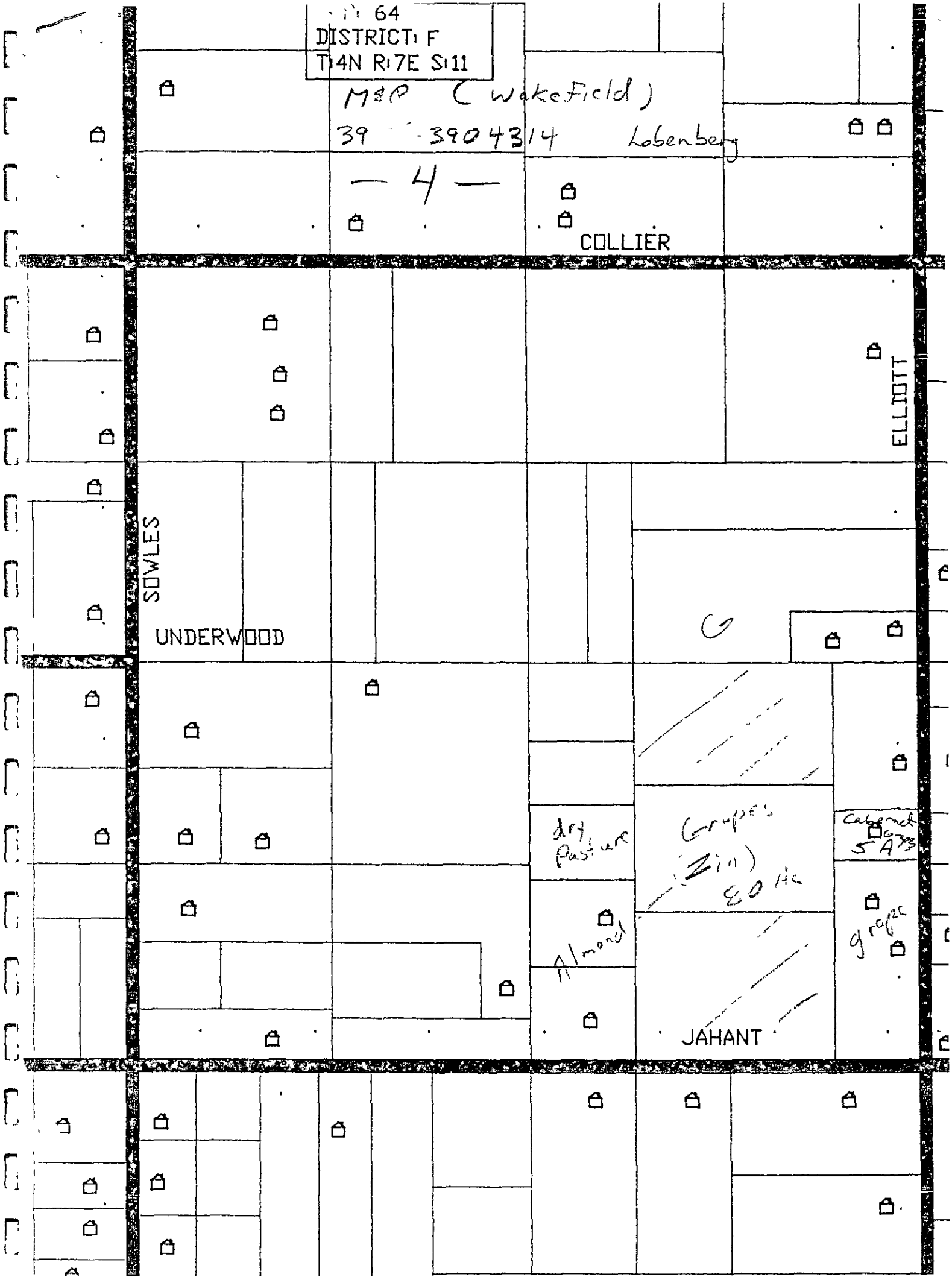
[X] 10. No Dicamba or Phenoxy herbicide applications allowed begining March 16 and continuing through October 15, and until grape leaves in the vicinity of the treated area are "browned off".

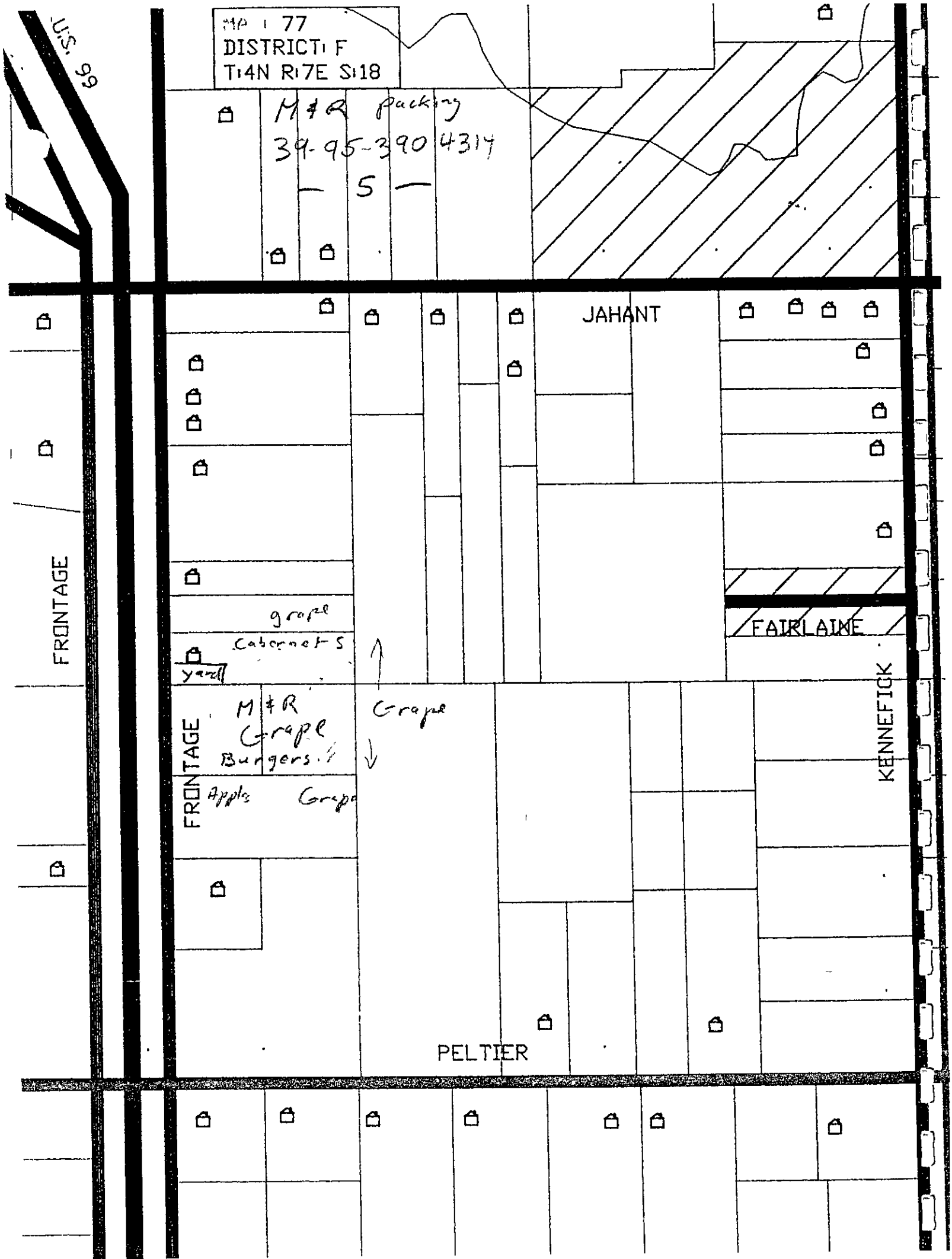
10/90 REVISED

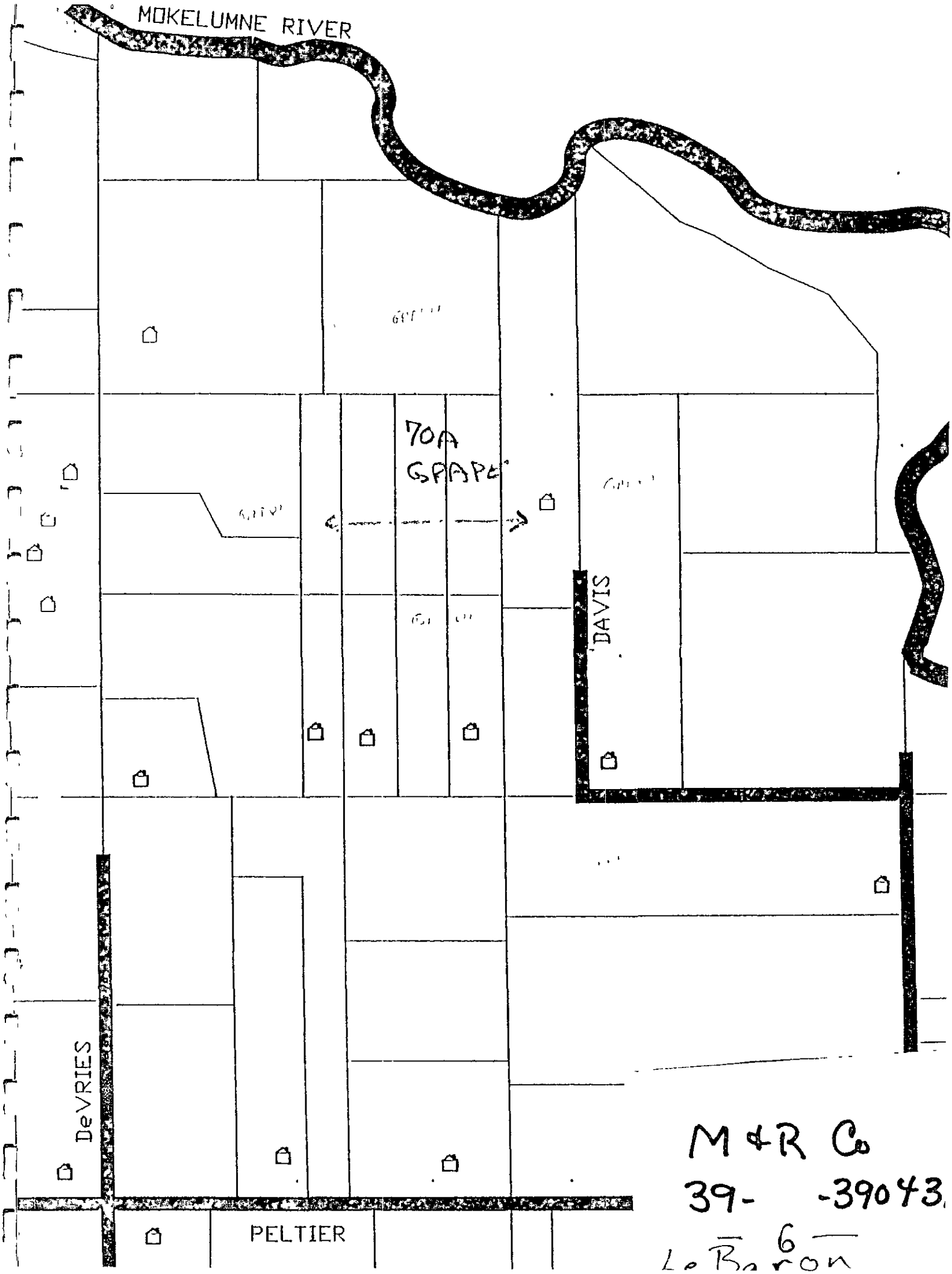
*** Last Page ***


92
DISTRICT F
T14N R6E S23
M+R
—2—
39- -3904314
Lefever
PELTIER
Peaches
G
S.P.R.R.
LOWER SACRAMENTO
G
G
ACAMPO


DISTRICT E
50
T3N R6E S24
M+R - 3 -
39- -3904314
Skinner
HARNEY
S.P.R.R.
G
3-1
92 Ac
Grapes
G
WEST LANE
U.S.98
G
SCOTTSDALE
ARMSTRONG
PEARSON
MICKE GROVE
BEAR CREEK


64
DISTRICT F
T4N R7E S11
M&P (Wakefield)
39 3904314 Lobenberg
— 4 —
COLLIER
ELLIOTT
SOWLES
UNDERWOOD
dry pasture
Grapes (Zin) 20 Ac
Cabernet 5 Ac
grapes
Almond
JAHANT

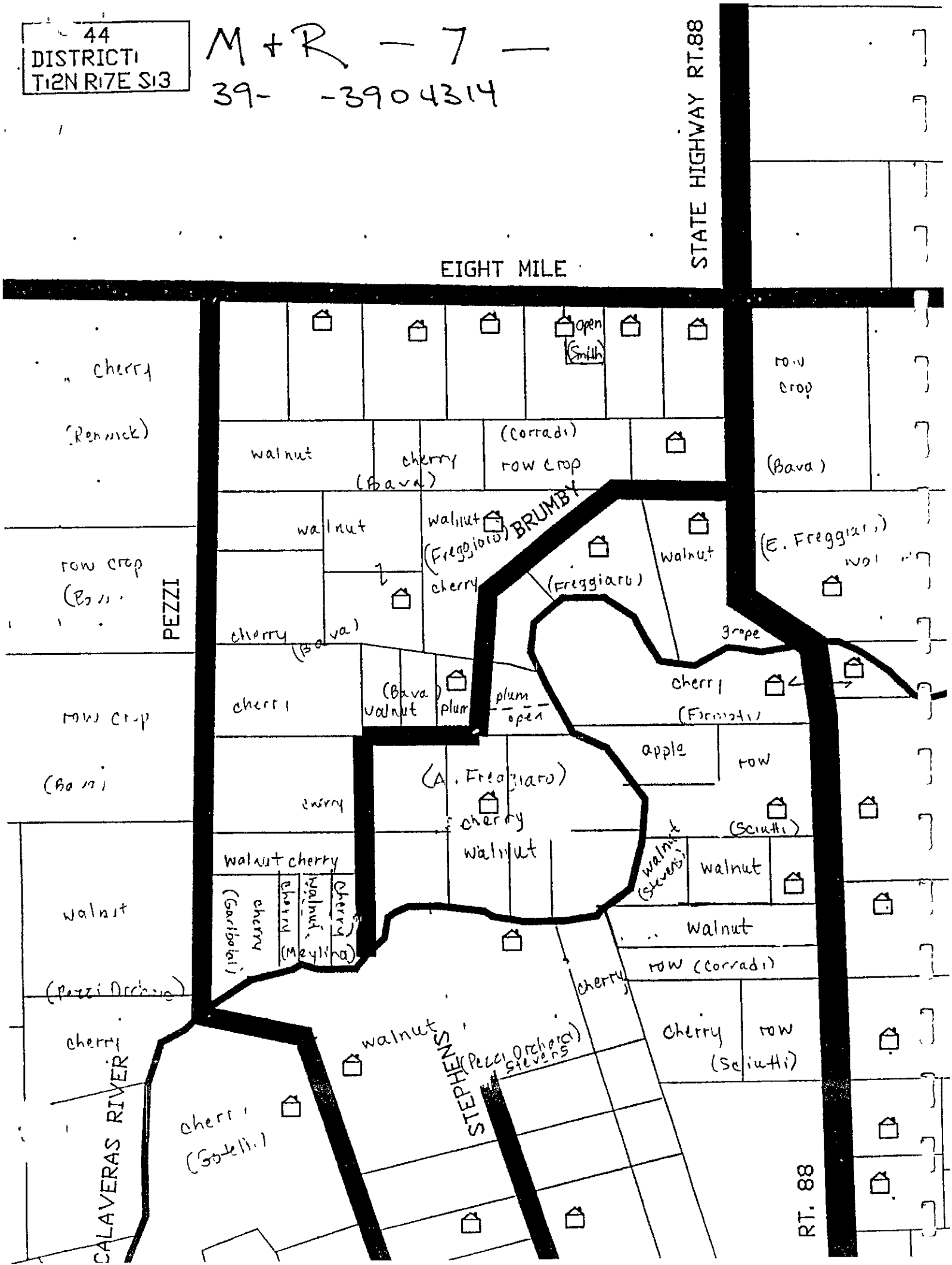

MAP 77
DISTRICT F
T14N R17E S18
M & R Packing
39-95-390 4314
— 5 —
U.S. 99
JAHANT
FRONTAGE
grape
Cabernet S
yard
M & R
Grape
Burgers
Grape
Apple
Grape
FRONTAGE
FAIRLAINE
KENNEFICK
PELTIER

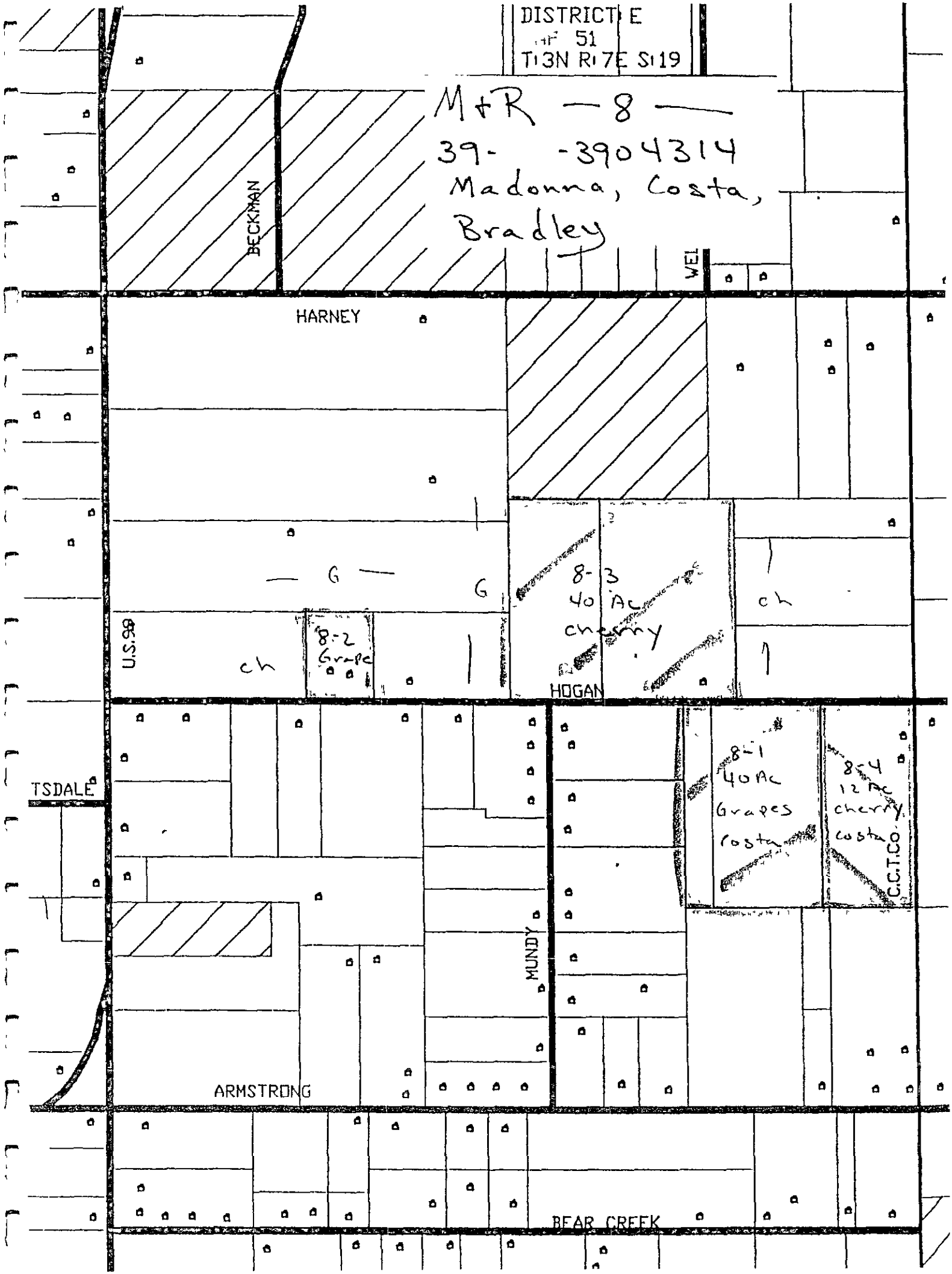


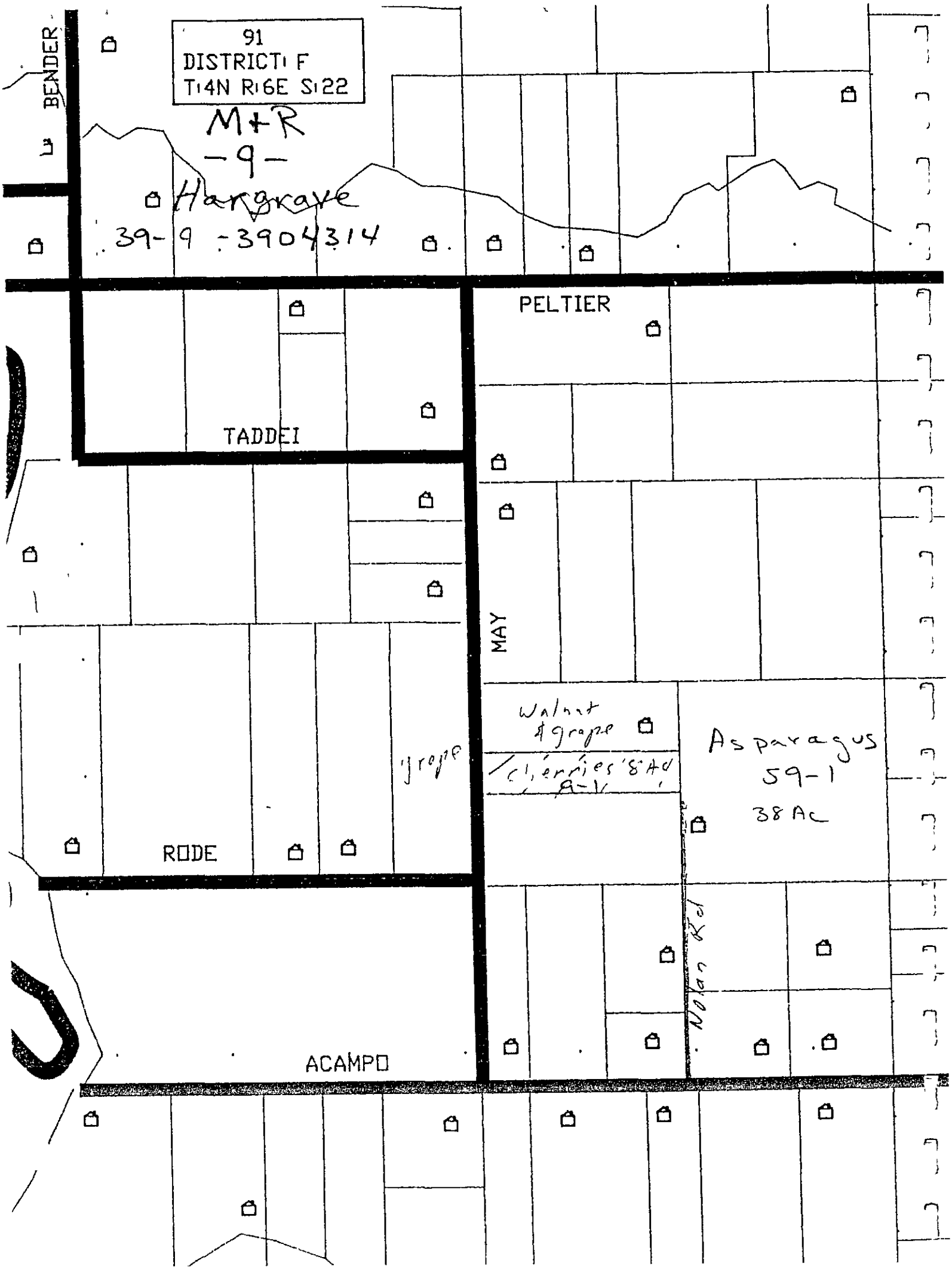
M & R Co
39- -39043
6
LeBaron

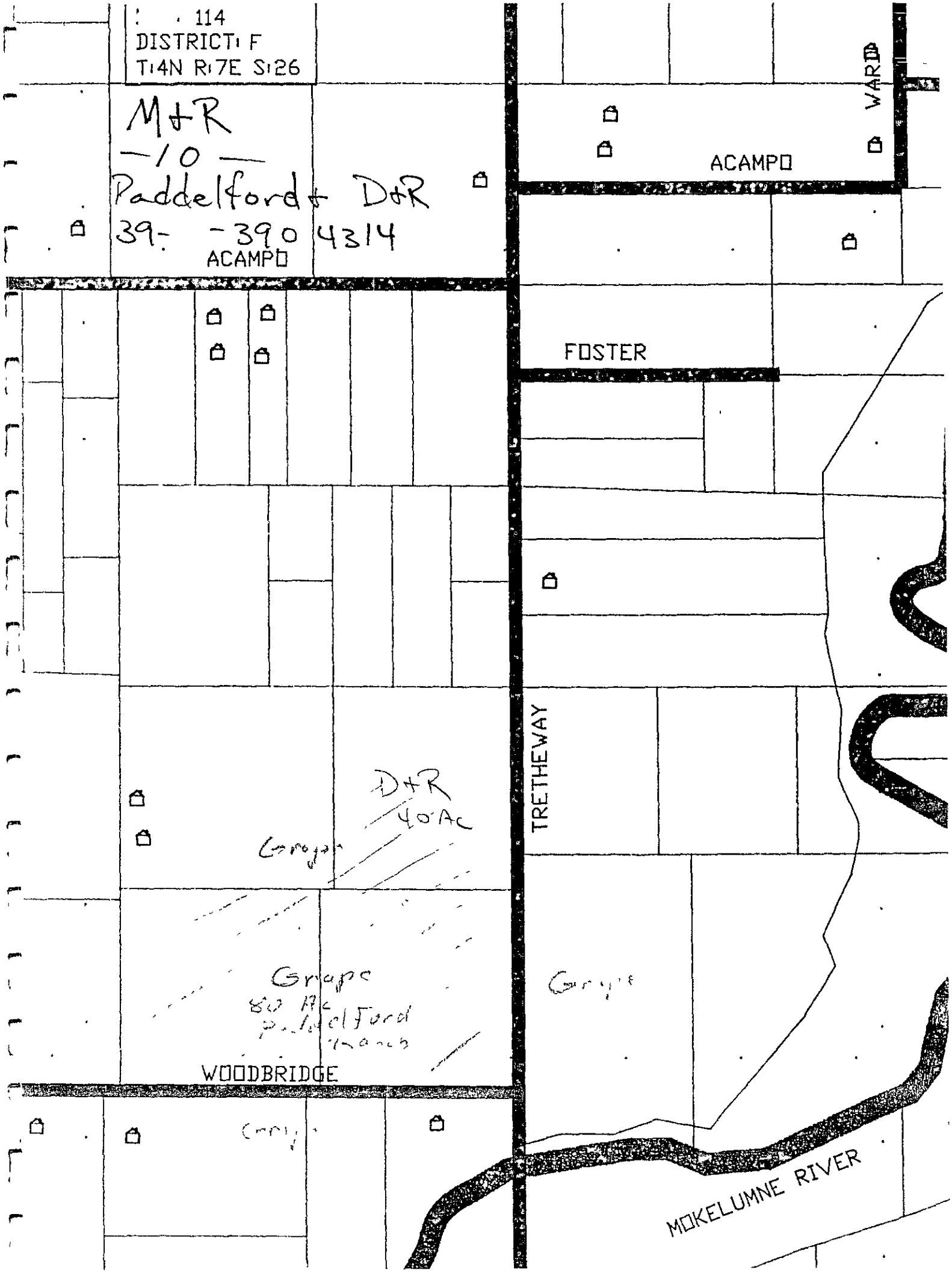
44
DISTRICT 1
T12N R17E S13

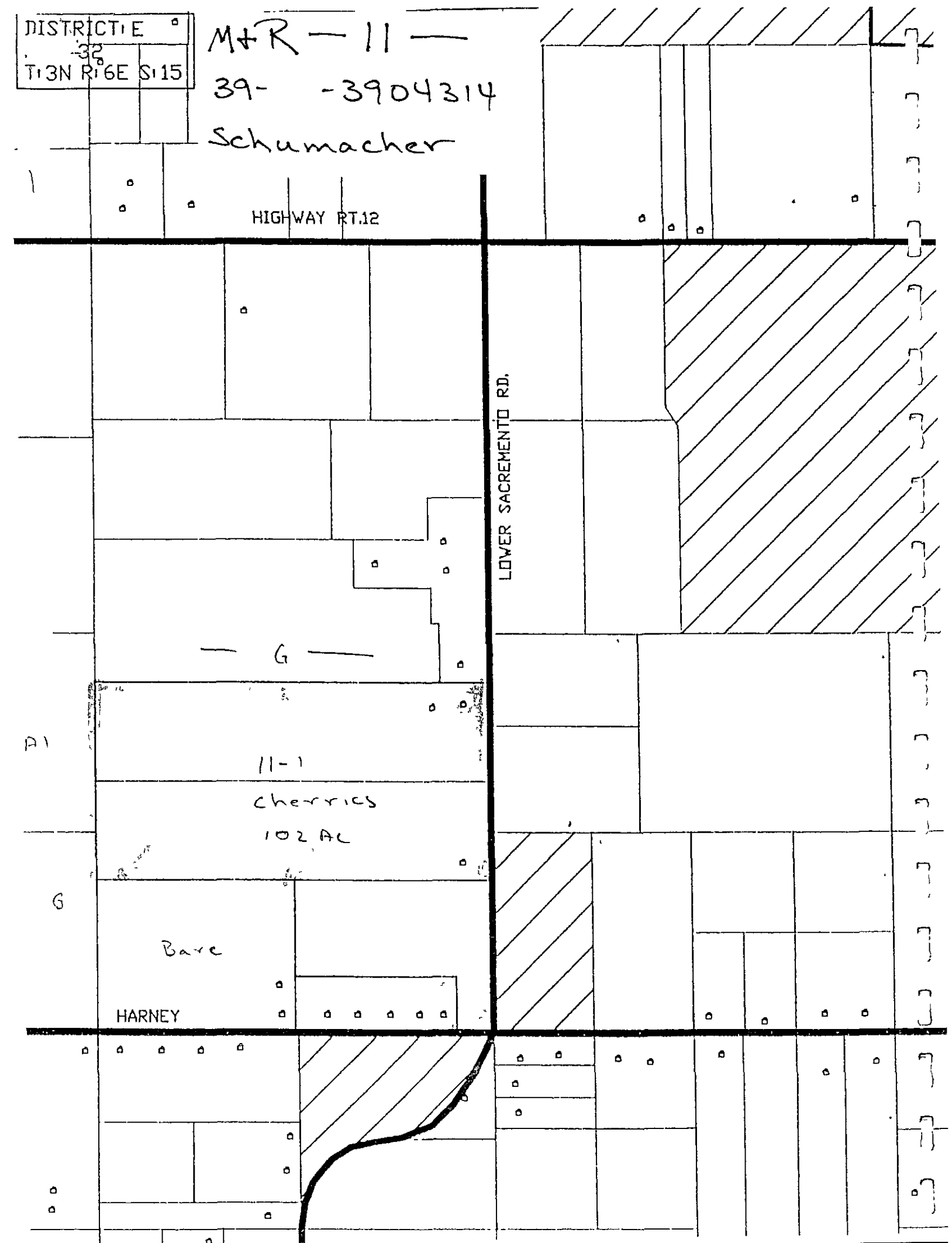
M+R - 7 -
39- -3904314




DISTRICT E
51
T13N R17E S19
M+R —8—
39- -3904314
Madonna, Costa,
Bradley
BECKMAN
WEI
HARNEY
— G —
G
8-3
40 Ac
cherry
ch
U.S.99
ch
8-2
Grape
HOGAN
8-1
40 Ac
Grapes
Costa
8-4
12 Ac
cherry
Costa
C.C.T.Co.
TSDALE
MUNDY
ARMSTRONG
BEAR CREEK


91
DISTRICT: F
T:4N R:6E S:22
M+R
-9-
Hargrave
39-9 -3904314
BENDER
PELTIER
TADDEI
MAY
Walnut & grape
Cherries 8 Ac
grape
Asparagus
59-1
38 Ac
RODE
Nolan Rd
ACAMPO


114
DISTRICT F
T4N R7E S26
M+R
-10-
Paddelford + D+R
39- -390 4314
ACAMPO
ACAMPO
WARD
FOSTER
TRETHEWAY
D+R
40 Ac
Grape
Grape
80 Ac
Paddelford
Ranch
Grape
WOODBRIDGE
Grape
MOKELUMNE RIVER


DISTRICT E
32
T13N R16E S15
M+R — 11 —
39- -3904314
Schumacher
HIGHWAY RT.12
LOWER SACREMENTO RD.
— G —
A1
11-1
cherries
102 AC
G
Bare
HARNEY

DISTRICT E
63
T13N R16E S28

M+R - 12 -
39- -3904314
Schumacher 40

ARMSTRONG

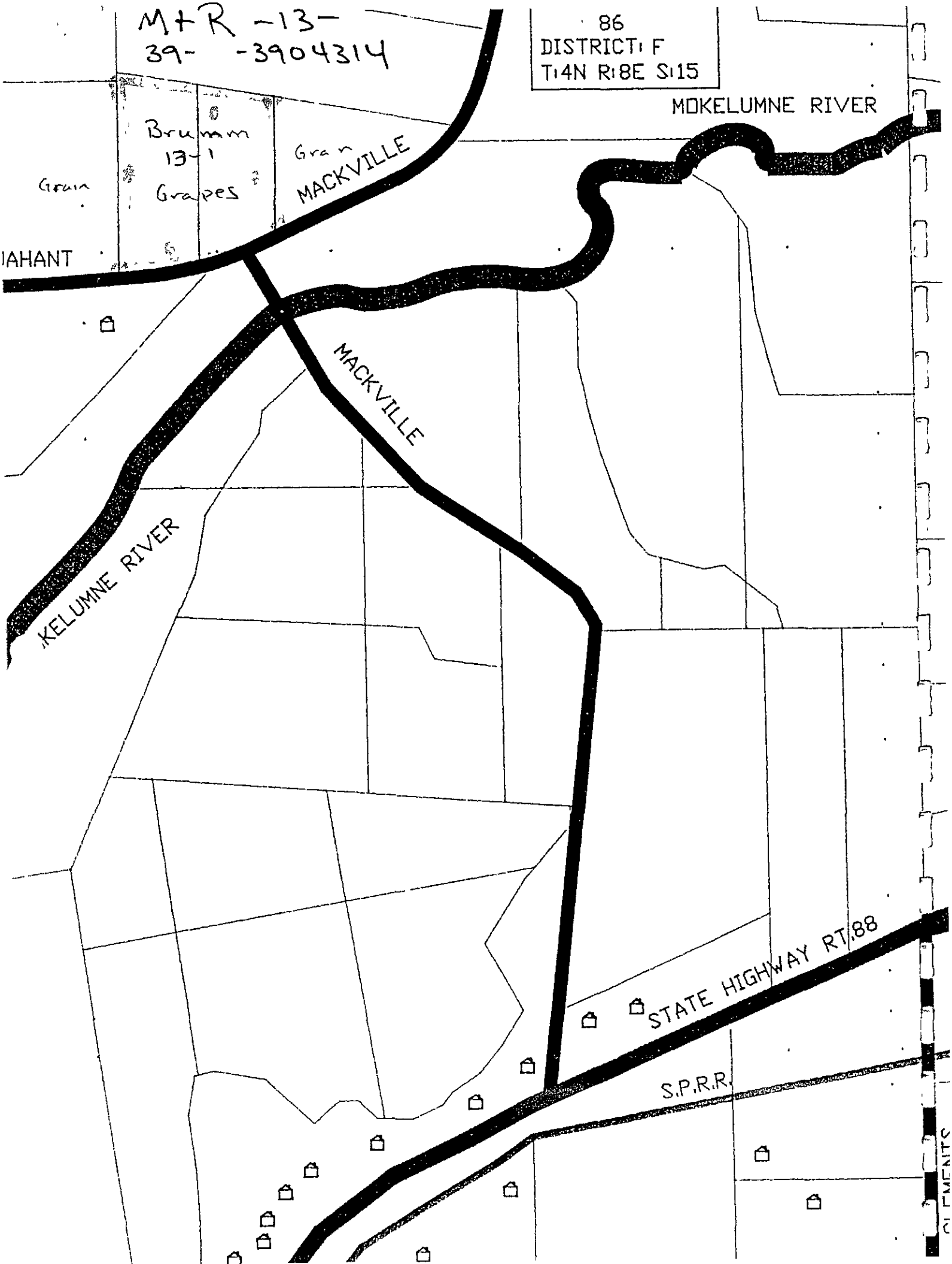
G
1

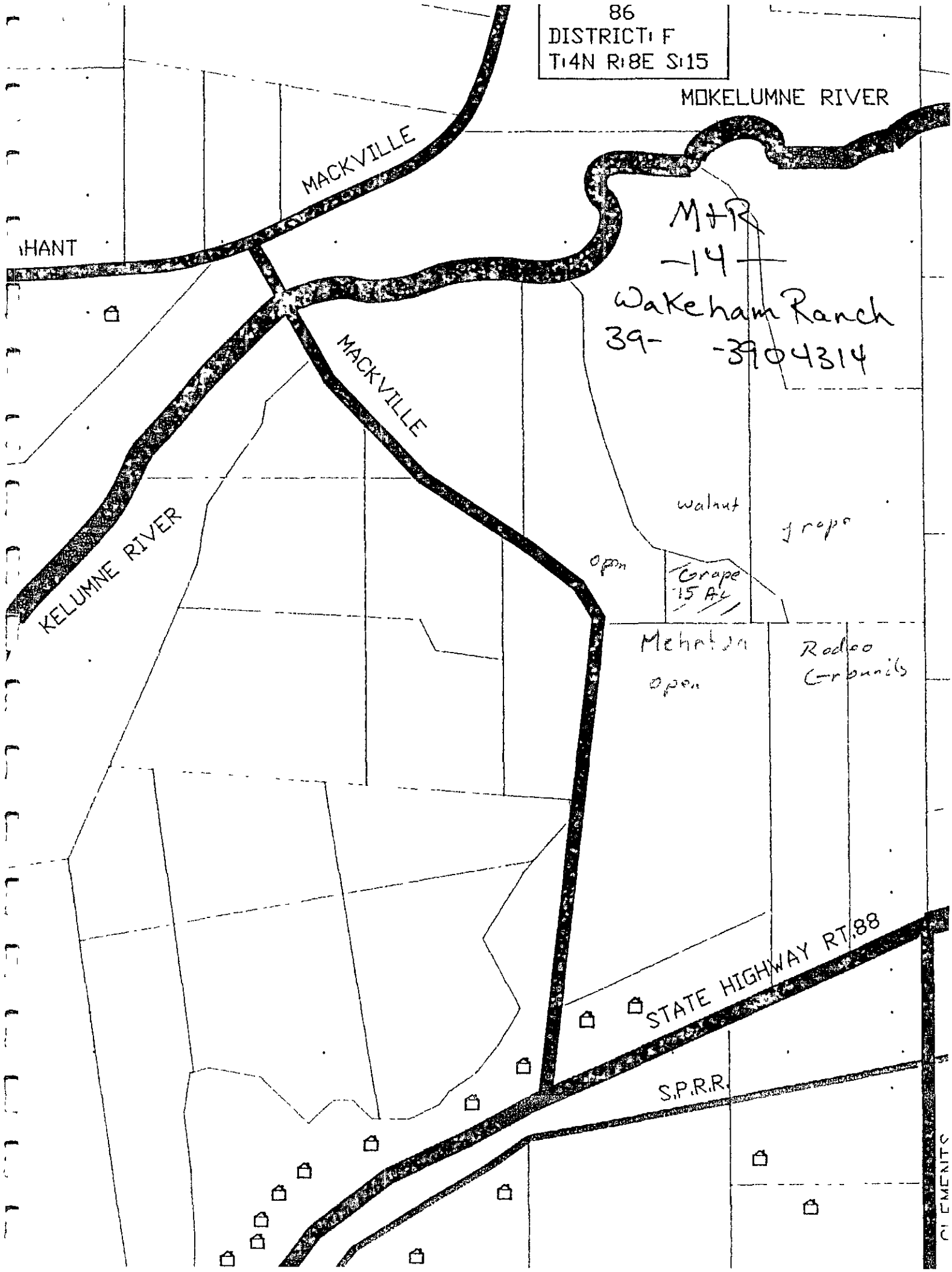
12-1
cherries

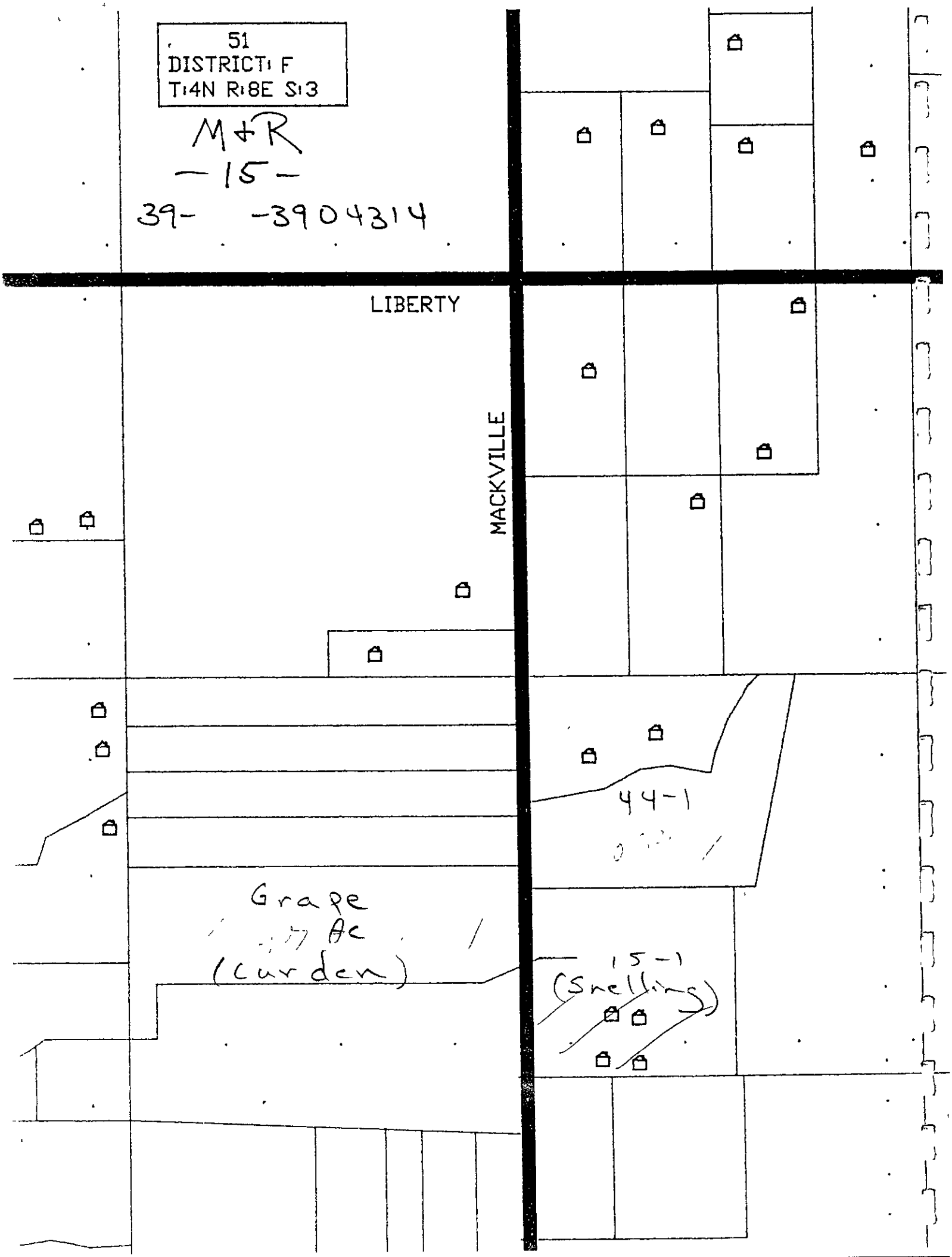
Bar

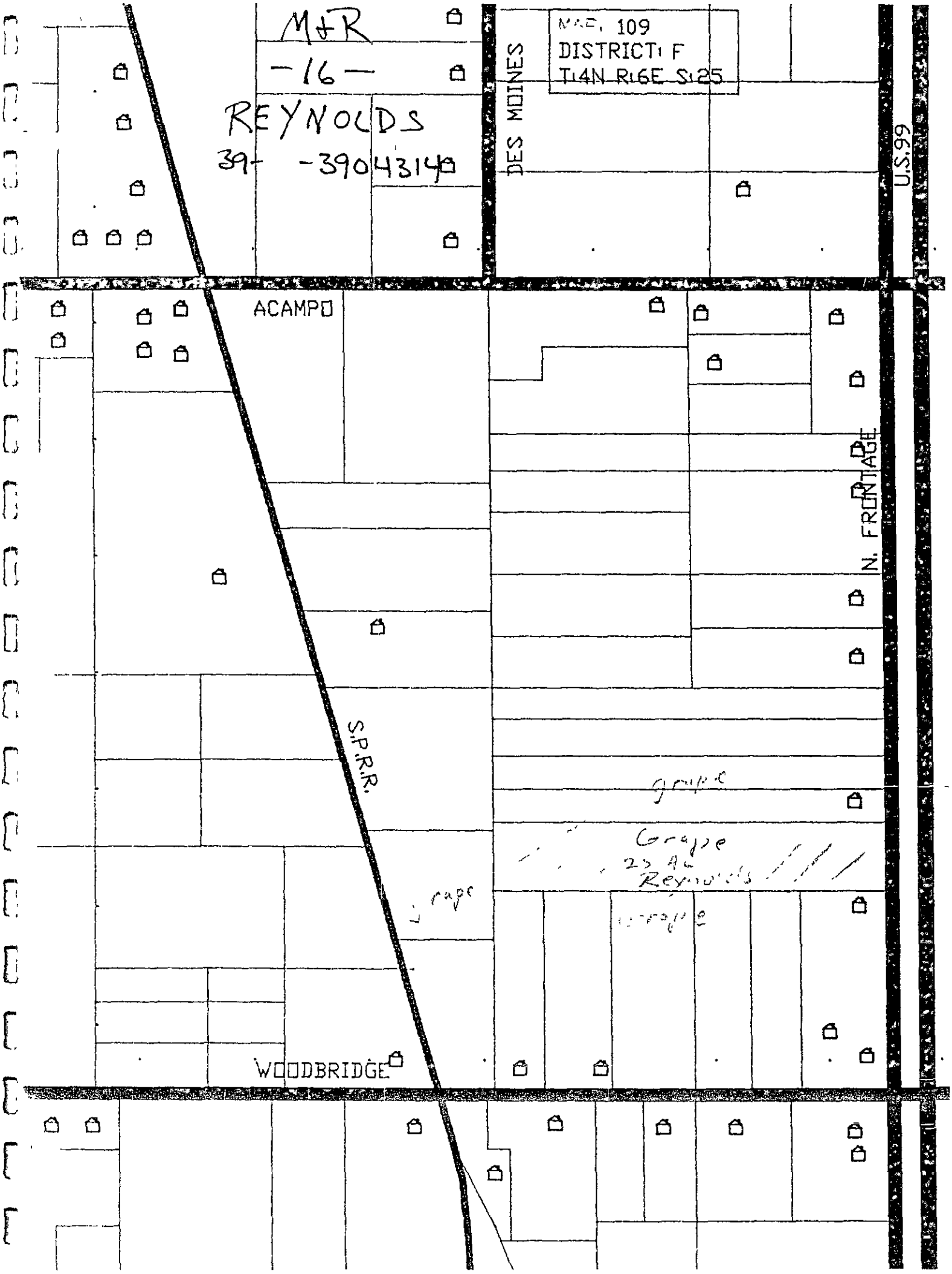
air strip

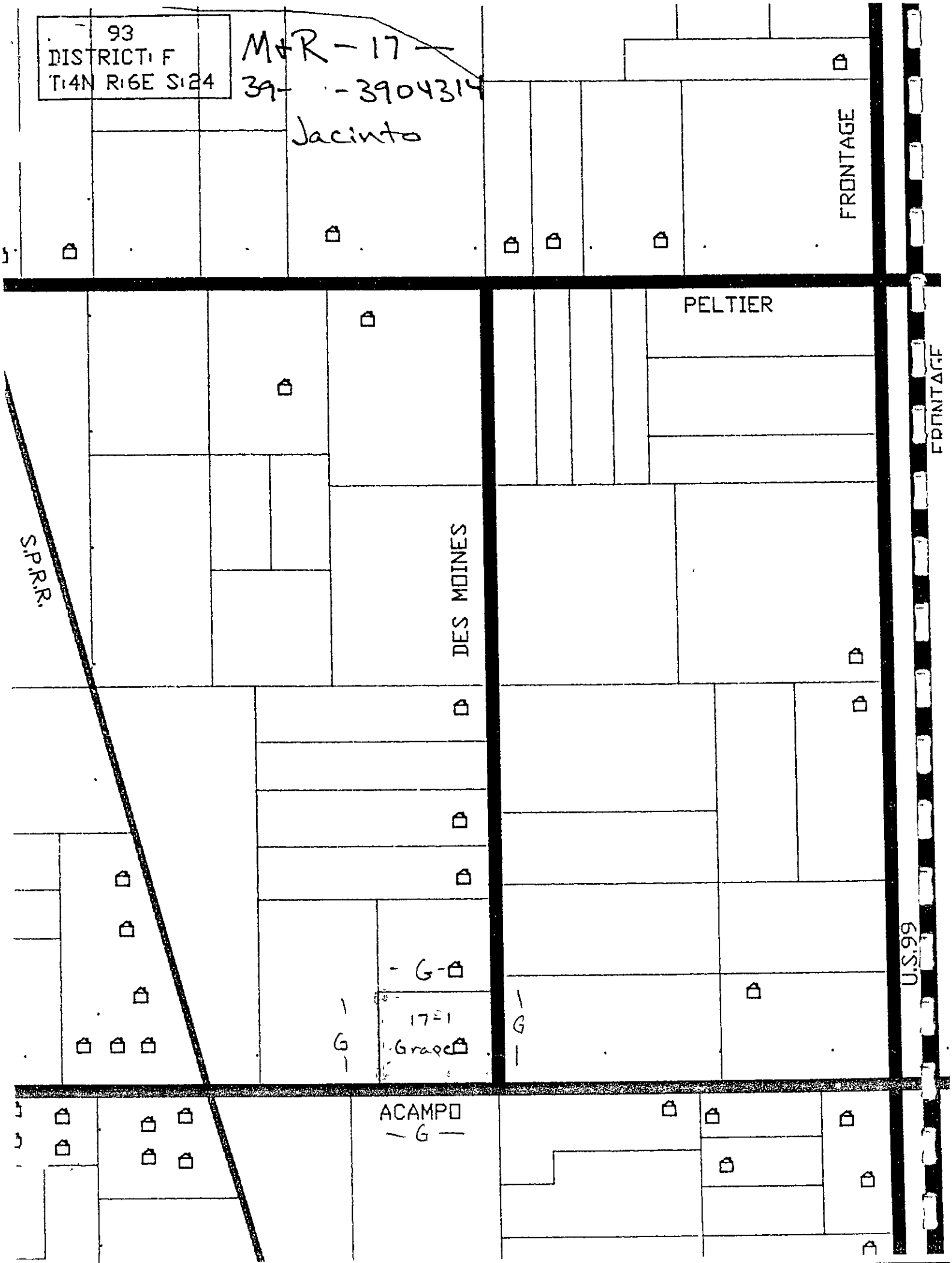
W.P.R.R.


M+R -13-
39- -3904314
86
DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
Brumm
13-1
Grapes
Grain
Grain
MACKVILLE
IAHANT
MACKVILLE
KELUMNE RIVER
STATE HIGHWAY RT.88
S.P.R.R.


86
DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
MACKVILLE
HANT
M+R
-14-
Wakeham Ranch
39- -3904314
MACKVILLE
KELUMNE RIVER
walnut
grape
open
Grape
15 Ac
Mehatan
open
Rodeo
Grounds
STATE HIGHWAY RT.88
S.P.R.R.


51
DISTRICT: F
T:4N R:8E S:3
M+R
-15-
39- -3904314
LIBERTY
MACKVILLE
44-1
Grape
Ac
(Curden)
15-1
(Snelling)


M&R
-16-
REYNOLDS
39- -3904314
MAP 109
DISTRICT F
T14N R16E S25
DES MOINES
U.S.99
ACAMPO
N. FRONTAGE
S.P.R.R.
grape
Grape
23 Ac
Reynolds
grape
grape
WOODBRIDGE


93
DISTRICT F
T14N R6E S24
M&R-17-
39- -3904314
Jacinto
FRONTAGE
PELTIER
FRONTAGE
S.P.R.R.
DES MOINES
U.S.99
G
17-1
Grape
G
G
ACAMPO
G

DISTRICT: E
MAP: 18
T:3N R:6E S:10
M+R Packing
— 19 —
Beckman
SARGENT
G
Garces 1971
Industrial
LOWER SACREMENTO RD.
HIGHWAY RT.12

#25

ITEMS TO BE SHOWN ON MAP OF AREA TO BE TREATED: M+R

39- -3904314

1. Adjacent crops

2. Occupied buildings including schools, dwellings, and labor camps

3. Areas occupied by animals including beehives, livestock, and poultry.

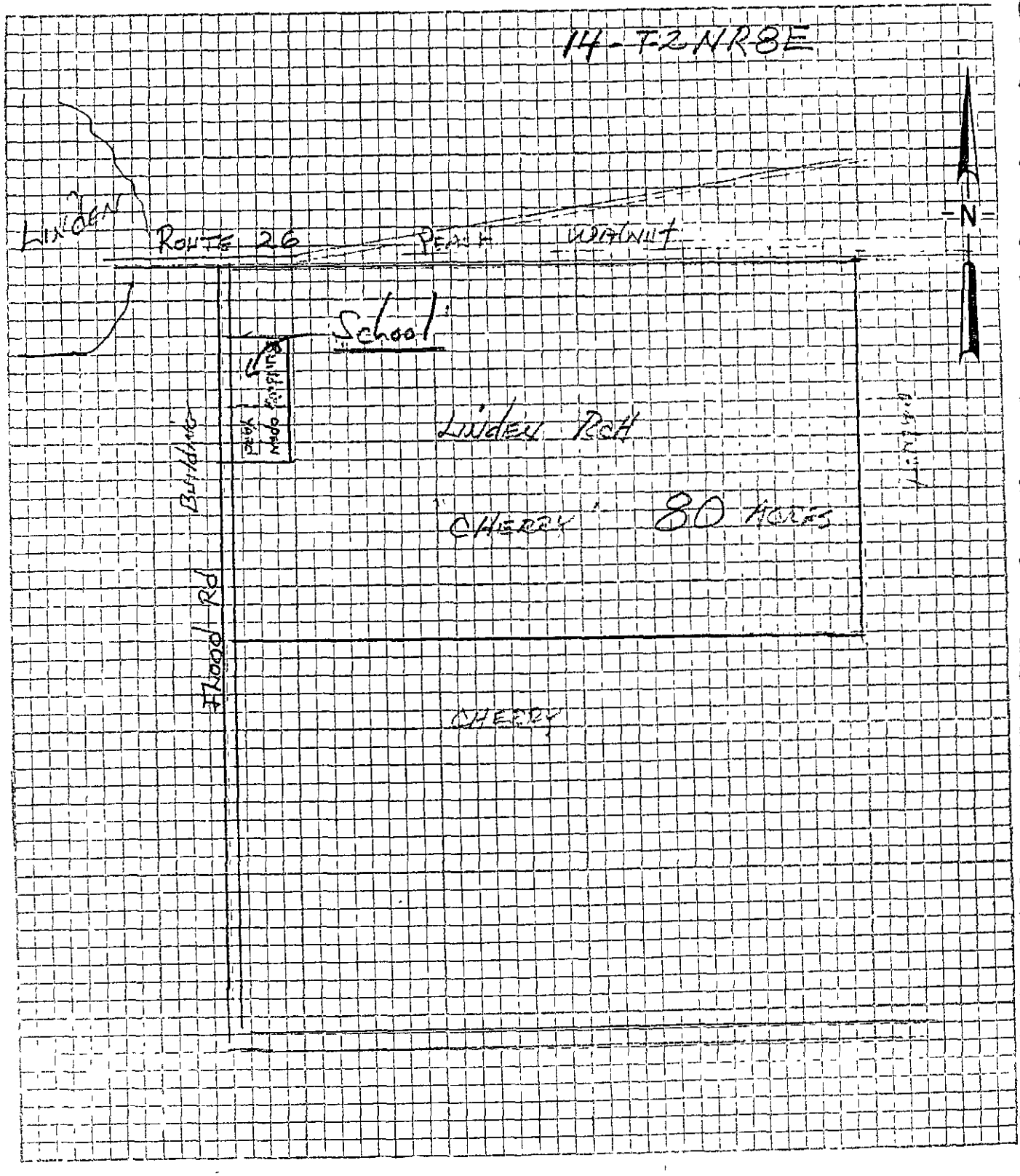
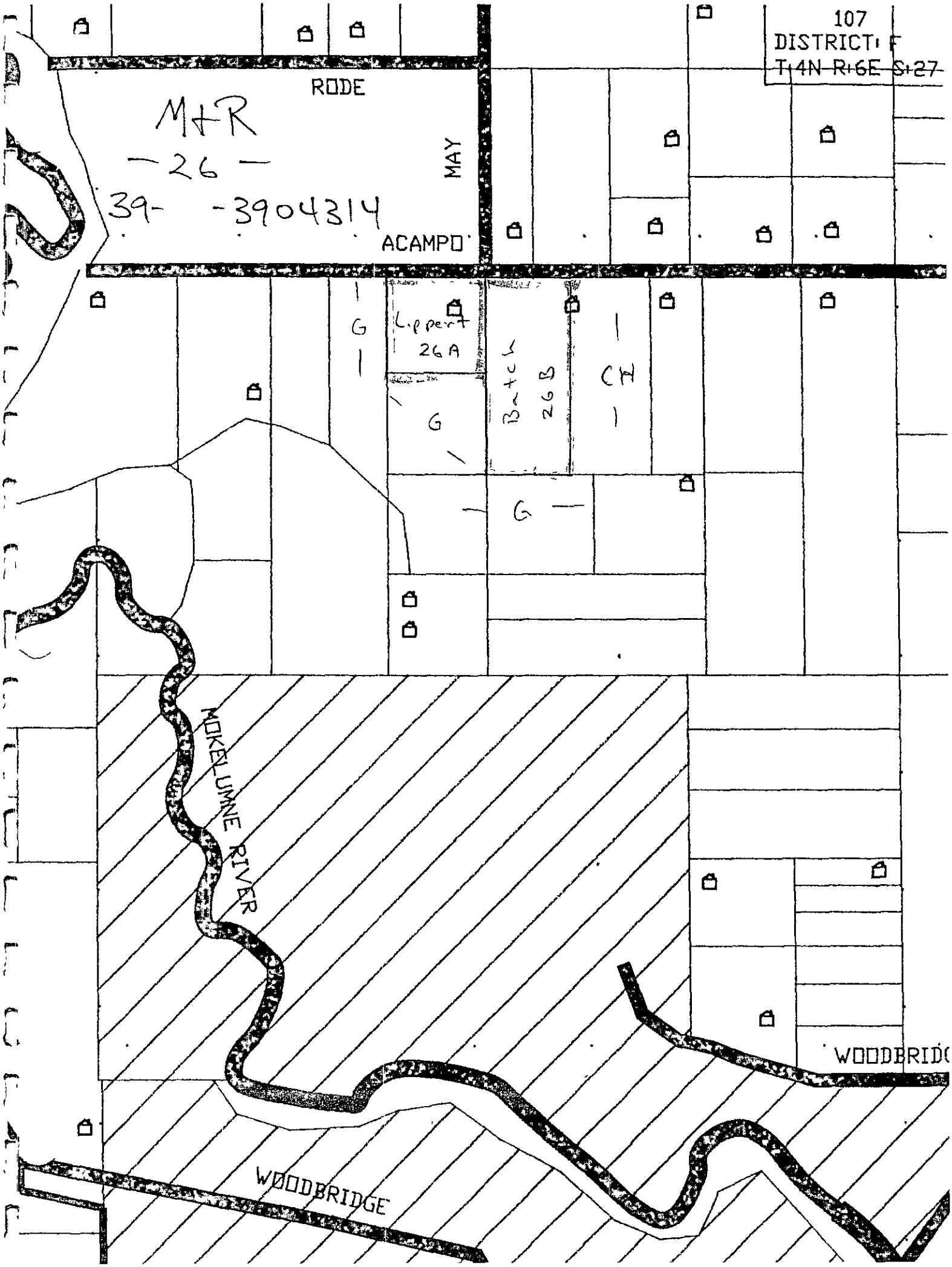
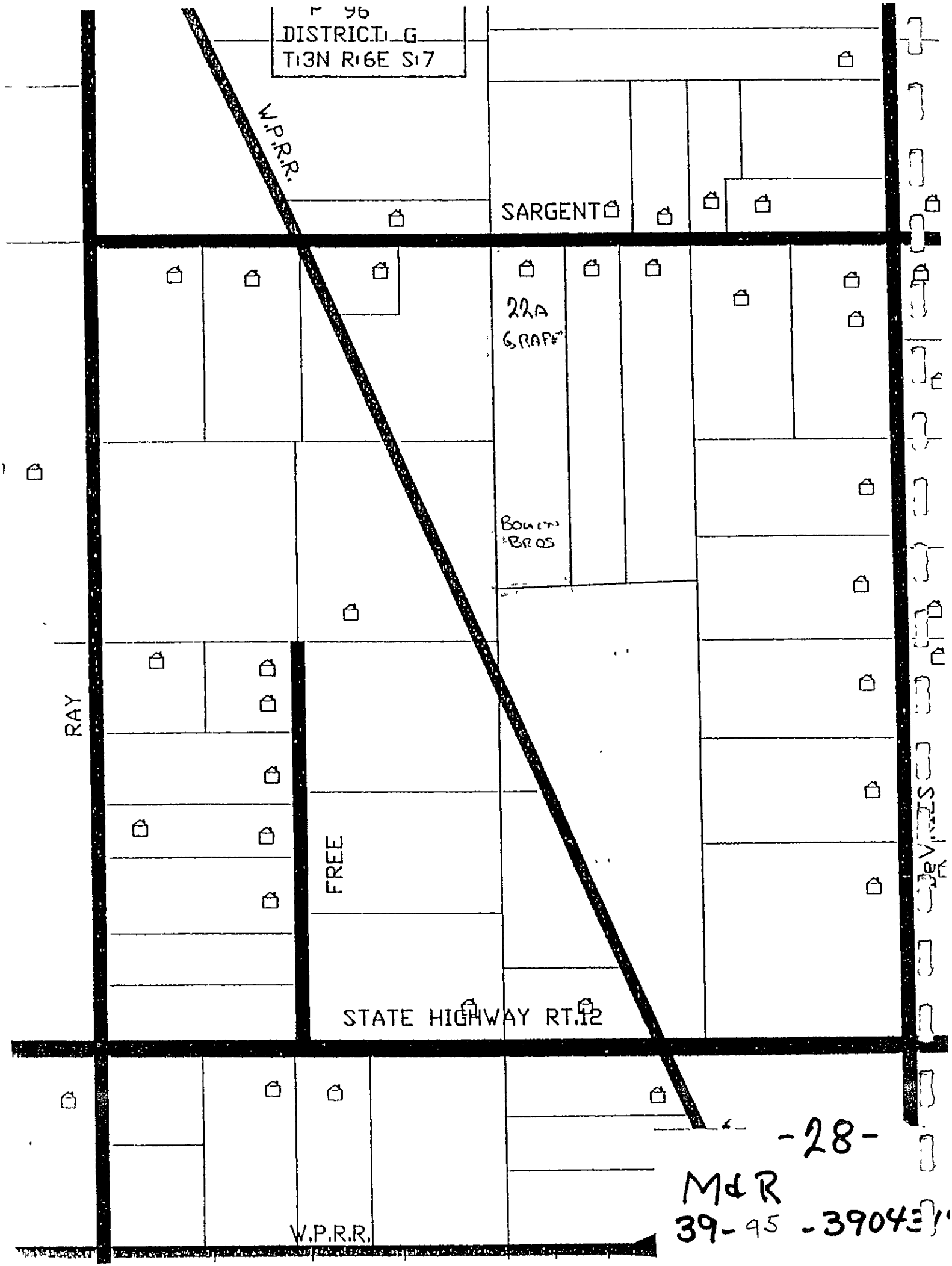


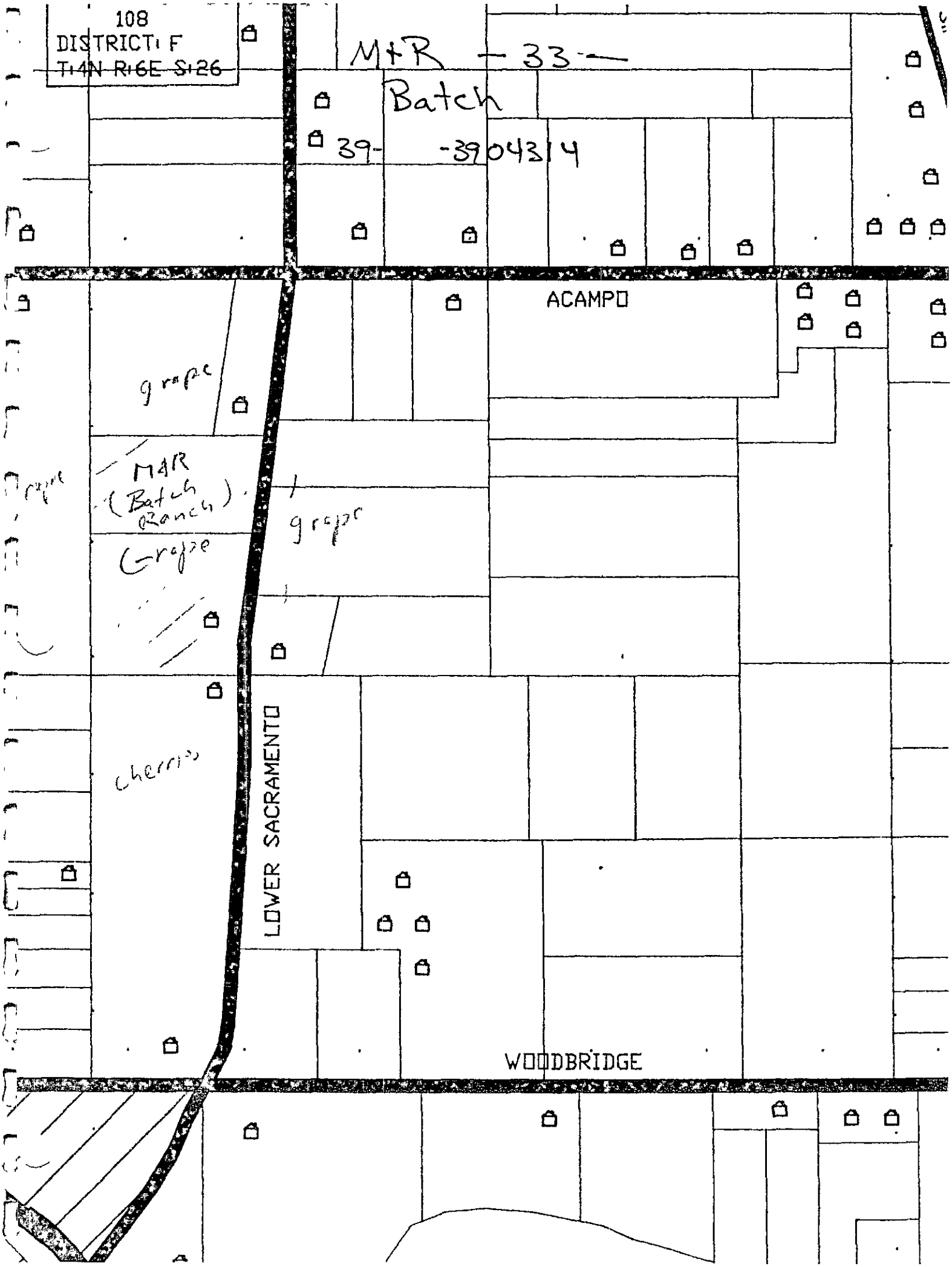
Exhibit A - Map of Permit No. _____

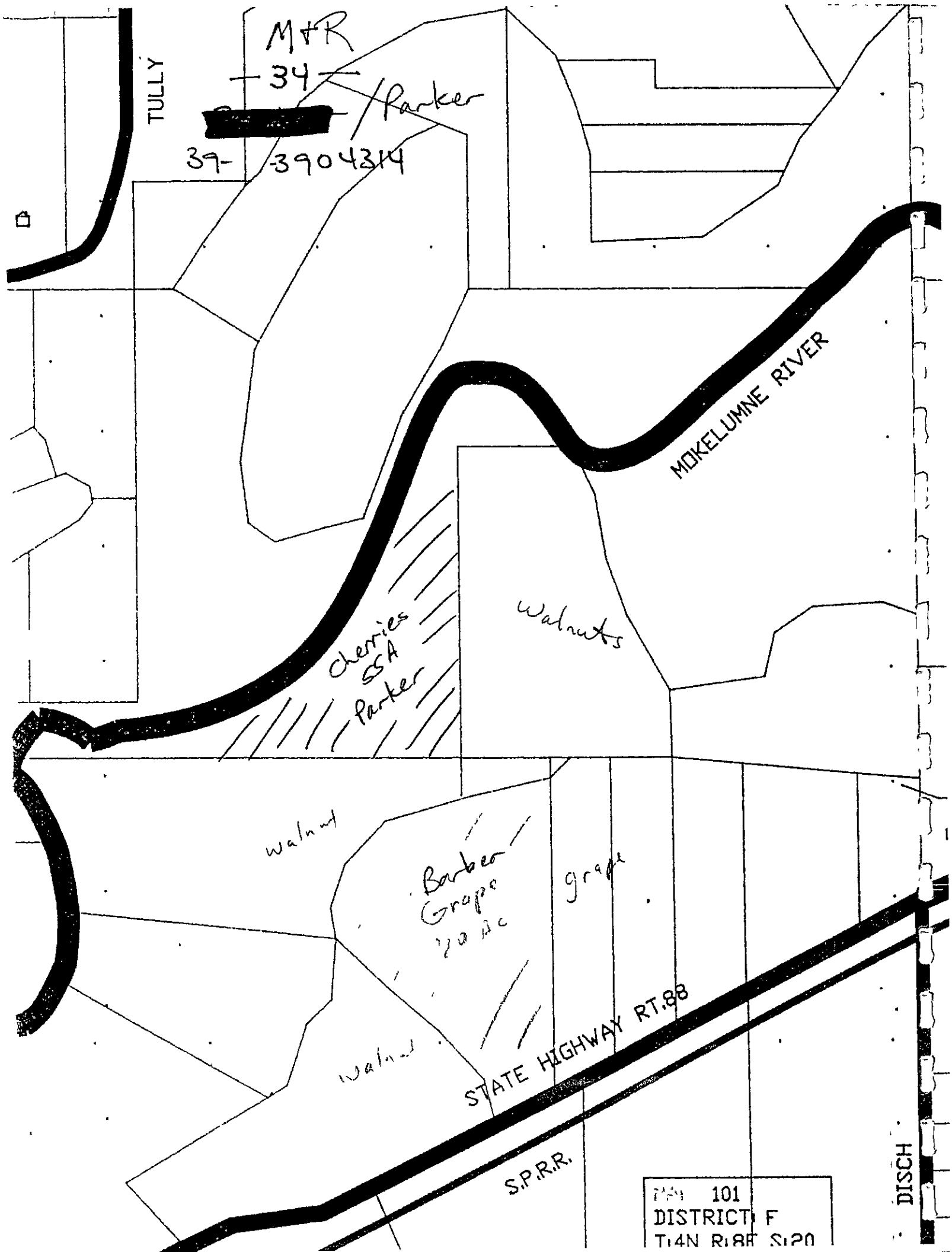

107
DISTRICT: F
T:4N R:6E S:27
RODE
M+R
-26-
39- -3904314
MAY
ACAMPO
G
Lippert
26A
Batch
26B
CH
G
G
MOKELUMNE RIVER
WOODBRIDGE
WOODBRIDGE

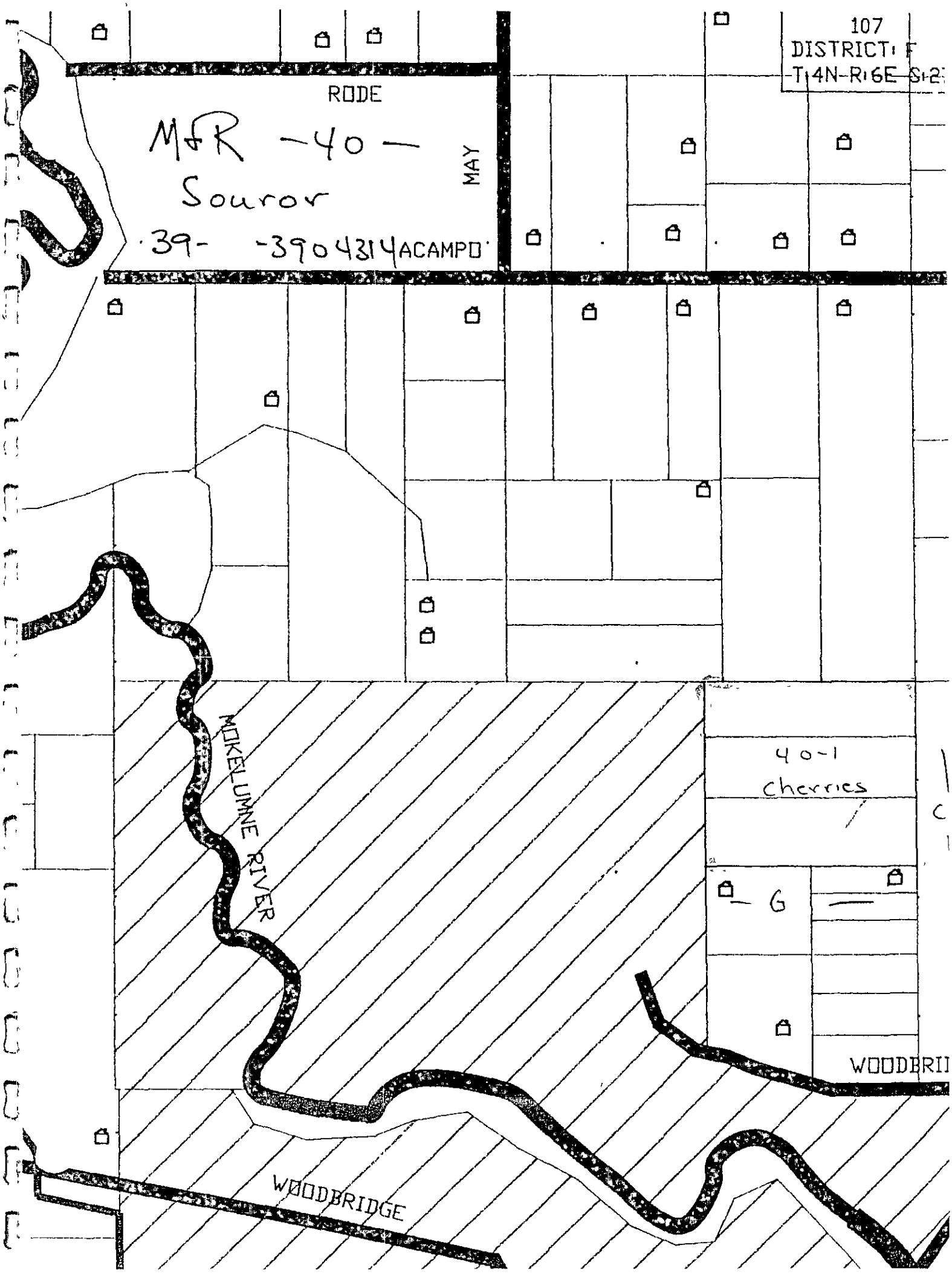


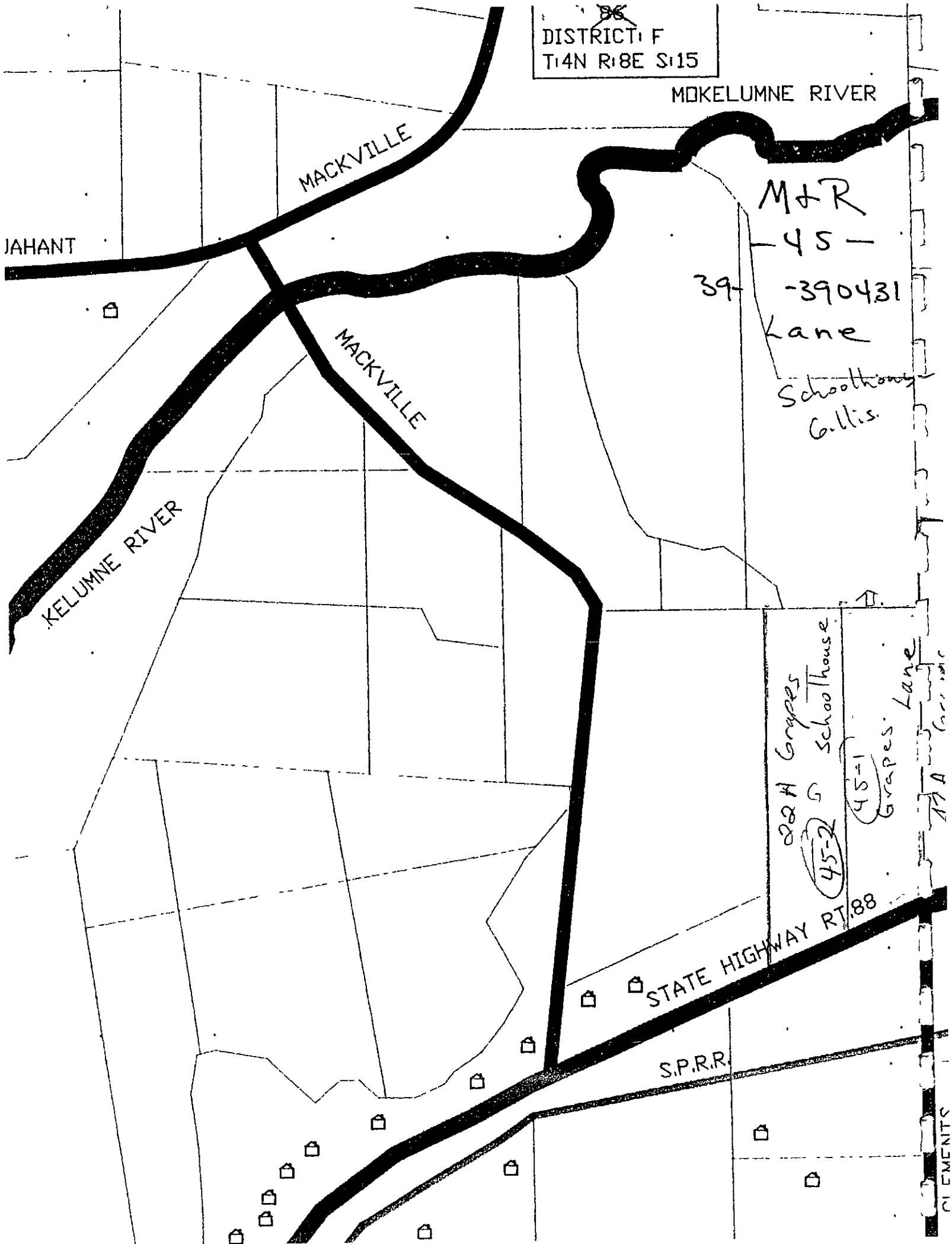
-28-

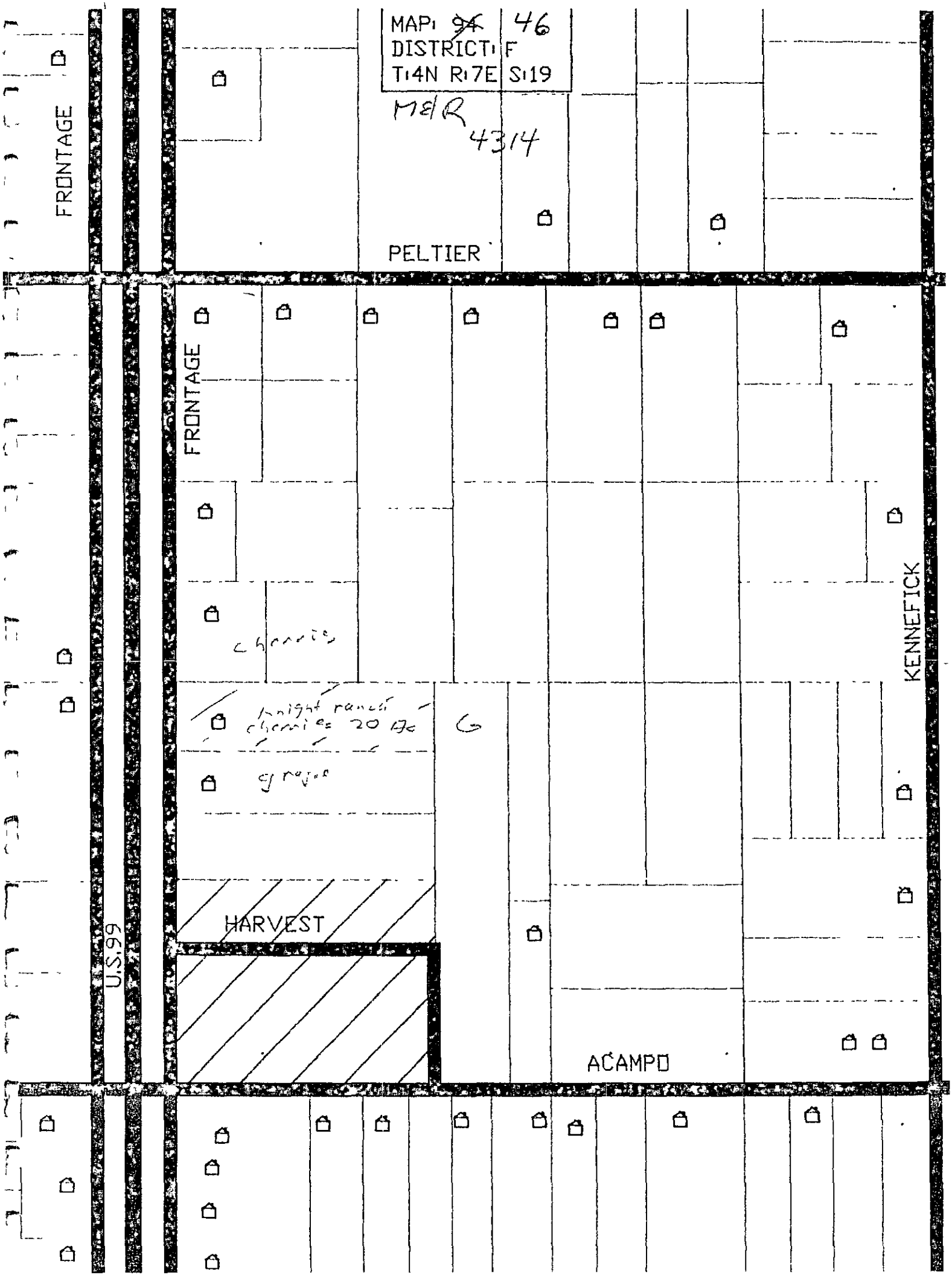
M&R
39-95 -39043

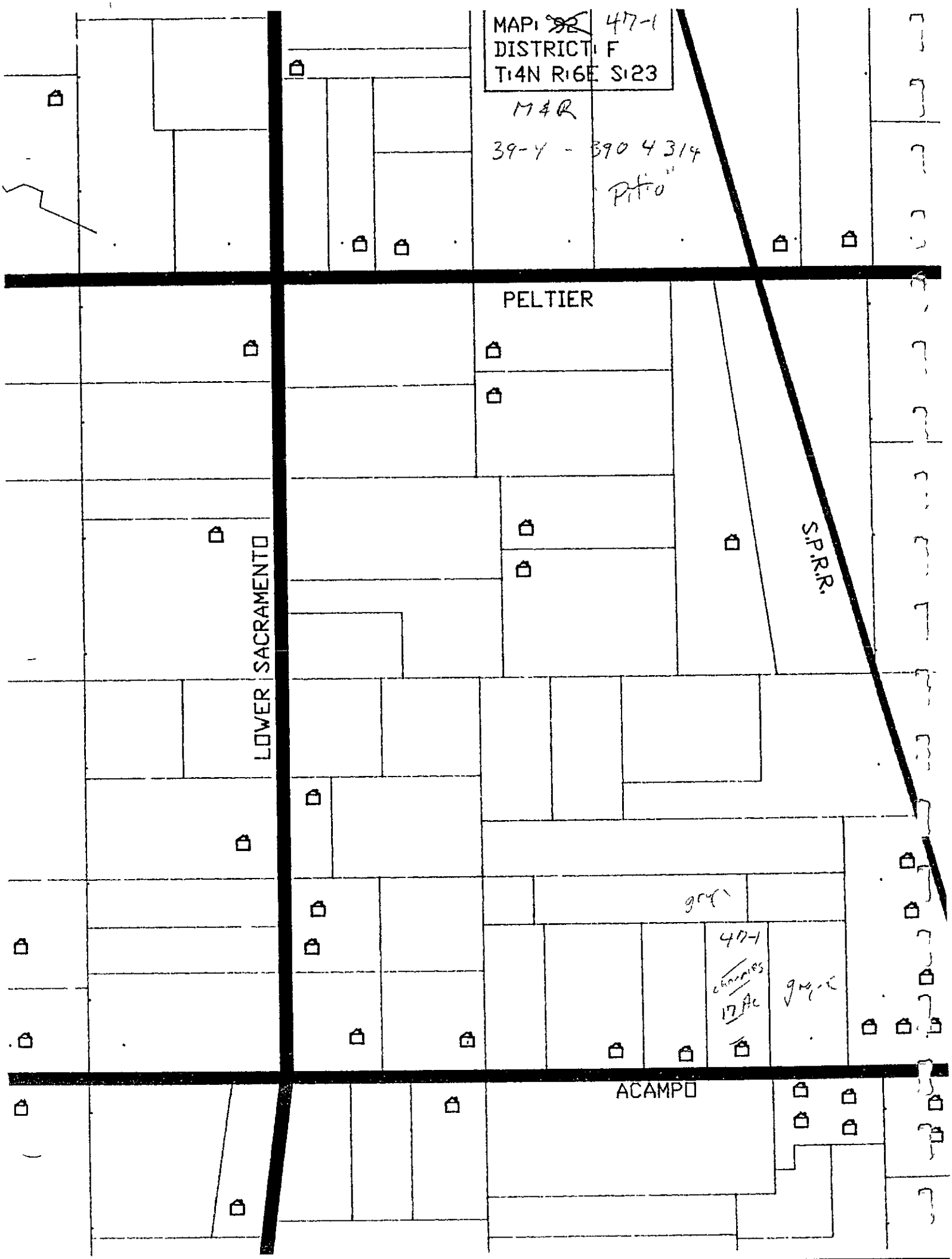

108
DISTRICT: F
T4N R6E S26
M+R - 33 -
Batch
39- -39043 4
ACAMPO
grape
MAR
(Batch Ranch)
grape
grape
grape
cherries
LOWER SACRAMENTO
WOODBRIDGE

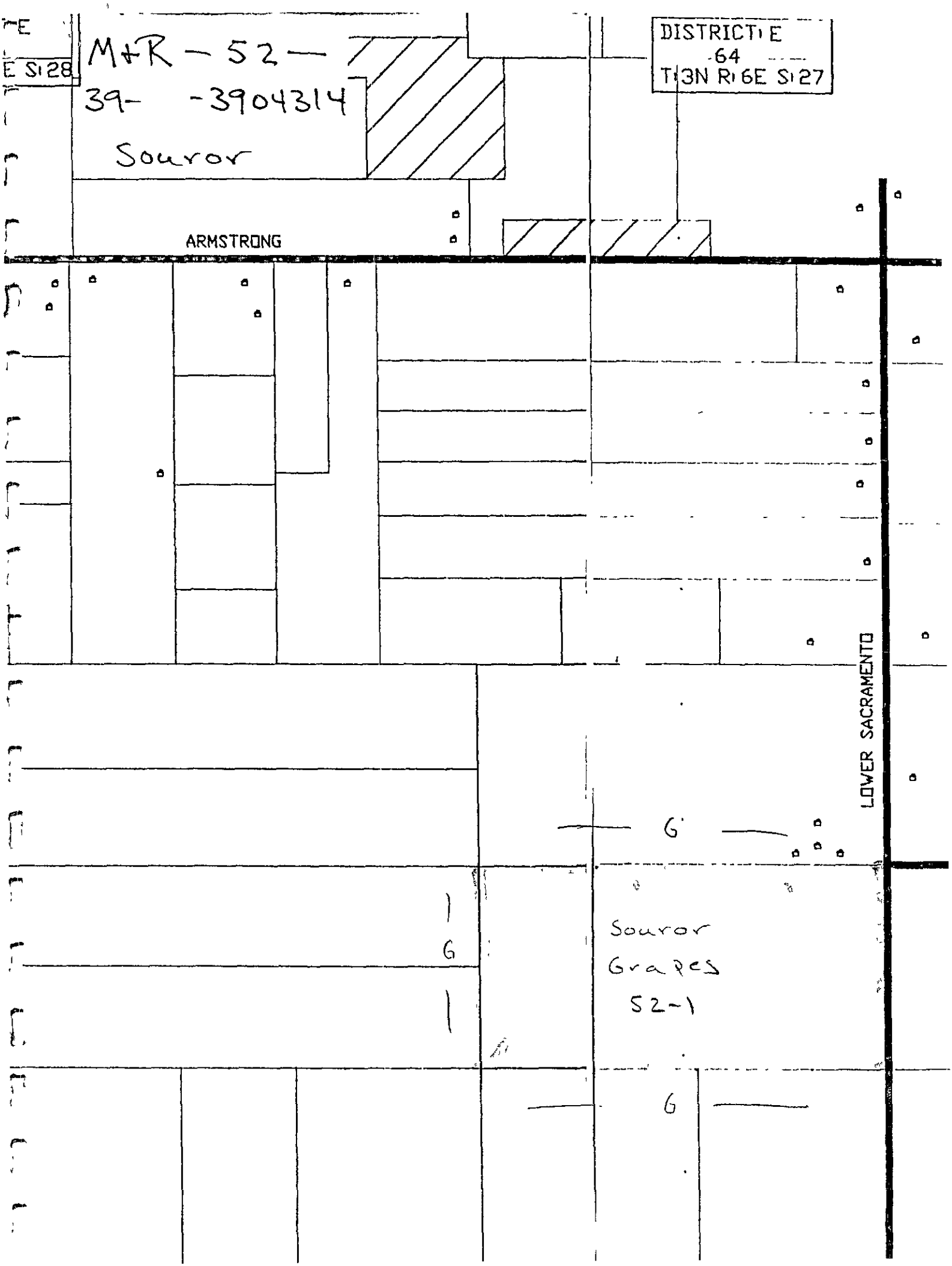

M+R
34
Parker
[redacted]
39-
3904314
TULLY
MOKELUMNE RIVER
Cherries
SSA
Parker
Walnuts
walnut
Barber
Grape
grape
walnut
STATE HIGHWAY RT.88
S.P.R.R.
DISCH
101
DISTRICT F
T14N R18E S20


107
DISTRICT: F
T:4N-R:6E-S:2
RODE
MAY
M&R -40-
Sourer
·39- -3904314ACAMPO
MOKELUMNE RIVER
40-1
Cherries
G
WOODBRIDGE


DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
MACKVILLE
JAHANT
M&R
-45-
39- -390431
Lane
Schoolhouse
Gillis
MACKVILLE
KELUMNE RIVER
88A Grapes
G
Schoolhouse
45-2
45-1
Grapes
Lane
STATE HIGHWAY RT.88
S.P.R.R.

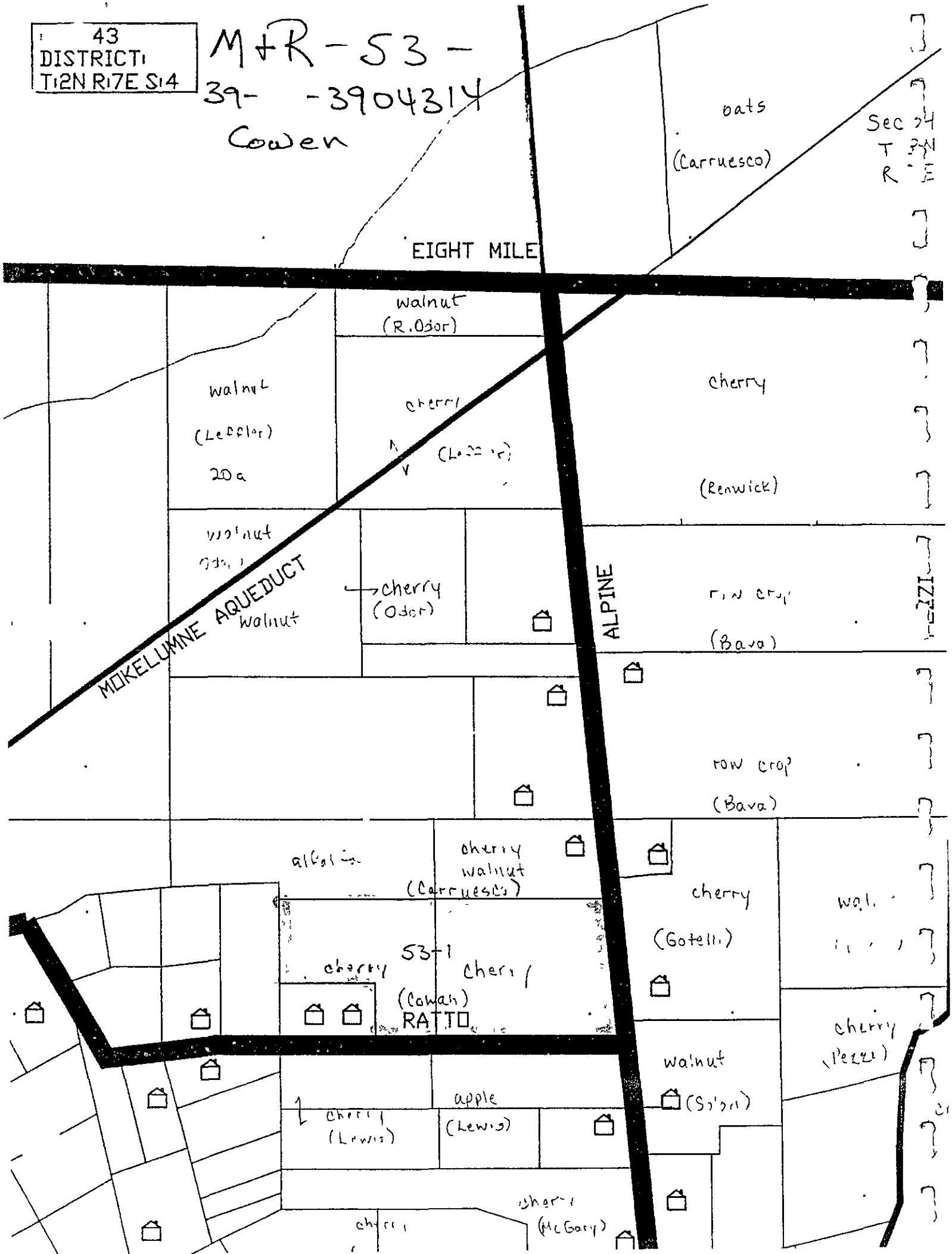

MAP: ~~94~~ 46
DISTRICT: F
T:4N R:7E S:19
M&R
4314
FRONTAGE
PELTIER
FRONTAGE
KENNEFICK
HARVEST
U.S.99
ACAMPO

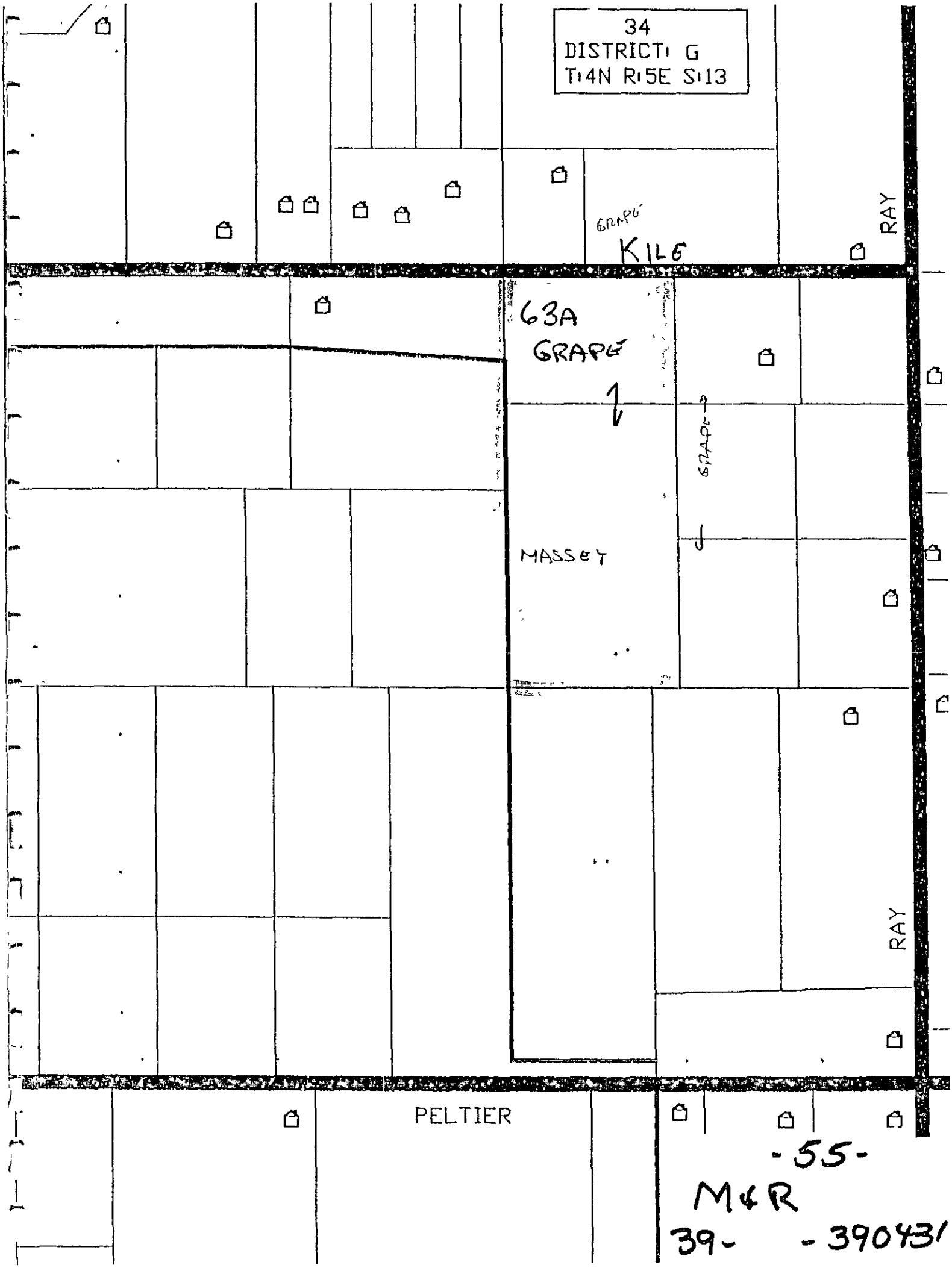

MAP: ~~92~~ 47-1
DISTRICT: F
T:4N R:6E S:23
M&R
39-Y - 390 4314
Pitio
PELTIER
LOWER SACRAMENTO
S.P.R.R.
47-1
17 Ac
ACAMPO


E
E S128
M+R - 52 -
39- -3904314
Souvor
DISTRICT E
64
T3N R6E S27
ARMSTRONG
LOWER SACRAMENTO
G
G
Souvor
Grapes
52-1
G

43
DISTRICT:
T:2N R:7E S:4

M+R-53-
39- -3904314
Cowen

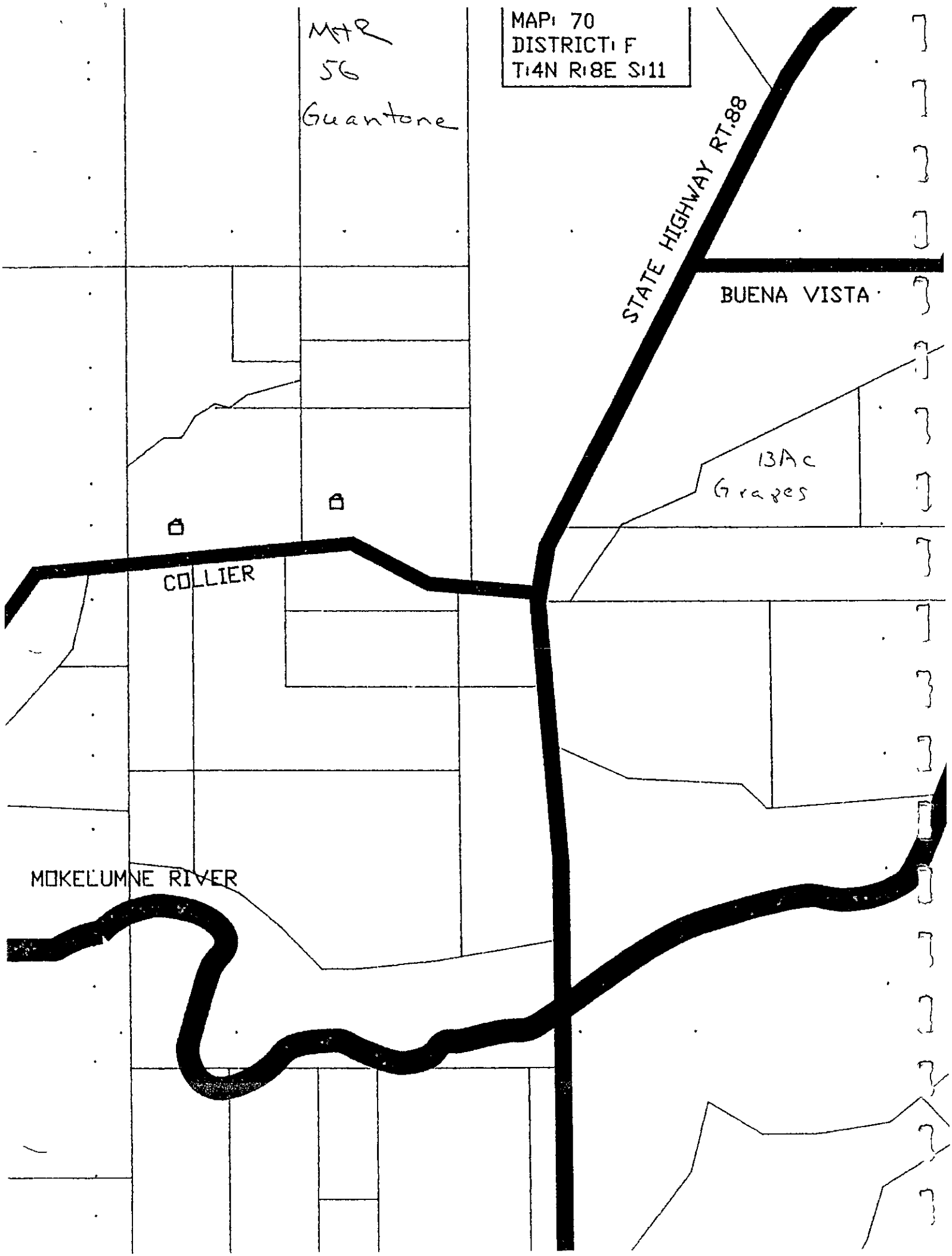


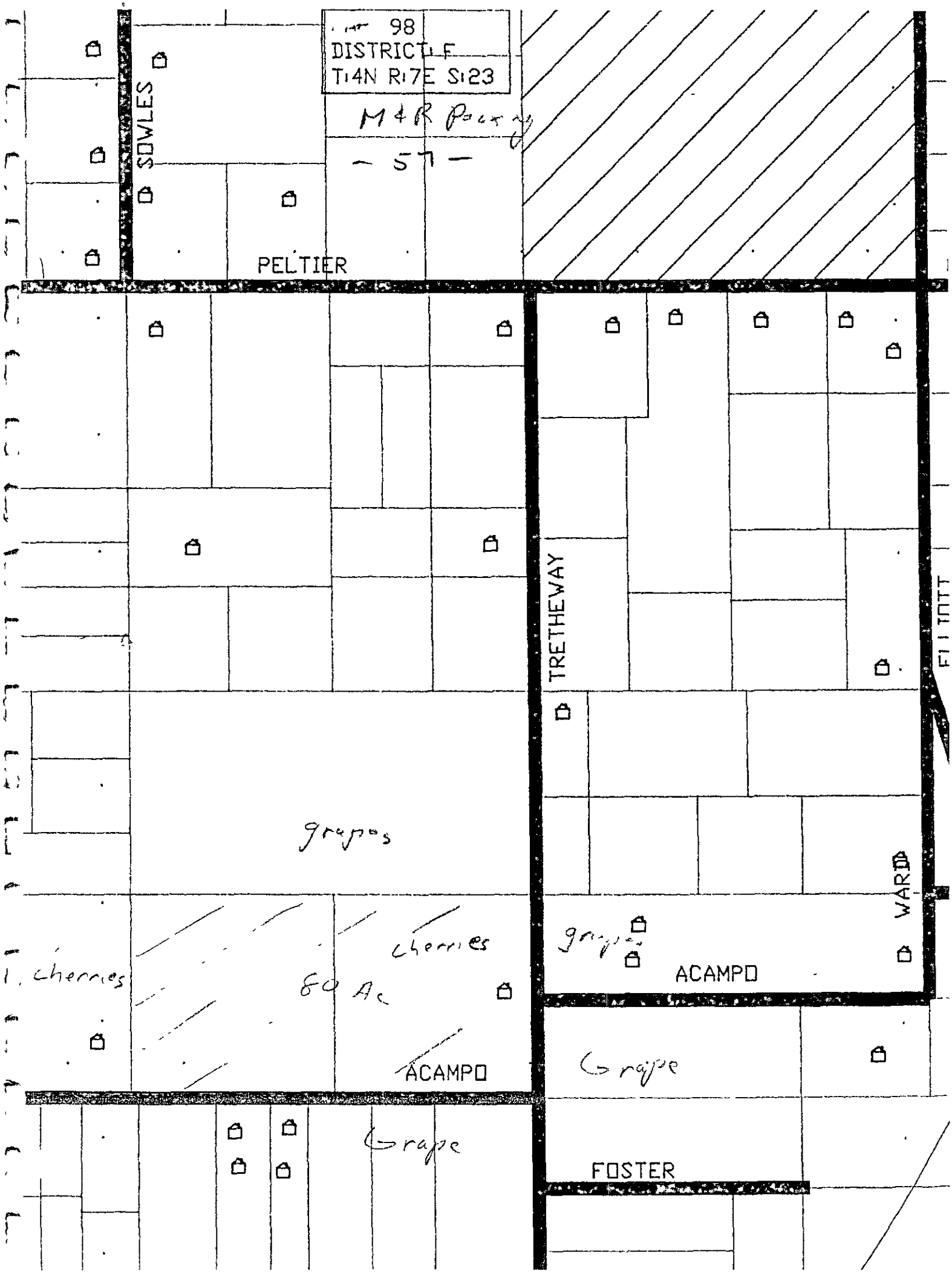


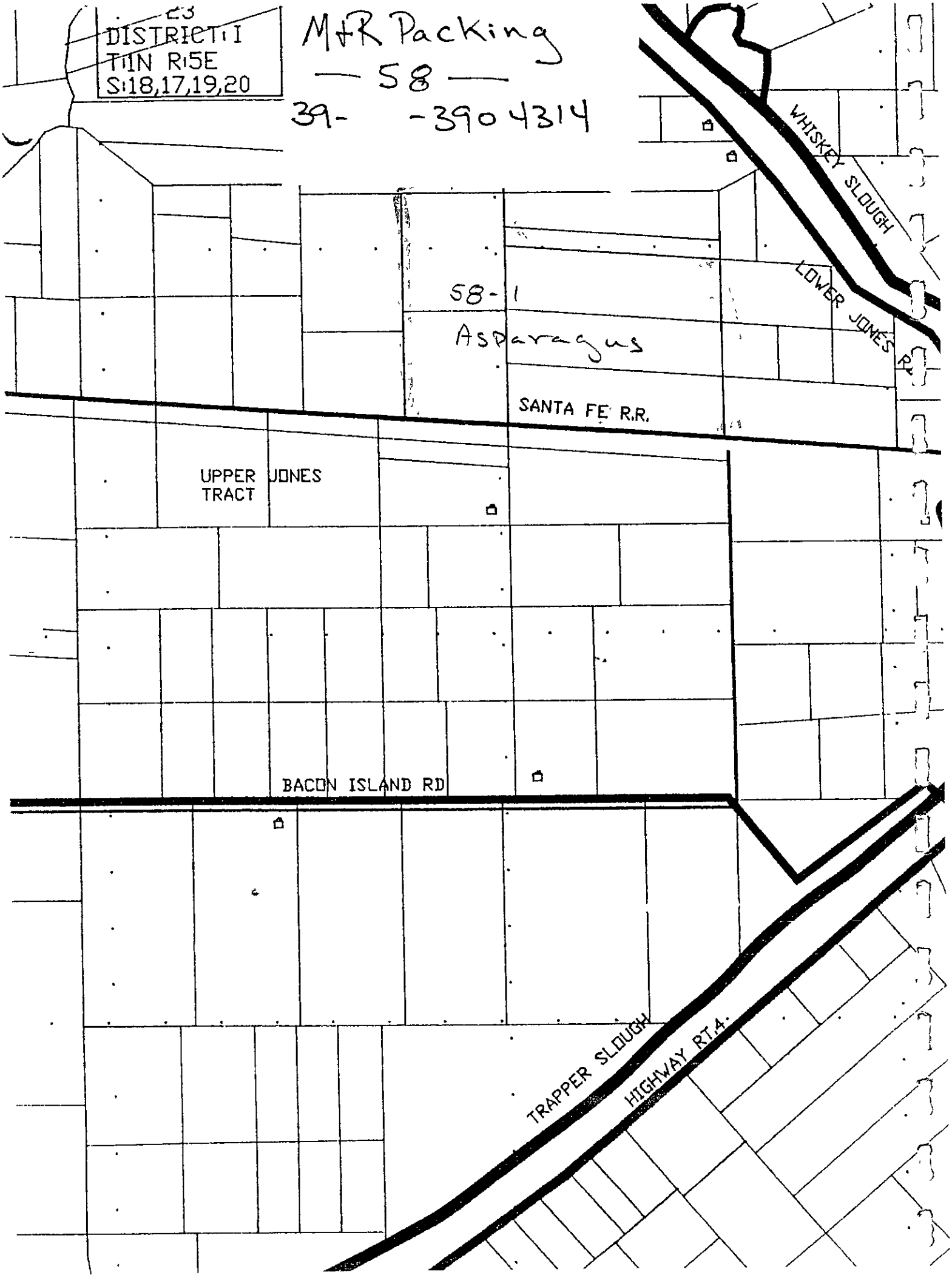
-55-

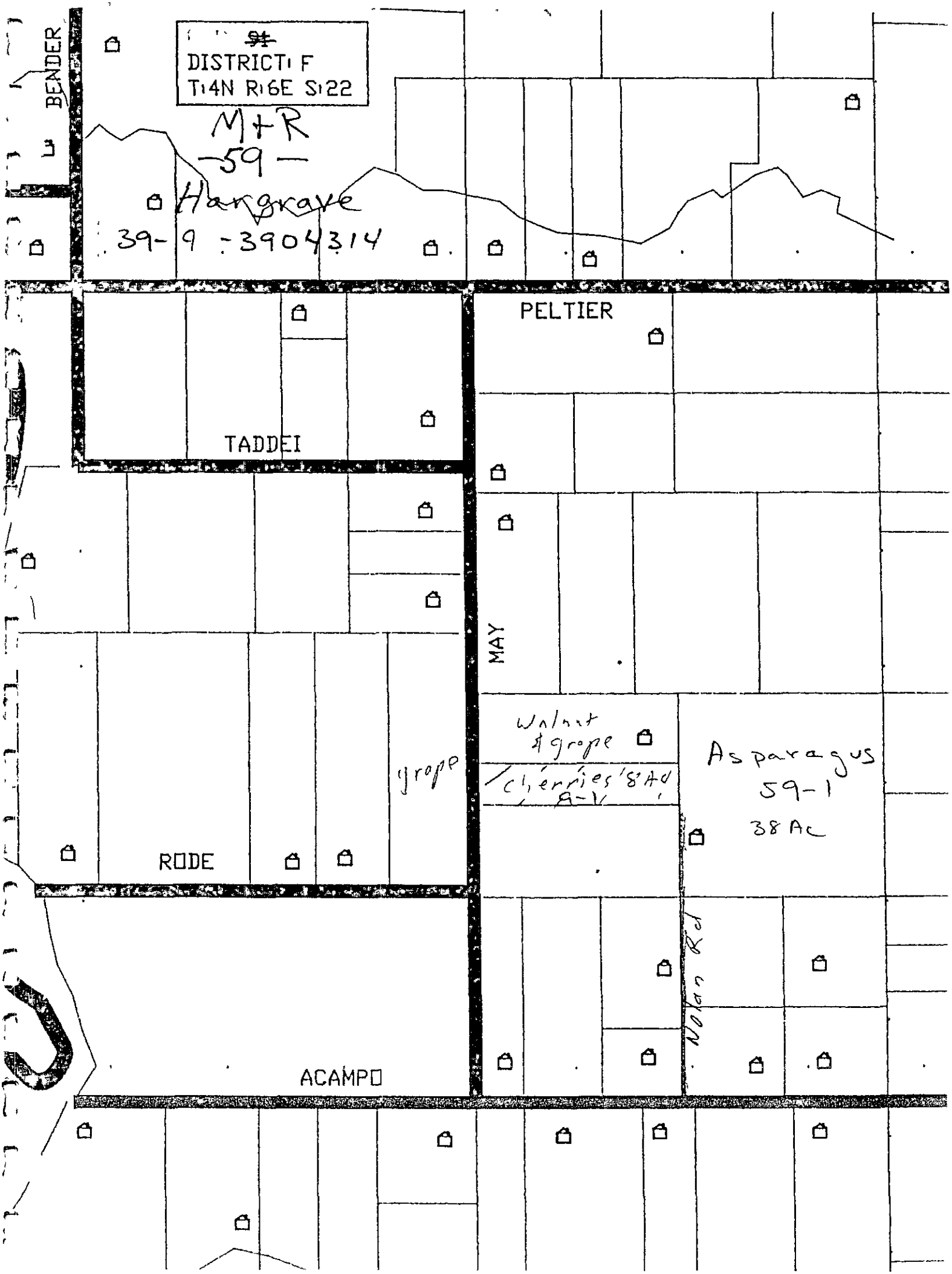
M&R

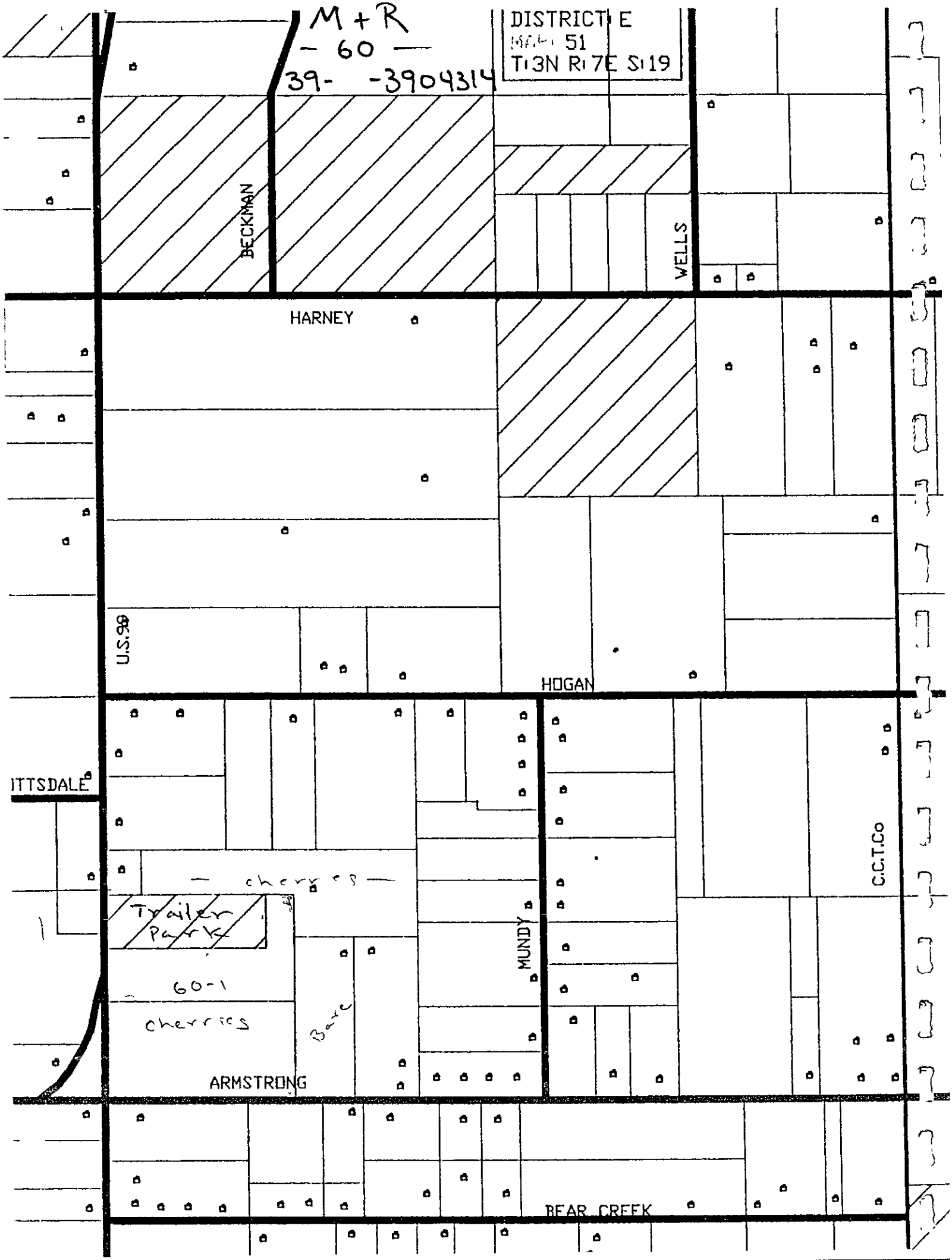
39- -390431

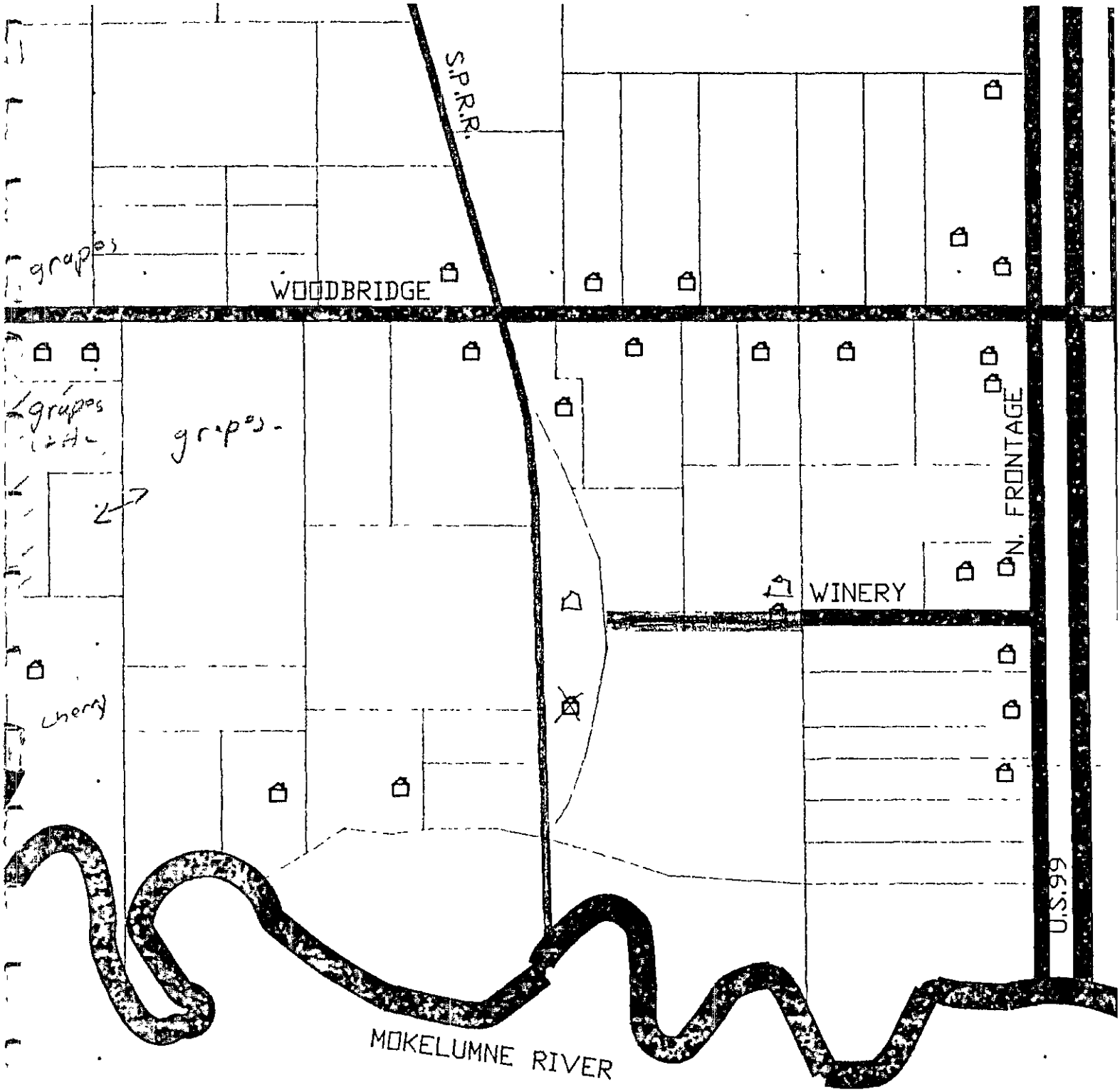

MAP: 70
DISTRICT: F
T:4N R:8E S:11
M+R
56
Guantone
STATE HIGHWAY RT.88
BUENA VISTA
13Ac
Grapes
COLLIER
MOKELUMNE RIVER


98
DISTRICT F
T14N R17E S23
M&R Pacing
- 57 -
SOWLES
PELTIER
TRETHEWAY
WARD
ACAMPO
grapes
cherries
cherries
80 Ac
ACAMPO
Grape
Grape
FOSTER


DISTRICT 1
T1N R5E
S:18,17,19,20
M&R Packing
— 58 —
39- -3904314
WHISKEY SLOUGH
LOWER JONES R.
58-1
Asparagus
SANTA FE R.R.
UPPER JONES
TRACT
BACON ISLAND RD
TRAPPER SLOUGH
HIGHWAY RT.4

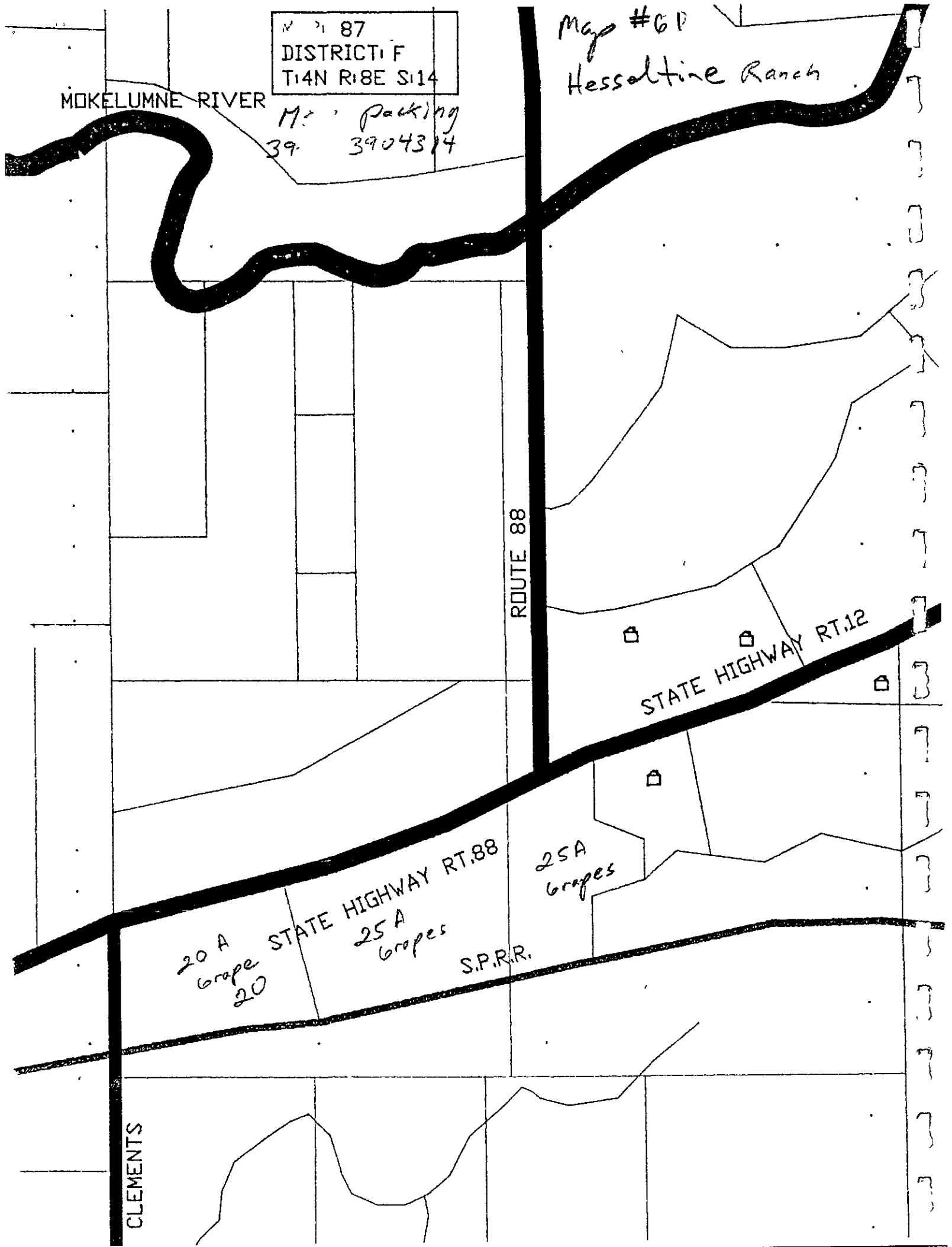

DISTRICT: F
T:4N R:6E S:22
M+R
-59-
Hargrave
39-9-3904314
BENDER
PELTIER
TADDEI
MAY
RODE
ACAMPO
grape
walnut & grape
cherries 8 Ac
Asparagus
59-1
38 Ac
Nolan Rd

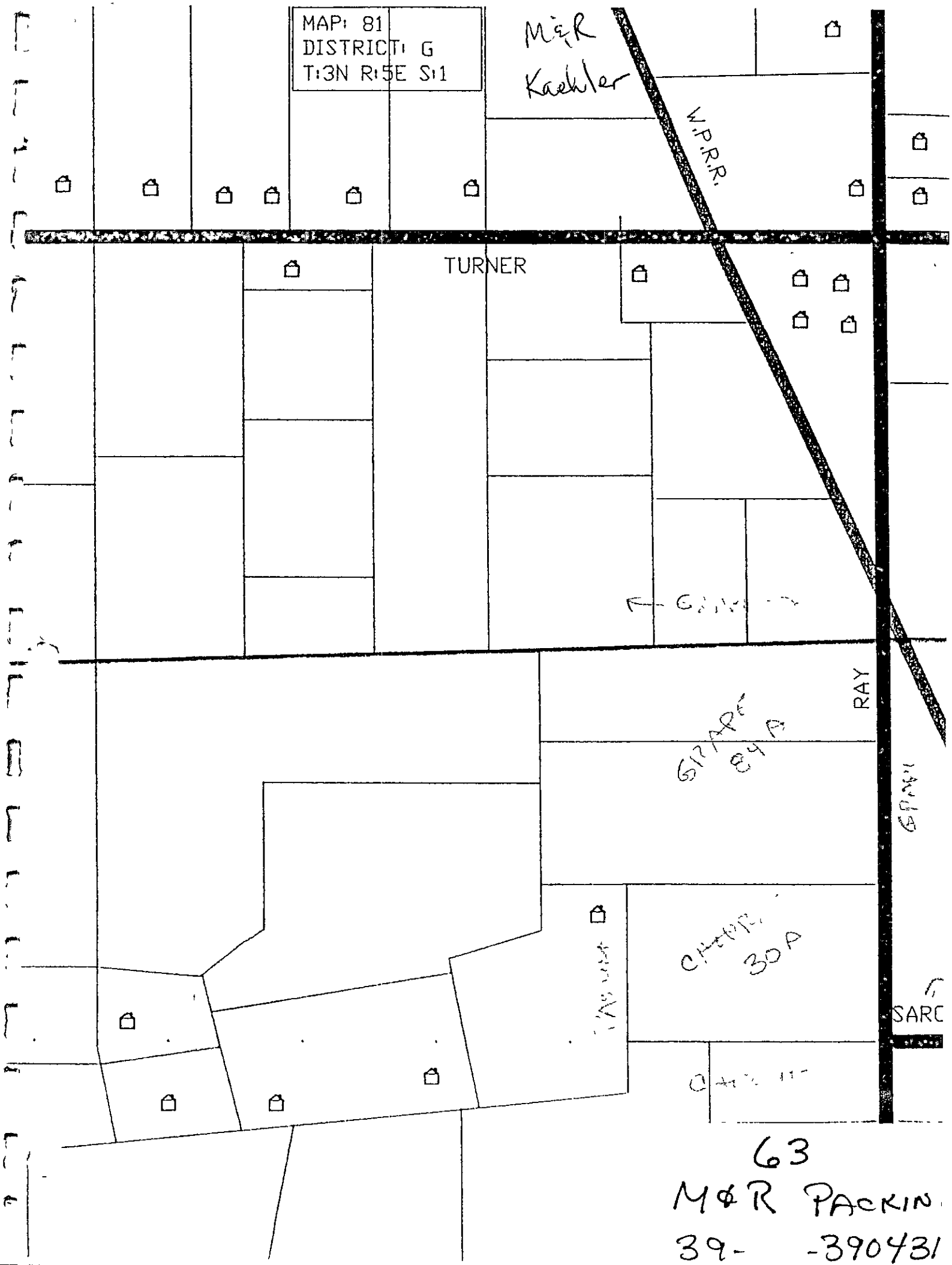

M + R
— 60 —
39- -3904314
DISTRICT E
MAP 51
T13N R17E S19
BECKMAN
WELLS
HARNEY
U.S.99
HOGAN
ITTSDALE
C.C.T.Co
— cherries —
Trailer Park
60-1
cherries
Bare
MUNDY
ARMSTRONG
BEAR CREEK



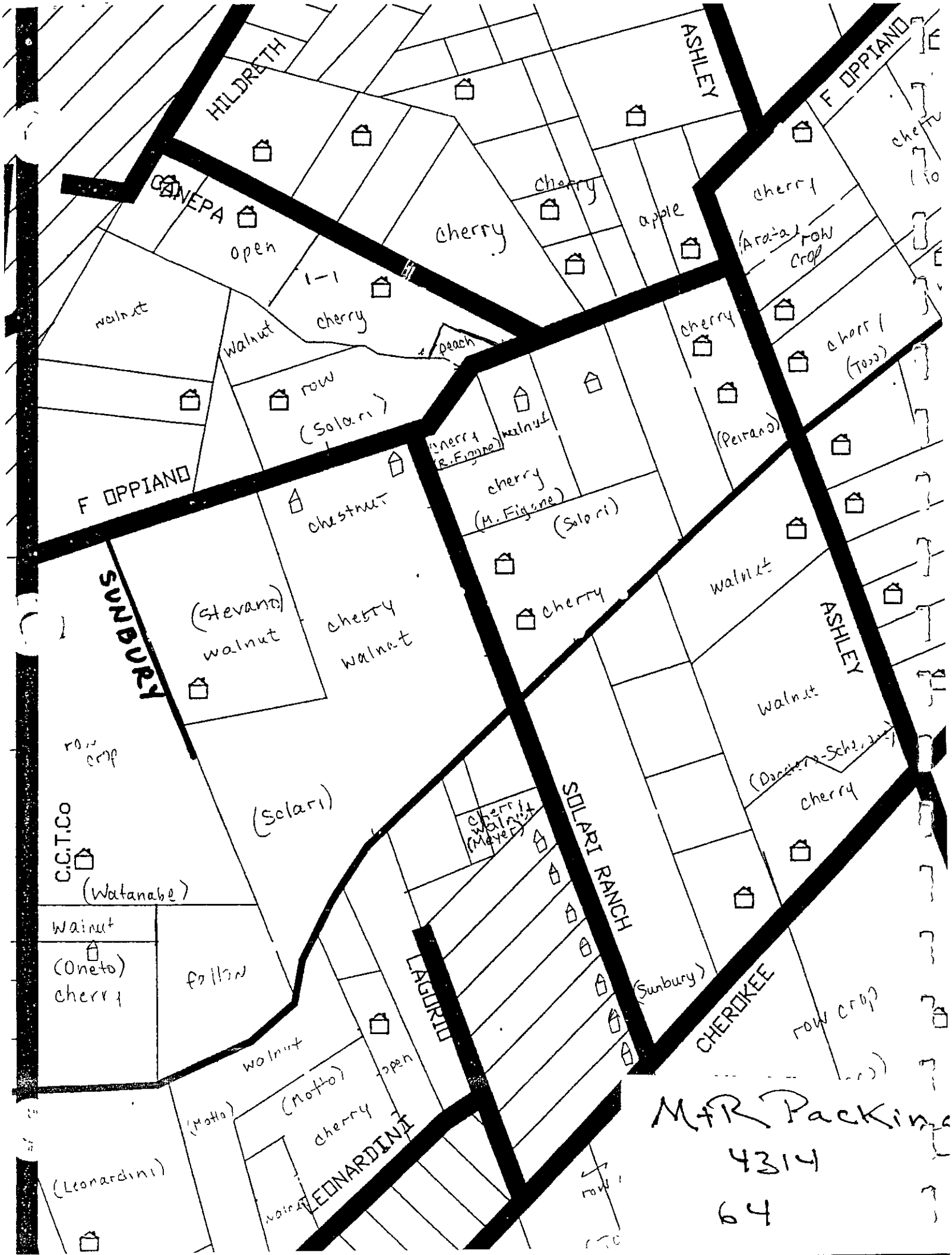
MAP: ~~126~~ 62-1
DISTRICT: F
T:4N R:6E S:36

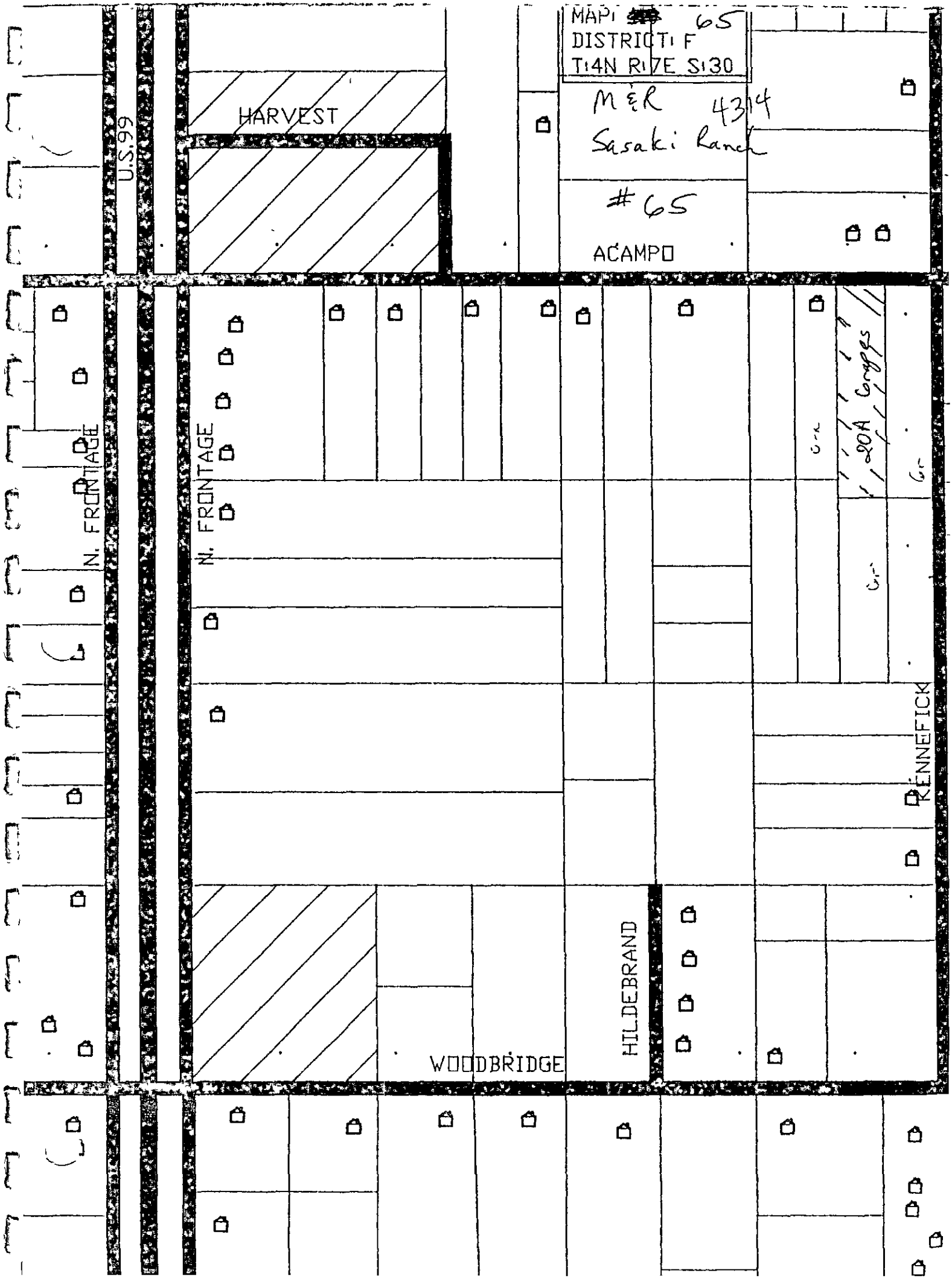
M&R Packing

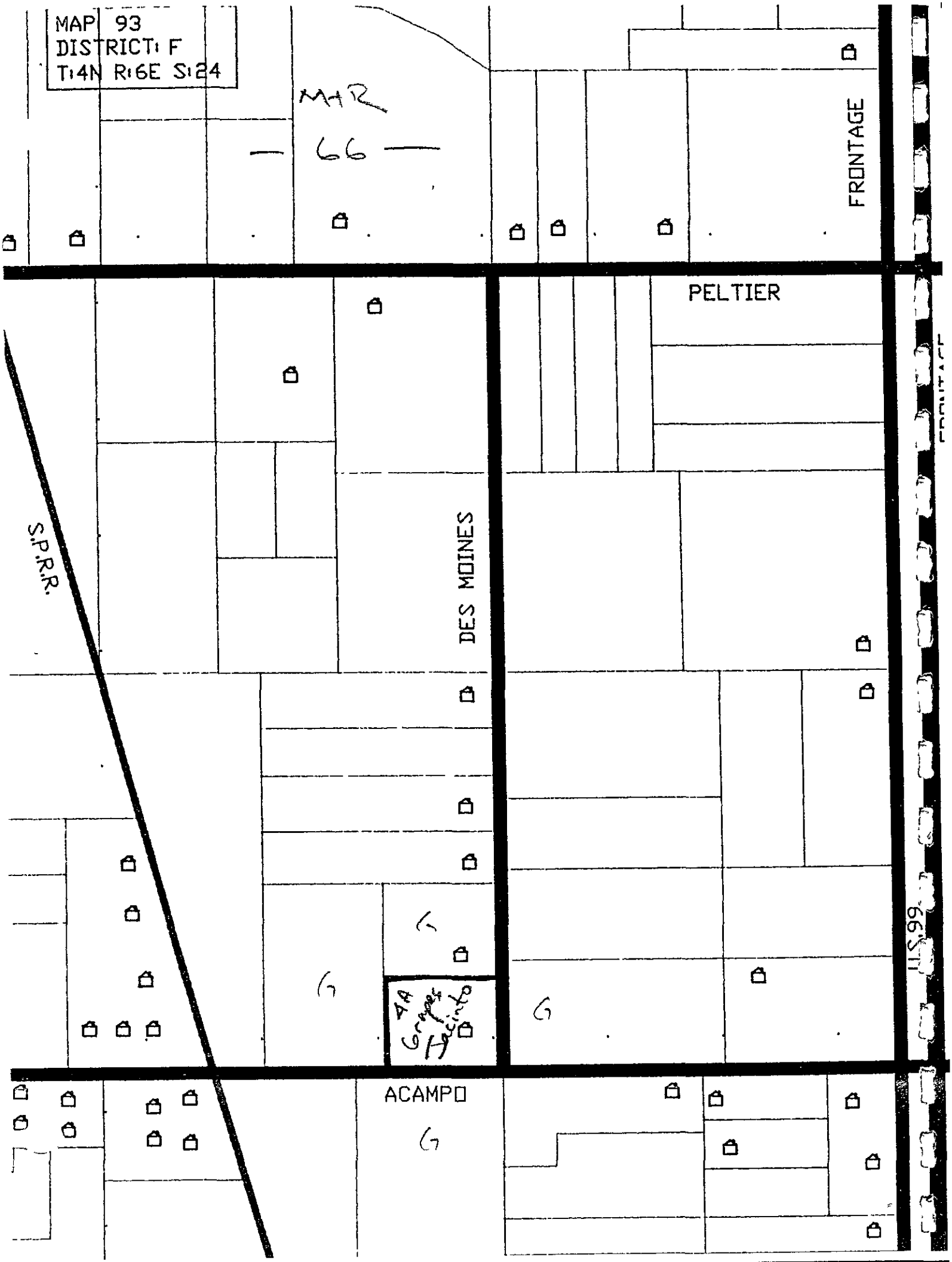

87
DISTRICT F
T4N R8E S14
Map #6P
Hessoltine Ranch
MOKELUMNE RIVER
Mc Packing
39 3904314
ROUTE 88
STATE HIGHWAY RT.12
STATE HIGHWAY RT.88
25A
Grapes
20 A
Grape
20
25 A
Grapes
S.P.R.R.
CLEMENTS

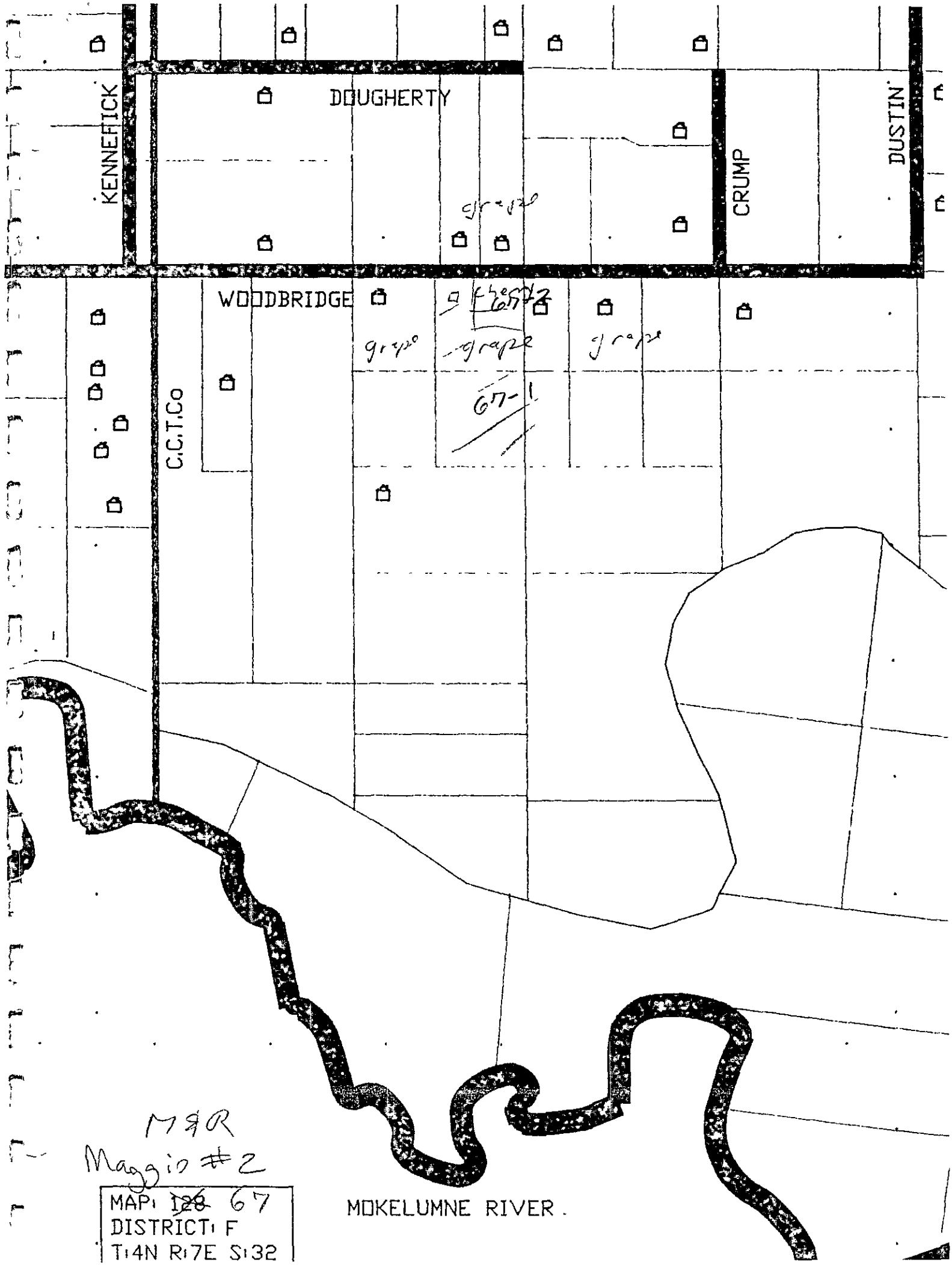


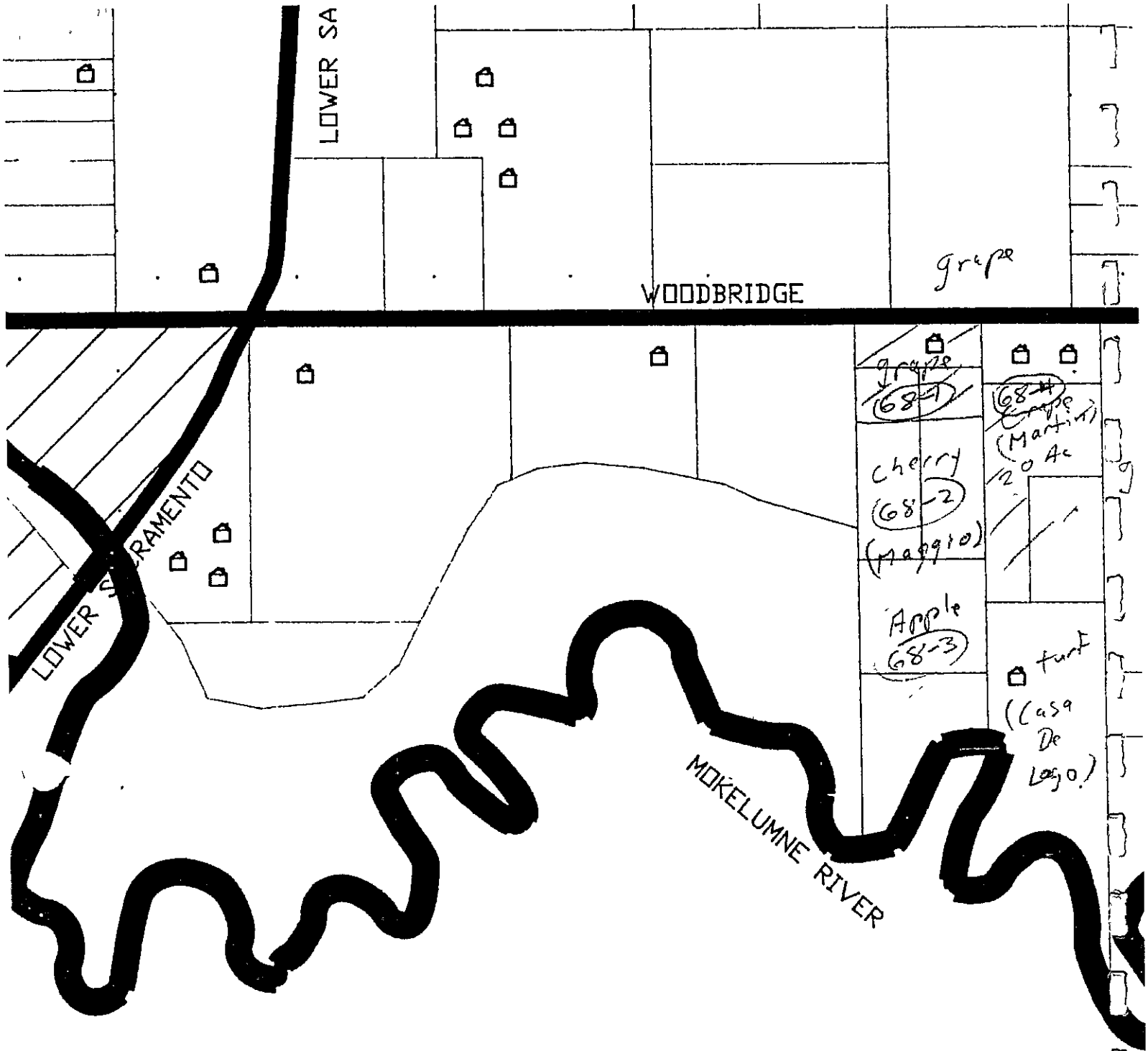
63
M&R PACKIN
39- -390431


HILDRETH
ASHLEY
F OPPIANO
CANEPA
open
cherry
apple
cherry
(Araiza)
row crop
walnut
walnut
cherry
peach
row
(Solari)
cherry
(Toso)
(Peirano)
F OPPIANO
chestnut
cherry
(M. Figone)
(Solari)
SUNBURY
(Stevano)
walnut
cherry
walnut
cherry
walnut
ASHLEY
walnut
(Oscarone-Schultz)
cherry
row crop
(Solari)
C.C.T.Co
(Watanabe)
cherry
walnut
(Mayer)
SOLARI RANCH
walnut
(Oneto)
cherry
fallow
LAGURIA
(Sunbury)
CHEROKEE
row crop
walnut
(Motto)
open
(Motto)
cherry
LEONARDINI
(Leonardini)
M&R Packing
4314
64


MAP
65
DISTRICT F
T4N R7E S30
M&R 4314
Sasaki Ranch
#65
ACAMPO
HARVEST
U.S.99
N. FRONTAGE
N. FRONTAGE
20A Cottages
RENNEFICK
HILDEBRAND
WOODBRIDGE


MAP 93
DISTRICT: F
T:4N R:6E S:24
MAR
66
FRONTAGE
PELTIER
DES MOINES
S.P.R.R.
U.S. 99
ACAMPO
G
G
G
G
AA
Grupo
Hacinto


KENNEFICK
DOUGHERTY
CRUMP
DUSTIN
WOODBRIDGE
C.C.T.Co
grape
grape
grape
grape
67-1
MOKELUMNE RIVER
M&R
Maggio #2
MAP: ~~128~~ 67
DISTRICT: F
T:4N R:7E S:32

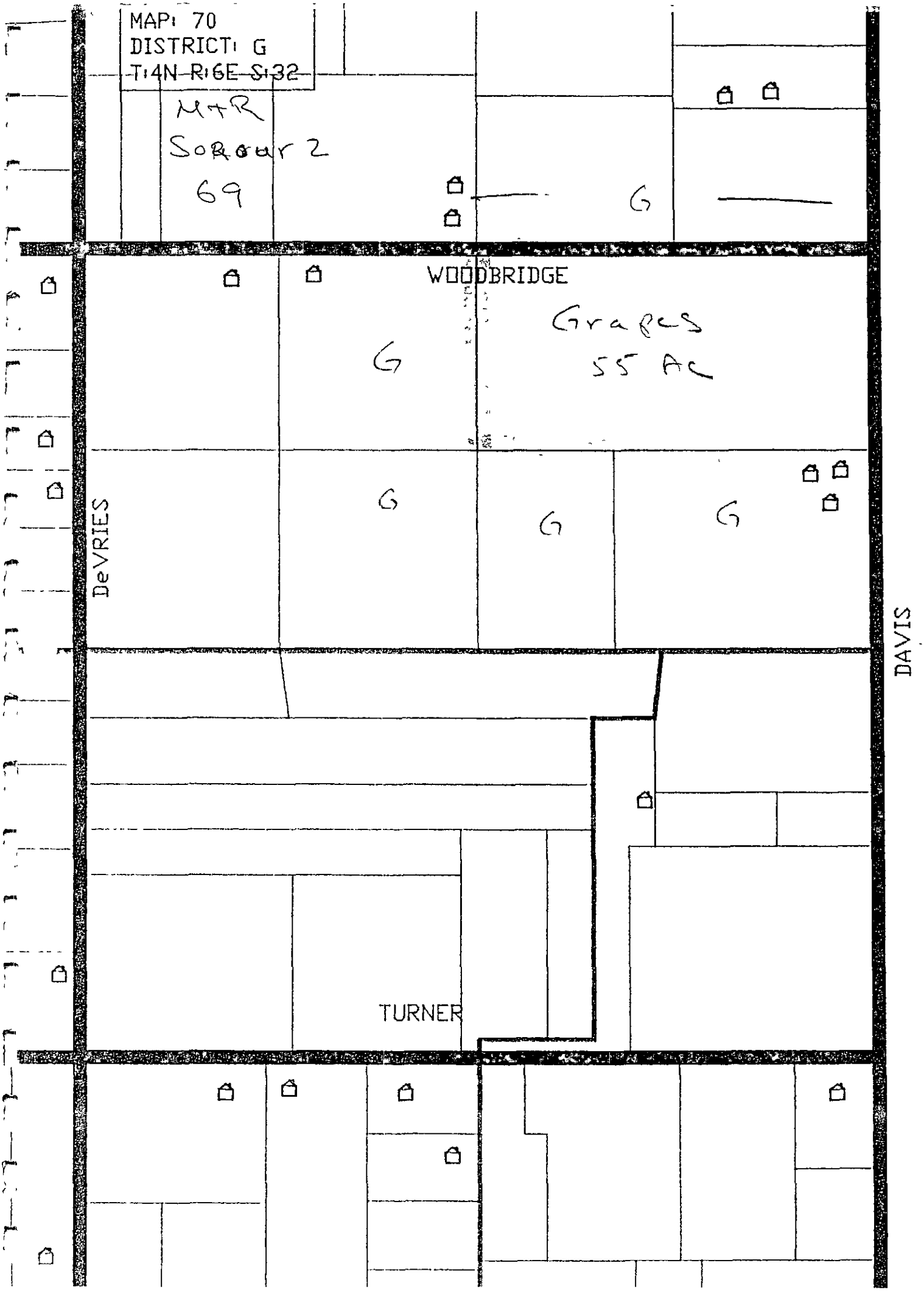


MGR Packing
4314

Martin

Maggio #1

MAP: ~~185~~ 68
DISTRICT: F
T:4N R:6E S:35


MAP: 70
DISTRICT: G
T:4N R:6E S:32
M+R
Sorour 2
69
G
WOODBRIDGE
Grapes
55 Ac
G
G
G
G
DeVRIES
DAVIS
TURNER

SCOTT HUDSON
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS & MEASURES
ANIMAL CONTROL

VICKI HELMAR
ASST AGRICULTURAL COMMISSIONER
ASST SEALER OF WEIGHTS & MEASURES

SAN JOAQUIN COUNTY

OFFICE OF THE

AGRICULTURAL COMMISSIONER

POST OFFICE BOX 1809
STOCKTON, CALIFORNIA 95201-1809
PHONE 209/468-3300
FAX 209/468-3330

MAIN OFFICE - STOCKTON
1868 E. HAZELTON AVE

LODI OFFICE
210 N SACRAMENTO ST

TRACY OFFICE
503 E 10TH STREET

SIMMS STATION - RIPON
17620 E HWY 120

Date: December 1, 2000

To. Paraquat (Gramoxone) Restricted Materials Multi-Year Permit Holders

From: Gary W. Stockel, Deputy Agricultural Commissioner

Subject: Permit Conditions for Paraquat Dichloride

The following permit conditions for the use of paraquat dichloride are now a part of your current Restricted Materials Permit·

CONDITIONS FOR THE USE OF PARAQUAT DICHLORIDE (GRAMOXONE)

Persons working as applicators or flaggers (except applicators working in an enclosed cab or flaggers working in an enclosed vehicle) shall wear a dust/mist respirator approved by MSHA/NIOSH (number prefix TC-84-A)

These use conditions are added to your permit based on a determination by California Department of Pesticide Regulation that an inhalation hazard exists for applicators and flaggers exposed to paraquat dichloride outside of enclosed cabs or vehicles

If you have any questions about these conditions, please contact the San Joaquin County Agricultural Office that issued your permit

SAN JOAQUIN COUNTY
1868 E HAZELTON AVENUE
STOCKTON, CA 95205

Web URL www co san-joaquin ca us/agc E-Mail
Office (209)468-3300 Recorder (NOI) (209)468-3300 FAX (209)468-3330

==========

RESTRICTED MATERIALS PERMIT PERMIT #: 39-04-3904314
County HQ District # XE HS

M & R PACKING
33 E TOKAY ST
LODI, CA 95240-

Expiration Date 12/31/200
Effective Date ~~01/01/199~~ 1/4/02

JIM QUASCHNICK
33 E TOKAY ST
LODI, CA 95240-

Home: (209)369-2725
Shop: (209)368-3300
Fax
Mobile: ( ) -

==========

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App		Seasonal	X	Poss & Use	X	Phone	X	Fax	
Q A Cert		Job		Poss Only		Box	X	Modem	
Ag PCO						In Person	X	Web	
Non-Ag	X								

NOI required 24 hours prior to applicatic

==========

Non-Ag Use: None
Conditions: PQW Z QL32426

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I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be use in the treatment [Form PR-ENF-125 (Rev 07/92) Pesticide Enforcement Branch]

Permit Applicant _____ Sign _____

Title: _____ Issue Date: 1-4-02

Issuing Officer _____ Issue Date: _____

M & P PACKING Permit# 39-04-3904314

Employees handle pesticides (Y or N) |Y|

Permit Pesticides

Numb	Pesticide	Pest(s)	Form	Method(s)		Applicator(s)	
1051	SEVIN	LARVAE	Liquid	Air	Ground	PCO	Grower
2000	DICAMBA	WEEDS	Liquid	Air	Ground	PCO	Grower
2302	DISYSTON	APHIDS	Liquid	Ground		PCO	Grower
3830	METHOMYL	LARVAE	Liquid	Air	Ground	PCO	Grower
3850	METHYL BROMIDE	LARVAE	Fumigant	Fumigate		PCO	
4840	ALUMINUM PHOSPH	RODENTS	Fumigant	Ground		PCO	Grower
5540	STRYCHNINE	GOPHERS	Bait	Ground		PCO	Grower
6260	ZINC PHOSPHIDE	RODENTS	Bait	Ground		PCO	Grower
6360	2,4-D	WEEDS	Liquid	Ground		PCO	Grower
16011	PARAQUAT	WEEDS	Liquid	Ground		PCO	Grower
16891	SUPRACIDE	LARVAE	Liquid	Ground		PCO	Grower
18571	NEMACUR	NEMATODES	Liquid	Ground		PCO	Grower

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Con
APPLE (4001-0)	68-3	F	35	04N	06E	M	15 00	A	P
	MAGGIO FARMS				S/WOODBRIDGE 1/2 M E/LOWER SAC				
	1051(SEVIN), 16011(PARAQUAT)								
CHERRY (5002-0)	08-3	E	19	03N	07E	M	40 00	A	PW
	MADONNA				N/HOGAN W/CCTRR				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	08-4	E	19	03N	07E	M	12 00	A	PW
	COSTA				S/HOGAN W/CCTRR				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEM CU								
	09-1	F	22	04N	06E	M	8 00	A	PW
	HARGRAVE				E/MAY 1/2M N/ACAMPO				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	11-1	E	15	03N	06E	M	102 00	A	PW
	SCHUMACHER 62				NW HARNEY & LOWER SACRAMENTO				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE) 18571(NEM CU								
	12-1	E	28	03N	06E	M	40 00	A	PW
	SCHUMACHER 40				S/ARMSTORNG 1/8M W/LOWER SAC				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE) 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	25-1	D	14	02N	08E	M	80 00	A	PW
	B & R				SE FLOOD & HWY 26				
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE) 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEM CU								

M & R PACKING Permit# 39-04-3904314

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
CHERRY (5002-0)	26-1 STODDARD	F	27	04N	06E	M	35 00	A	PW
	SE ACAMPO & MAY								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	34-2 PARKER RANCH	F	20	04N	08E	M	55 00	A	P
	NW HWY 88 & DISCH								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	40-1 SOUROUR	F	27	04N	06E	M	42 00	A	PW
	N/WOODBRIDGE 1/4M W/LOWEP SAC								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	46-1 KNIGHT	F	19	04N	07E	M	20 00	A	PW
	E/HWY 99 1/4M N/ACAMPO								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE) 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	47-1 PITTO	F	23	04N	06E	M	17 00	A	PW
	N/ACAMPO 1/4M W/SPRR								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	53-1 COWEN	D	4	02N	07E	M	45 00	A	PW
	W/ALPINE N/RATTO								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	57-1 HUMPHREY	F	23	04N	07E	M	80 00	A	PW
	NW TRETHEWAY & ACAMPO ROADS								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	60-1 HOGAN RANCH	E	19	04N	07E	M	43 00	A	P
	NE HWY 99 & ARMSTRONG								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE) 16011(PARAQUAT) 18571(NEMACUR)								
	63-2 KAHLER	G	1	03N	05E	M	30 00	A	PW
	N/W SARGENT & RAY RDS								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMACU								
	64-1 SOLAPI	H	8	02N	07E	M	25 00	A	PW
	NE CANEPA & FOPPIANO								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE) 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMAC								

M & R PACKING Permit# 39-04-3904314

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
CHERRY (5002-0)	67-2 MAGGIO 2	F	32	04N	07E	M	10 00 S/WOODBRIDGE 1/4 M E/KENNEFICK	A	P
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMAC								
	68-2 MAGGIO FARMS	F	35	04N	06E	M	10 00 S/WOODBRIDGE 1/2 M E/LOWER SAC	A	P
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 16891(SUPRACIDE), 18571(NEMAC								
ASPARAGUS (16002-0)	58-1	I	17	01N	05E	M	465 00 N/MOKELUMNE AQ 3M W LOW JONES	A	P
	2000(DICAMBA), 2302(DISYSTON), 6360(2,4-D), 16011(PARAQUAT)								
GRAPE (29141-0)	02-1 LEFEVER	F	23	04N	06E	M	95 00 SW PELTIER & SPRR	A	P
	1051(SEVIN), 3830(METHOMYL), 18571(NEMACUR)								
	03-1 SKINNER	E	24	03N	06E	M	97 00 E/HWY 99 1/4M S/HARNEY	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	04-1 WAKEFIELD	F	11	04N	07E	M	80 00 N/JAHANT 1/8M W/ELLIOT	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	04-2 LOBENBERG	F	11	04N	07E	M	5 00 W/ELLIOT 1/4M N/JAHANT	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	05-1 AIRPORT	F	18	04N	07E	M	27 00 E/HWY 99 1/2M N/PELTIER	A	P
	1051(SEVIN) 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	06-1 LEBARON	G	17	04N	06E	M	70 00 NW END OF DAVIS	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	08-1 COSTA	E	19	03N	07E	M	18 00 S/HOGAN W/CCTRR	A	P
	1051(SEVIN), 3830(METHOMYL) 16011(PARAQUAT), 18571(NEMACUR)								
	08-2 BRADLEY	E	19	03N	07E	M	9 00 S/HOGAN 1/4M W/CCTRR	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	10-1 PADDLEFORD	F	26	04N	07E	M	80 00 NW WOODBRIDGE & TRETHEWAY	A	P
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT) 18571(NEMACUR)								

M & R PACKING Permit# 39-04-3904314

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
GRAPE (29141-0)	10-2 D & R	F	26	04N	07E	M	80 00	A	P
	NW WOODBRIDGE & TRETHEWAY								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	13-1 BRUMM	F	15	04N	08E	M	17 00	A	P
	NW JAHANT & MACKVILLE								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	14-1 WAKEHAM	F	15	04N	08E	M	15 00	A	P
	N/MEHRTEN 1/8M E/MACKVILLE								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	15-1 CAHILL	F	3	04N	08E	M	39 00	A	P
	E/MACKVILLE 1/2M N/COLLIER								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	15-2 MACKVILLE	F	3	04N	08E	M	47 00	A	P
	W/MACKVILLE 1/2M N/COLLIER								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	16-1 REYNOLDS	F	25	04N	06E	M	28 00	A	P
	W/HWY 99 1/4M N/WOODBRIDGE								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	19-1 BECKMAN	E	10	03N	06E	M	37 00	A	P
	S/SARGENT 1/8M W/LOWER SACRAME								
	1051(SEVIN), 3830(METHOMYL), 18571(NEMACUR)								
	26-26A LIPPERT	F	27	04N	06E	M	7 00	A	P
	SW MAY & ACAMPO								
	1051(SEVIN), 3830(METHOMYL), 18571(NEMACUR)								
	26-26B BATCH 2	F	27	04N	06E	M	10 00	A	P
	SE MAY & ACAMPO								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	33-1 BATCH 1	F	26	04N	06E	M	39 00	A	P
	W/LOWER SAC 1/2M N/WOODBRIDGE								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	34-1 BARBOUR	F	20	04N	08E	M	70 00	A	P
	NW HWY 88 & DISCH								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	44-1 OLSON	F	3	04N	08E	M	140 00	A	P
	E/MACKVILLE 1/2M N/COLLIER								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								

M & R PACKING Permit# 39-04-3904314

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
GRAPE (29141-0)	45-1 LANE	F	15	04N	08E	M	18 00	A	P
	NW CLEMENTS & HWY 88								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	45-2 SCHOOLHOUSE	F	15	04N	08E	M	22 00	A	P
	NW CLEMENTS & HWY 88								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	45-3 GILLIS	F	15	04N	08E	M	47 00	A	P
	NE CLEMENTS & HWY 88								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	52-1 SOROUR	E	27	03N	06E	M	80 00	A	P
	SW METTLER & LOWER SACRAMENTO								
	1051(SEVIN) 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUP)								
	55-1 MASSEY	G	13	04N	05E	M	63 00	A	P
	S/KILE 1/4M W/RAY								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	56-1 GUANTONE	F	12	04N	08E	M	13 00	A	P
	HWY 88 1/4M N COLLIER								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	61-1 HESSELTINE	F	14	04N	08E	M	83 00	A	P
	SE CLEMENTS & HWY 12								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 18571(NEMACUR)								
	63-1 KAHLER	G	1	03N	05E	M	84 00	A	P
	NW SARGENT & RAY								
	1051(SEVIN), 4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE) 6260(ZINC PHOSPHIDE), 16011(PARAQUAT), 18571(NEMACUR)								
	65-1 SASAKI RANCH	F	30	04N	07E	M	20 00	A	P
	S/ACAMPO 1/8 M W/KENNEFICK								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	66-1 JACINTO	F	24	04N	06E	M	4 00	A	P
	NW ACAMPO & DESMOINES								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	67-1 MAGGIO 2	F	32	04N	07E	M	18 00	A	P
	S/WOODBRIDGE 1/4 M E/KENNEFICK								
	1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)								
	68-1 MAGGIO 1	F	35	04N	06E	M	10 00	A	P
	S/WOODBRIDGE 1/2 M E/LOWER SAC								
	1051(SEVIN), 3830(METHOMYL) 16011(PARAQUAT), 18571(NEMACUR)								

M & R PACKING Permit# 39-04-3904314

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
GRAPE (29141-0)	68-4 MARTIN	F	35	04N	06E	M	20 00 S/WOODBRIDGE 1/2 M E/LOWER SAC	A	P
1051(SEVIN), 3830(METHOMYL), 16011(PARAQUAT), 18571(NEMACUR)									
	69-1 SOROUR	G	32	04N	06E	M	55 00 SW WOODBRIDGE & DAVIS	A	P
1051(SEVIN), 3830(METHOMYL), 18571(NEMACUR)									
	70-1	E	35	03N	06E	M	58 00 E/WESTLANE 1/4M N/EIGHTMILE	A	P
1051(SEVIN), 3830(METHOMYL), 18571(NEMACUR)									
UNCUL NON-AG (67000-0)	ALL	E	23	04N	06E	M	20 00 ALL LOCATIONS	A	P
4840(ALUMINUM PHOSPHIDE), 16011(PARAQUAT)									

* * * LAST PAGE * * *

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

PERMIT NO 3904314

PAGE NO

M & R Packing — District E

LOCATION (74-11)	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8 D & L	11	3N	7E	74	Grapes	20	Original	permit						NOI
9 1/2 miles S/ Winter														
10 between Fox &														
11 Trethway														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														

*Formulation L—Liquid B—Bait D—Dust F—Fumigant G—Granules WP—Wettable Powder O—Other

**Method A—Air F—Fumigation GR—Ground O—Other

APPLICANT SIGNATURE [signature] DATE 7-27-04

ISSUED BY [signature] DATE 7-27-04

DISTRIBUTION WHITE & YELLOW—COUNTY PINK & GOLD—PERMITTEE

PESTICIDE ENFORCEMENT DIVISION PR E... (Rev...)

Form OSP 02 66861

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

PERMIT NO 3904314

PAGE NO

M&B Packing

LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8														
9 Change Crop														
10						408 Sub 6-9-04								
11 N/Mok elumne	17	1N	5E	58-1	Corn	~~465~~	Sevin (1051) Dicamba (2000)							
12 AQ 3MW Lower							Disyston (2301) Methomyl (3830)							
13 Jones							Methyl Parathion (3940) Thimet (4752)							
14							2-4-D Amine (9801) Paraquat (16011)							
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														

*Formulation L—Liquid B—Bait D—Dust F—Fumigant G—Granules WP—Wettable Powder O—Other

**Method A—Air F—Fumigation GR—Ground O—Other

APPLICANT SIGNATURE [signature] DATE 4-4-04

ISSUED BY [signature] DATE 4-3-04

PESTICIDE ENFORCEMENT BRANCH PB ENF-125A (Rev. 9/00)

APPLICATION — RESTRICTED MATERIALS — SUPPLEMENT M&R

PERMIT NO. 4314

PAGE NO. 1

LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8 S/W Woodbridge				60-3	Apples	12	Guthion							
9 1/2 mi E/Low Sac Rd														
10														
11.														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														

* Formulation: L-Liquid B-Bait D-Dust F-Fumigant G-Granules WP-Wettable Powder O-Other

**Method: A-Air F-Fumigation Gr-Ground O-Other

APPLICANT SIGNATURE [signature] DATE 6/10/03

ISSUED BY [signature] DATE 6/10/03

DISTRIBUTION: WHITE & YELLOW COUNTY PINK & GOLD PERMITTEE

P 1/1 02

SAN JOAQUIN COUNTY

12:1..DEC 11 '02 10 12AM M&R PACKING

DISTRICT — MATERIALS — SUPPLEMENT

M+R Packing

PERMIT NO. 431

PAGE NO.

LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F	M	RATE	DILUTION/ VOLUME	APPL.	DATES THEREOF
1. All locations					Cherry	700	Methyl Bromide							
2.							Chloropicrin							
3.							single tree site application							
4.														
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														
21.														
22.														
23.														
24.														
25.														
26.														
27.														
28.														
29.														
30.														
31.														
32.														

L-Light G-Other A-All

APPLICANT SIGNATURE

DATE 12/11

DATE

APPLICATION — RESTRICTED MATERIALS — SUPPLEMENT

M+R

PERMIT NO. 4314

PAGE NO.

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL.	DATE/ TIMING
8	1/4M SE Harney & HWY	24	3N	6E	3-2	Preplant	20	Telone	S.P.						
9															
10	E/H99 1/2M N/Peltier	18	4N	7E	5-1	"	30	Telone	S.P.						
11															
12								See attached							
13								condition	Y						
14															
15															
16.															
17															
18															
19															
20															
21															
22.															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32.															
33															
34															

* Formulation L-Liquid B-Bait D-Dust F-Fumigant Granu WP- Ble Po O-C

**Method A-Air F-Fumigation Gr-Ground O-Other

APPLICANT SIGNATURE [signature] DATE 5/2/02

ISSUED BY [signature] DATE 6/20/02

APPLICATION — RESTRICTED MATERIALS — SUPPLEMENT

PERMIT NO. 4314

M+R Packing

PAGE NO

LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8 1/4 mi SE/Harney + Hwy	24	3N	6E	3-2	Grapes	20	Pesticides listed							
9 (Site 3-2)							on permit for grapes							
10														
11														
12														
13.														
14														
15.														
16.														
17														
18														
19														
20														
21														
22														
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24														
25														
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28														
29.														
30														
31														
32														
33														
34														

* Formulation L-Liquid B-Bait D-Dust F-Fumigant G-Granules WP-Wettable Powder O-Other

APPLICANT SIGNATURE [signature] DATE 5/2/02

The commissioner must be presented with a valid recommendation before issuing a permit.

All Application Methods

Township Limit for All Application Methods

The township (36 square-mile area) limit is necessary to minimize the levels of the amount of 1,3-D in the atmosphere and mitigate the potential for chronic exposure. This township limit is based on the percent of a.i. in different 1,3-D products.

The 1,3-D application rate is determined using a formula expressed as adjusted total pounds (ATP) to ensure that 1,3-D emitted into the atmosphere does not exceed recommended levels. The township limit is necessary to mitigate the potential for chronic exposure to the public.

ATP township limit requirements are as follows:

1. No more than 34,295 ATP shall be applied in January or December of each calendar year within each township.
2. No more than 90,250 ATP shall be applied in a calendar year in each township.

When county or state borders divide the township, the ATP of 1,3-D allowed per calendar year shall be approximately proportional to the area in each political subdivision.

Prior to each application, the permittee shall consult with Dow AgroSciences or their representative to ensure the proposed use does not exceed the ATP of 1,3-D applied in that township within the month or calendar year.

Notice of Intent (NOI)

- The permittee shall provide to the County Agricultural Commissoner (CAC), a valid recommendation from a pest control adviser before the NOI is accepted and the application allowed.
- In addition to the information required in 3CCR section 6434, the following information shall be provided on the NOI:

1. Application depth and type;
2. The total gallons (TG) of the pesticide formulation;
3. The pounds per gallon (lbs./gal) of 1,3-D formulation;
4. The percent by weight of the a.i. expressed as a decimal (.XX);
5. The total pounds (TP);
6. The application factor (AF) appropriate for your application; and
7. The ATP for the proposed application.

Continued on next page

SAN JOAQUIN COUNTY
RESTRICTED MATERIALS PERMIT CONDITIONS

PERMITTEE M+R PERMIT NO. 4314

CONDITION X

FURADAN CHEMIGATION OF GRAPES

A CERTIFICATION AND TRAINING

1 Each person prior to handling Furadan 4F for use on grapes must become "Certified trained" by attending training provided by the registrant All records of attendance and training shall be maintained by the employer

2 During all "handling" activities "Handlers" must have in possession, proof that they received the training and are "certified trained"

B APPLICATION REQUIREMENTS

1 Apply a minimum of ten gallons of water per vine through drip (trickle) emitter

2 Do not apply Furadan 4F for at least seven days after harvest to allow berries on the ground to dry (raisined)

3 For post-harvest drip irrigations, apply up to a maximum of two applications of three quarts per acre, or up to a maximum of three applications of two quarts per acre only

4 After the application and irrigation in soils where puddling is known to occur, look for, and eliminate, puddles, or enough time must be allowed to ensure dissipation of puddles two hours prior to sunrise

5 No daylight irrigation is to occur until the minimum gallonage is applied, or at least 21 days after Furadan 4F application

6 A "certified trained" person shall be at the application site during the application and until the flushing of the lines is completed The "certified trained" person shall shut the system down and make necessary adjustments should the need arise

7 Within 24-hours of the completion of the application and flushing, the property owner will survey the entire treated area for dead birds Carcasses will be held under refrigeration and given to the agricultural commissioner's office or disposed of as directed by the agricultural commissioner

CONDITION Z

Paraquat dichloride (Gramoxone)

Persons working as applicators or flaggers (except applicators working in an enclosed cab or flaggers working in an enclosed vehicle) shall wear a dust/mist respirator approved by MSHA/NIOH (number prefix TC-84-A).

The Following Conditions Apply To ..... Permit#: 39-04-39043-4

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[X] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium & Metam Potassium
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9: Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[X] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[X] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

1-4-02
Date

The Following Conditions Apply To ..... Permit#: 39-04-390431

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

The Following Conditions Apply To ..... Permit#: 39-04-3904314

CONDITION - Q

DICAMBA AND PHENOXY HERBICIDES - CENTRAL VALLEY/HAZARDOUS AREA

In addition to all applicable laws, regulations and label restrictions, the CONDITIONS CHECKED BELOW APPLY to applications covered by this permit.

[X] 1. No ester formulation applications allowed.

[_] 2. A smoke column is reqired at the application site for all Phenoxy and Dicamba applications by aircraft begining March 16 and continuing through October 15.

[X] 3. Do not discharge material more than 10 feet above the crop or target.

[_] 4. A drift reducing agent shall be added to the spray mixture at label rates.

[X] 5. Maximum wind velocity for Phenoxy herbicides 10 m.p.h.

[X] 6. Maximum wind velocity for Dicamba - 10 m.p.h. EXCEPT when wind is moving in direction of sensitive crops, the maximum wind velocity - 5 m.p.h.

[_] 7. No Dicamba application allowed in the vicinity of sensitive crops when the maximum temperature on the day of application is predicted to exceed 85 degrees Fahenheit. Predicted temperature for the following day will be determined by the 3:30 p.m. prediction by the National Weather Station - Stockton Airport.

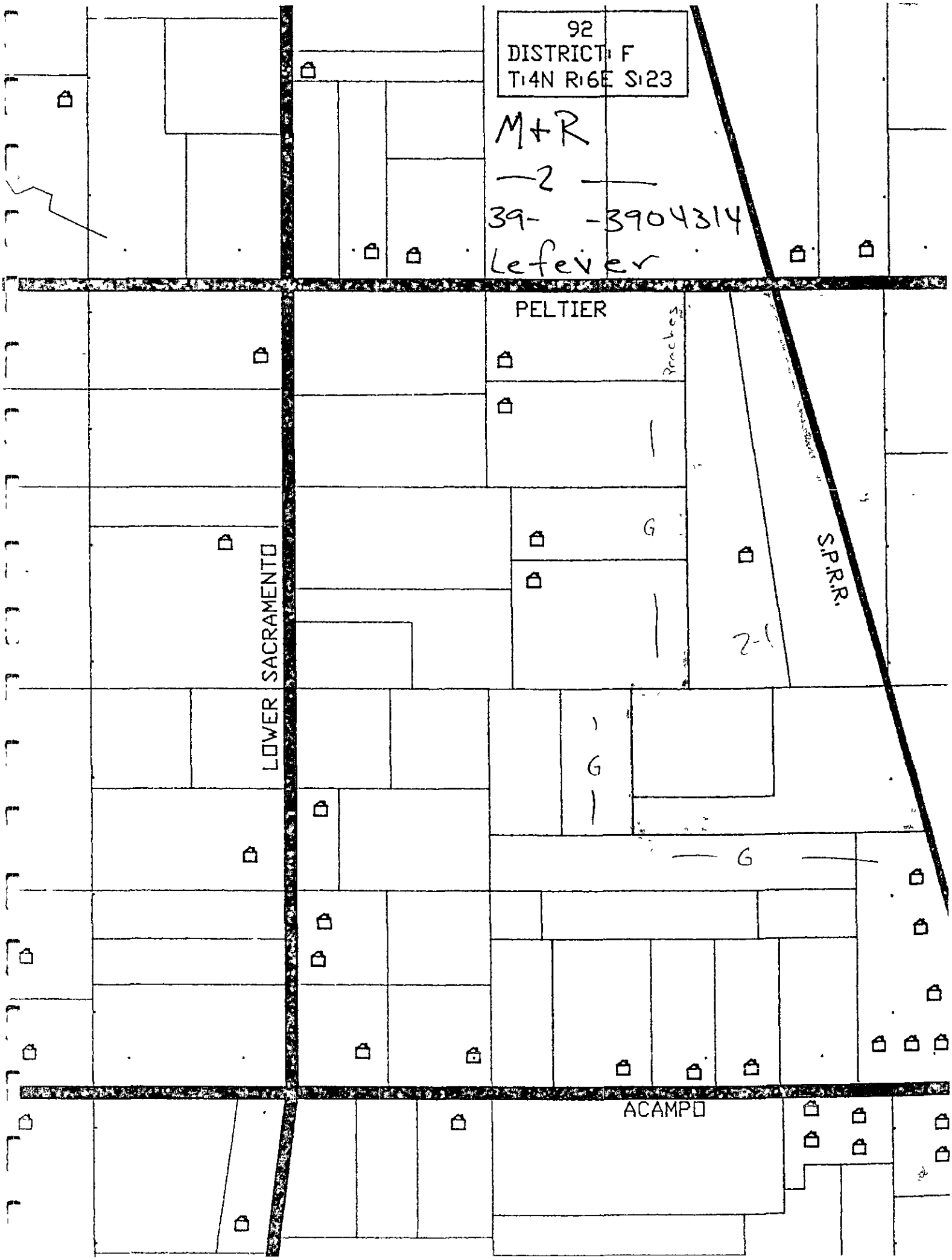
[_] 8. Dicamba applications by aircraft are restricted to a minimum distance of 2 miles from the following susceptible crops: beans, grapes, sunflower, tomato, safflower, curcurbits, potatoes.

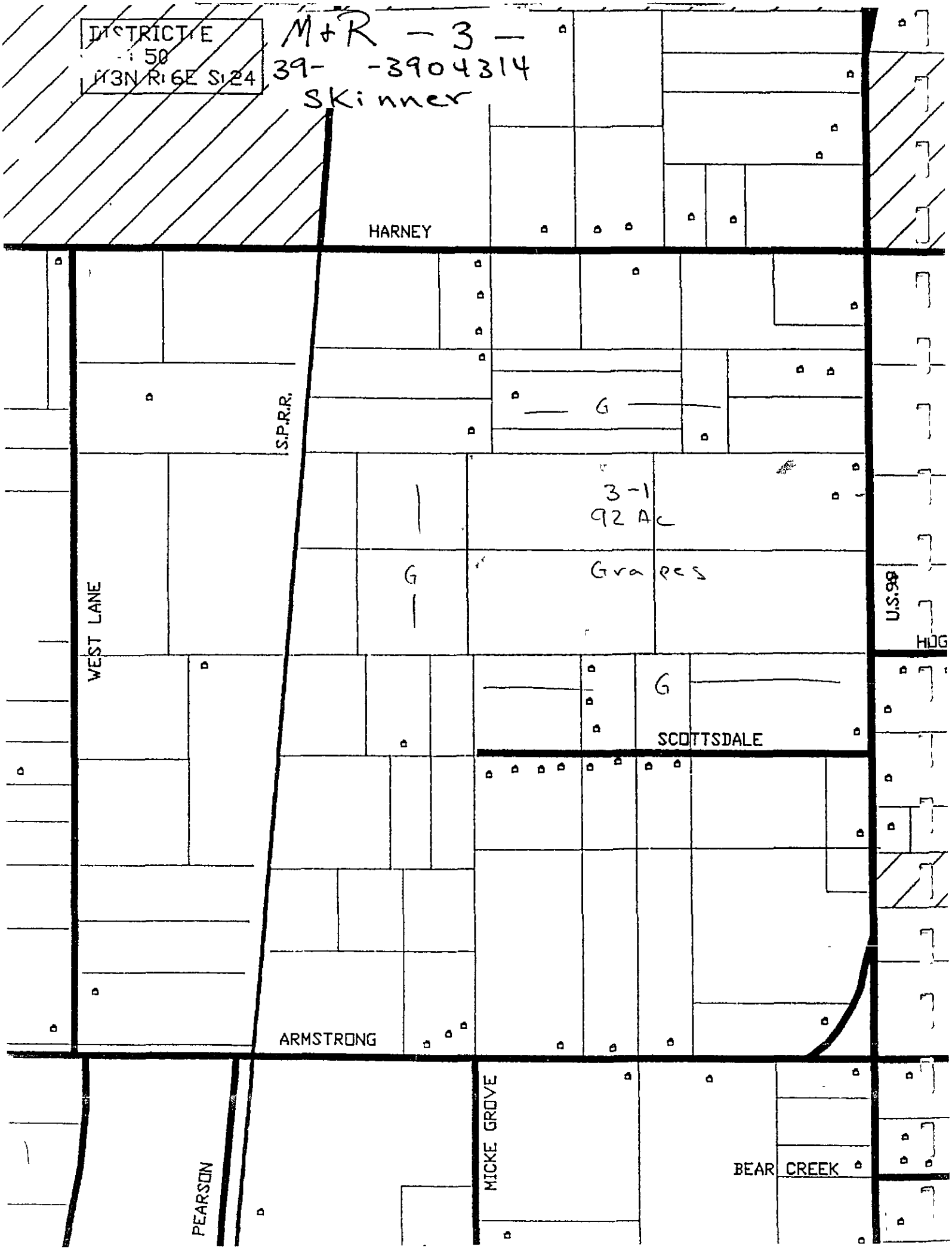
[_] 9. Dicamba applications by ground are restricted to a minimum distance of 20 feet from the following susceptible crops: beans, safflower, tomato, curcurbits, potatoes and 1/4 mile from grapes and sunflowers.

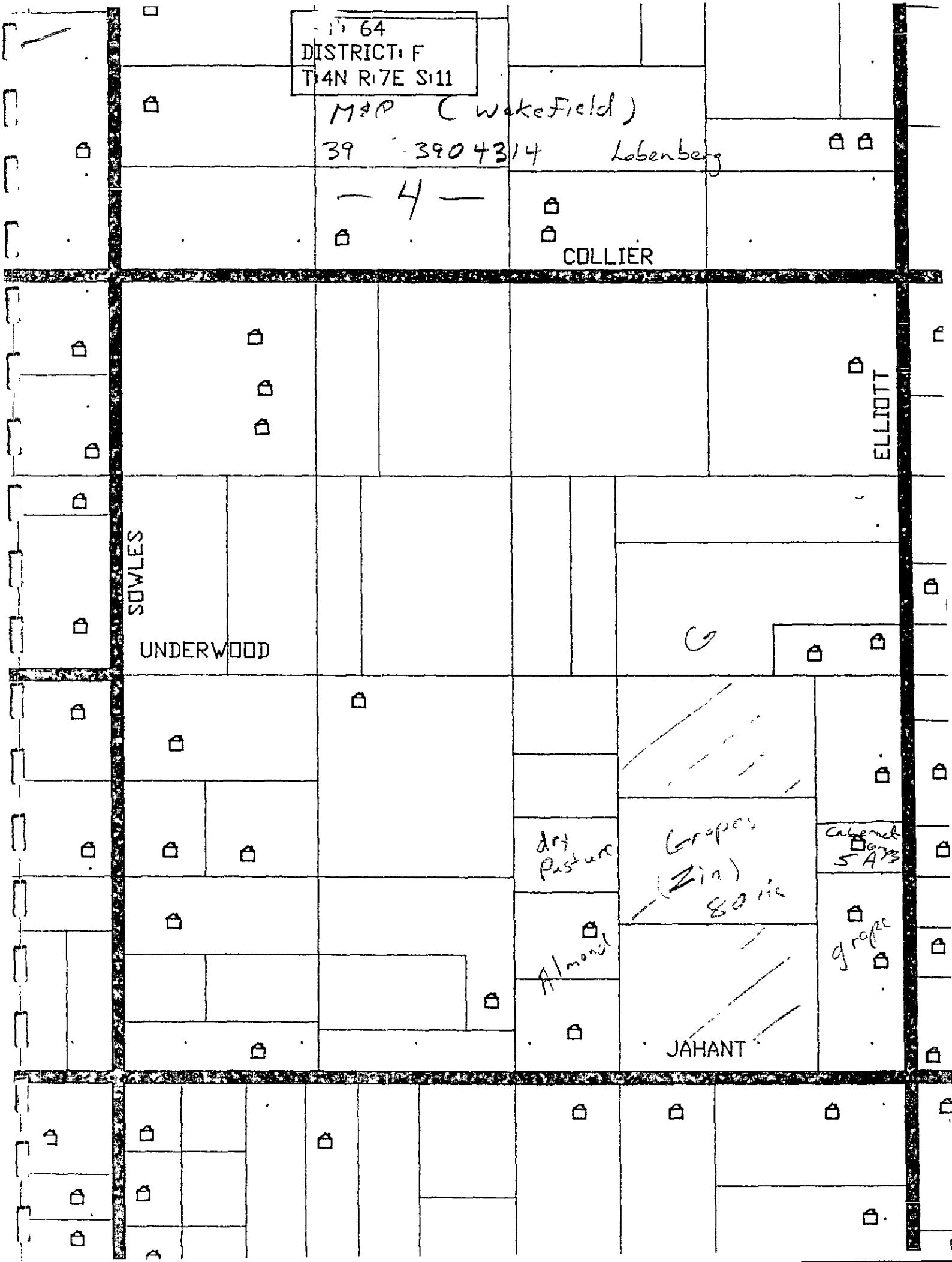
[X] 10. No Dicamba or Phenoxy herbicide applications allowed begining March 16 and continuing through October 15, and until grape leaves in the vicinity of the treated area are "browned off".

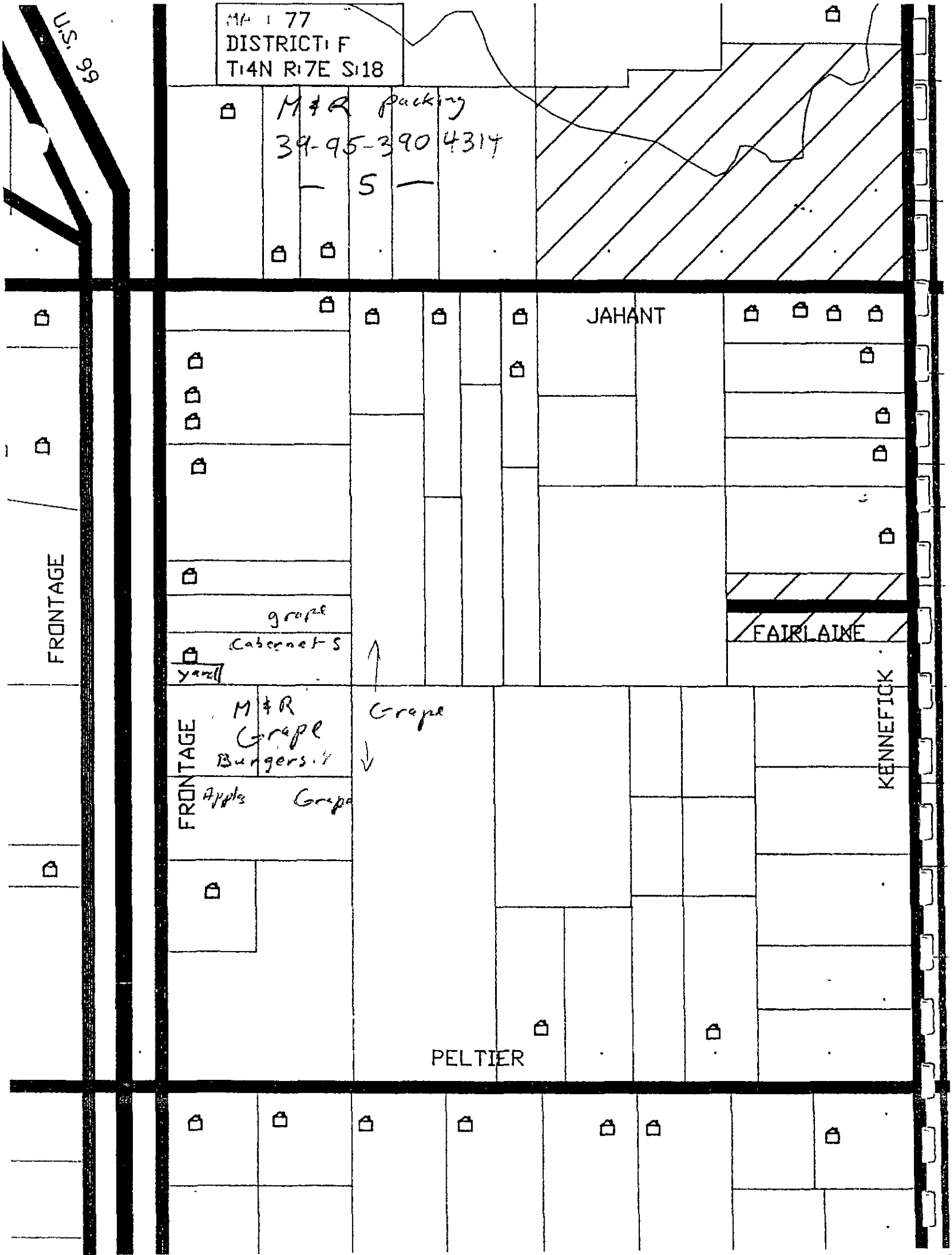
10/90 REVISED

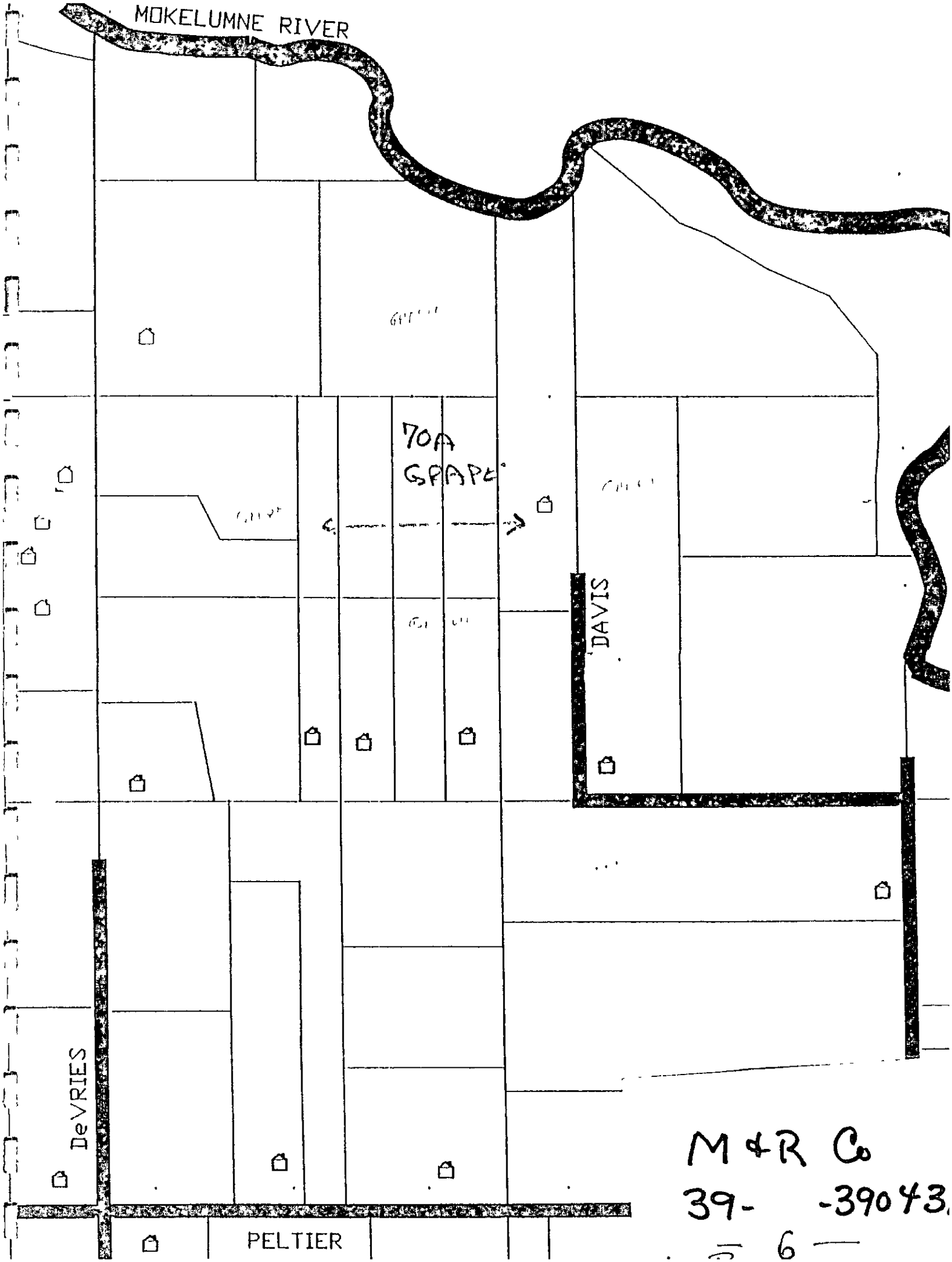
*** Last Page Of Conditions ***


92
DISTRICT F
T4N R6E S23
M+R
—2 —
39- -3904314
Lefever
PELTIER
Ranches
G
S.P.R.R.
2-1
LOWER SACRAMENTO
G
G
ACAMPO


DISTRICT E
50
T3N R6E S24
M+R -3-
39- -3904314
Skinner
HARNEY
S.P.R.R.
G
3-1
92 Ac
Grapes
G
WEST LANE
U.S.99
HOG
G
SCOTTSDALE
ARMSTRONG
MICKE GROVE
BEAR CREEK
PEARSON


64
DISTRICT F
T4N R7E S11
M&P (Wakefield)
39 3904314 Lobenberg
— 4 —
COLLIER
ELLIOTT
SOWLES
UNDERWOOD
dry Pasture
Grapes (Zin) 80 ac
Cabernet grapes 5 A/3
grape
Almond
JAHANT

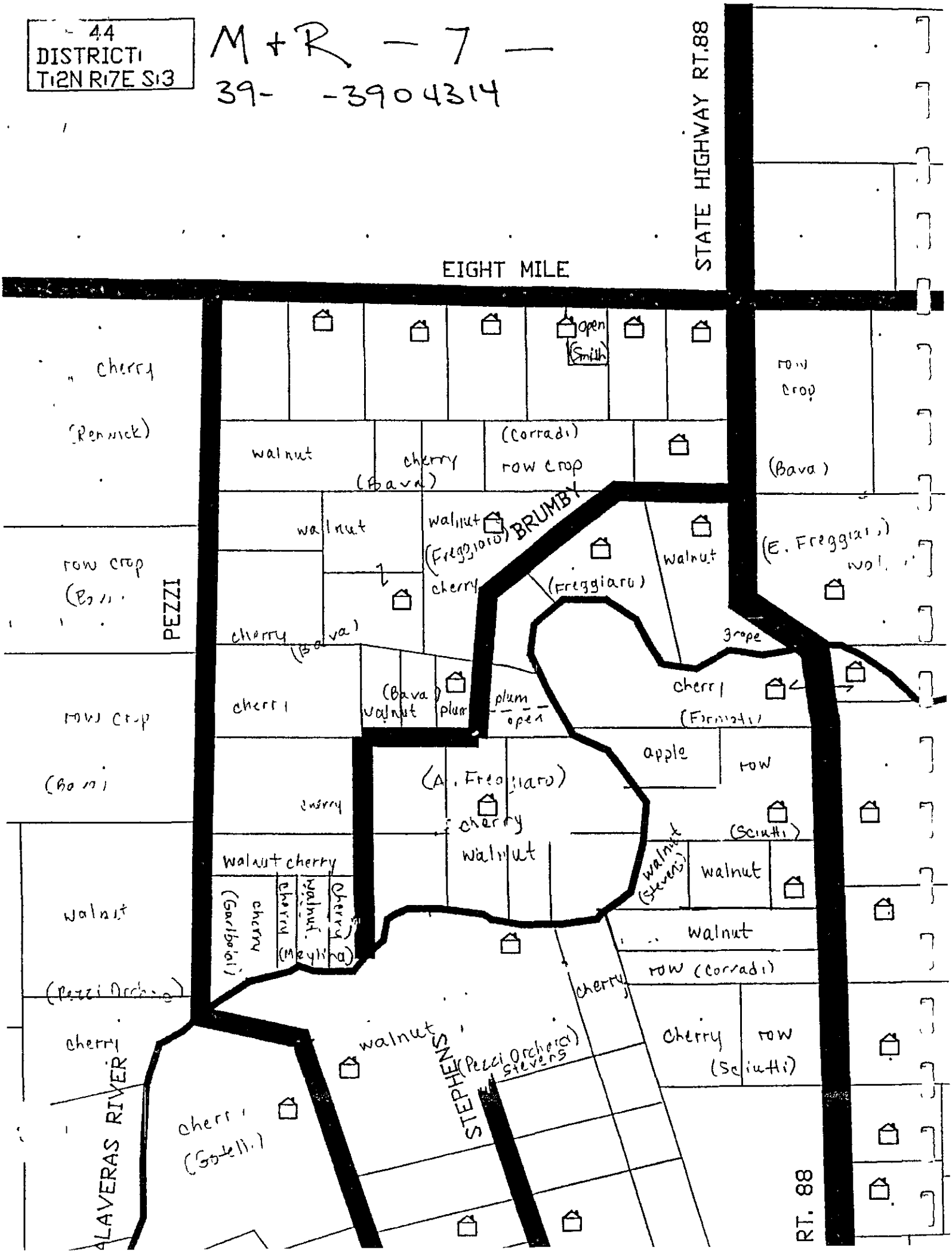

MA 77
DISTRICT F
T4N R7E S18
M & R packing
39-95-390 4314
5
U.S. 99
JAHANT
FRONTAGE
grape
Cabernet S
yard
FAIRLAINE
M & R
Grape
Grape
Burgers
FRONTAGE
Apples
Grape
KENNEFICK
PELTIER

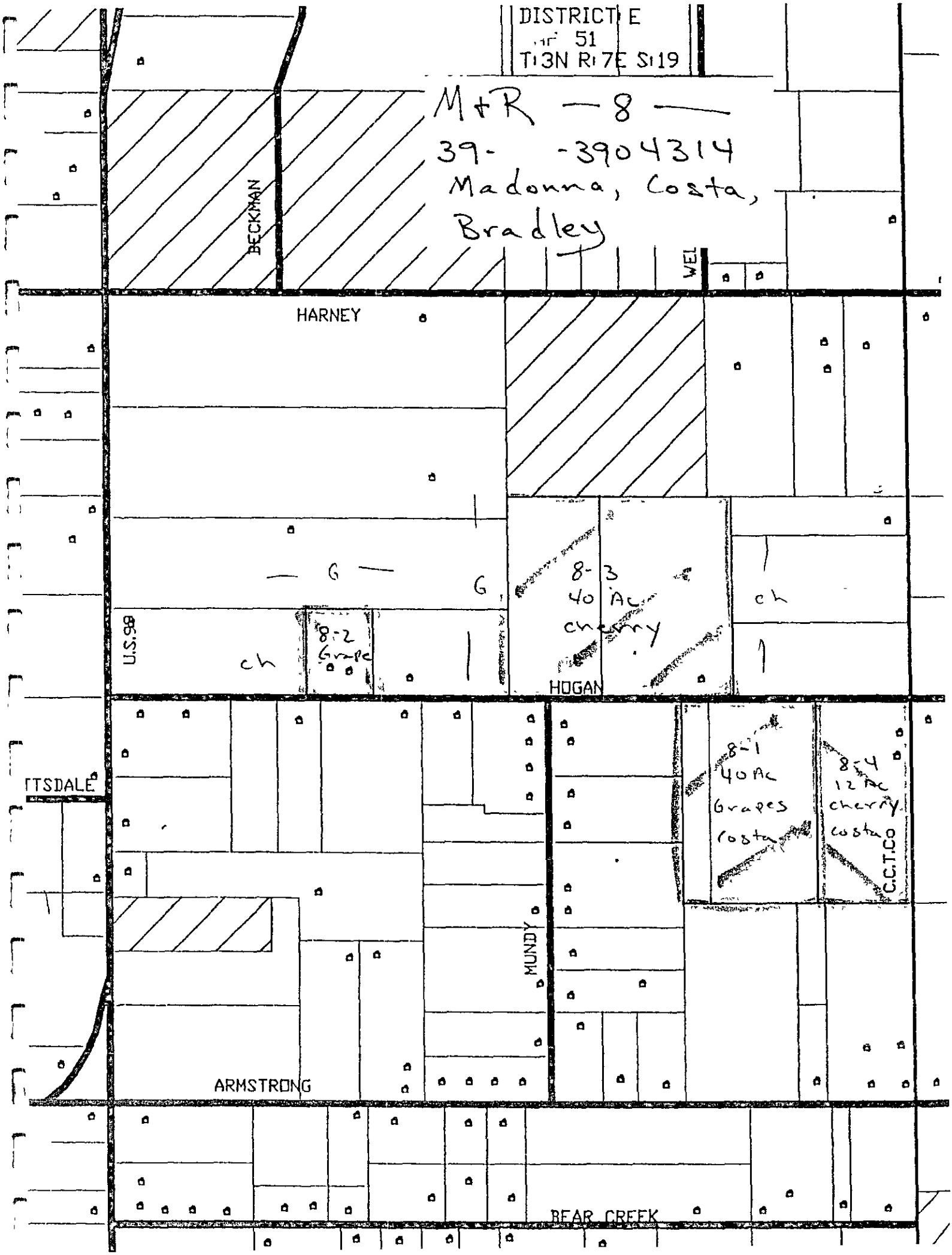


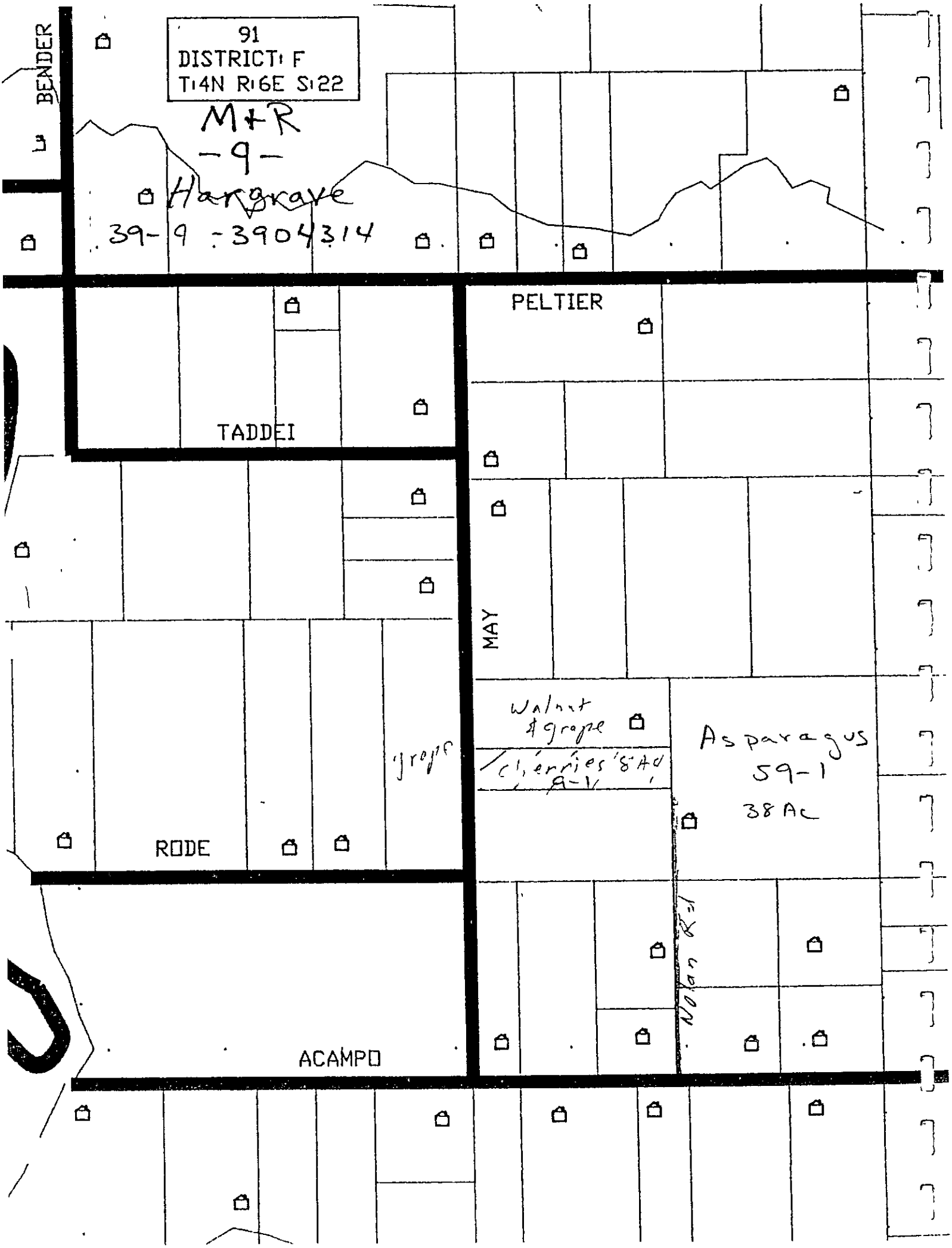
M & R Co
39- -39043
6

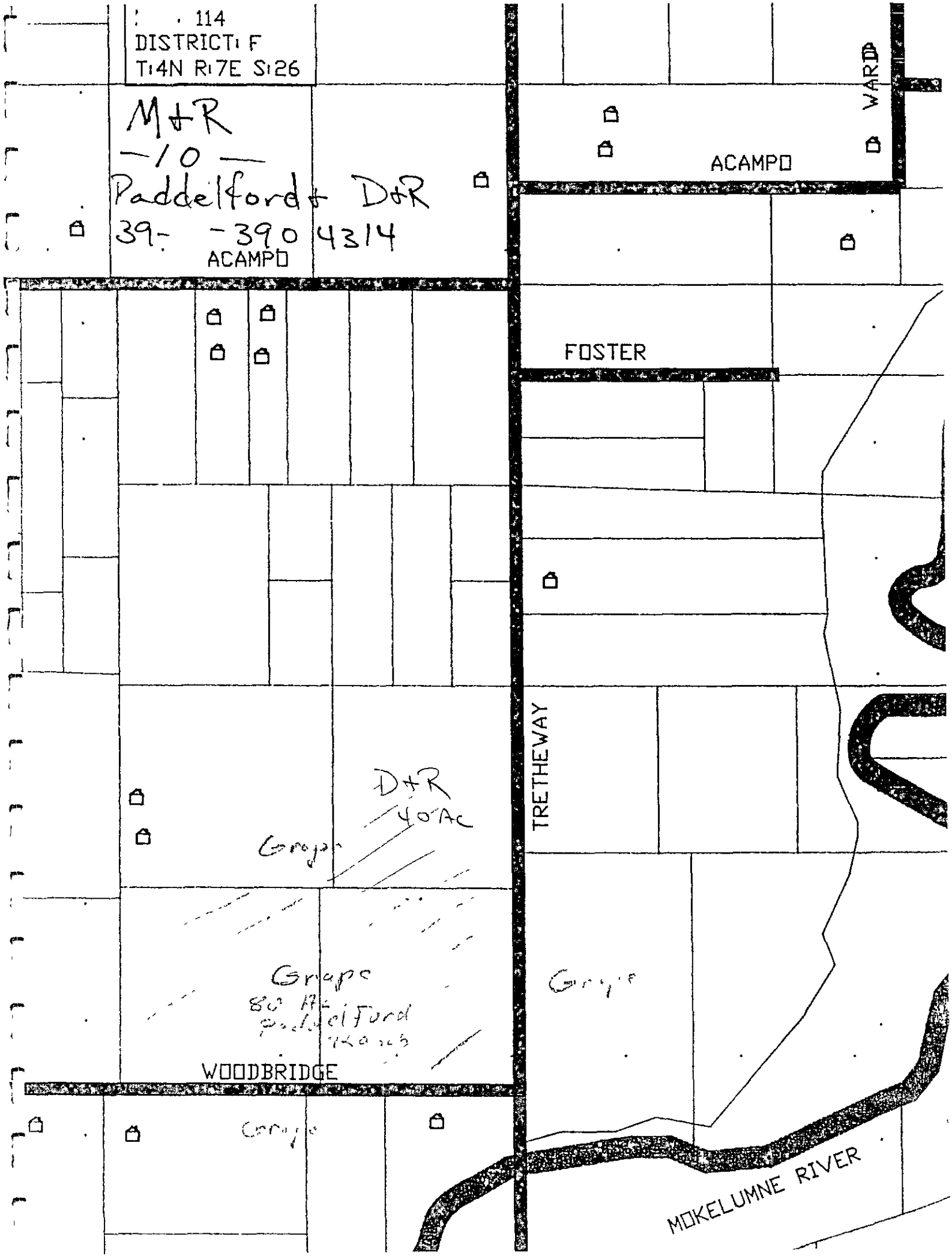
44
DISTRICT 1
T12N R17E S13

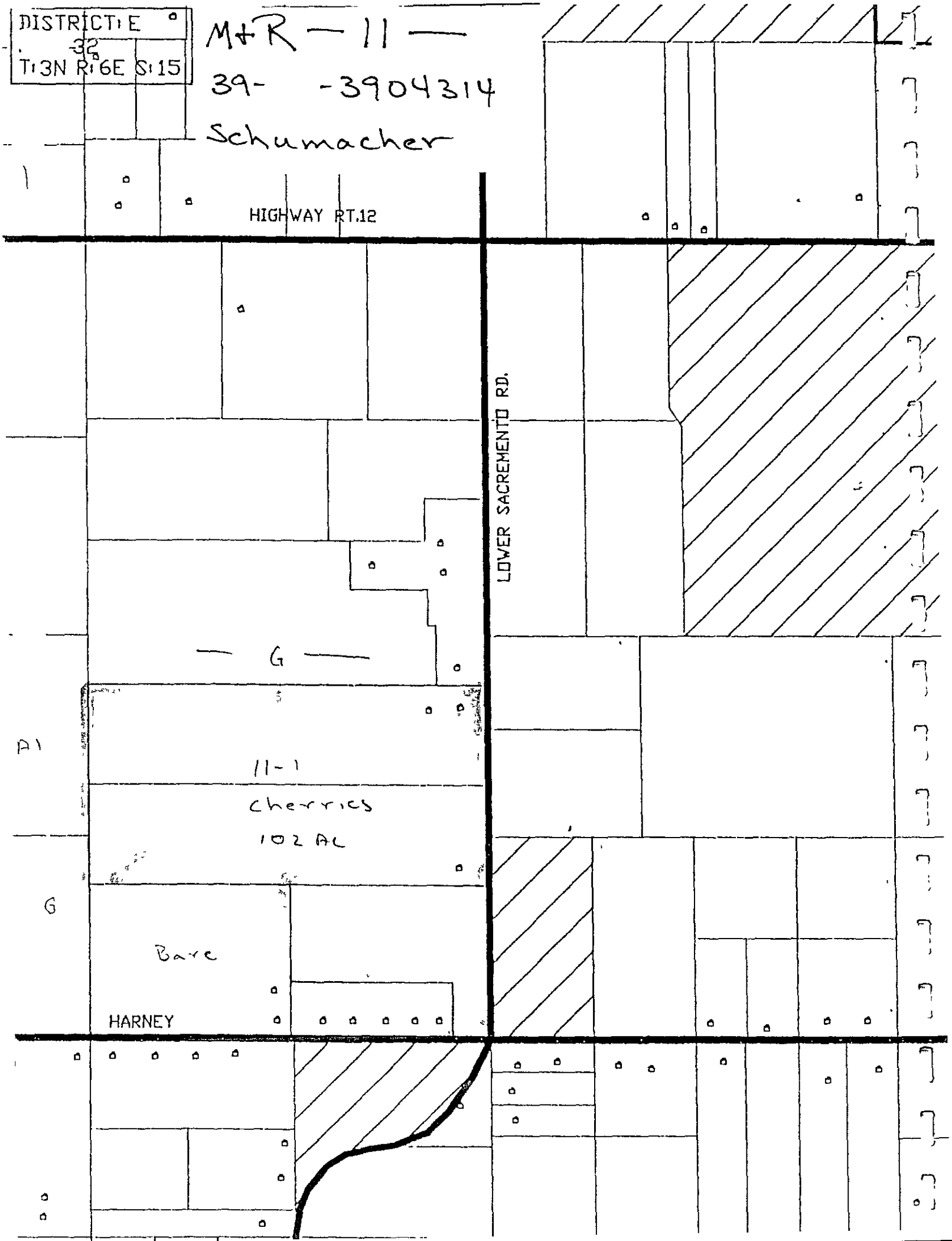
M+R - 7 -
39- -3904314

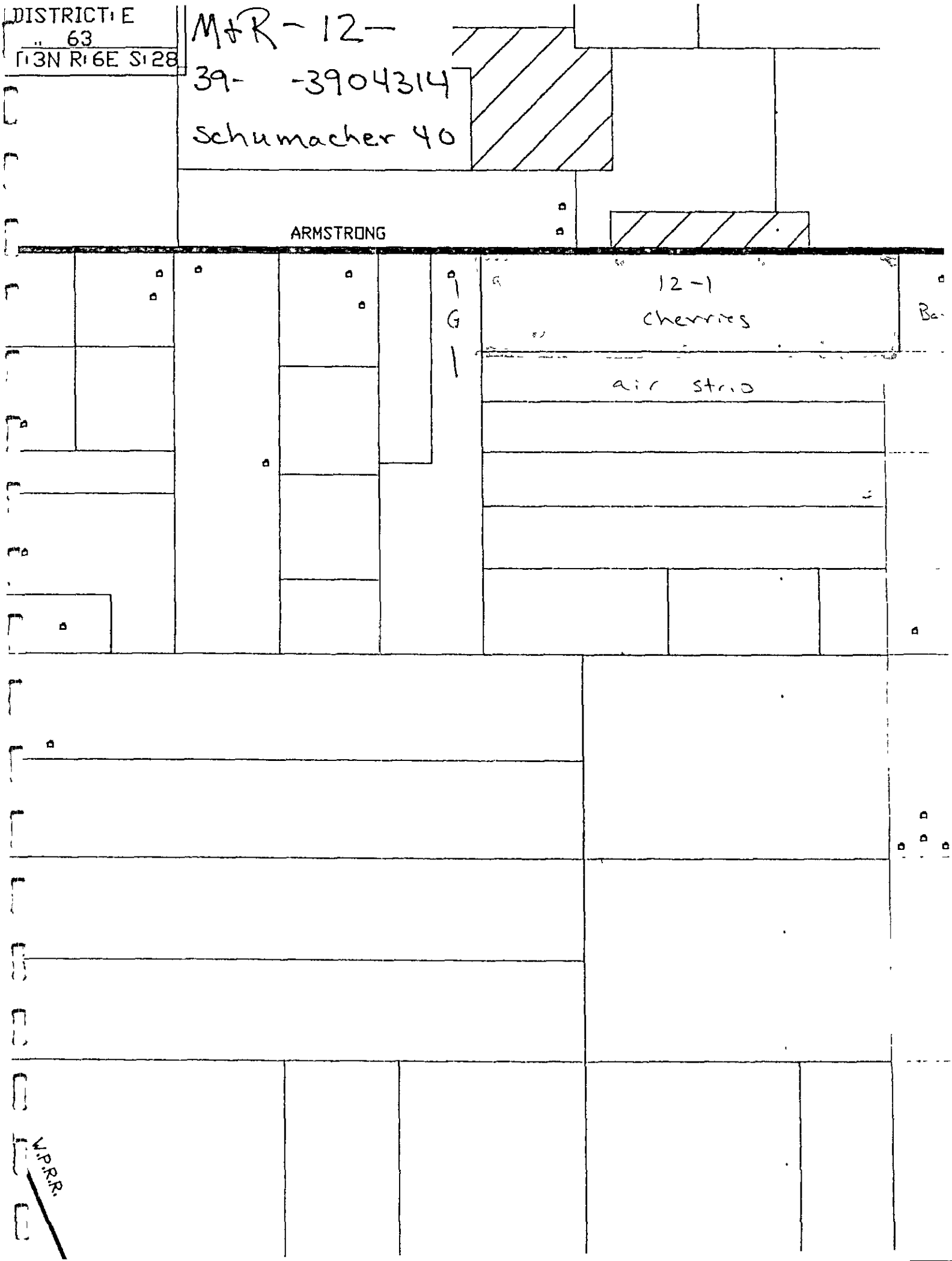


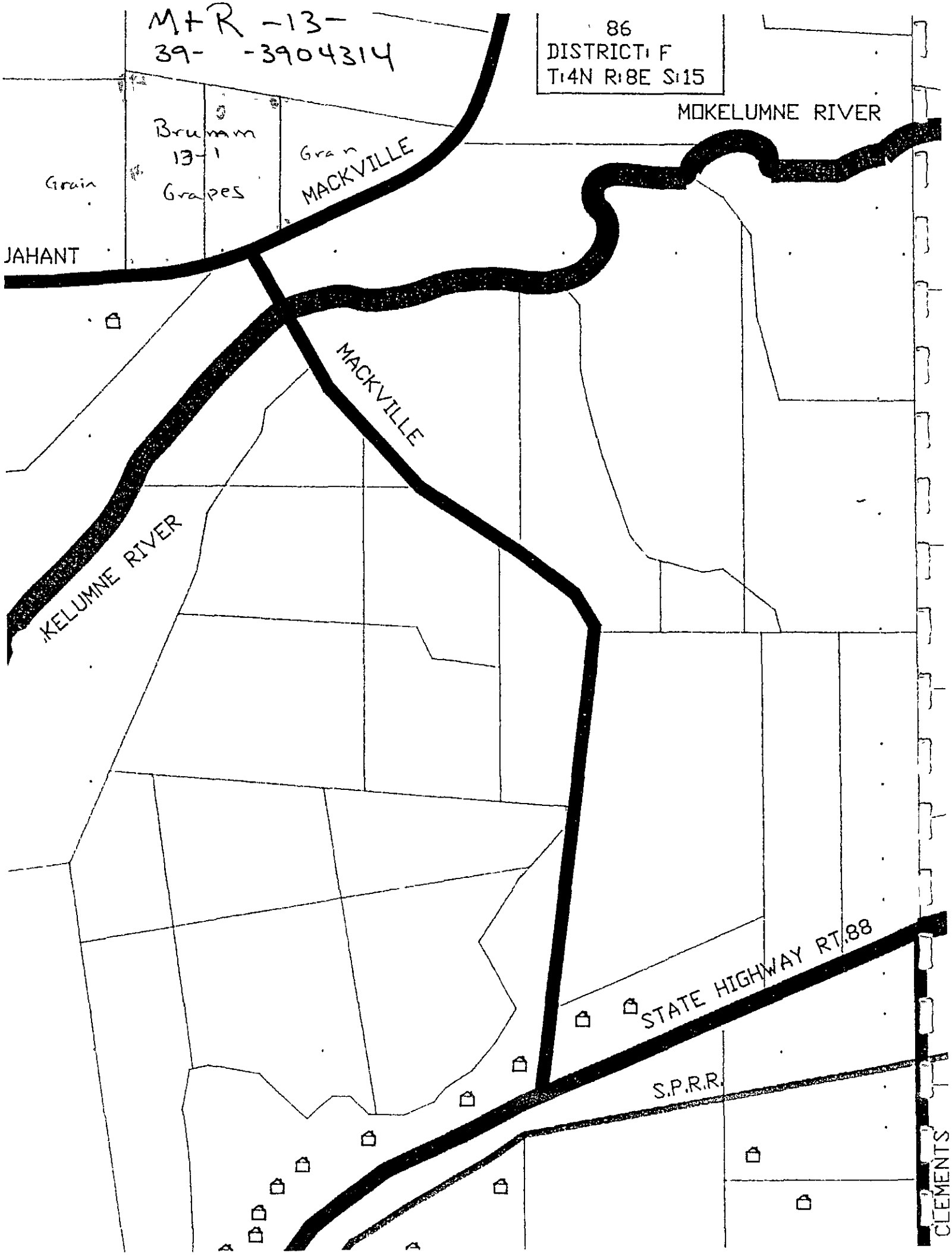

DISTRICT E
51
T13N R17E S19
M+R — 8 —
39- -3904314
Madonna, Costa,
Bradley
BECKMAN
WEL
HARNEY
— G —
G
8-3
40 Ac
cherry
ch
ch
8-2
Grape
U.S.98
HOGAN
8-1
40 Ac
Grapes
Costa
8-4
12 Ac
cherry
Costa
C.C.T.Co
TTSDALE
MUNDY
ARMSTRONG
BEAR CREEK

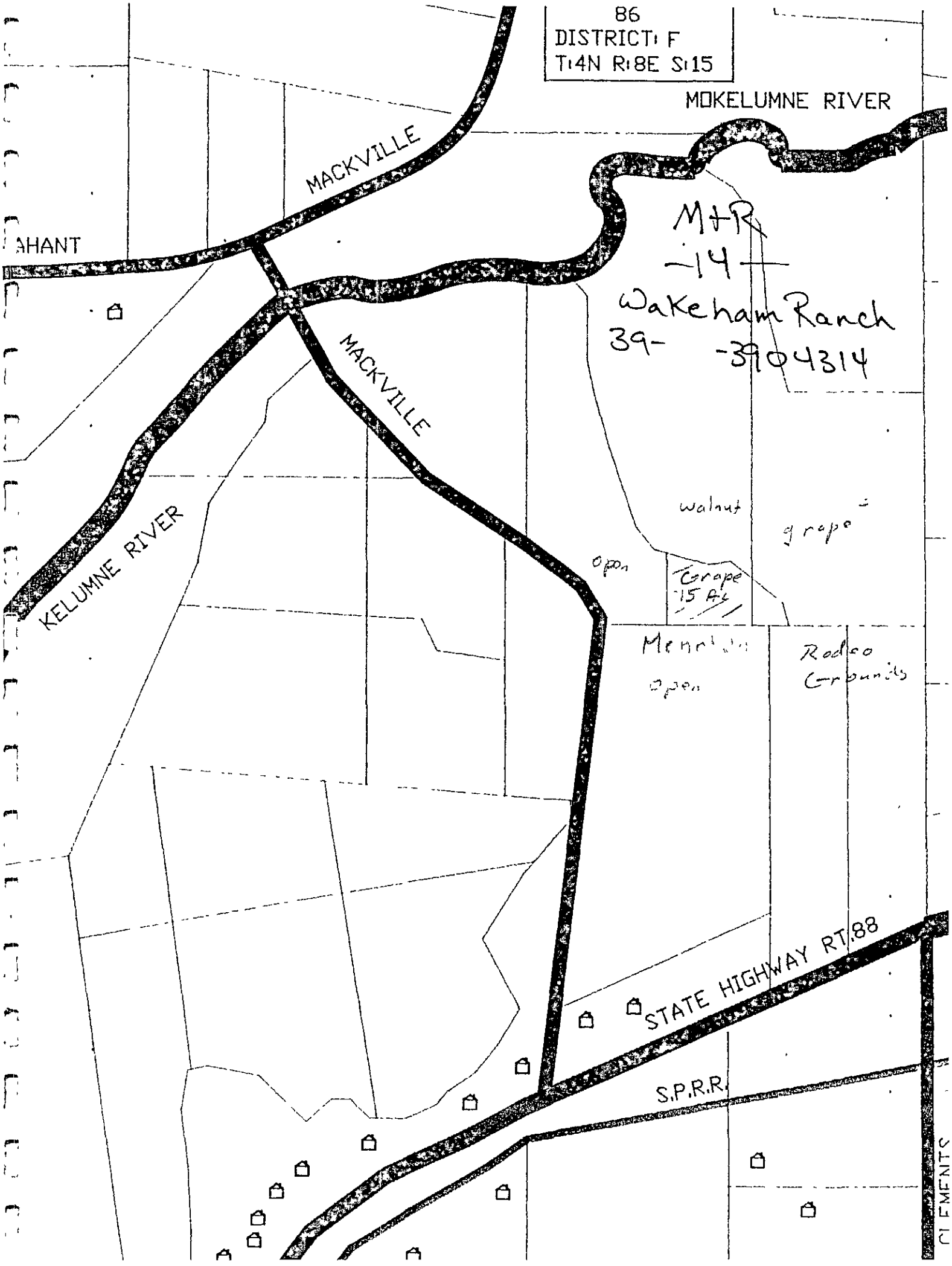

91
DISTRICT: F
T:4N R:6E S:22
M+R
-9-
Hargrave
39-9-3904314
BENDER
PELTIER
TADDEI
MAY
Walnut & grape
Cherries 8 Ac
9-1
grape
Asparagus
59-1
38 Ac
RODE
Nolan Rd
ACAMPO

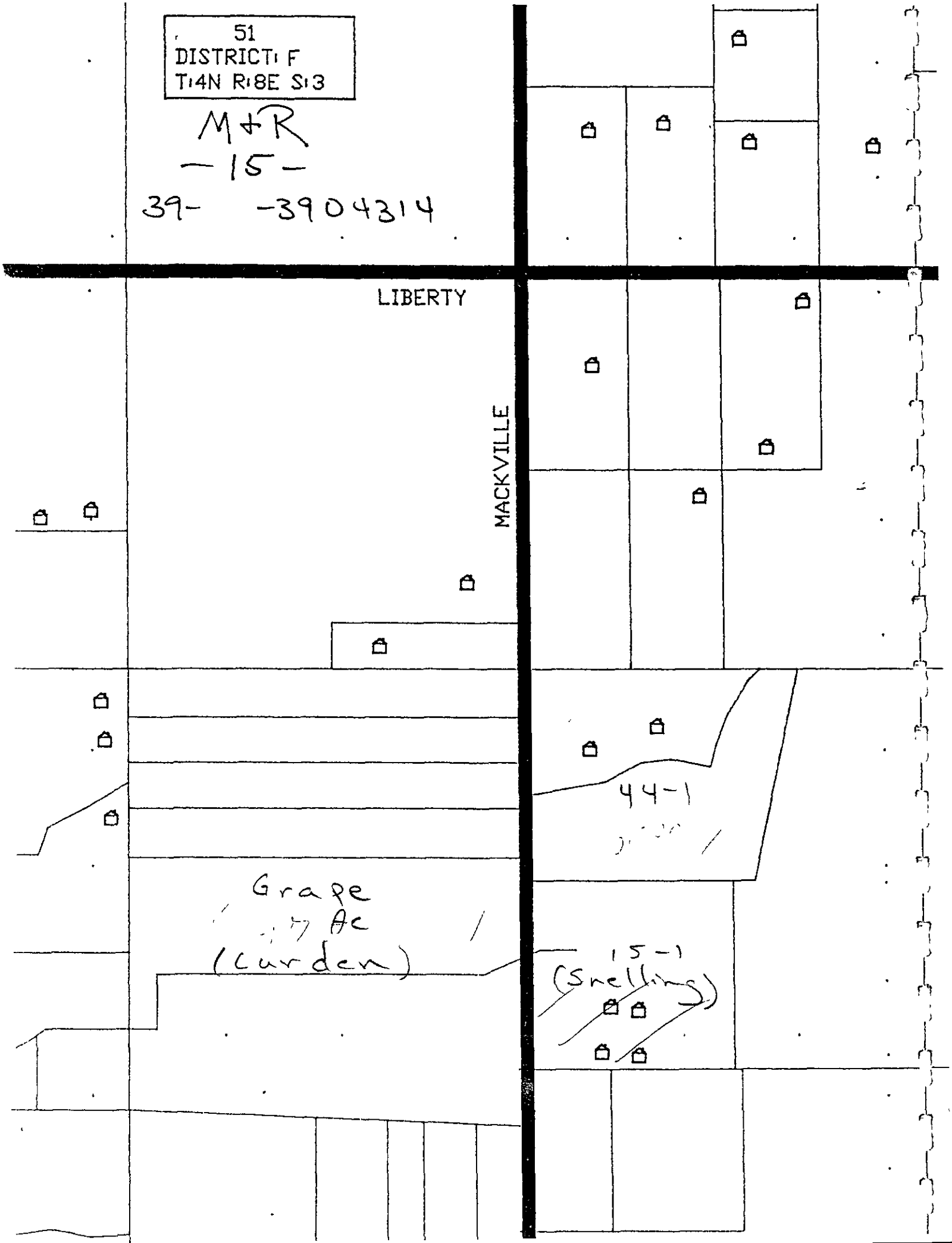

114
DISTRICT F
T4N R7E S26
M+R
-10-
Paddelford + D+R
39- -390 4314
ACAMPO
ACAMPO
WARD
FOSTER
TRETHEWAY
D+R
40 Ac
Grape
Grape
80 Ac
Paddelford
Grape
WOODBRIDGE
Grape
MOKELUMNE RIVER

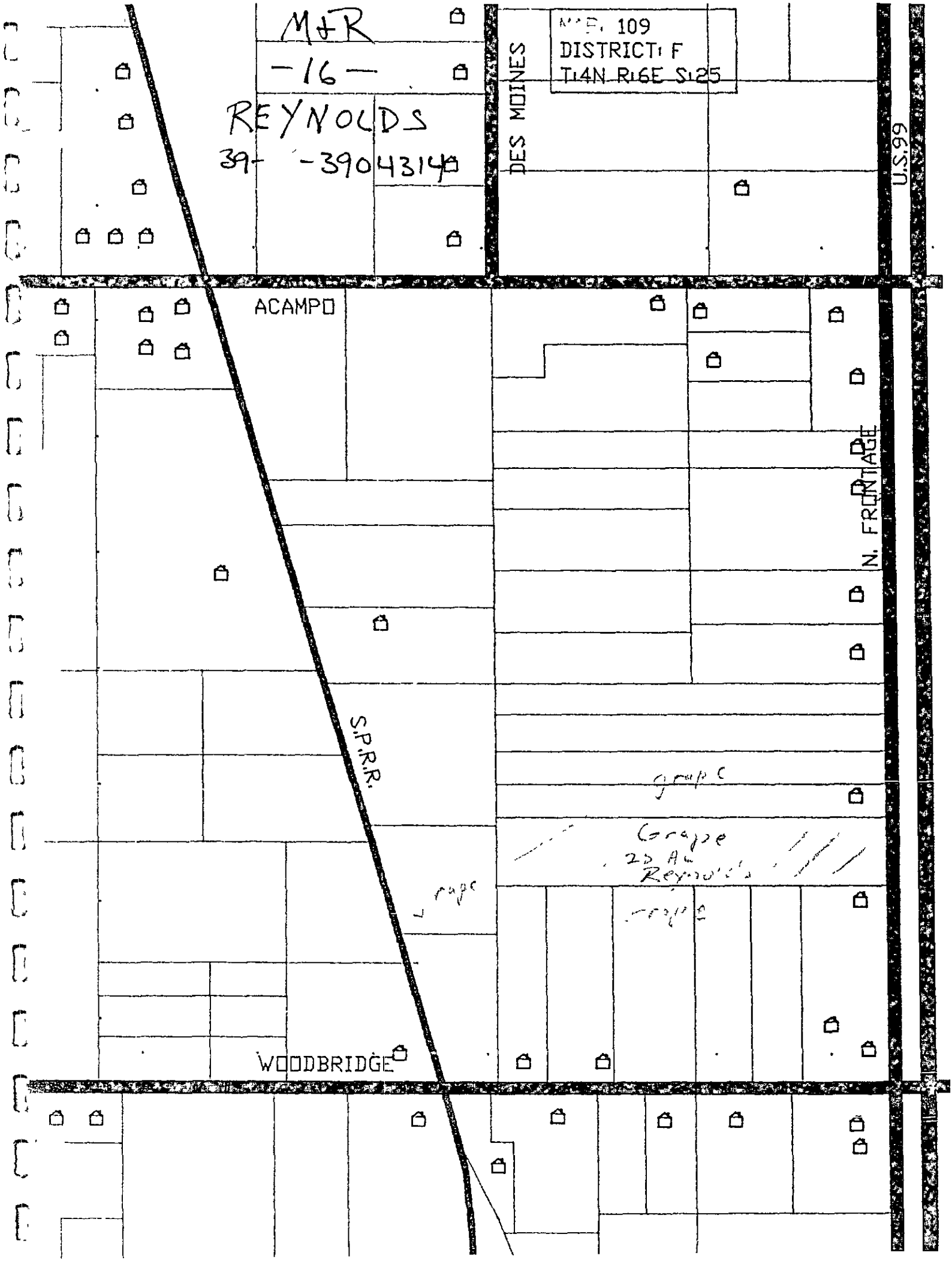

DISTRICT: E
32
T:3N R:6E S:15
M+R — 11 —
39- -3904314
Schumacher
HIGHWAY RT.12
LOWER SACREMENTO RD.
— G —
A1
11-1
Cherries
102 AC
G
Bare
HARNEY

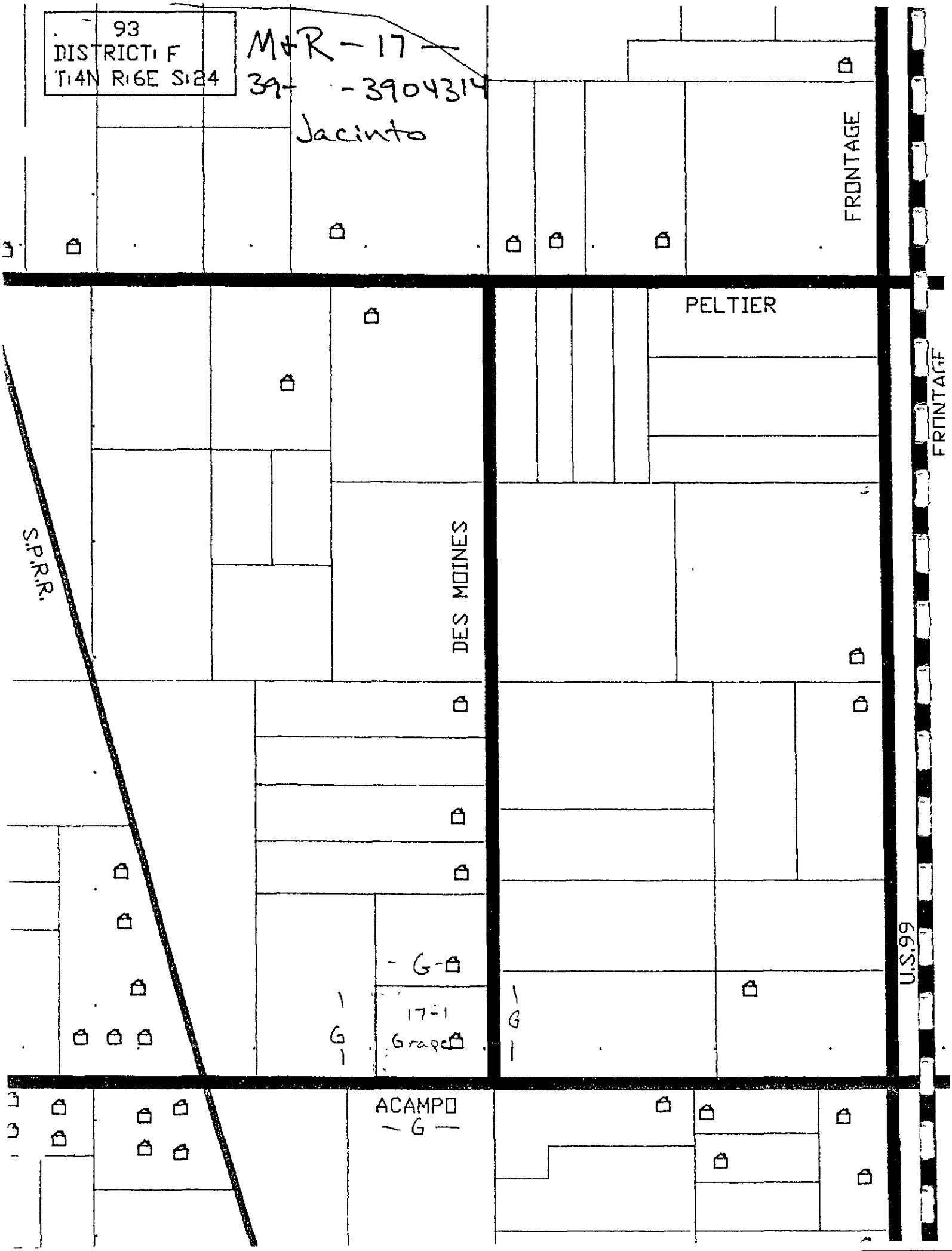

DISTRICT: E
63
T:3N R:6E S:28
M+R-12-
39- -3904314
Schumacher 40
ARMSTRONG
12-1
cherries
air strip
W.P.R.R.

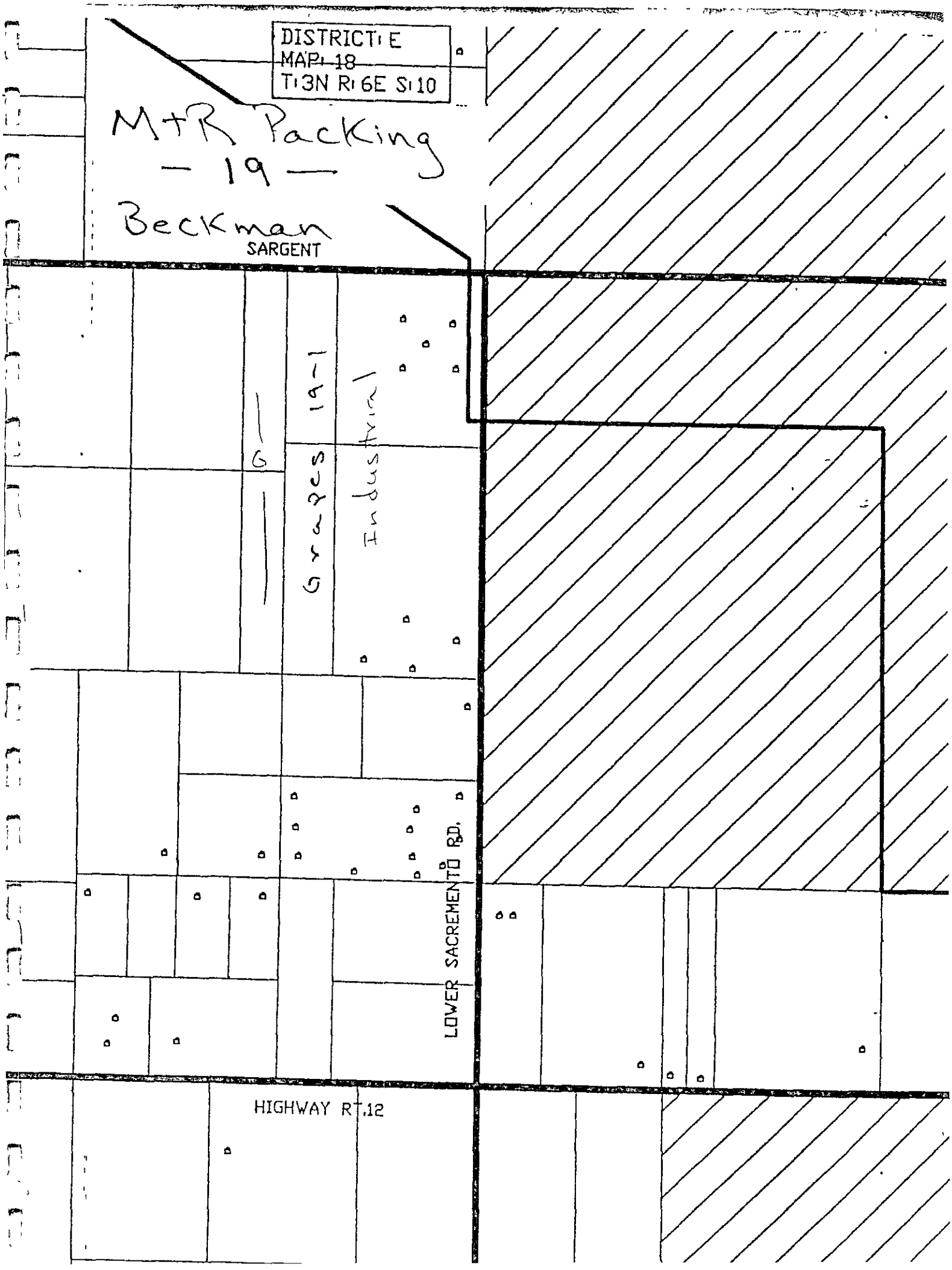

M+R -13-
39- -3904314
86
DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
Brumm
13-1
Grapes
Grain
Grain
MACKVILLE
JAHANT
MACKVILLE
KELUMNE RIVER
STATE HIGHWAY RT.88
S.P.R.R.
CLEMENTS


86
DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
MACKVILLE
AHANT
M+R
-14-
Wakeham Ranch
39- -3904314
MACKVILLE
KELUMNE RIVER
walnut
grape
open
Grape
15 Ac
Menlo
open
Rodeo
Grounds
STATE HIGHWAY RT.88
S.P.R.R.


51
DISTRICT: F
T:4N R:8E S:3
M+R
-15-
39- -3904314
LIBERTY
MACKVILLE
44-1
Grape
Ac
(Curden)
15-1
(Snelling)


M&R
-16-
REYNOLDS
39- -39043140
MAP 109
DISTRICT: F
T:4N R:6E S:25
DES MOINES
U.S.99
ACAMPO
N. FRONTAGE
S.P.R.R.
grape
Grape
20 Ac
Reynolds
grape
grape
WOODBRIDGE


93
DISTRICT: F
T:4N R:6E S:24
M+R-17
39- -3904314
Jacinto
FRONTAGE
PELTIER
FRONTAGE
S.P.R.R.
DES MOINES
U.S.99
G
17-1
Grape
G
G
ACAMPO
G


DISTRICT: E
MAP: 18
T:3N R:6E S:10
M+R Packing
— 19 —
Beckman
SARGENT
G
Garages 19-1
Industrial
LOWER SACREMENTO RD.
HIGHWAY RT.12

#25

ITEMS TO BE SHOWN ON MAP OF AREA TO BE TREATED: M+R

39- -3904314

1. Adjacent crops

2. Occupied buildings including schools, dwellings, and labor camps

3. Areas occupied by animals including beehives, livestock, and poultry.

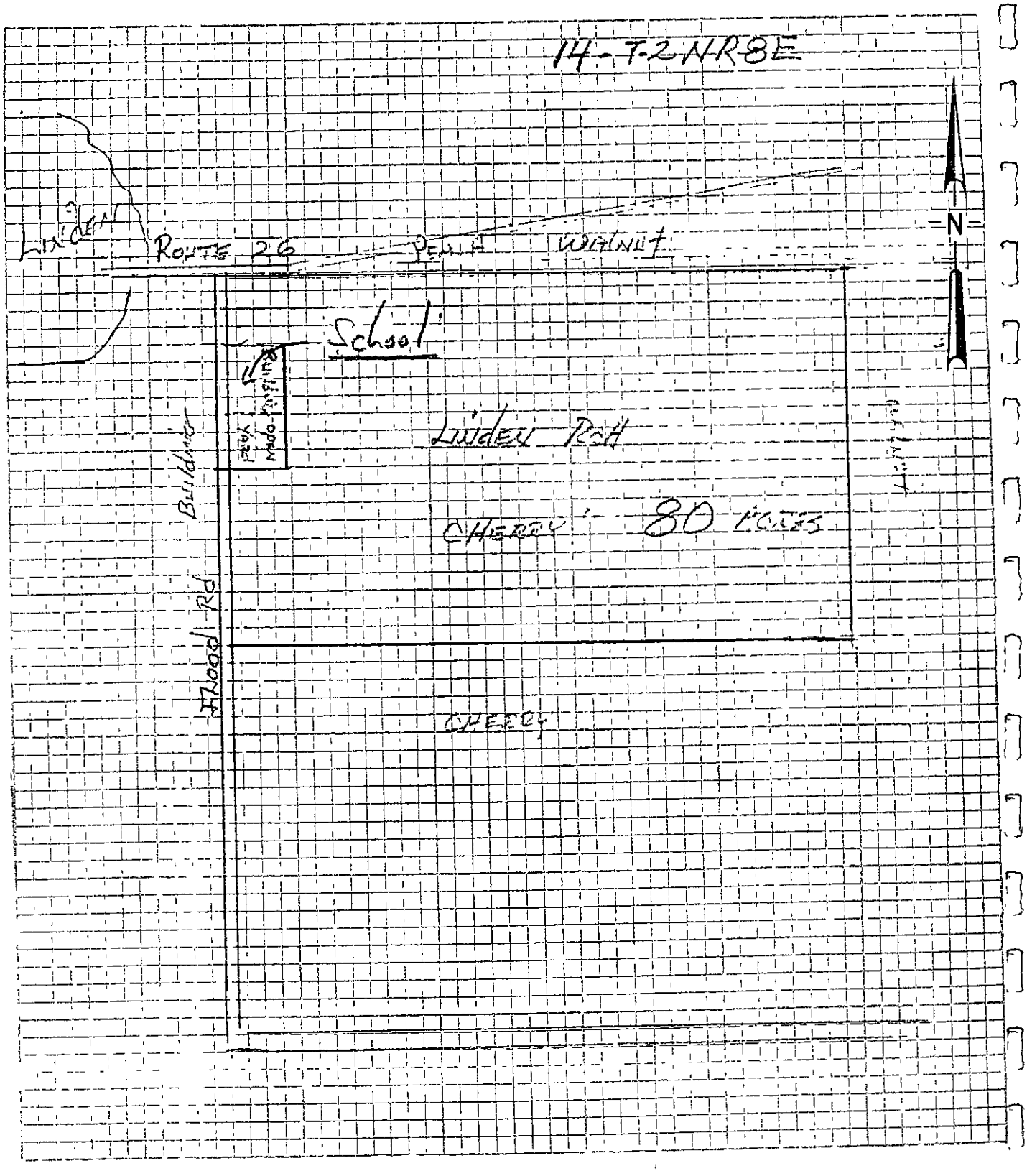
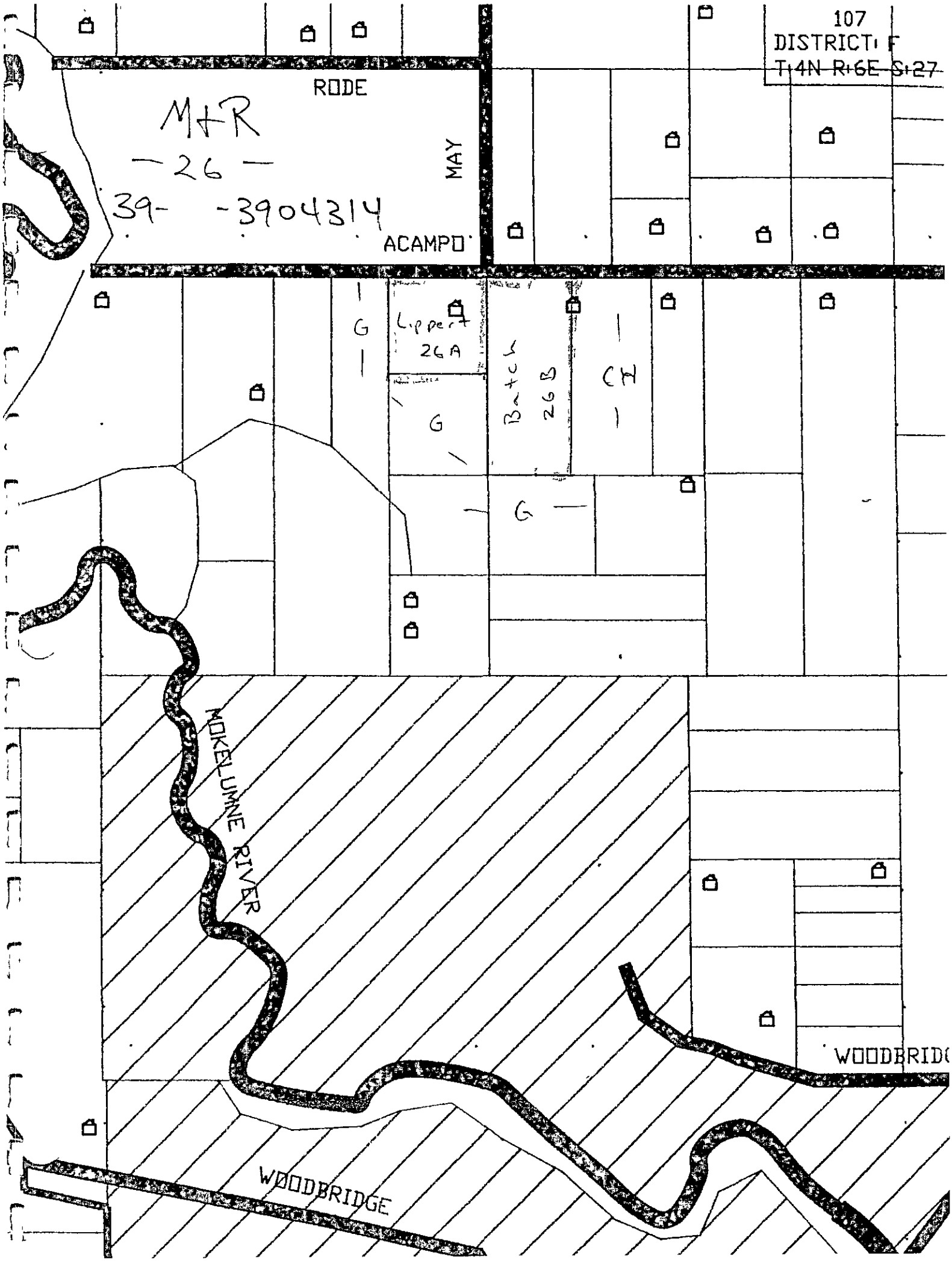
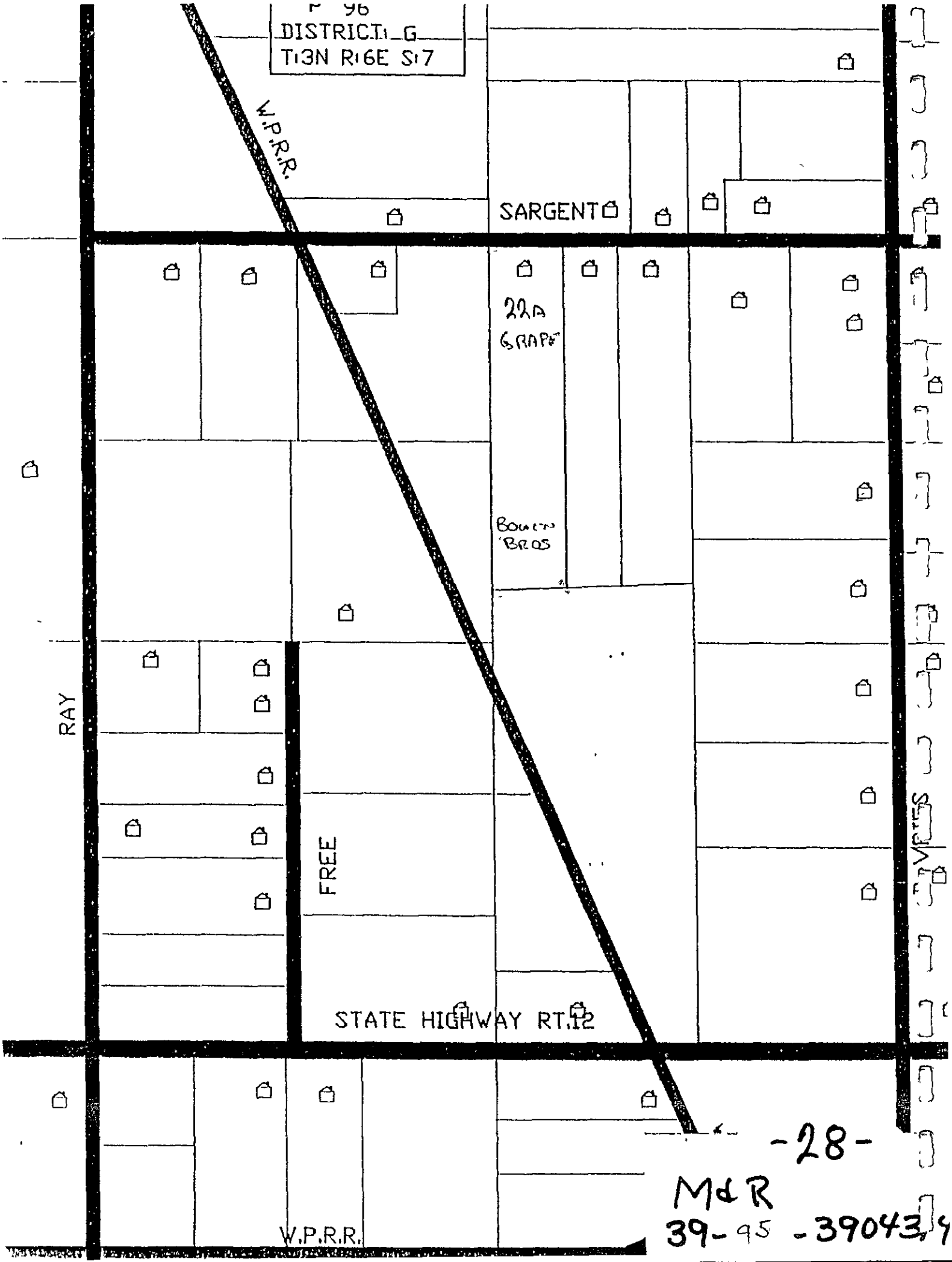


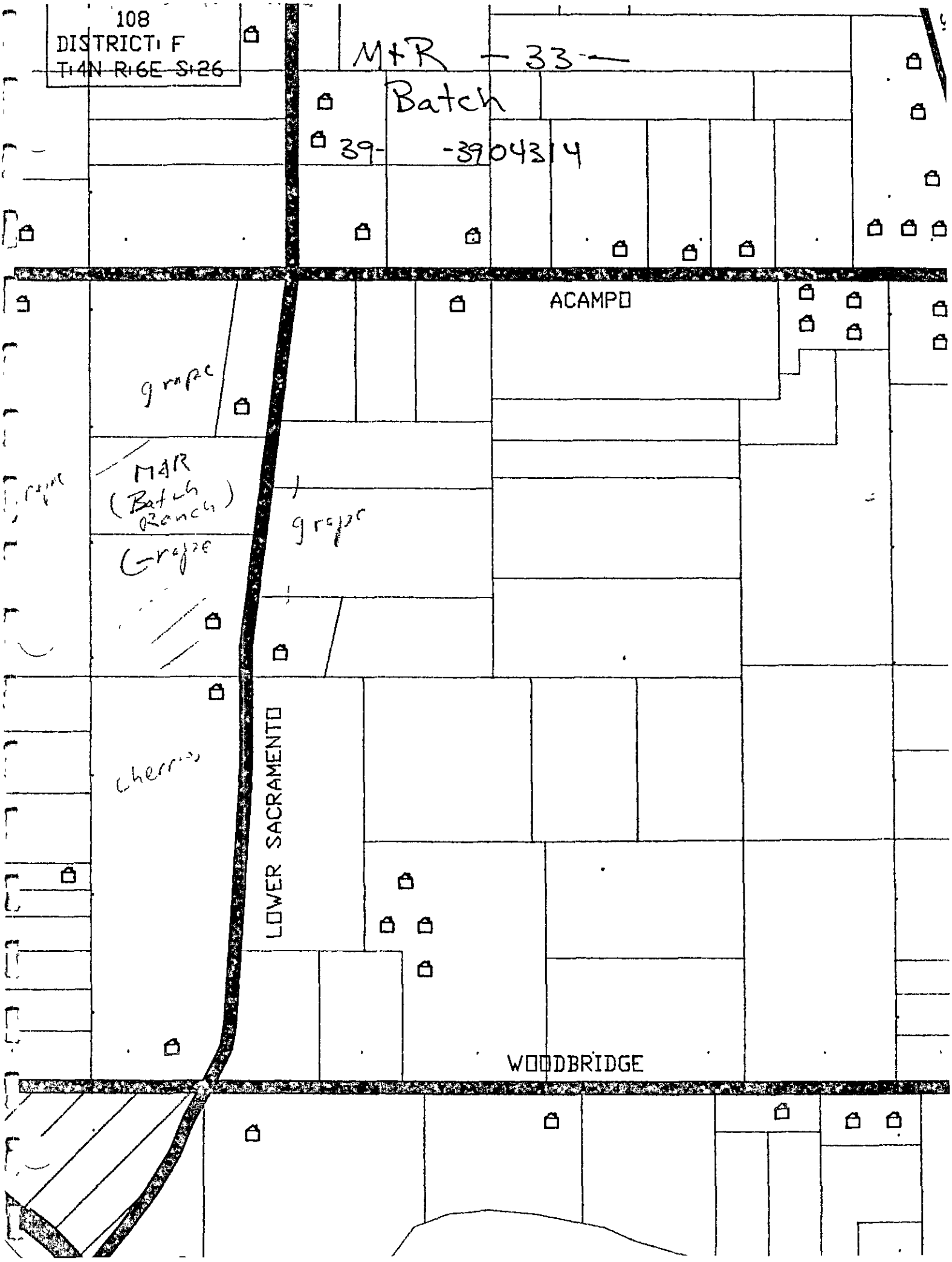
Exhibit A - Map of Permit No. _____

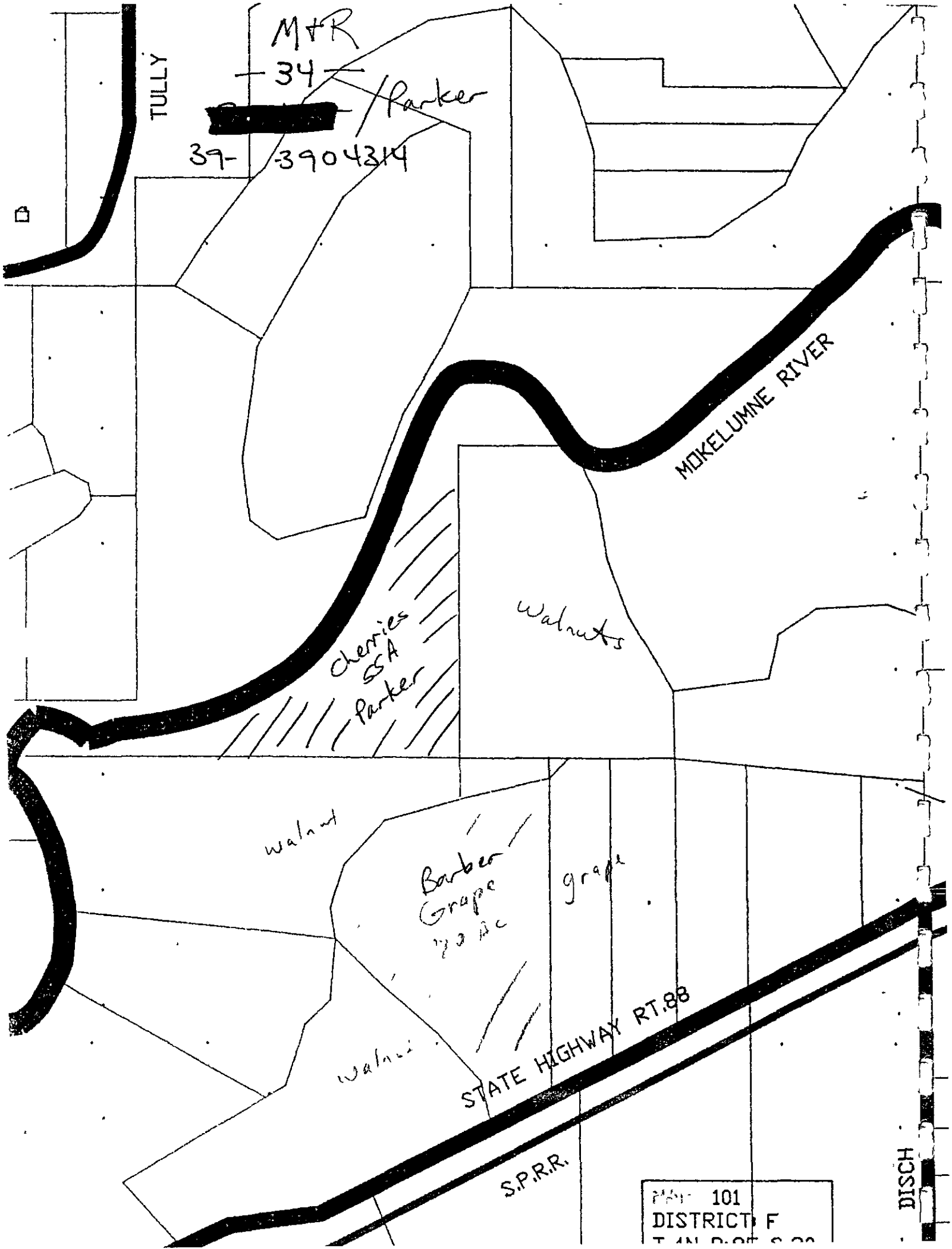

107
DISTRICT: F
T:4N R:6E S:27
RODE
M+R
-26-
39- -3904314
MAY
ACAMPO
G
Lippert
26A
Batch
26B
CH
G
G
MOKELUMNE RIVER
WOODBRIDG
WOODBRIDGE

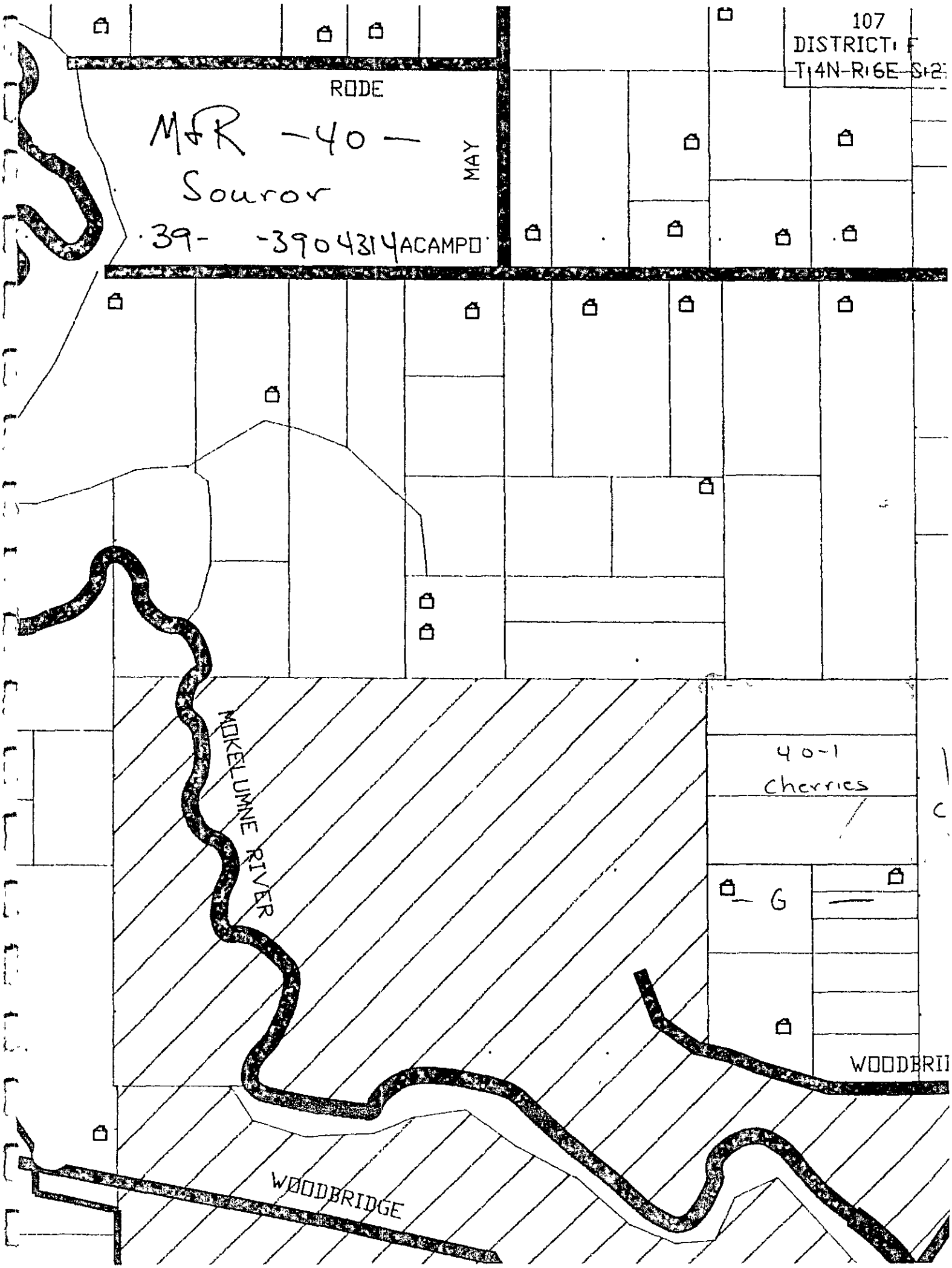


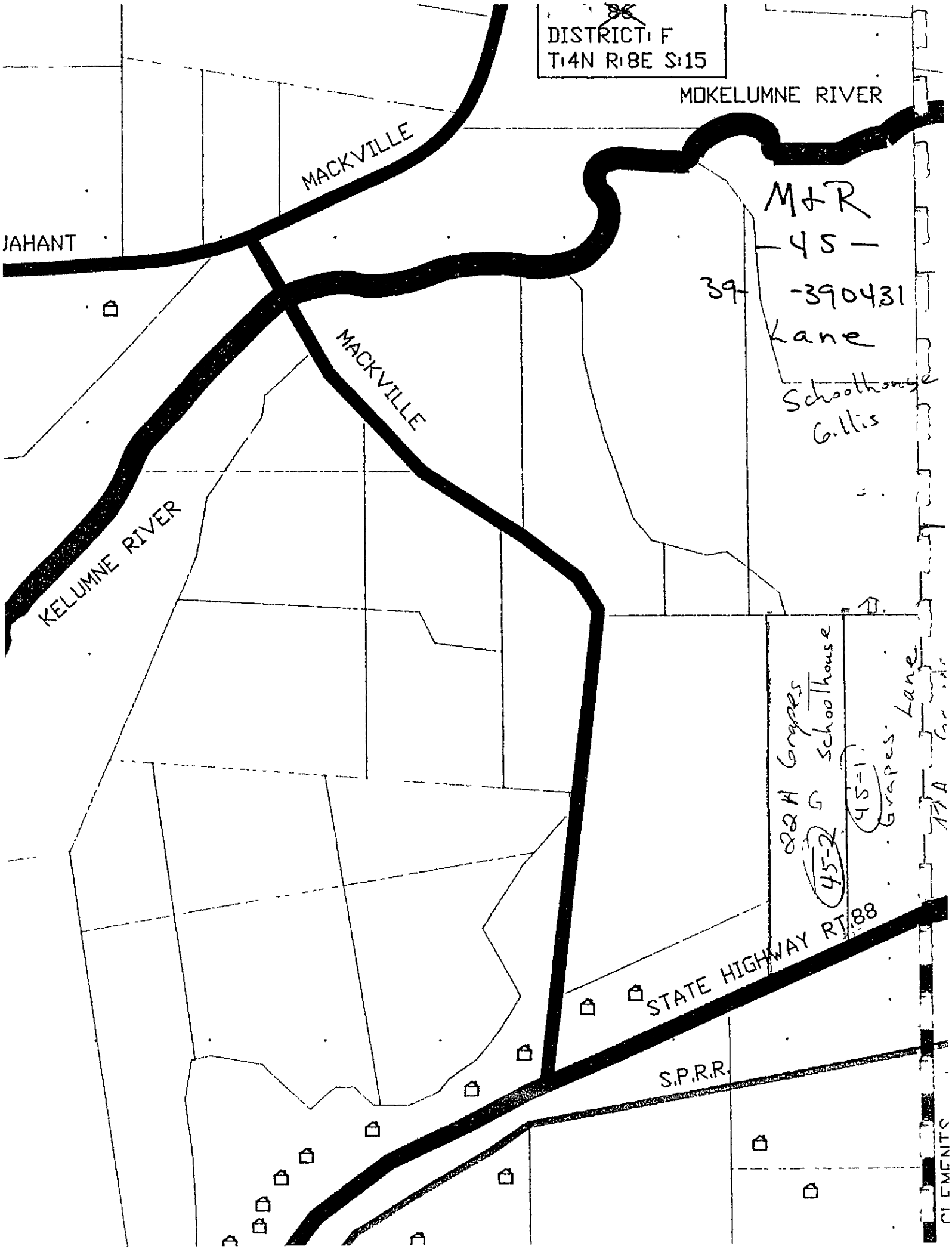
-28-

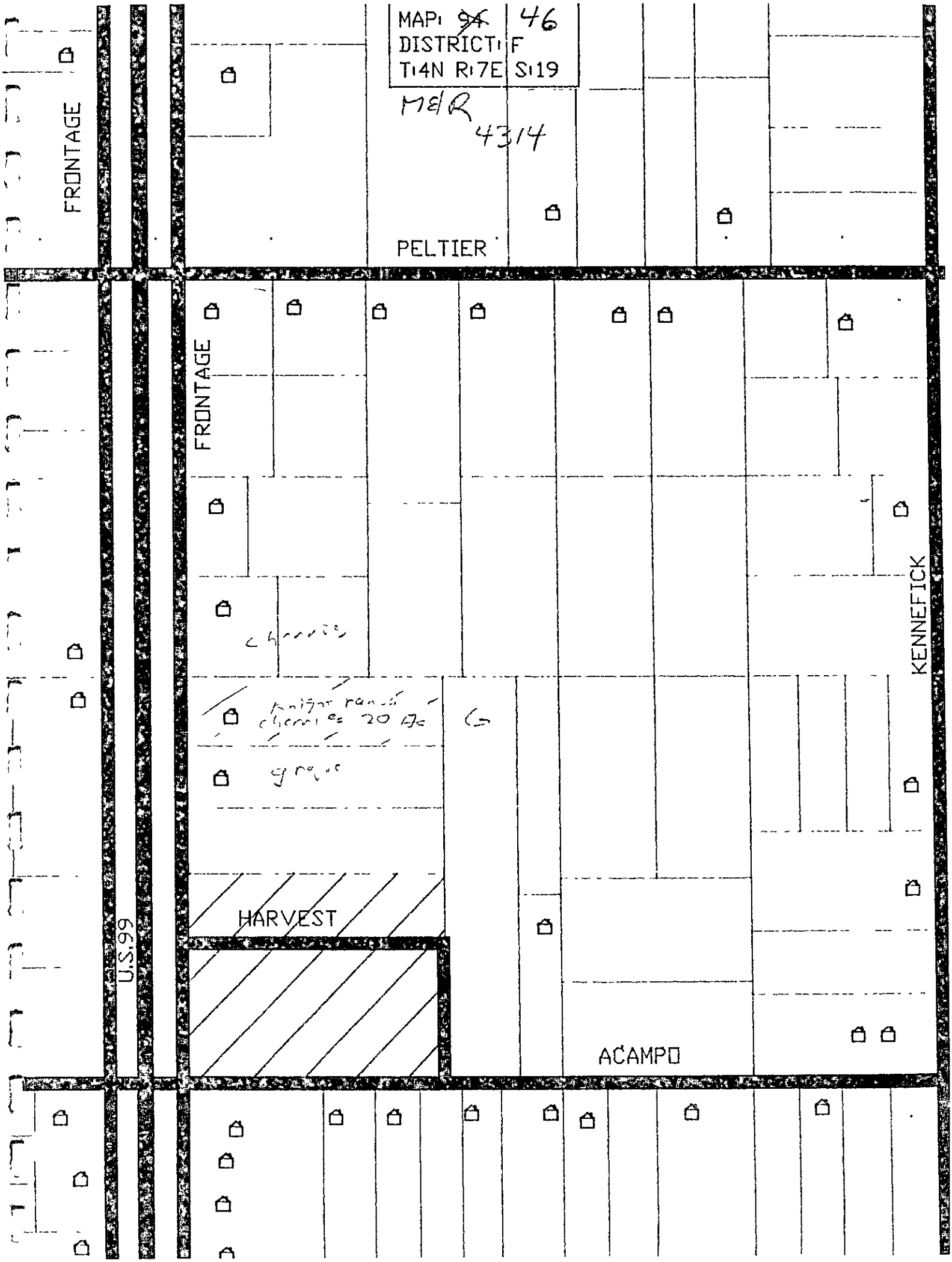
M&R
39-95 -39043,4

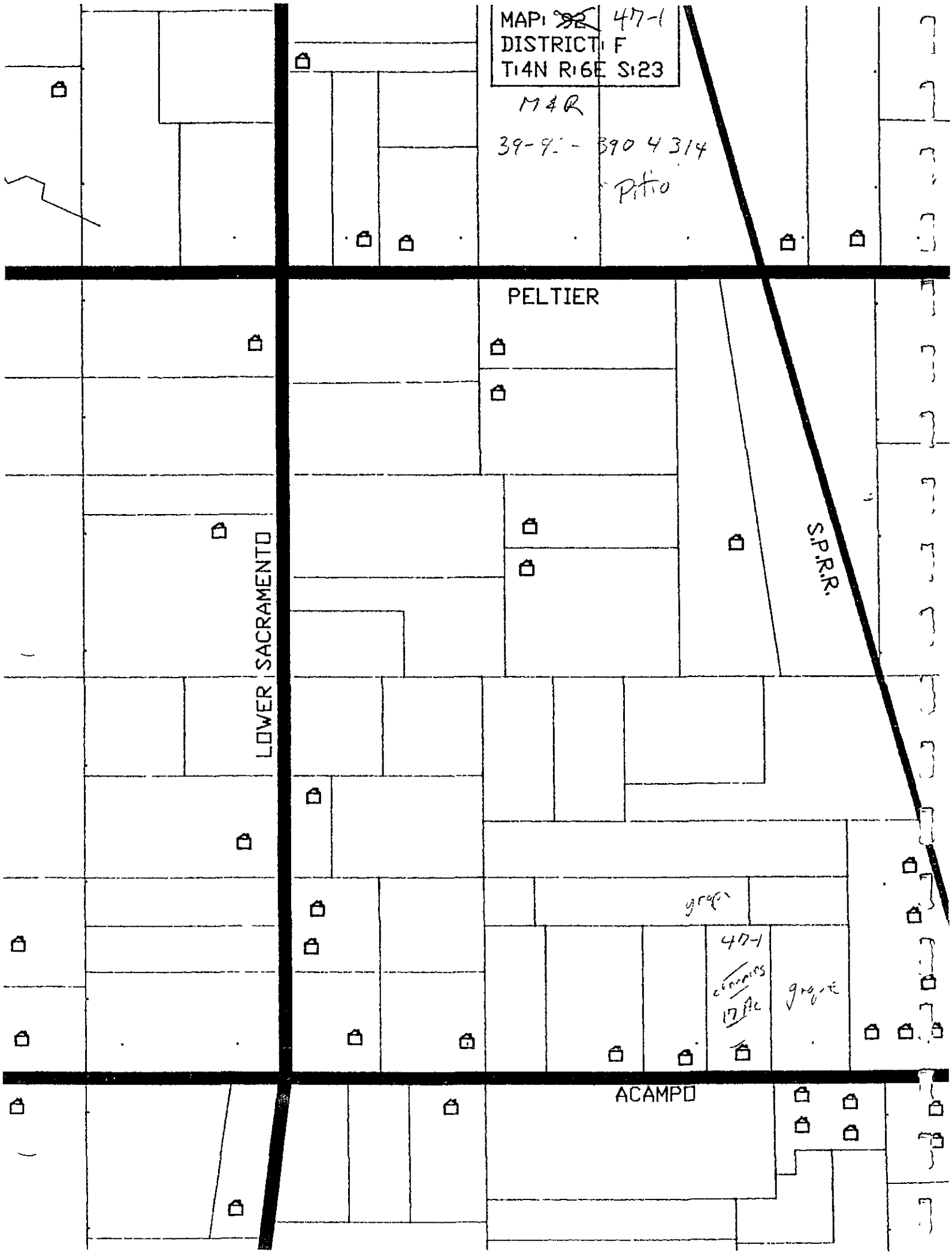

108
DISTRICT: F
T:4N R:6E S:26
M+R -33-
Batch
39- -3904314
ACAMPO
grape
MAR
(Batch Ranch)
grape
grape
grape
cherries
LOWER SACRAMENTO
WOODBRIDGE

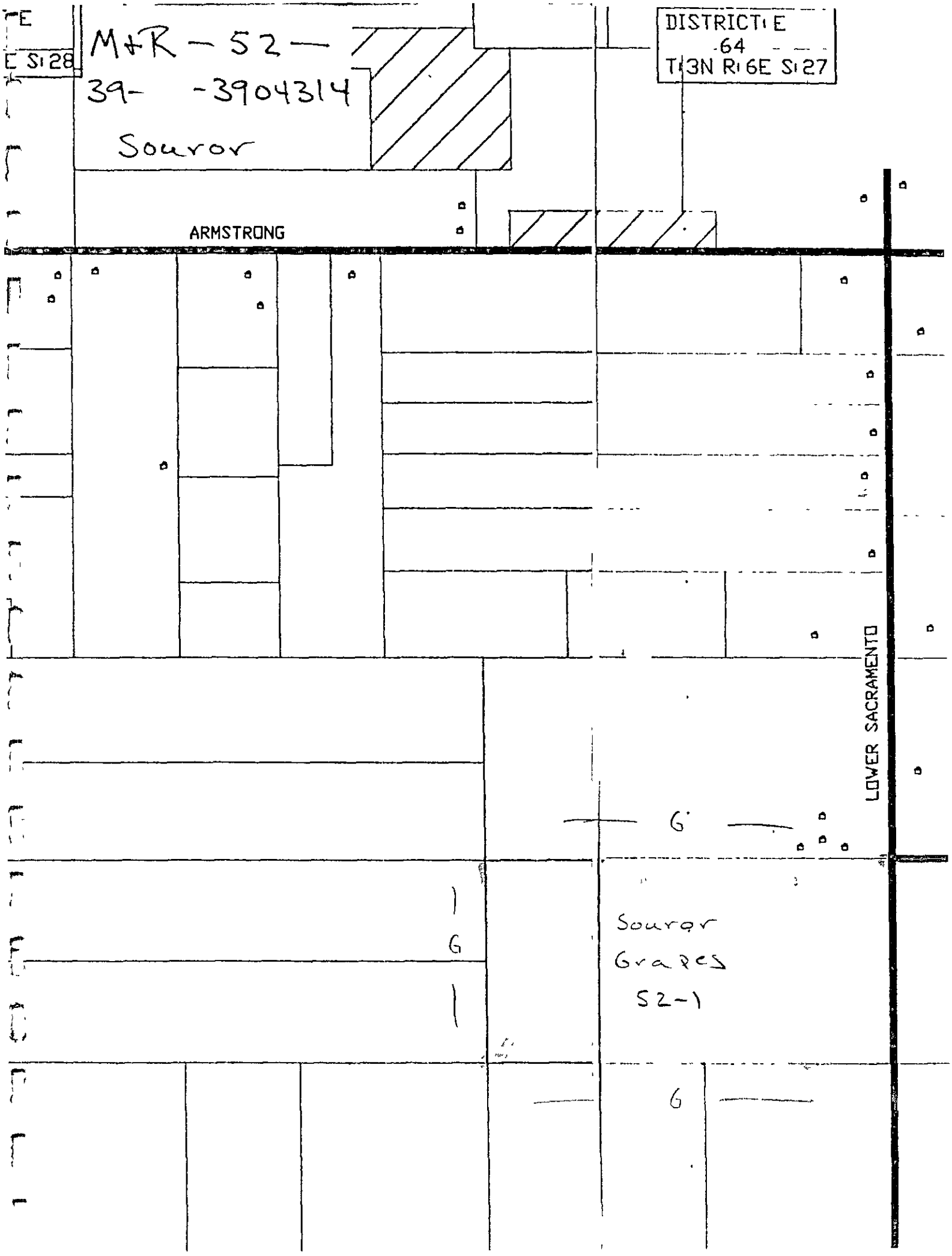

M+R
34
Parker
[redacted]
39-
3904314
TULLY
MOKELUMNE RIVER
Cherries
SSA
Parker
Walnuts
walnut
Barber
Grape
grape
walnut
STATE HIGHWAY RT.88
S.P.R.R.
DISCH
101
DISTRICT F


107
DISTRICT: F
T:4N-R:6E-S:2
RODE
MAY
MFR -40-
Souror
·39- -3904314 ACAMPO
MOKELUMNE RIVER
40-1
Cherries
G
WOODBRIDGE


DISTRICT: F
T:4N R:8E S:15
MOKELUMNE RIVER
MACKVILLE
JAHANT
M&R
-45-
39- -390431
Lane
Schoolhouse
Gillis
MACKVILLE
KELUMNE RIVER
28 A Grapes
G Schoolhouse
45-2
45-1
Grapes Lane
STATE HIGHWAY RT.88
S.P.R.R.

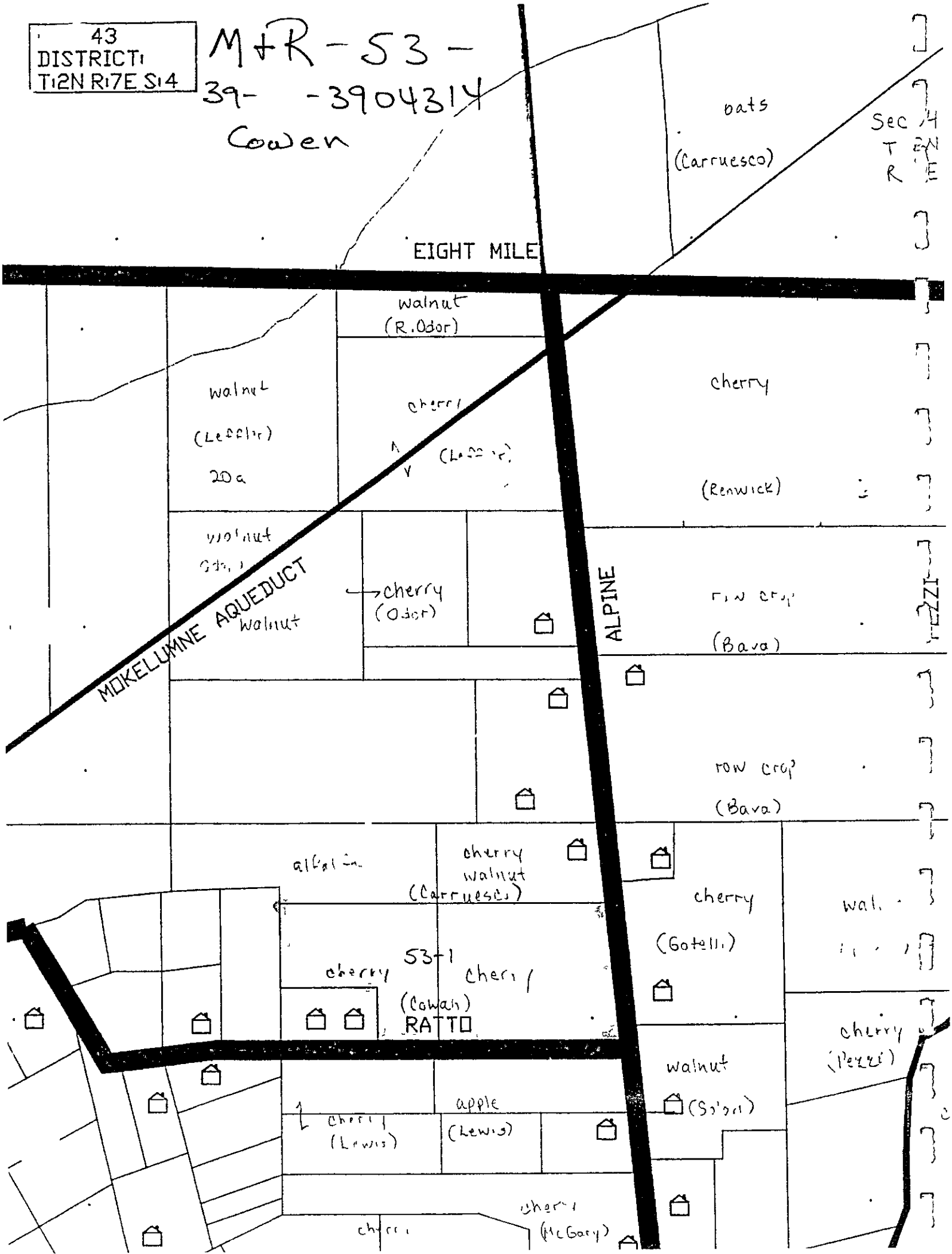

MAP: ~~94~~ 46
DISTRICT: F
T:4N R:7E S:19
M&R
4314
FRONTAGE
PELTIER
FRONTAGE
KENNEFICK
HARVEST
U.S.99
ACAMPO

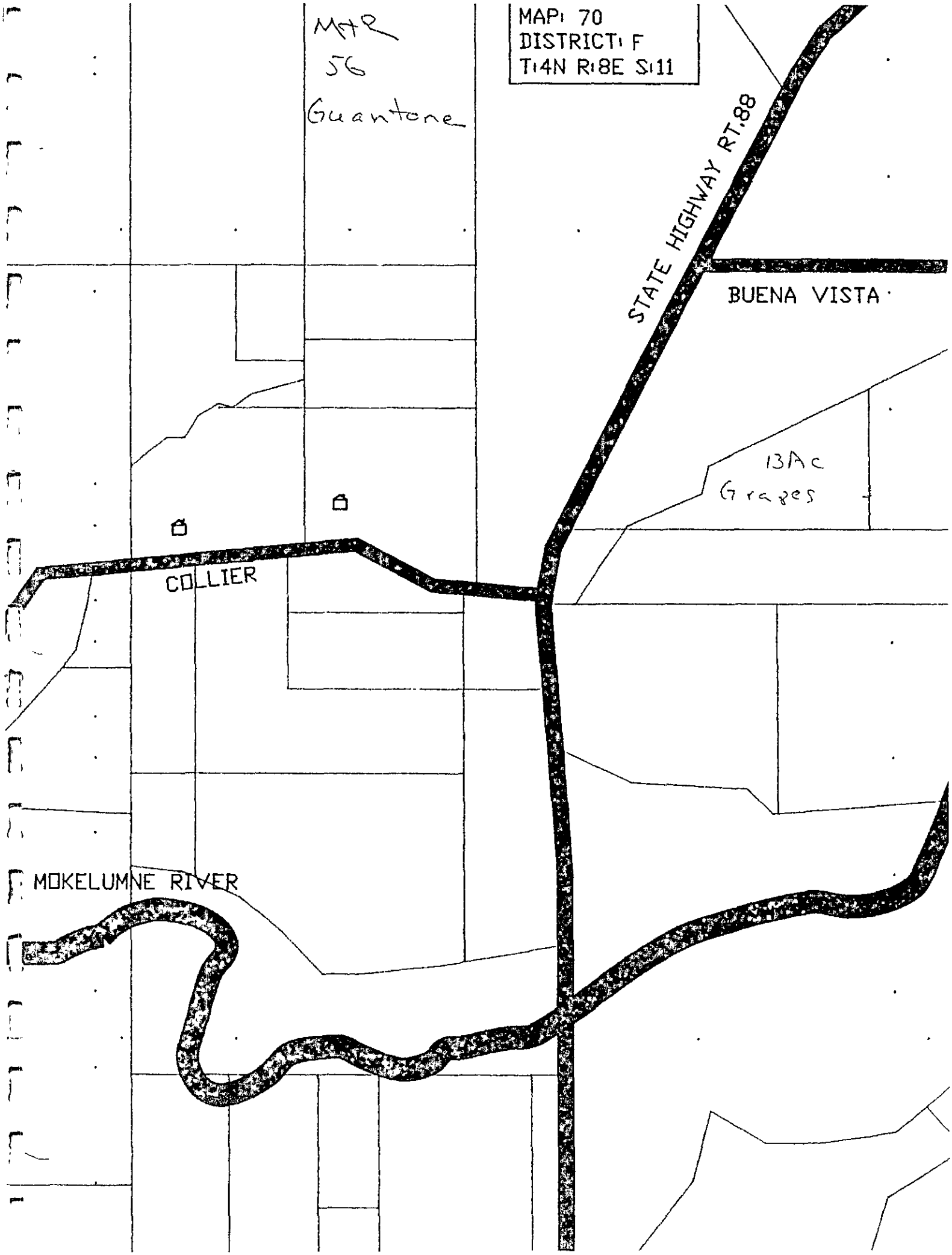

MAP: ~~92~~ 47-1
DISTRICT: F
T:4N R:6E S:23
M&R
39-9 - 390 4 314
Pitio
PELTIER
LOWER SACRAMENTO
S.P.R.R.
grape
47-1
conversion
17 Ac
grape
ACAMPO

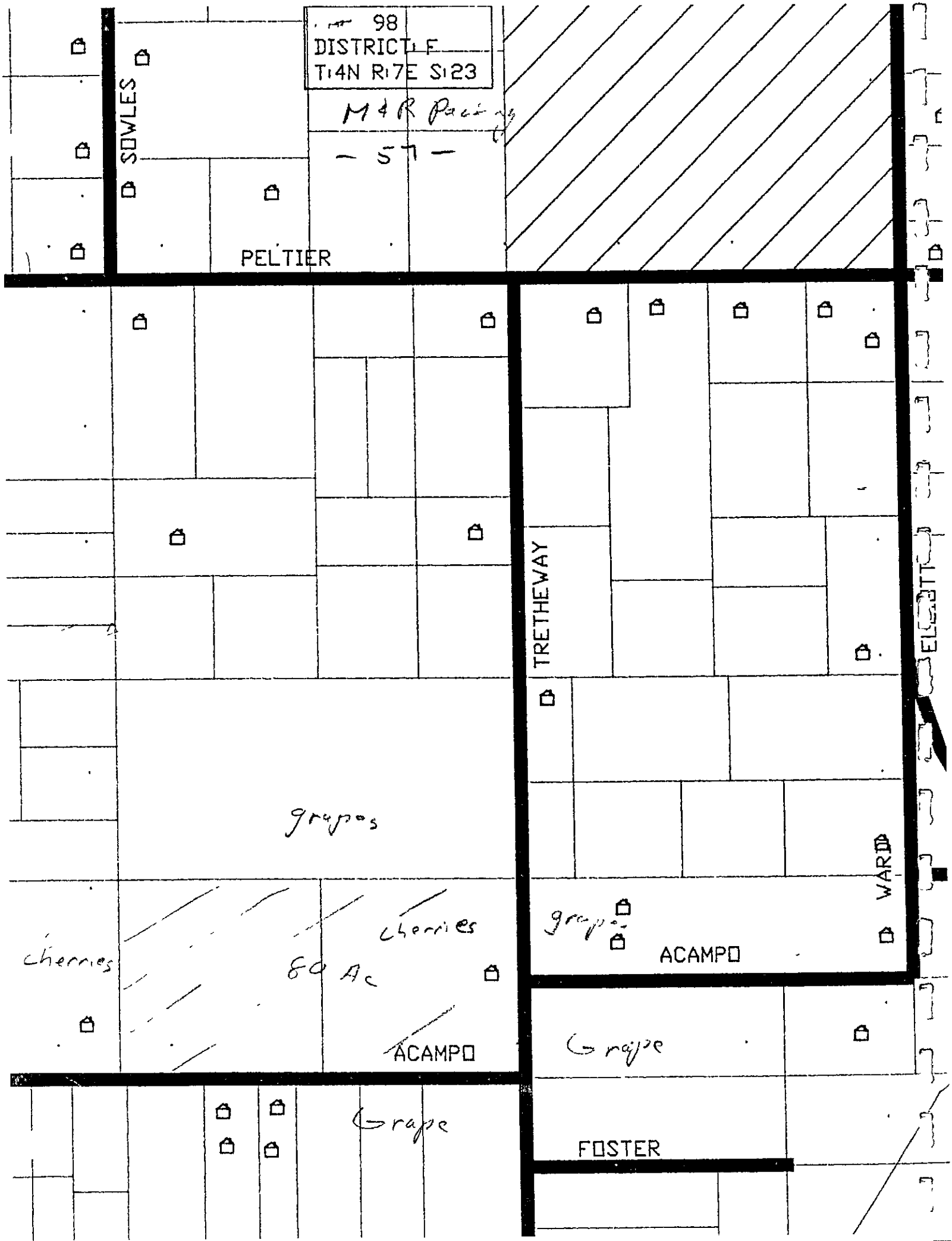

E
E S 28
M+R - 52 -
39- -3904314
Sourer
DISTRICT E
64
T 3N R 6E S 27
ARMSTRONG
LOWER SACRAMENTO
G
G
Sourer
Grapes
52-1
G

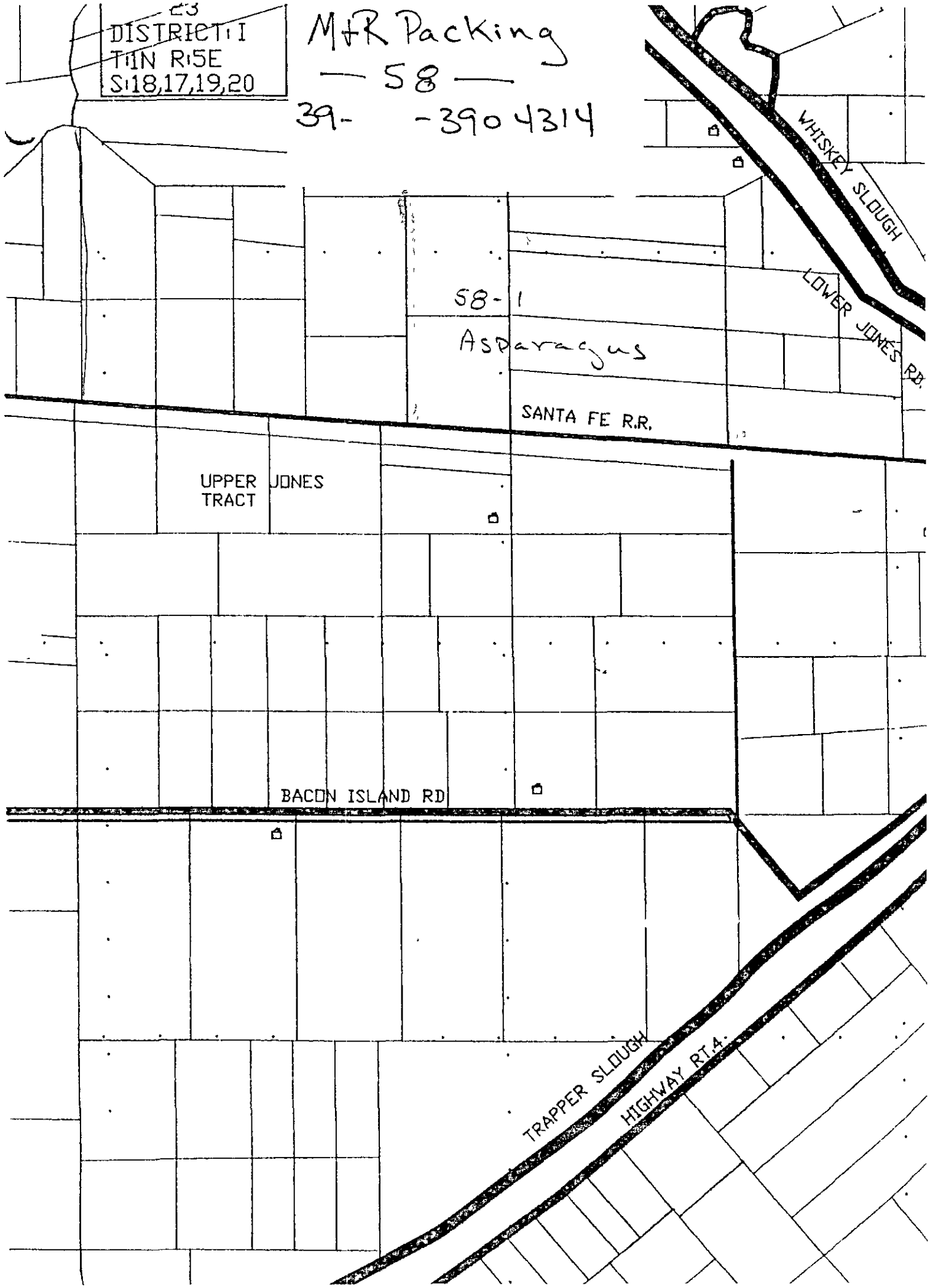
43
DISTRICT:
T:2N R:7E S:4

M+R-53-
39- -3904314
Cowen

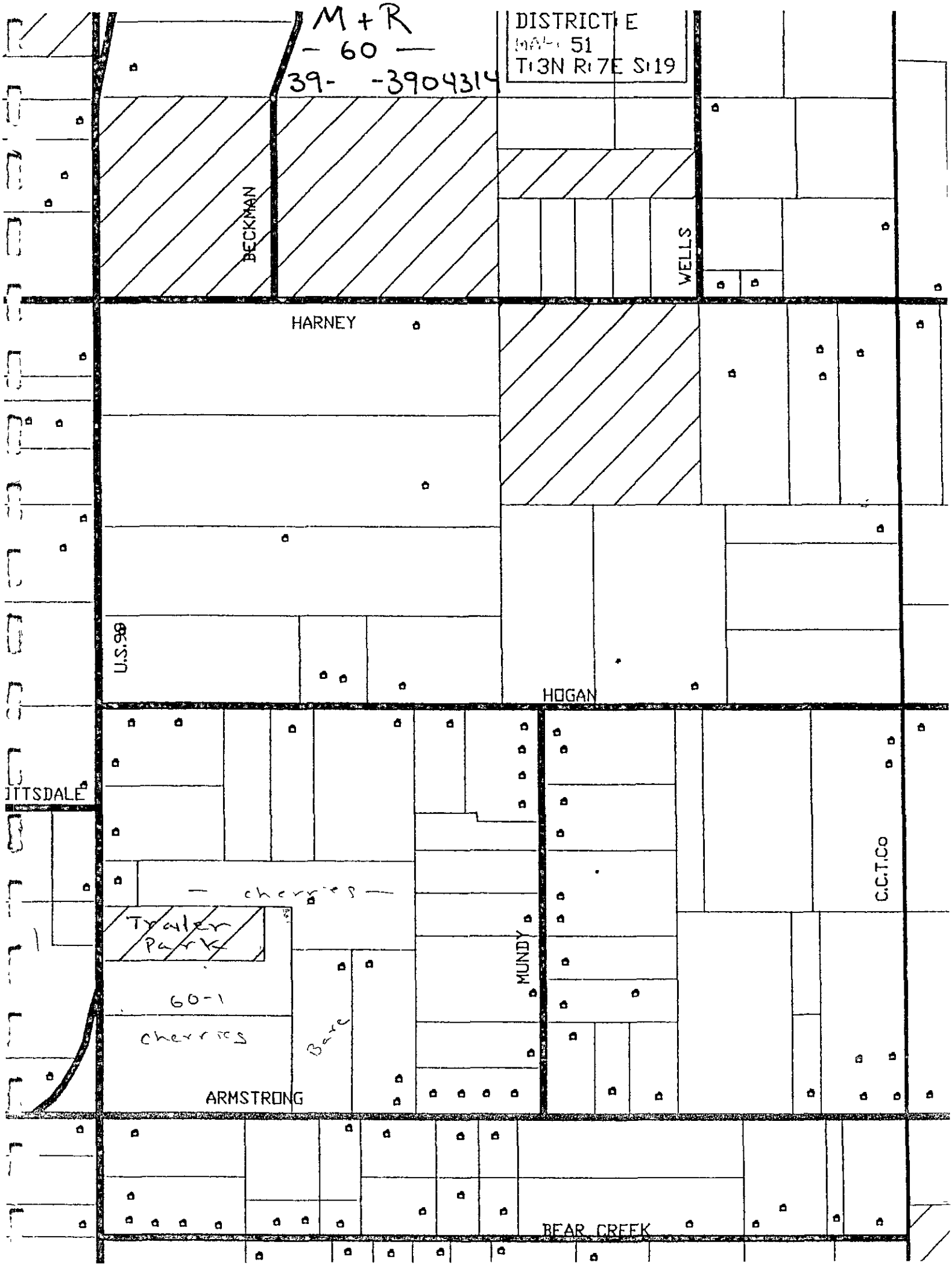


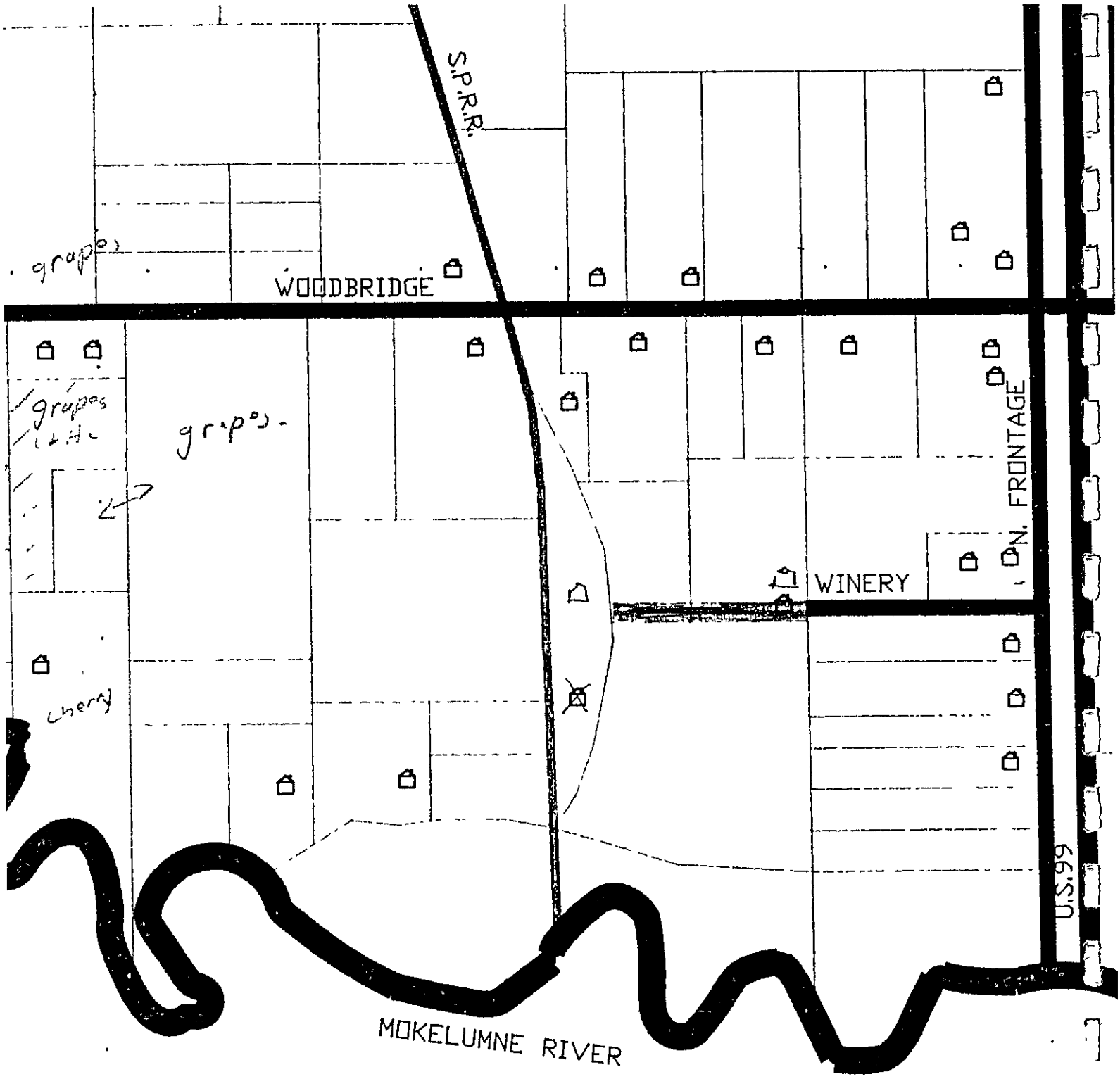

MAP: 70
DISTRICT: F
T:4N R:8E S:11
MTR
56
Guantone
STATE HIGHWAY RT.88
BUENA VISTA
13Ac
Grapes
COLLIER
MOKELUMNE RIVER


98
DISTRICT F
T:4N R:7E S:23
M & R Pacific
- 57 -
SOWLES
PELTIER
TRETHEWAY
ELLIOTT
WARD
ACAMPO
grapes
cherries
cherries
80 Ac
ACAMPO
grape
grape
FOSTER


DISTRICT 1
T1N R5E
S:18,17,19,20
M&R Packing
— 58 —
39- -3904314
WHISKEY SLOUGH
LOWER JONES RD.
58-1
Asparagus
SANTA FE R.R.
UPPER JONES
TRACT
BACON ISLAND RD
TRAPPER SLOUGH
HIGHWAY RT.4

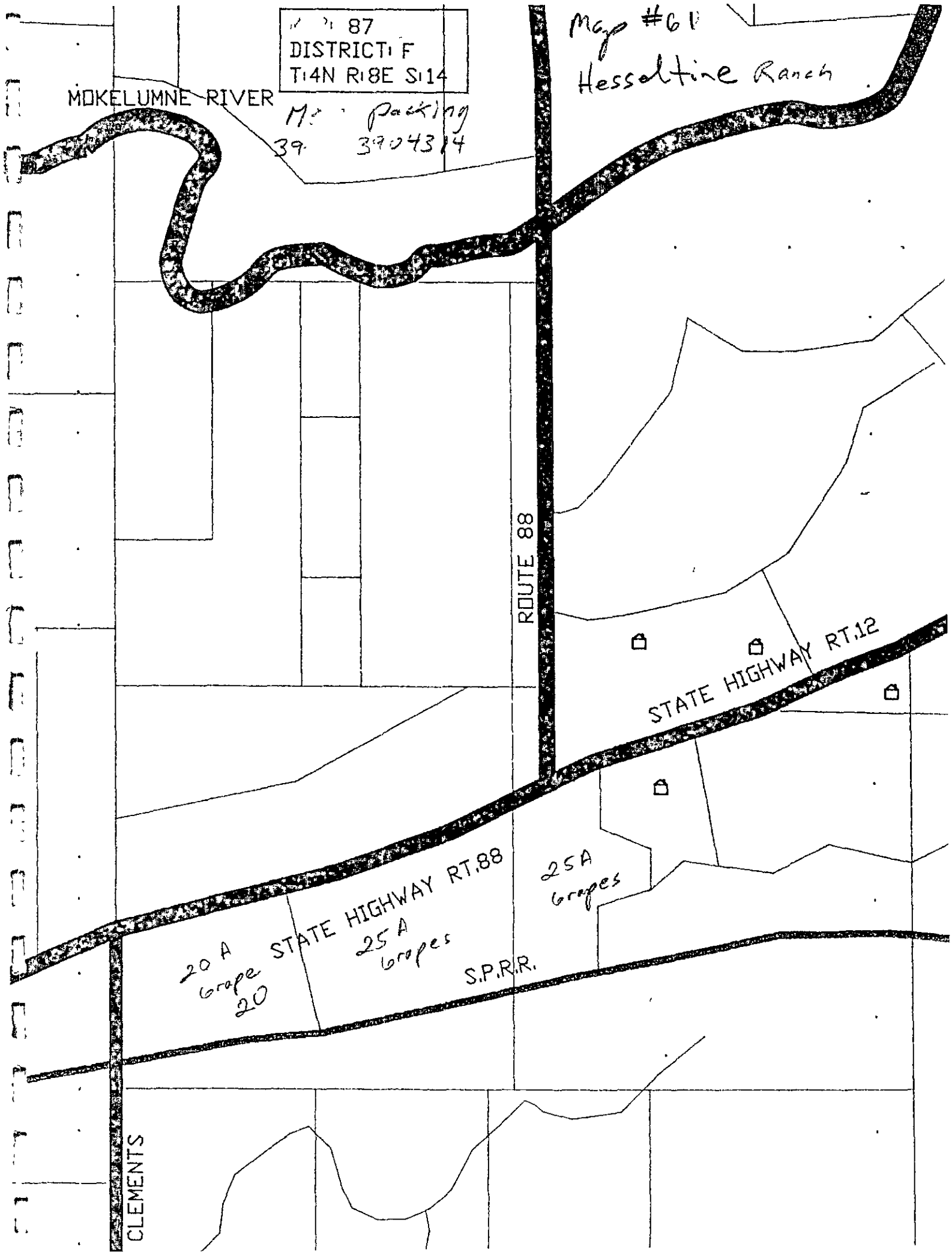
DISTRICT: F
T:4N R:6E S:22
M+R
-59-
Hangrave
39-9-3904314
BENDER
PELTIER
TADDEI
MAY
Walnut & grape
Cherries 8 Ac
Asparagus
59-1
38 Ac
grape
RODE
Nolan Rd
ACAMPO

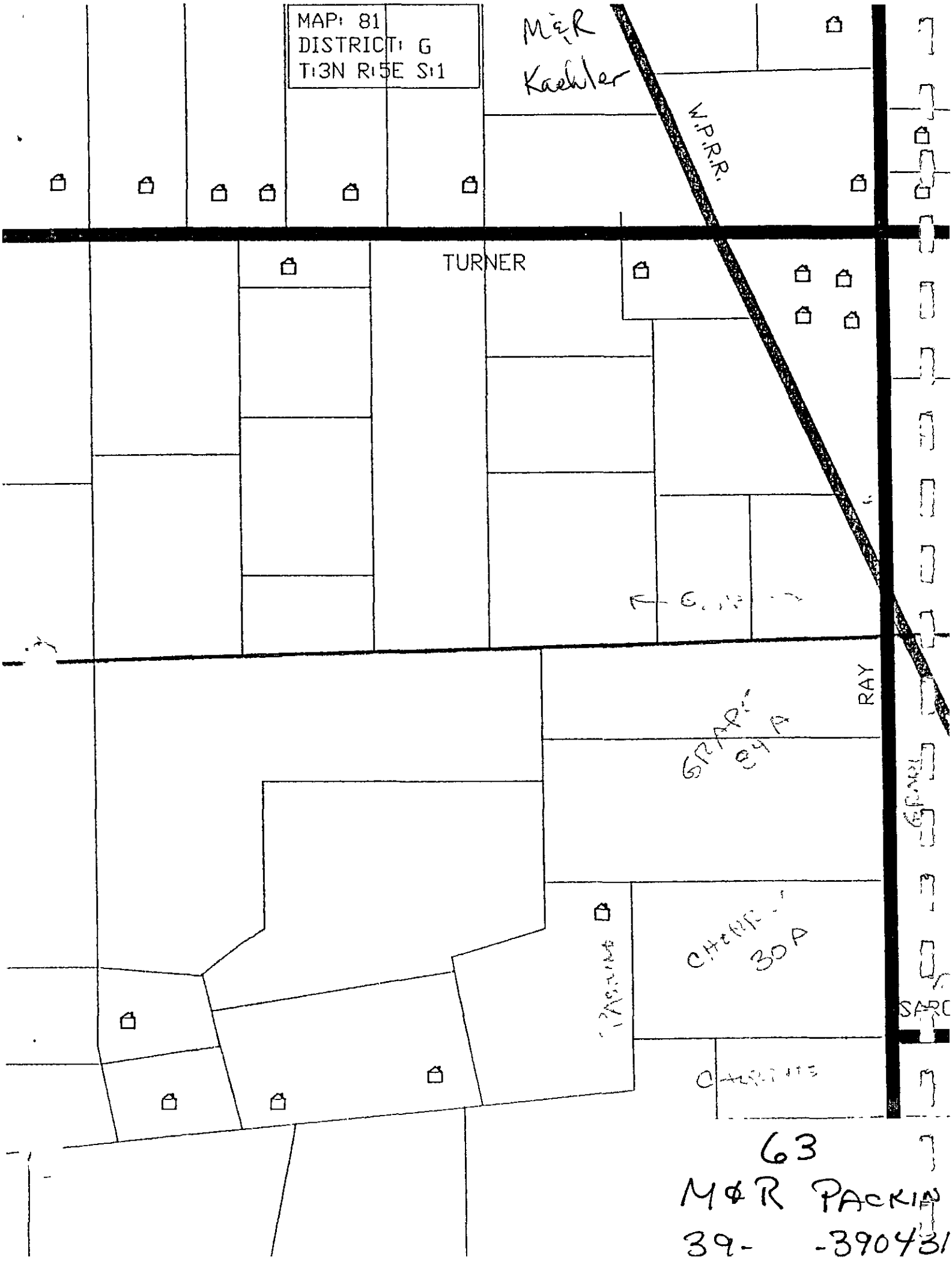

M + R
— 60 —
39- -3904314
DISTRICT E
MAP 51
T3N R7E S19
BECKMAN
WELLS
HARNEY
U.S.98
HOGAN
ITTSDALE
— cherries —
Tyler Park
60-1
cherries
Bare
MUNDY
C.C.T.Co
ARMSTRONG
BEAR CREEK

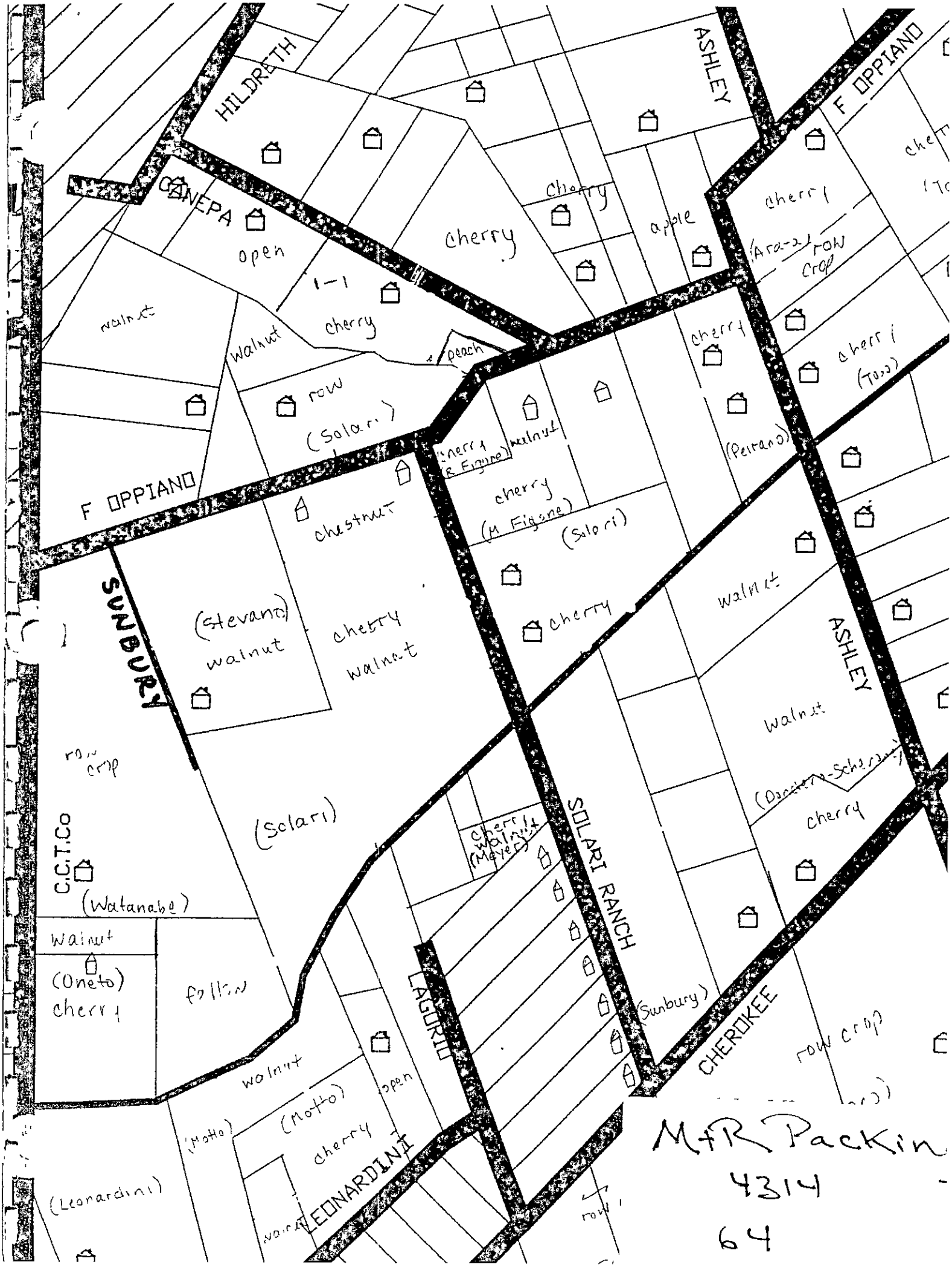


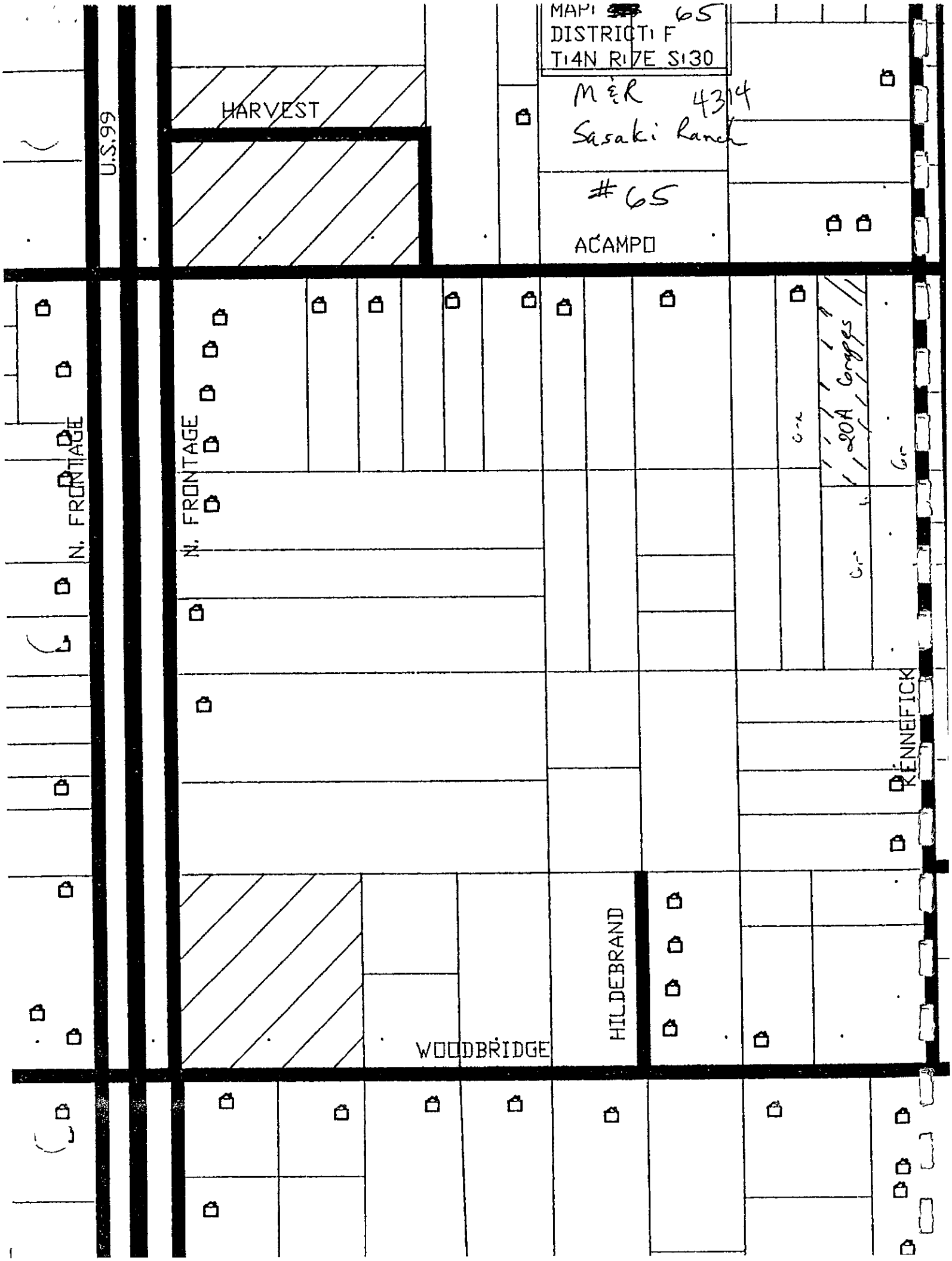
MAP: ~~126~~ 62-1
DISTRICT: F
T:4N R:6E S:36

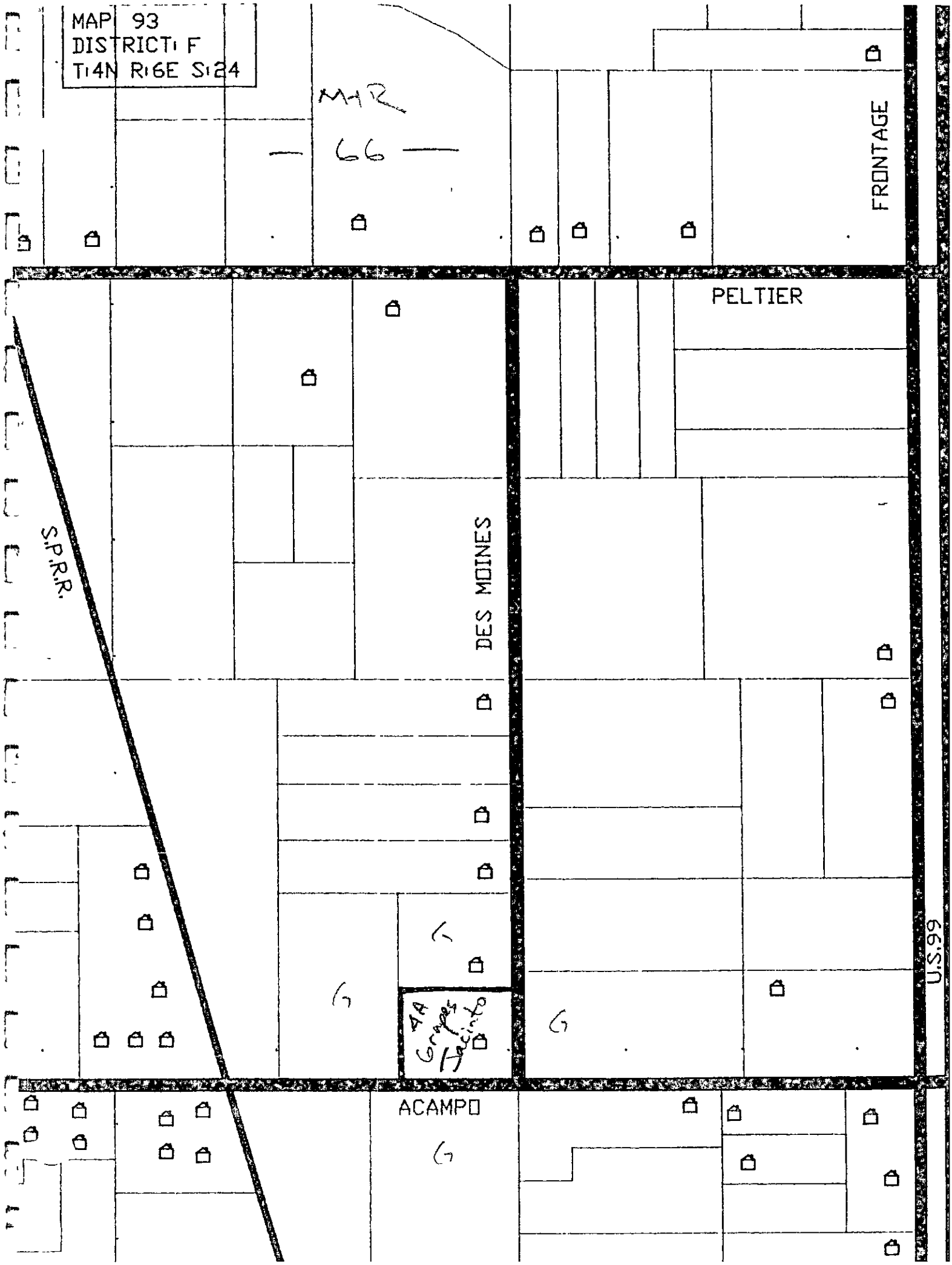
M&B Engineering

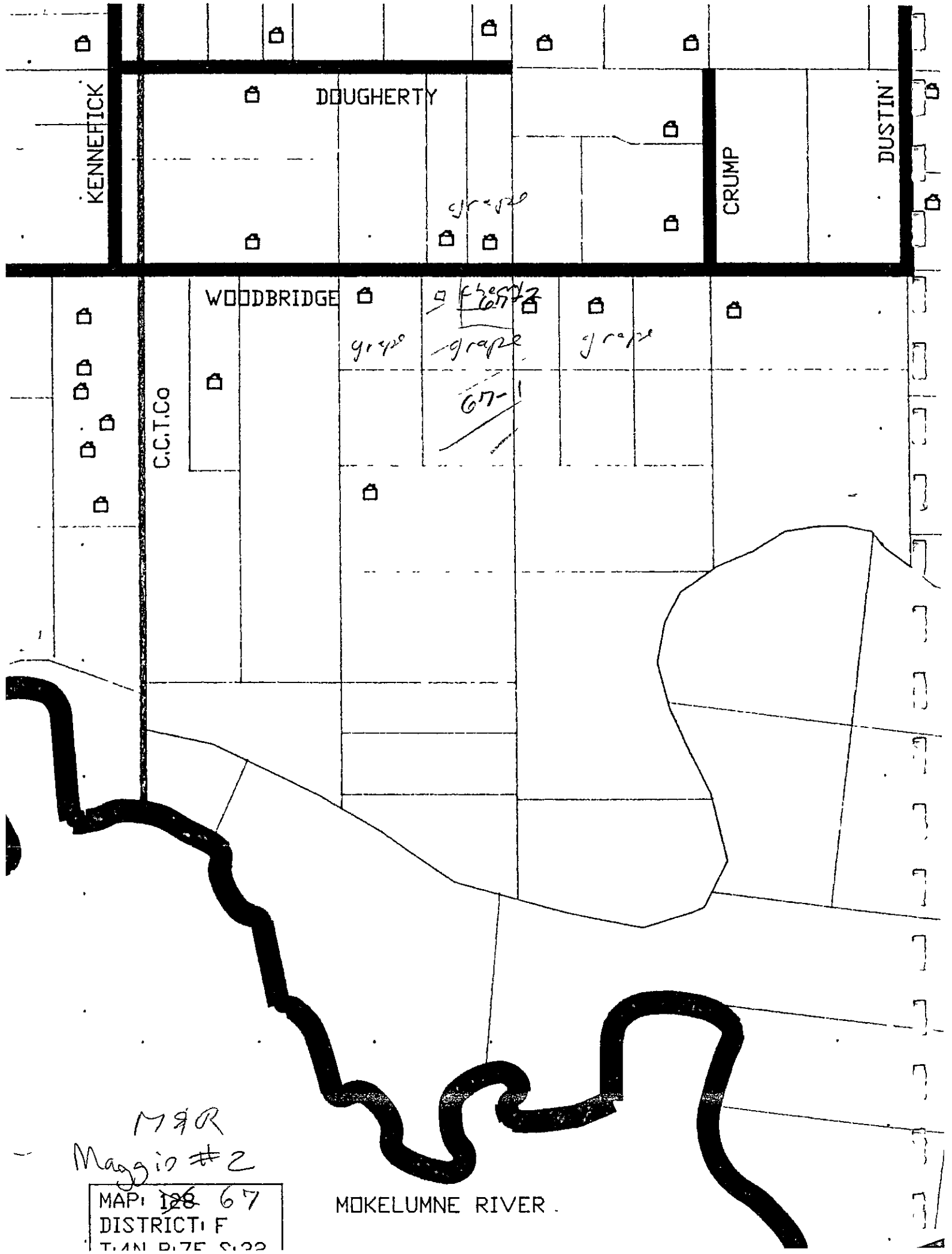

87
DISTRICT F
T4N R8E S14
Map #61
Hessoltine Ranch
MOKELUMNE RIVER
Packing
39 3904314
ROUTE 88
STATE HIGHWAY RT.12
STATE HIGHWAY RT.88
25 A grapes
25 A grapes
20 A grape 20
S.P.R.R.
CLEMENTS


MAP: 81
DISTRICT: G
T:3N R:5E S:1
M&R
Kaehler
W.P.R.R.
TURNER
RAY
GRAPE
84 A
CHERRIES
30 A
SARC
63
M&R PACKIN
39- -390431


HILDRETH
ASHLEY
F OPPIANO
CANEPA
open
cherry
cherry
apple
cherry
(Ara-2)
row crop
walnut
walnut
cherry
peach
cherry
cherry
(Toso)
row
(Solari)
(Peirano)
F OPPIANO
chestnut
cherry
(H Figone)
(Solari)
SUNBURY
(Stevano)
walnut
cherry
walnut
cherry
walnut
ASHLEY
walnut
(Dantoni-Schersu)
cherry
row crop
(Solari)
C.C.T.Co
(Watanabe)
cherry
walnut
(Meyer)
SOLARI RANCH
walnut
(Oneto)
cherry
fallow
LAGURIA
(Sunbury)
CHEROKEE
row crop
walnut
(Motto)
open
(Motto)
cherry
LEONARDINI
(Leonardini)
walnut
row
M+R Packin
4314
64

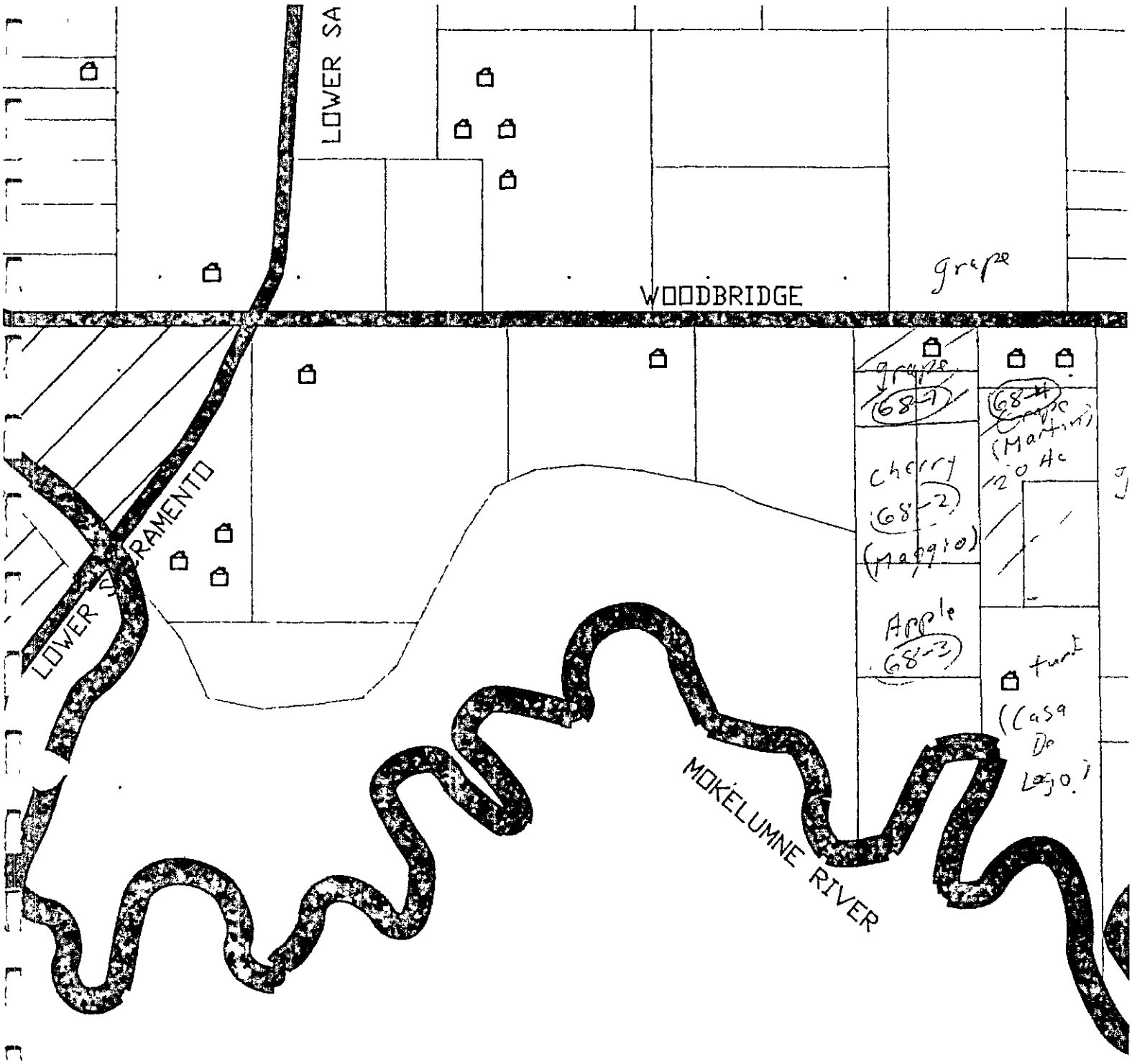

MAP 65
DISTRICT F
T14N R7E S30
M&R 4314
Sasaki Ranch
#65
ACAMPO
HARVEST
U.S.99
N. FRONTAGE
N. FRONTAGE
20A Grapes
RENNEFICK
HILDEBRAND
WOODBRIDGE


MAP 93
DISTRICT F
T14N R16E S24
MHR
66
FRONTAGE
PELTIER
DES MOINES
S.P.R.R.
U.S.99
ACAMPO
G
G
G
G
AA
Grapes
Hacinto



MAR
Maggio #2

MAP: ~~126~~ 67
DISTRICT: F
T:4N R:7E S:33

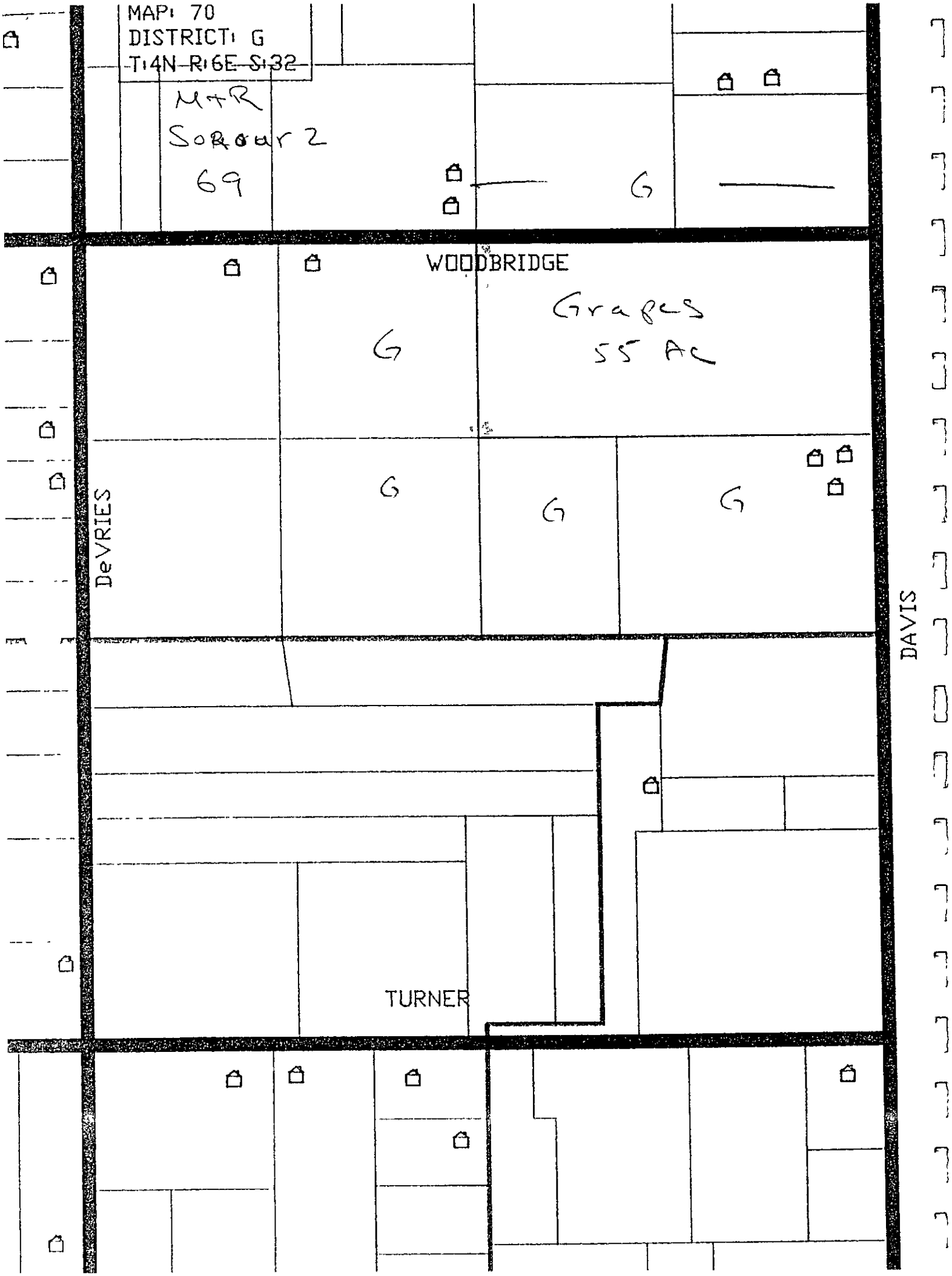


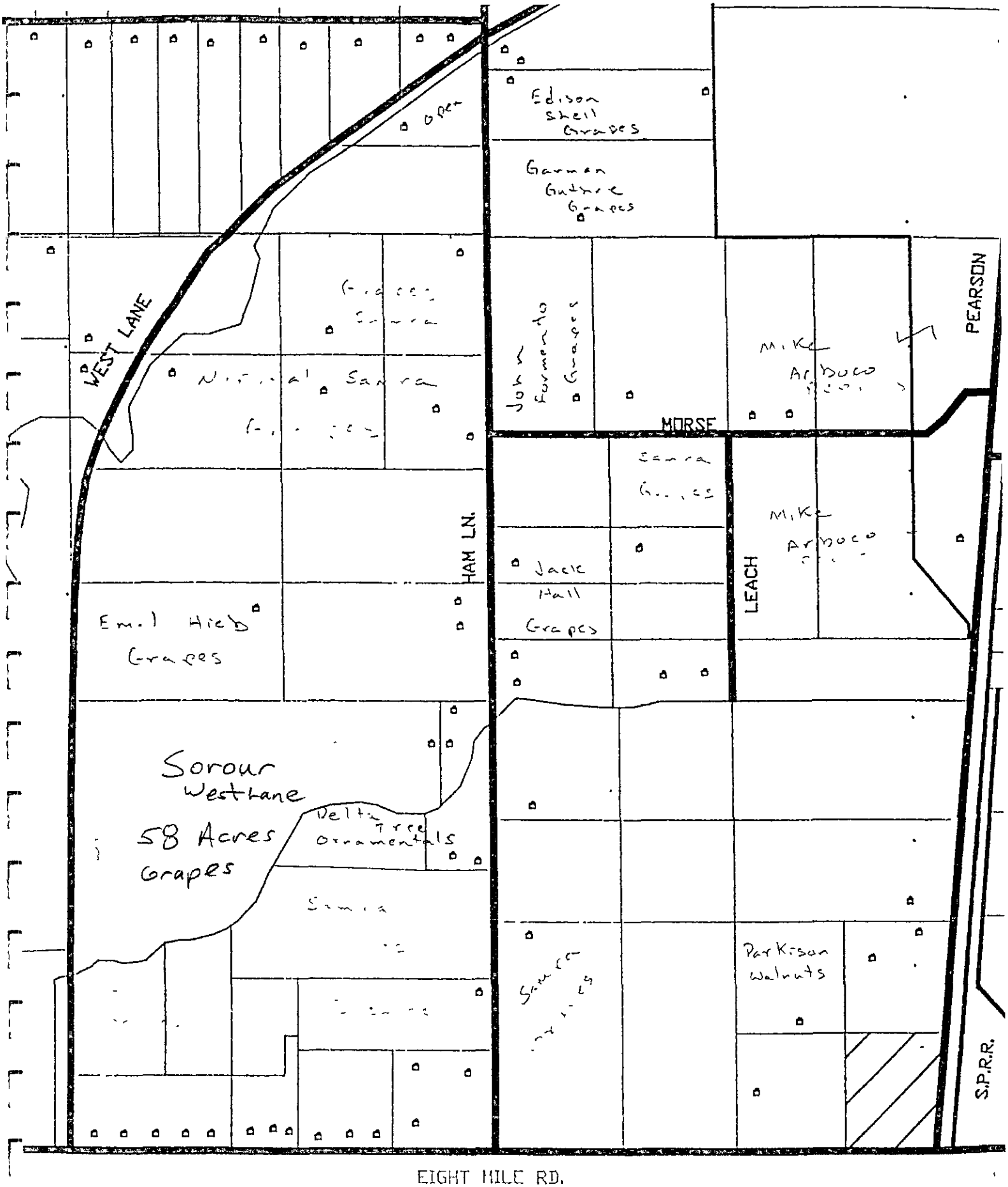
MAR placing
4314

Martin

Maggio #1

MAP: ~~185~~ 68
DISTRICT: F
T:4N R:6E S:35

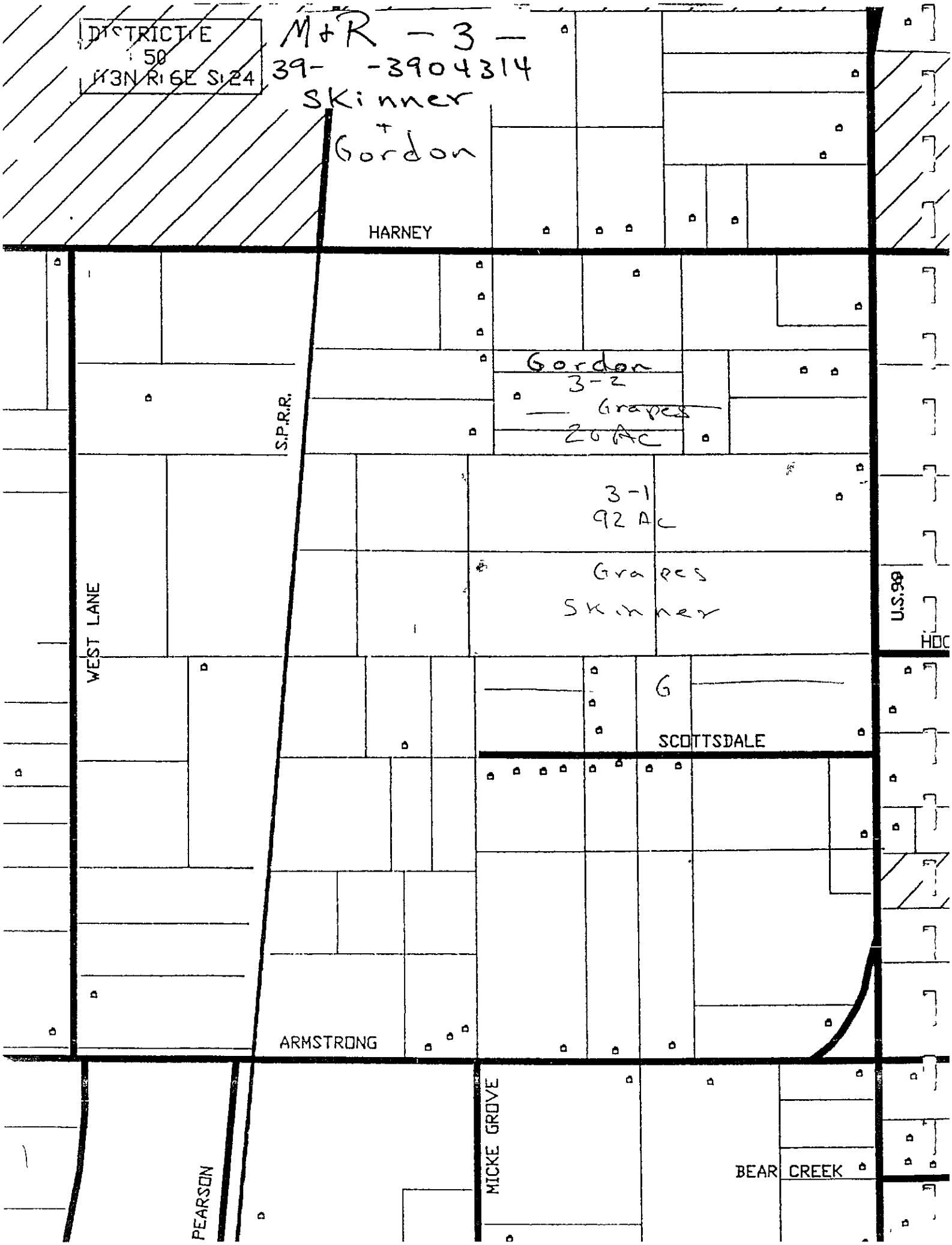

MAP: 70
DISTRICT: G
T:4N R:6E S:32
M+R
Sorour 2
69
G
WOODBRIDGE
Grapes
55 Ac
G
G
G
G
DeVRIES
DAVIS
TURNER

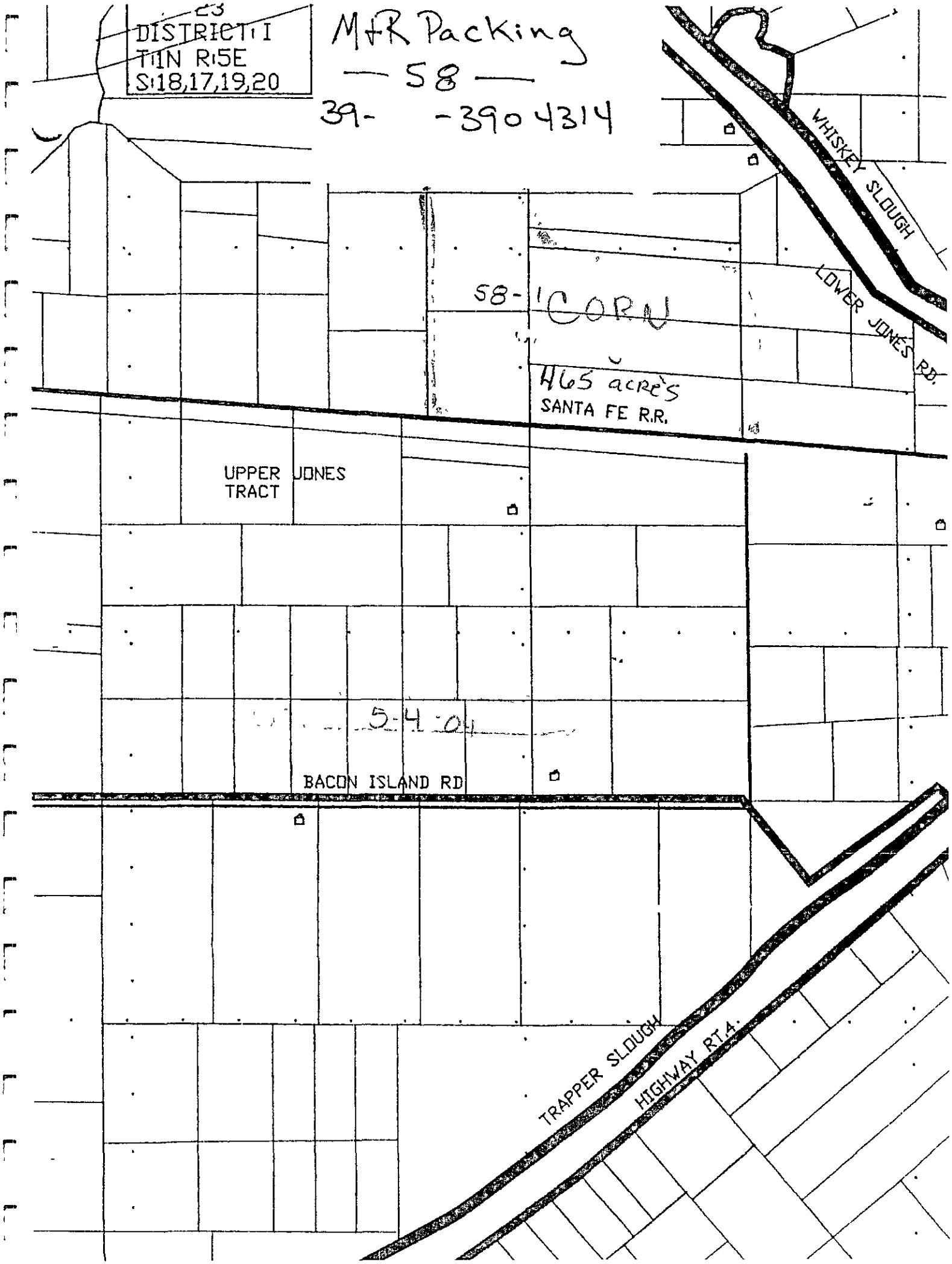


Map #70

M & R
39-39-04314

DISTRICT: E
MAP: 79
T:3N R:6E S:35


DISTRICT E
50
T3N R6E S24
M+R -3-
39- -3904314
Skinner
+
Gordon
HARNEY
Gordon
3-2
Grapes
20 AC
S.P.R.R.
3-1
92 AC
Grapes
Skinner
WEST LANE
U.S.98
G
SCOTTSDALE
ARMSTRONG
MICKE GROVE
BEAR CREEK
PEARSON


DISTRICT I
T1N R5E
S18,17,19,20
M+R Packing
— 58 —
39- -3904314
WHISKEY SLOUGH
LOWER JONES RD.
58-1 CORN
465 acres
SANTA FE R.R.
UPPER JONES TRACT
5-4-04
BACON ISLAND RD
TRAPPER SLOUGH
HIGHWAY RT.4.

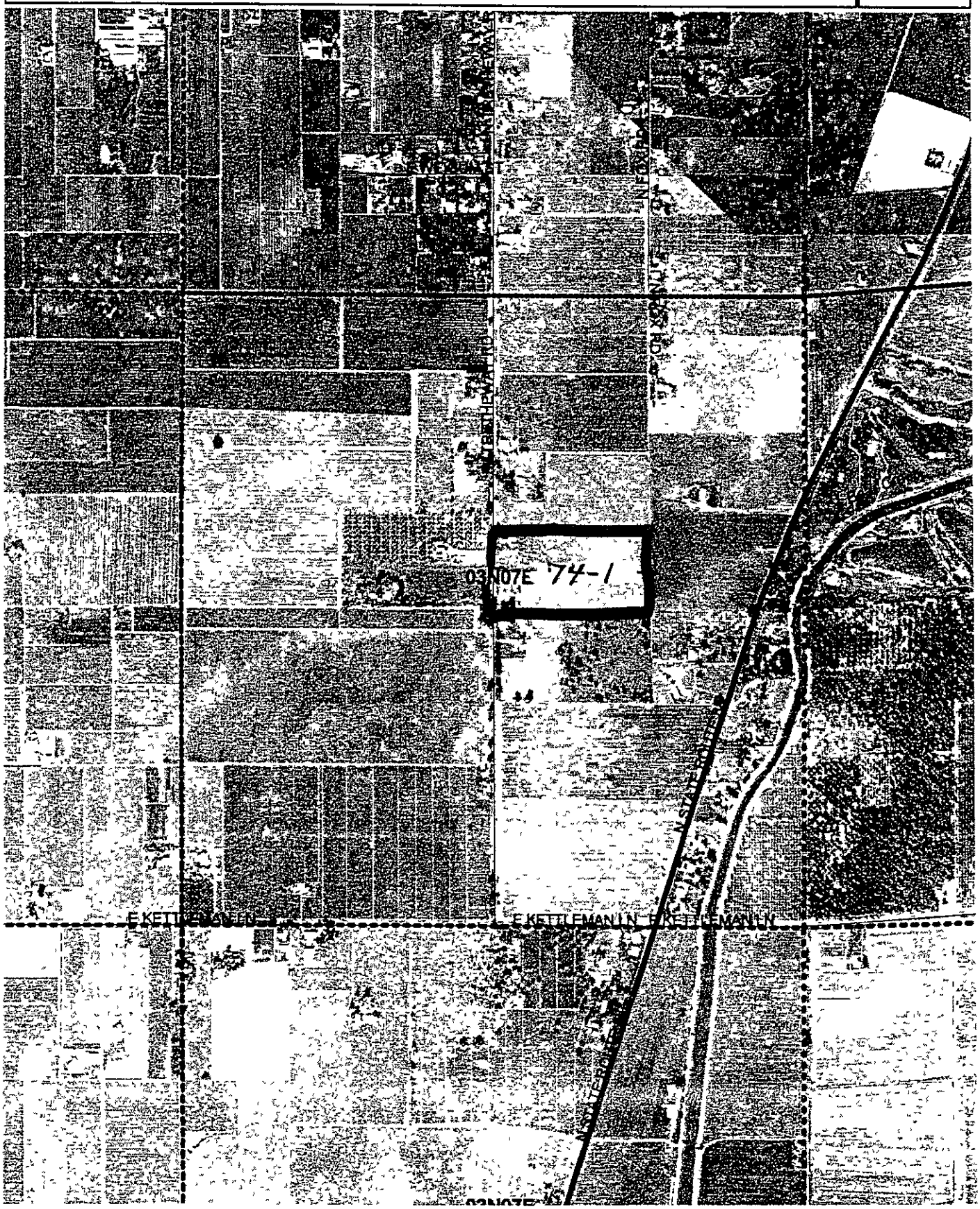
District E

Permit #: 3904314

Permittee: M & R

Map #: 74-1

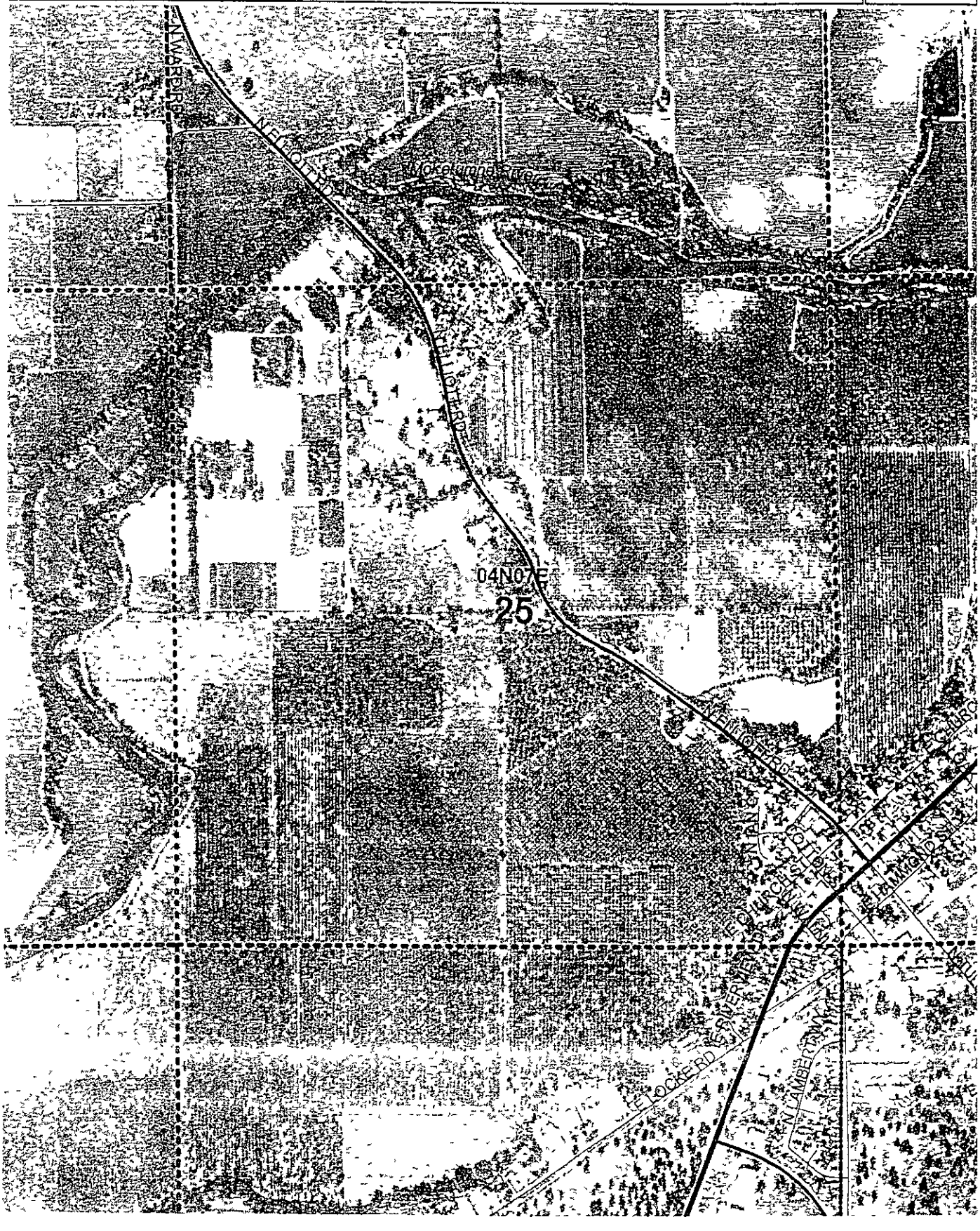
December 3, 2002 GIS



District F

Permit #	Permitee	Map #
39-04-390314	M&R	73

December 2 2002 GIS



SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205-

E-mail
Web www co san-joaquin ca us/agcomm
Office (209)468-3300 Fax (209)468-3330 Recorder (NOI's) (209)468-3300

2007

RESTRICTED MATERIALS PERMIT

M & R PACKING
33 E TOKAY ST
LODI, CA 95240-

Permit Number 39-05-3904314
County District #: E (SD)
Expiration Date December 31, ~~2005~~ 2005
Effective Date. January 1, ~~1990~~ 2005

JIM QUASCHNICK
33 E TOKAY ST
LODI, CA 95240-

Home Phone: (209)369-2725
Shop Phone: (209)368-3300
Mobile Phone: ( ) -
Fax.

Permittee Type: Private Applicator
Permit Type Seasonal
Possession Possession & Use

NOI Method of Submission:

Phone	X	Fax	X	Box
In Person	X	Modem.		Web

NOI required 24 hours prior to application

Conditions A,P,Q,GWP-R3,GWP-L3

See end of permit for code descriptions.

I understand that this permit does not relieve me from liability for any damages to any persons or property caused by the use of these pesticides I waive any claims of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws regulations and specific conditions of this permit I authorize inspection at all reasonable times and whenever an emergency exists by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be used in the treatment [Form PR-ENF-125 (Rev 07/92) Pesticide Enforcement Branch]

Permit Applicant Jim Quaschnick (Please Print) Signed

Title Supervisor (Please Print) Issue Date 1/4/05

Issuing Officer Steve Dinardi Issue Date: 1/4/05

Employees handle pesticides

NAME	PHONE	TYPE
M & R PACKING	(209)369-2725	Grower-Permittee
QUASCHNICK,JIM		Pesticide Applicator Certified

PERMIT PESTICIDES

Number	Pesticide	Pests	Forms	Methods	Applicators
1051	SEVIN	LARVAE	Liquid	Air Ground	PG
2000	DICAMBA	WEEDS	Liquid	Air Ground	PG
2302	DISYSTON	APHIDS	Liquid	Ground	PG
3141	GUTHION	LARVAE	All Reg.	Air Ground	PG
3830	METHOMYL	LARVAE	Liquid	Air Ground	PG
3850	METHYL BROMIDE	LARVAE	Fumigant	Fumigant	PCO
3940	METHYL PARATHION	INSECTS	All Reg	Air Ground	PG
4782	THIMET	APHIDS	All Reg.	Air Ground	PG
4840	ALUMINUM PHOSPHIDE	RODENTS	Fumigant	Ground	PG
5310	SIMAZINE	WEEDS	All Reg.	Ground	PG
5540	STRYCHNINE	GOPHERS	Bait	Ground	PG
6260	ZINC PHOSPHIDE	RODENTS	Bait	Ground	PG
6360	2,4-D	WEEDS	Liquid	Ground	PG
16011	PARAQUAT	WEEDS	Liquid	Ground	PG
16891	SUPRACIDE	LARVAE	Liquid	Ground	PG
18571	NEMACUR	NEMATODES	Liquid	Ground	PG

PERMIT COMMODITIES

Crop / Site	Location/Site Narrative/Site Conditions	District	Section / Quantity	Town / Units	Range	Meridian
APPLE (4001-0)						
1-3	N/ HWY 88, E/ ELLIOTT RIVER R RANCH	F	25 / 30.00	04N / A	07E	M
	1051 (SEVIN), 3141 (GUTHION), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 6360 (2,4-D), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),					
68-3	S/WOODBRIDGE 1/2 M E/LOWER SAC MAGGIO FARMS LEACHING GWPA	F	35 / 15 00	04N / A	06E	M
	1051 (SEVIN), 3141 (GUTHION), 16011 (PARAQUAT),					
CHERRY (5002-0)						
08-3	N/HOGAN W/CCTRP. MADONNA	E	19 / 40 00	02N / A	07E	M
	1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT) 16891 (SUPRACIDE), 18571 (NEMACUR),					

CHERRY (5002-0)

08-4	S/HOGAN W/CCTRR COSTA	E	19 12 00	03N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

09-1	E/MAY 1/2M N/ACAMPO HARGRAVE	F	22 8.00	04N A	06E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE) 18571 (NEMACUR),

1-1	N/ HWY 88, E/ ELLIOTT RIVER R RANCH	F	25 15 00	04N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

11-1	NW HARNEY & LOWER SACRAMENTO SCHUMACHER 62 RUNOFF GWPA	E	15 102 00	03N A	06E	M

Site Conditions GWP-R3
1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

12-1	S/ARMSTORNG 1/8M W/LOWER SAC SCHUMACHER 40	E	28 40 00	03N A	06E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

25-1	SE FLOOD & HWY 26 B & R	D	14 80 00	02N A	08E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE) 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

26-1	SE ACAMPO & MAY STODDARD LEACHING GWPA	F	27 35 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

34-2	NW HWY 88 & DISCH PARKER RANCH	F	20 55 00	04N A	08E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

40-1	N/ WOODBRIDGE 1/4 M W/LOWER SAC SOUROUK LEACHING GWPA	F	[illegible] 42 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT) 16891 (SUPRACIDE), 18571 (NEMACUR),

CHERRY (5002-0)

46-1	E/HWY 99 1/4M N/ACAMPO KNIGHT	F	19 20 00	04N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

47-1	N/ACAMPO 1/4M W/SPRR PITTO	F	23 17.00	04N A	06E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

53-1	W/ALPINE N/RATTO COWEN	D	4 45 00	02N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

57-1	NW TRETHEWAY & ACAMPO ROADS HUMPHREY	F	23 80 00	04N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

60-1	NE HWY 99 & ARMSTRONG HOGAN RANCH	E	19 43 00	03N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

63-2	N/W SARGENT & RAY RDS KAHLER RUNOFF GWPA	G	1 30 00	03N A	05E	M

Site Conditions GWP-R3
1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE) 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

64-1	NE CANEPA & FOPPIANO SOLARI	H	8 25 00	02N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

67-2	S/WOODBRIDGE 1/4 M E/KENNEFICK MAGGIO 2	F	32 10.00	04N A	07E	M

1051 (SEVIN), 3850 (METHYL BROMIDE) 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 16891 (SUPRACIDE) 18571 (NEMACUR),

68-2	S/WOODBRIDGE 1/2 M E/LOWER SAC MAGGIO FARMS LEACHING GWPA	F	35 10 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3850 (METHYL BROMIDE), 4840 (ALUMINUM PHOSPHIDE), 5540 (STRYCHNINE) 6260 (ZINC PHOSPHIDE) 16011 (PARAQUAT), 16891 (SUPRACIDE), 18571 (NEMACUR),

CORN FOR/FOD (2270-5-0)

Permitee M & R PACKING — Permit Number. 39-05-3904

CORN FOR/FOD (22005-0)

58-1	N/MOKELUMNE AQ 3M W LOW JONES	I	17	01N	05E	M
			408 00	A		

1051 (SEVIN), 2000 (DICAMBA), 2302 (DISYSTON), 3930 (METHOMYL), 6360 (2,4-D), 16011 (PARAQUAT),

GRAPE (29141-0)

02-1	SW PELTIER & SPRR LEFEVER BOTH GWPA	F	23	04N	06E	M
			95 00	A		

Site Conditions GWP-R3 GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 3940 (METHYL PARATHION), 4782 (THIMET), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

03-1	W/HWY 99 1/4M S/HARNEY SKINNER LEACHING GWPA	E	24	03N	06E	M
			97 00	A		

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

03-2	1/4M SE HARNEY & H99 GORDON LEACHING GWPA	E	24	03N	06E	M
			20 00	A		

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE) 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

04-1	N/JAHANT 1/8M W/ELLIOT WAKEFIELD	F	11	04N	07E	M
			80 00	A		

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

04-2	W/ELLIOT 1/4M N/JAHANT LOBENBERG	F	11	04N	07E	M
			5 00	A		

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

05-1	E/HWY 99 1/2M N/PELTIER AIRPORT	F	18	04N	07E	M
			27 00	A		

1051 (SEVIN), 3830 (METHOMYL) 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

06-1	HW END OF DAVIS LEBARON	G	17	04N	07E	M
			70 00	A		

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR)

GRAPE (29141-0)

08-1	S/HOGAN W/CCTRR COSTA	E	19 18.00	03N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

08-2	S/HOGAN 1/4M W/CCTRR BRADLEY	E	19 9.00	03N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

10-1	NW WOODBRIDGE & TRETHEWAY PADDLEFORD	F	26 80.00	04N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

10-2	NW WOODBRIDGE & TRETHEWAY D & R	F	26 60.00	04N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

13-1	NW JAHANT & MACKVILLE BRUMM	F	15 17.00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

14-1	N/MEHRTEN 1/8M E/MACKVILLE WAKEHAM	F	15 15.00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

15-1	E/MACKVILLE 1/2M N/COLLIER CAHILL	F	3 39.00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

15-2	W/MACKVILLE 1/2M N/COLLIER MACKVILLE	F	3 47.00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

16-1	W/HWY 99 1/4M N/WOODBRIDGE REYNOLDS	F	25 28.00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

Permitee M & R PACKING Permit Number 39-05-390431

GRAPE (29141-0)

19-1	S/SARCENT 1/8M W/LOWER SACRAME BECKMAN RUNOFF CWPA	E	10 37 00	03N A	06E	M

Site Conditions GWP-R3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT) 18571 (NEMACUR),

26-26A	SW MAY & ACAMPO LIPPERT LEACHING GWPA	F	27 7.00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

26-26B	SE MAY & ACAMPO BATCH 2 LEACHING GWPA	F	27 10 00	04N A	06E	M

Site Conditions. GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

33-1	W/LOWER SAC 1/2M N/WOODBRIDGE BATCH 1 LEACHING GWPA	F	26 39 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

34-1	NW HWY 88 & DISCH BARBOUR	F	20 70 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

44-1	E/MACKVILLE 1/2M N/COLLIER OLSON	F	3 140 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

45-1	NW CLEMENTS & HWY 88 LANE	F	15 18 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

45-2	NW CLEMENTS & HWY 88 SCHOOLHOUSE	F	15 22 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL) 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT) 18571 (NEMACUR),

45-3	NE CLEMENTS & HWY 88 GILLIS	F	14 47 00	04N A	08E	M

1051 (SEVIN) 3830 (METHOMYL) 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE) 6260 (ZINC PHOSPHIDE) 16011 (PARAQUAT), 18571 (NEMACUR)

Permitee.M & R PACKING Permit Number: 39-05-390

GRAPE (29 141-0)

52-1	SW METTLER & LOWER SACRAMENTO SOROUR RUNOFF GWPA	E	27 80 00	03N A	06E	M

Site Conditions. GWP-R3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

55-1	S/KILE 1/4M W/RAY MASSEY	G	13 63 00	04N A	05E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

56-1	HWY 88 1/4M N COLLIER GUANTONE	F	12 13 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

61-1	SE CLEMENTS & HWY 12 HESSELTINE	F	14 83 00	04N A	08E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT) 18571 (NEMACUR),

63-1	NW SARGENT & RAY KAHLER RUNOFF GWPA	G	1 84.00	03N A	05E	M

Site Conditions GWP-R3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

65-1	S/ACAMPO 1/8 M W/KENNEFICK SASAKI RANCH	F	30 20 00	04N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

66-1	NW ACAMPO & DESMOINES JACINTO LEACHING GWPA	F	24 4 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

67-1	S/WOODBRIDGE 1/4 M E/KENNEFICK MAGGIO 2	F	32 18 00	04N A	07E	M

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

68-1	S/WOODBRIDGE 1/2 M E/LOWER SAC MAGGIO 1 LEACHING GWPA	F	35 10 00	04N A	06E	M

Site Conditions GWP-L3
1051 (SEVIN) 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE) 6260 (ZINC PHOSPHIDE) 16011 (PARAQUAT), 18571 (NEMACUR),

GRAPE (29141-0)

68-4	S/WOODBRIDGE 1/2 M E/LOWER SAC MARTIN LEACHING GWPA	F	35	04N	06E	M
			20 00	A		

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

69-1	SW WOODBRIDGE & DAVIS SOROUR LEACHING GWPA	G	32	04N	06E	M
			55 00	A		

Site Conditions GWP-L3
1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE) 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR)

70-1	E/WESTLANE 1/4M N/EIGHTMILE	E	35	03N	05E	M
			58 00	A		

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE), 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE) 16011 (PARAQUAT), 18571 (NEMACUR),

74 1	1/2M S/VICTOR, E/TRETHWAY	E	11	03N	07E	M
			20 00	A		

1051 (SEVIN), 3830 (METHOMYL), 4840 (ALUMINUM PHOSPHIDE) 5310 (SIMAZINE), 5540 (STRYCHNINE), 6260 (ZINC PHOSPHIDE), 16011 (PARAQUAT), 18571 (NEMACUR),

UNCUL NON-AG (67000-0)

ALL	ALL LOCATIONS	E	23	04N	06E	M
			20.00	A		

4840 (ALUMINUM PHOSPHIDE), 16011 (PARAQUAT),

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

PERMIT NO 3904314

PAGE NO

Crop change M + R Packing

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	N/ Mokelumne AQ,	17	1N	5e	58-1	Safflower	~~440~~						As per		
9	3m W/ lower Jones						424	All Pesticides					Label /	Noi	
10								on Permit							
11	Corn → Safflower														
12															
13															
14															
15															
16															
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25															
26															
27															
28															
29															
30															
31															
32															
33															

*Formulation L--Liquid B--Bait D--Dust F--Fumigant G--Granules WP--Wettable Powder O--Other

**Method [illegible] F--F[illegible]gation [illegible]round[illegible] Other[illegible]

APPLICANT SIGNATURE [signature] DATE 4/11/05

ISSUED B[illegible] 4/[illegible]/0[illegible]

ENFORCEMENT BRANCH PR-ENF-125A (Rev 9/00)

Permitee.M & R PACKING Permit Number 39-05-390431

Decription of Conditions on this Permit:

Condition ID	Description
A	Permit Cond.Table of Contents

A - PERMIT CONDITIONS - TABLE OF CONTENTS

WORKERS SAFETY SERIES ATTACHED

[ ] A-1 through A-11 General Information

PERMIT CONDITONS ATTACHED

[X] P - General
[ ] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[ ] R - Dicamba & Phenoxys - Special Hazardous Area
[ ] S - Metam Sodium & Metam Potassium
[ ] T - Aldicarb (Temik)
[ ] U - Endosulfan (Thiodan)
[ ] V - Rice Pesticides Program
  [ ] - Molinate (Ordram) Worker Safety (A)
  [ ] - Attachments 1-10. Molinate (1, 6), Thiobencarb (2,6,7), Methylparathion (3,9), Seepage Control (5), Propanil (10) and Malathion (voluntary, 4,8)
[ ] W - Methyl Bromide
  [ ] - Soil within greenhouses
  [ ] - Commodity
  [ ] - Soil injection
  [ ] - Tarped potting soil
  [ ] - Single tree site
[ ] X - Furadan chemigation of grapes
[ ] Y - 1, 3 - Dichloropropene
[ ] Z - Other

GROUNDWATER PROTECTION PERMIT CONDITIONS

These conditions apply to pesticides labeled for agricultural, outdoor industrial, or outdoor institutional use that contain chemicals listed in 3CCR section 6800(a). ATRAZINE, SIMAZINE, BROMACIL, DIURON (except products with less than 7% diuron applied to foliage), PROMETON, BENTAZON, AND NORFLURAZON Ground Water Protection Areas (GWPA), for San Joaquin County, are designated in the Department of Pesticide Regulation document EH03-05 A list of GWPAs may be obtained from the Commissioner's Office or DPR's website (www cdpr ca gov/docs/gwp)

"Engineered rights of way" are defined as areas within a ground water protection area (GWPA) that are constructed in a way that results in increased runoff and collection of storm water, such as railroad ballasts and berms, public roadsides, and highway median strips or similar areas, but not canal or ditch banks or utility lines

SELECTED GROUNDWATER PROTECTION PERMIT CONDITIONS ATTACHED

GWP-C & D Unlined canal and ditch banks
[ ] 1 - Percolation rate is less than or equal to 0 2 inches per hour
[ ] 2 - Applied six months prior to water run
[ ] 3 - All applications are prohibited below high water line

GWP-ROW Engineered rights-of-way, within San Joaquin County GWPAs
[ ] 1A - Soil disturbance within 7 days
[ ] 1B - Incorporation
[ ] 1C - Applied between April 1 and July 31

[ ] 3 - Compliance with NPDES permit

GWP-R Runoff GWPAs within San Joaquin County
[ ] 1 - Soil disturbance
[ ] 2 - Incorporated
[ ] 3 - Band treatment
[ ] 4 - Applied between April 1 and July 31
[ ] 5 - Runoff water held onsite
[ ] 6 - Runoff water stored offsite
[ ] 7 - Runoff to adjacent fallow field

GWP-L Leaching GWPAs within San Joaquin County
[ ] 1 - No irrigation
[ ] 2 - Bed or berm application
[ ] 3 - Managed irrigation

GWP-Director Director Approved Alternative Management Practices or Interim Use
[ ] 1 - Director approved alternative
[ ] 2 - Director approved interim use

Revised 10/04

GWP-L3 Managed irrigation

CONDITION - GWP-L3 - LEACHING GROUND WATER PROTECTION AREAS MANAGED IRRIGATION

For six months after the application of 3CCR section 6800(a) pesticides, the permittee shall manage irrigation so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1 33 or less.

GWP-R3 Band treatment

CONDITION - GWP-R3 - RUNOFF GROUND WATER PROTECTION AREAS BAND TREATMENT

3CCR section 6800(a) pesticides shall be applied as a band treatment immediately adjacent to the crop row so that not more than 33 percent of the distance between rows is treated

P General

CONDITION - P - General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1 Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are

a Spray - 12 m p h
b Dust - 8 m.p h.
c. Pellets, granular or baits - 16 m.p h

2 No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, non-target crops, animals or other public or private property

3 Unless specifically named as a dust on this permit, NO DUST FORMULATIONS are allowed

4 Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s)

bait.

Revised 10/90

Q **Dicamba & Phenoxy Herbicide CV**

CONDITION - Q - DICAMBA AND PHENOXY HERBICIDES - CENTRAL VALLEY/HAZARDOUS AREA

In addition to all applicable laws, regulations and label restrictions, the CONDITIONS CHECKED BELOW APPLY to applications covered by this permit.

[X] 1 No ester formulation applications allowed

[ ] 2 A smoke column is required at the application site for all Phenoxy and Dicamba applications by aircraft beginning March 16 and continuing through October 15

[X] 3 Do not discharge material more than 10 feet above the crop or target.

[ ] 4 A drift reducing agent shall be added to the spray mixture at label rates.

[X] 5 Maximum wind velocity for Phenoxy herbicides - 10 m.p.h.

[X] 6 Maximum wind velocity for Dicamba - 10 m.p.h. EXCEPT when wind is moving in direction of sensitive crops, the maximum wind velocity - 5 m.p.h.

[ ] 7 No Dicamba application allowed in the vicinity of sensitive crops when the maximum temperature on the day of application is predicted to exceed 85 degrees fahrenheit. Predicted temperature for the following day will be determined by the 3:30 p.m. prediction by the National Weather Station - Stockton Airport

[ ] 8 Dicamba applications by aircraft are restricted to a minimum distance of two (2) miles from the following susceptible crops: beans, grapes, sunflower, tomato, safflower, curcurbits, potatoes

[ ] 9 Dicamba applications by ground are restricted to a minimum distance of 20 feet from the following susceptible crops: beans, safflower, tomato, curcurbits, potatoes and 1/4 mile from grapes and sunflowers

[ ] 10 No Dicamba or Phenoxy herbicide applications allowed beginning March 16 and continuing through October 15, and until grape leaves in the vicinity of the treated area are "browned off".

Revised 10/90

Description of Custom Site Conditions

Condition ID	Description

* * * LAST PAGE * * *

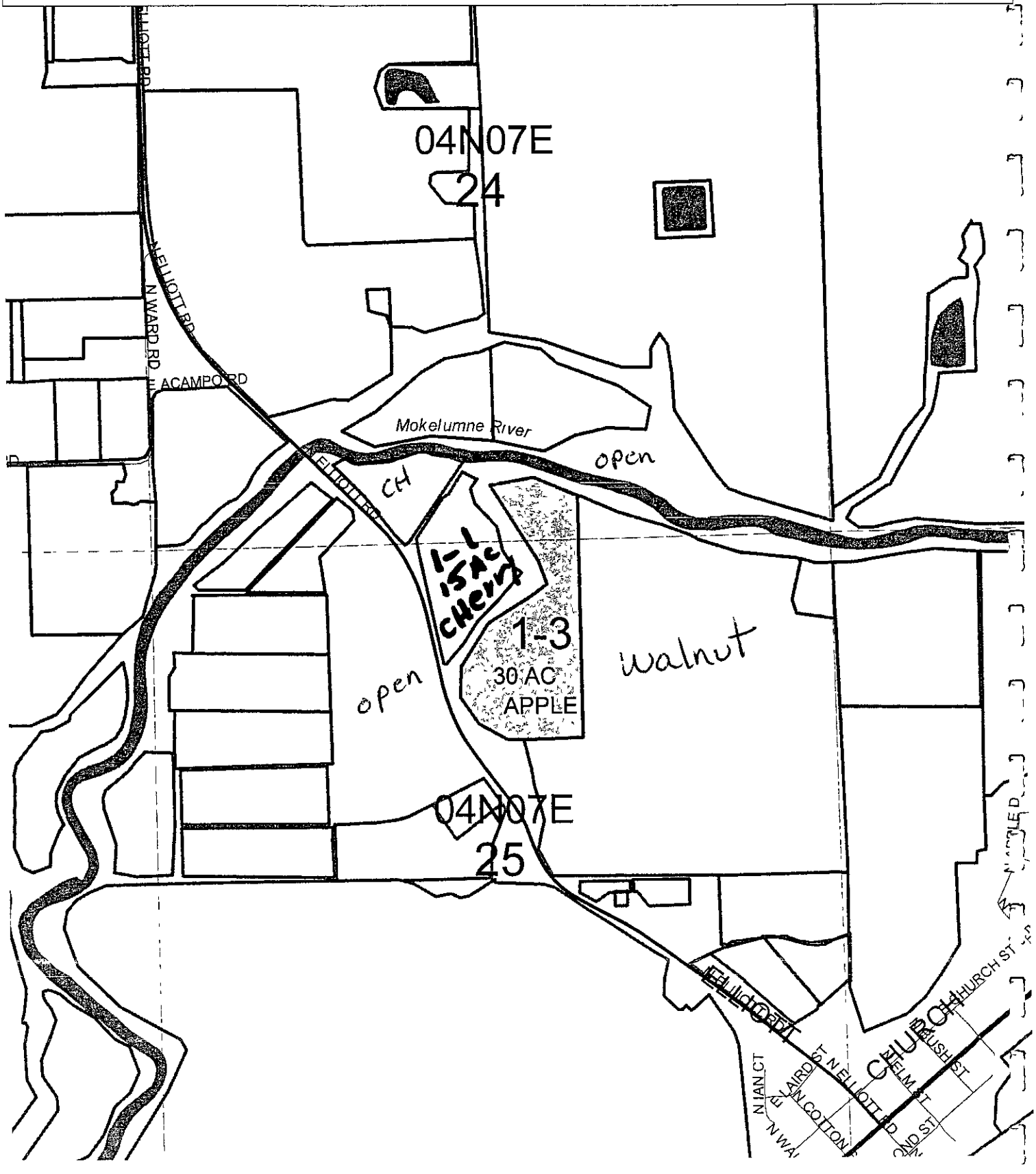
District E

Permit # 3904314

Permittee

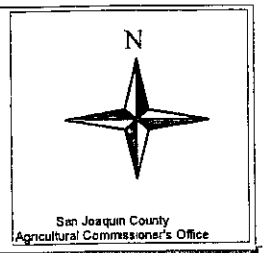
Map # 1

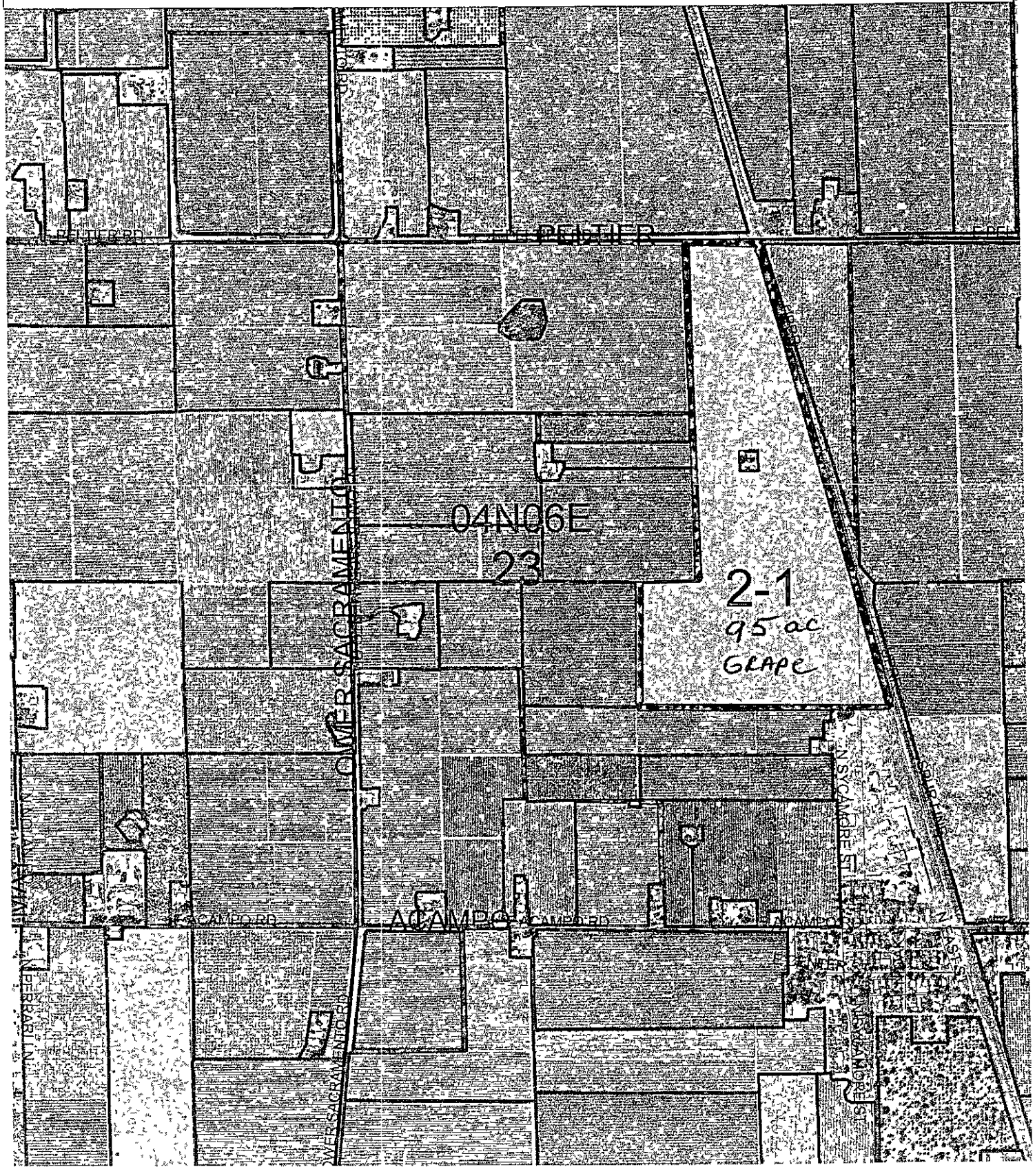
M & R PACKING



District E

Permit #	Permittee	Map #
3904314	M & R PACKING	2





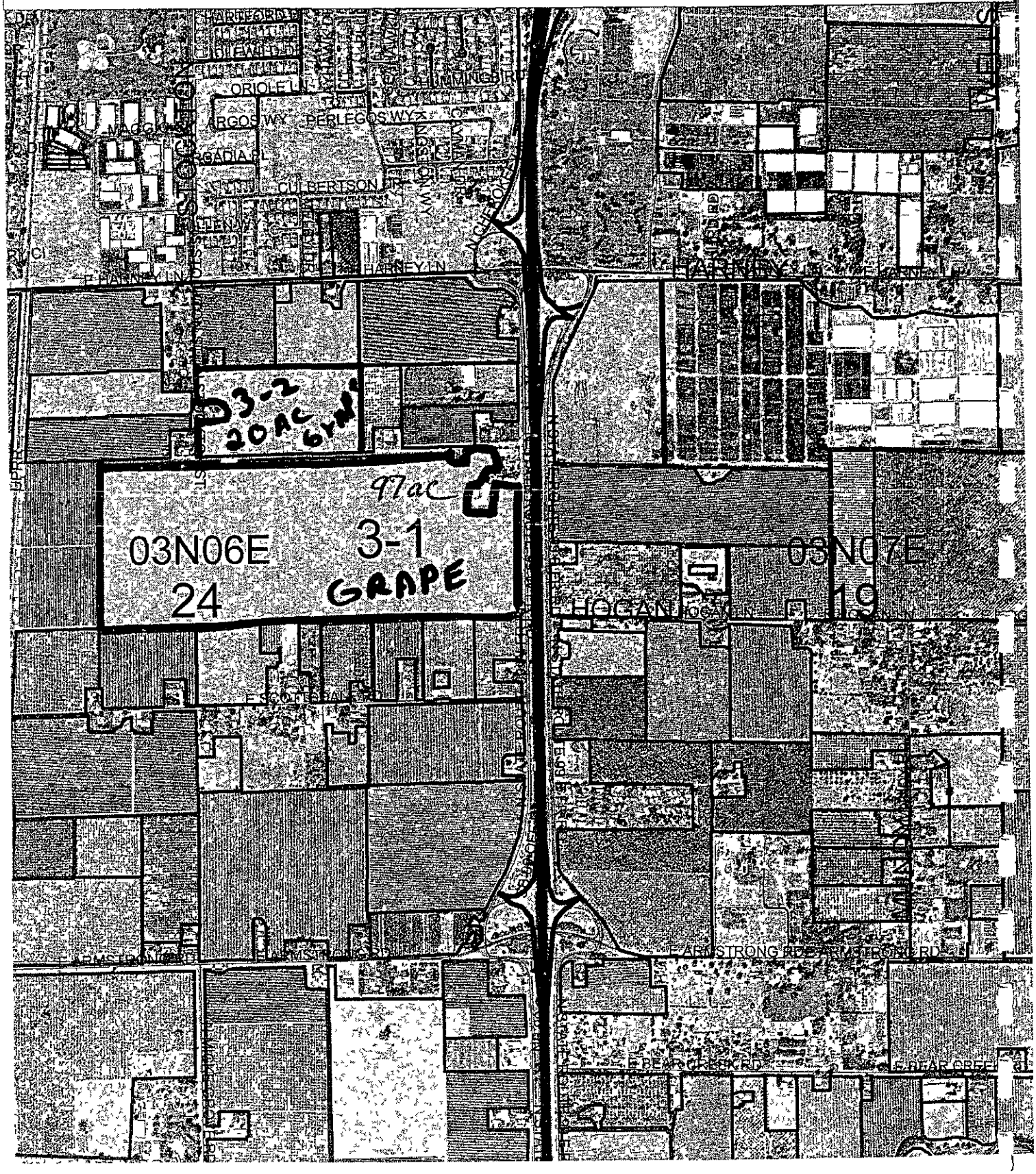
District E

Permit # 3904314

Permittee M & R PACKING

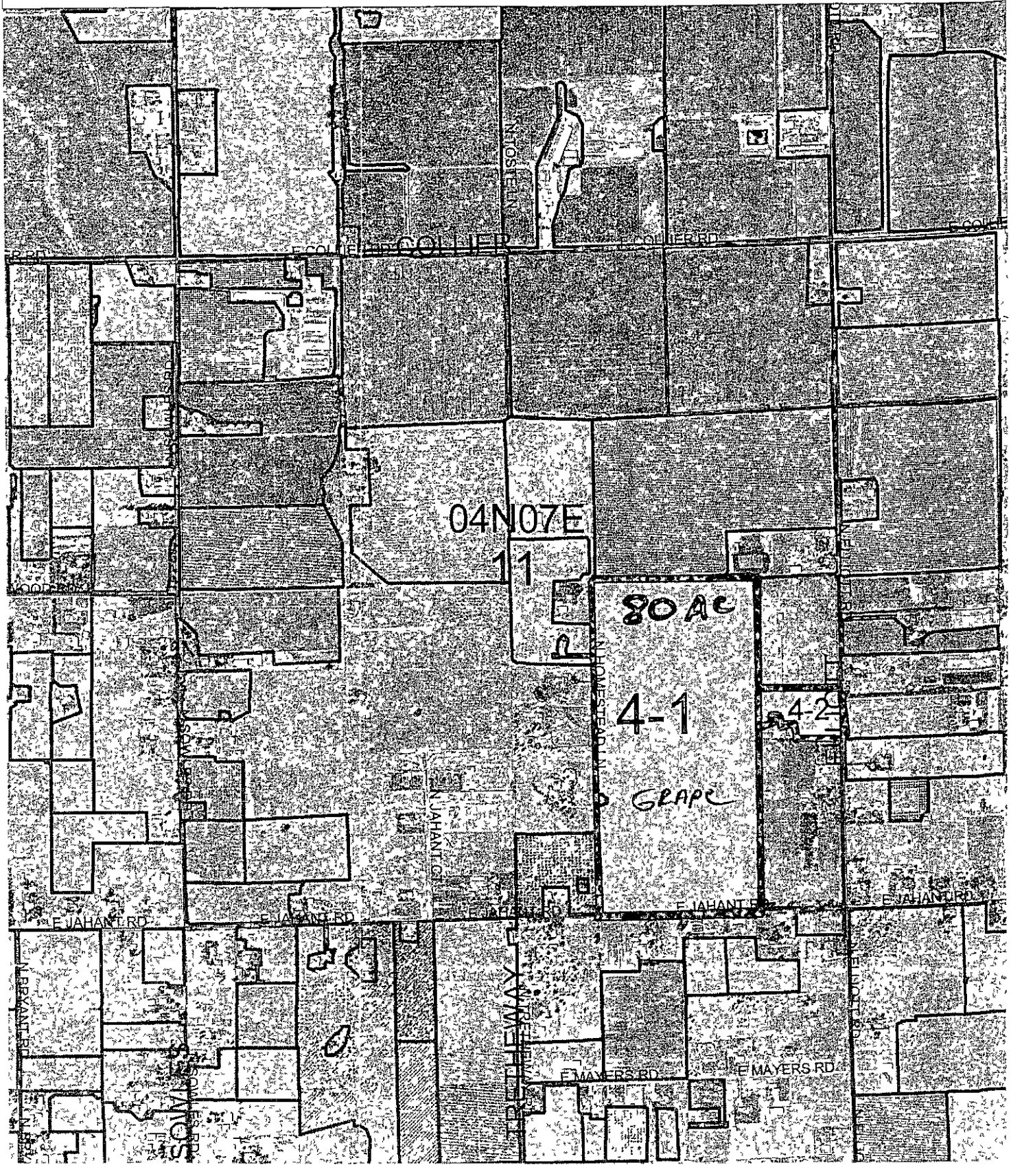
Map # 3

Leaching



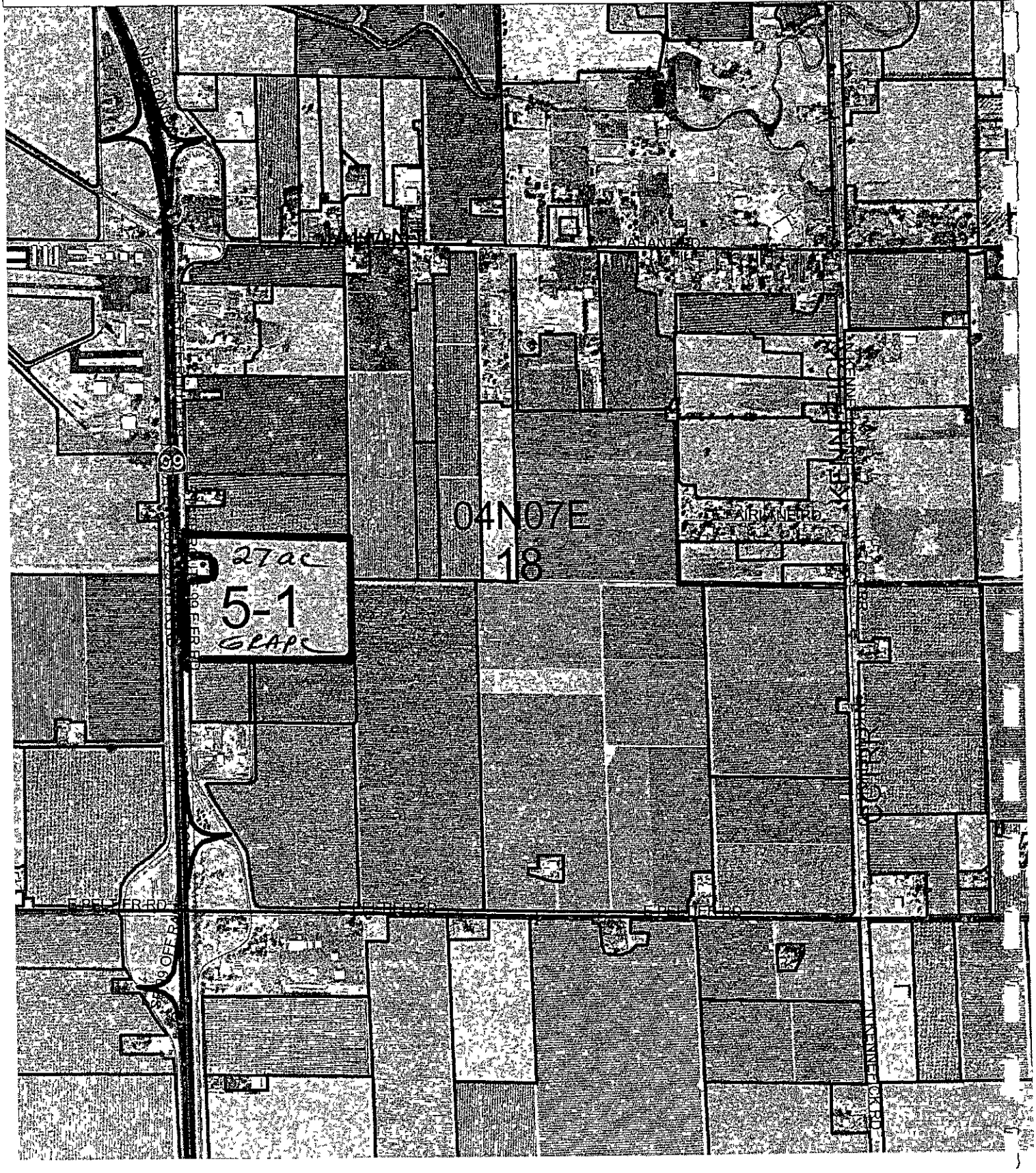
District E

Permit #	Permittee	Map #
3904314	M & R PACKING	4



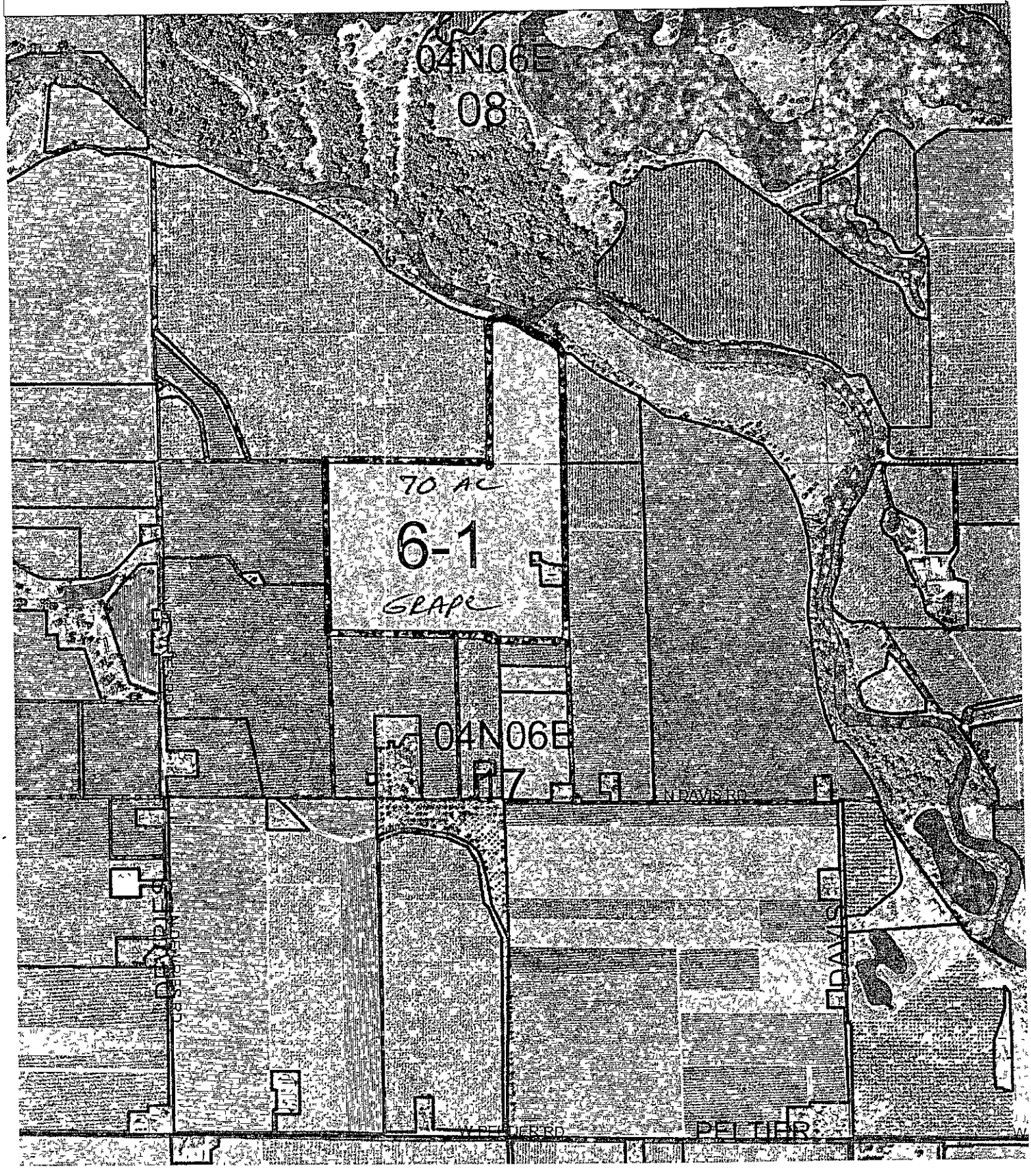
District E

Permit #	Permittee	Map #
3904314	M & R PACKING	5



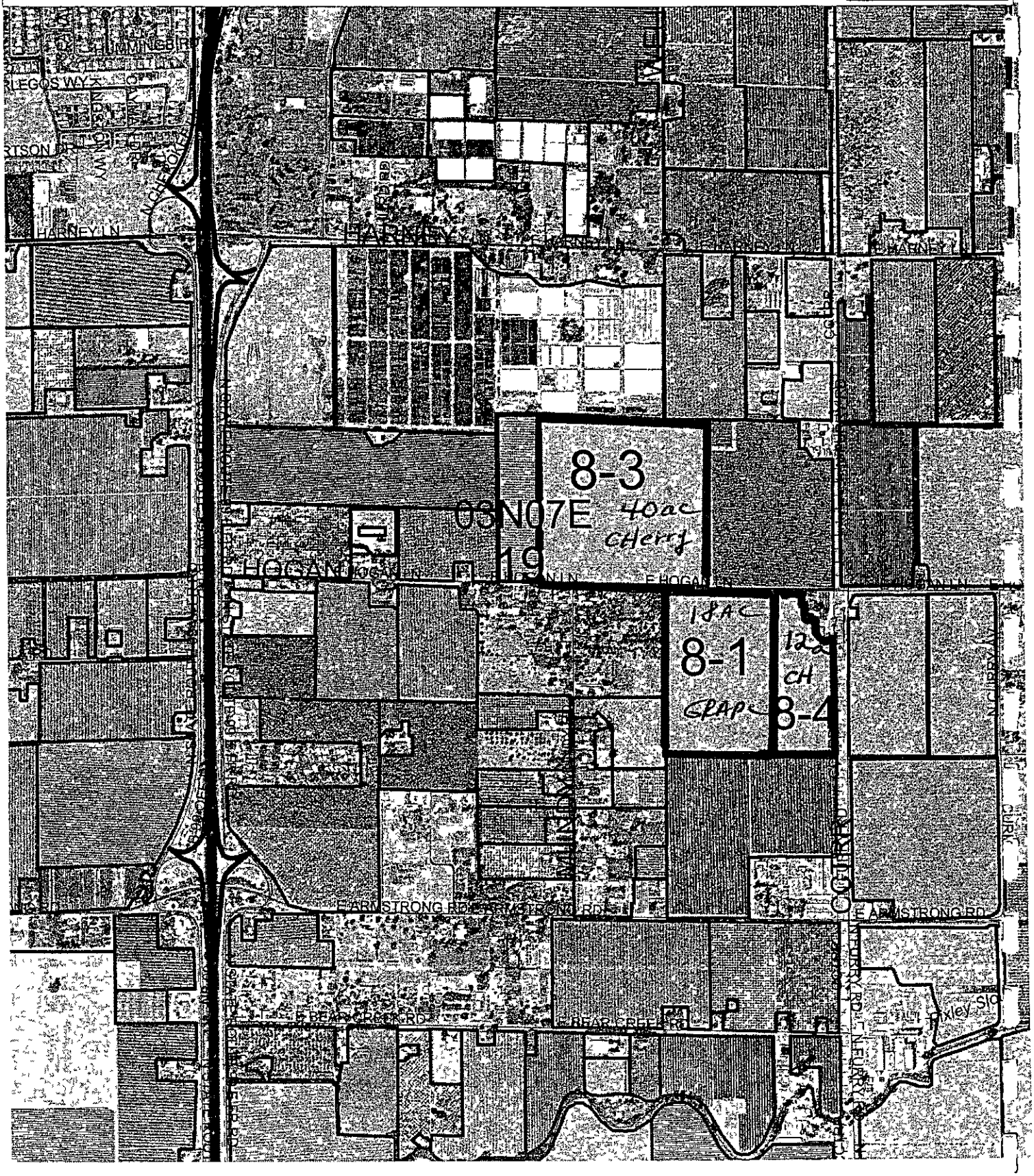
District E

Permit #	Permittee	Map #
3904314	M&R PACKING	6



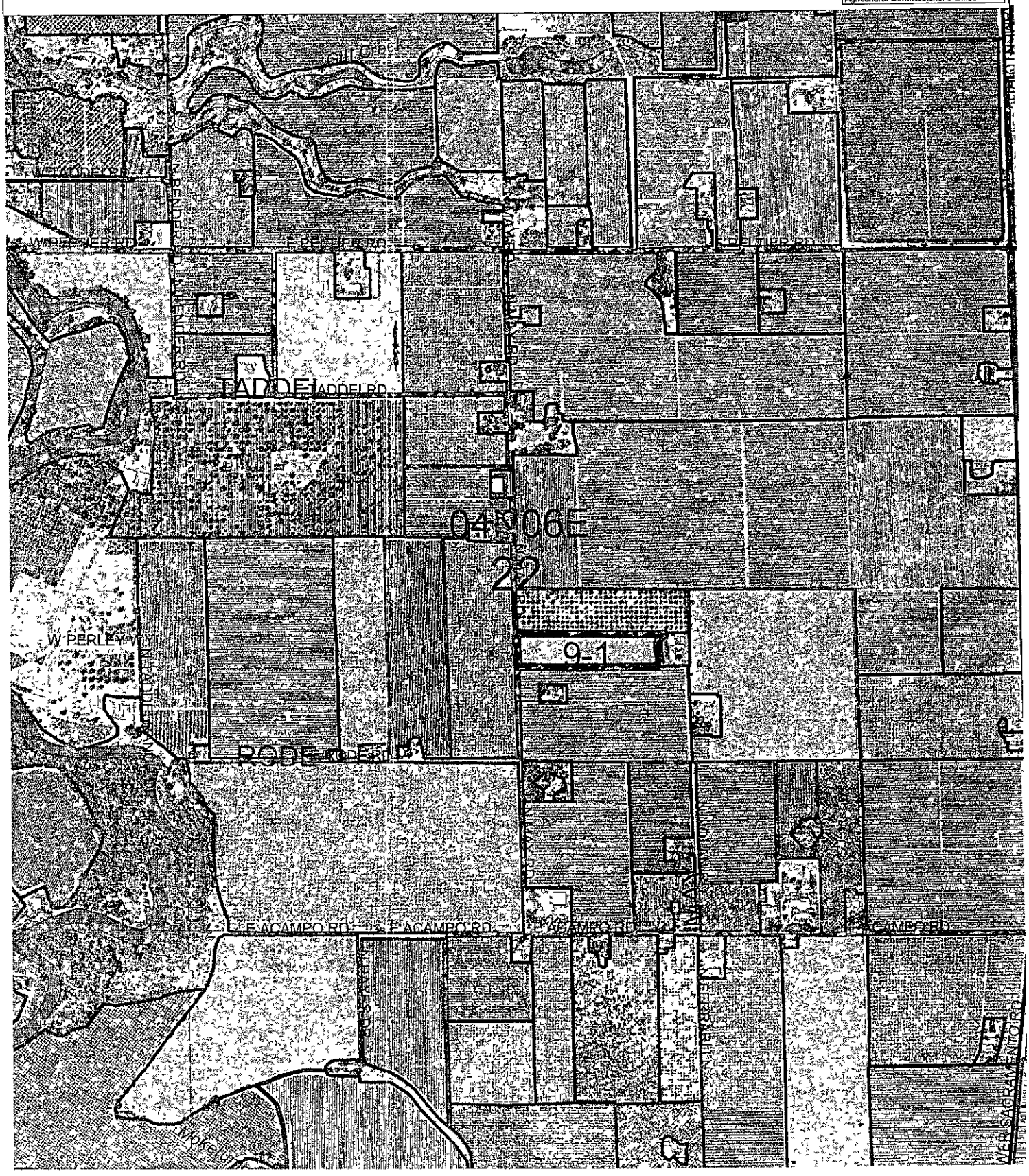
District E

Permit #	Permittee	Map #
3904314	M & R PACKING	8



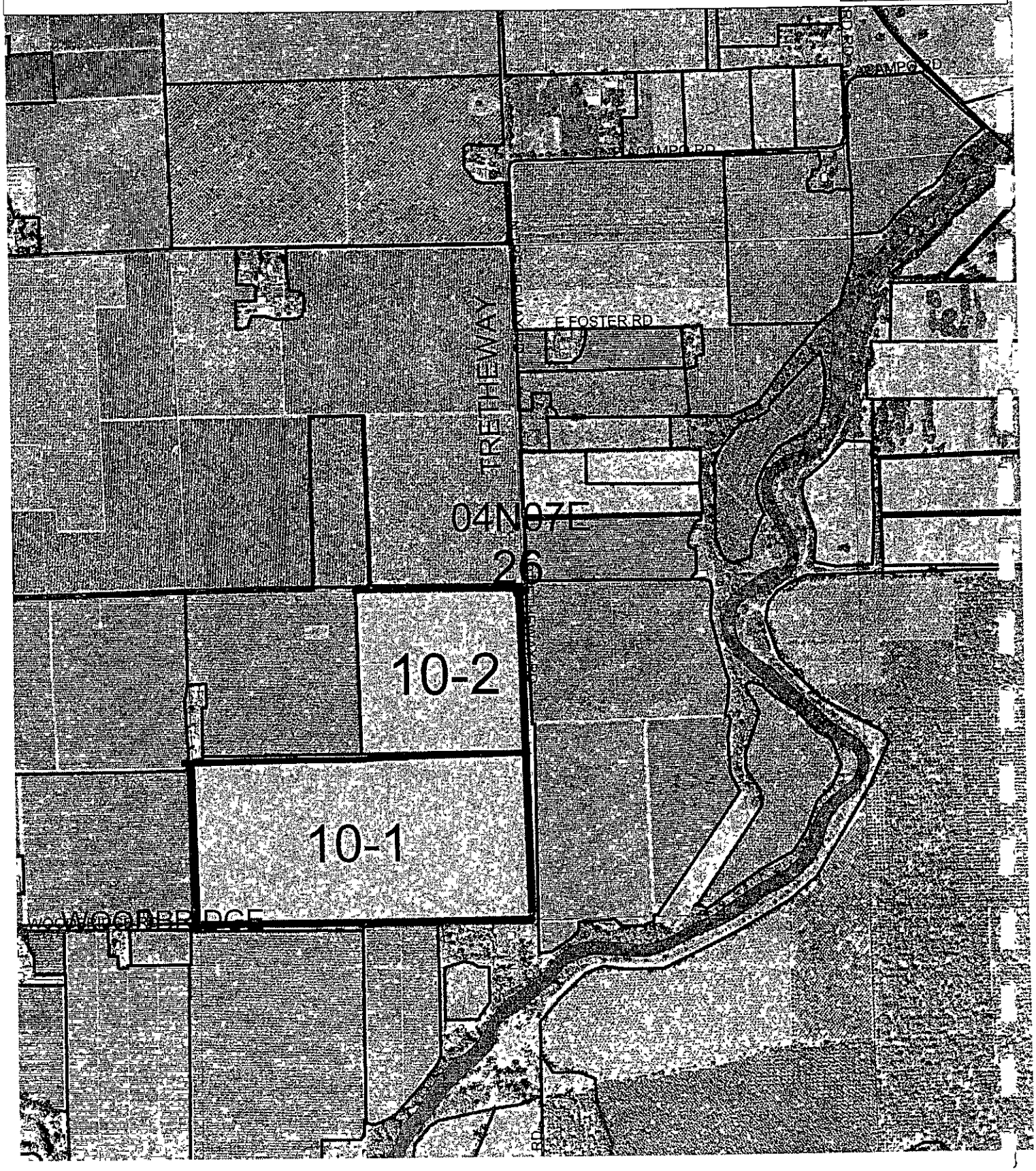
District E

Permit #	Permittee	Map #
3904314	M & R PACKING	9



District E

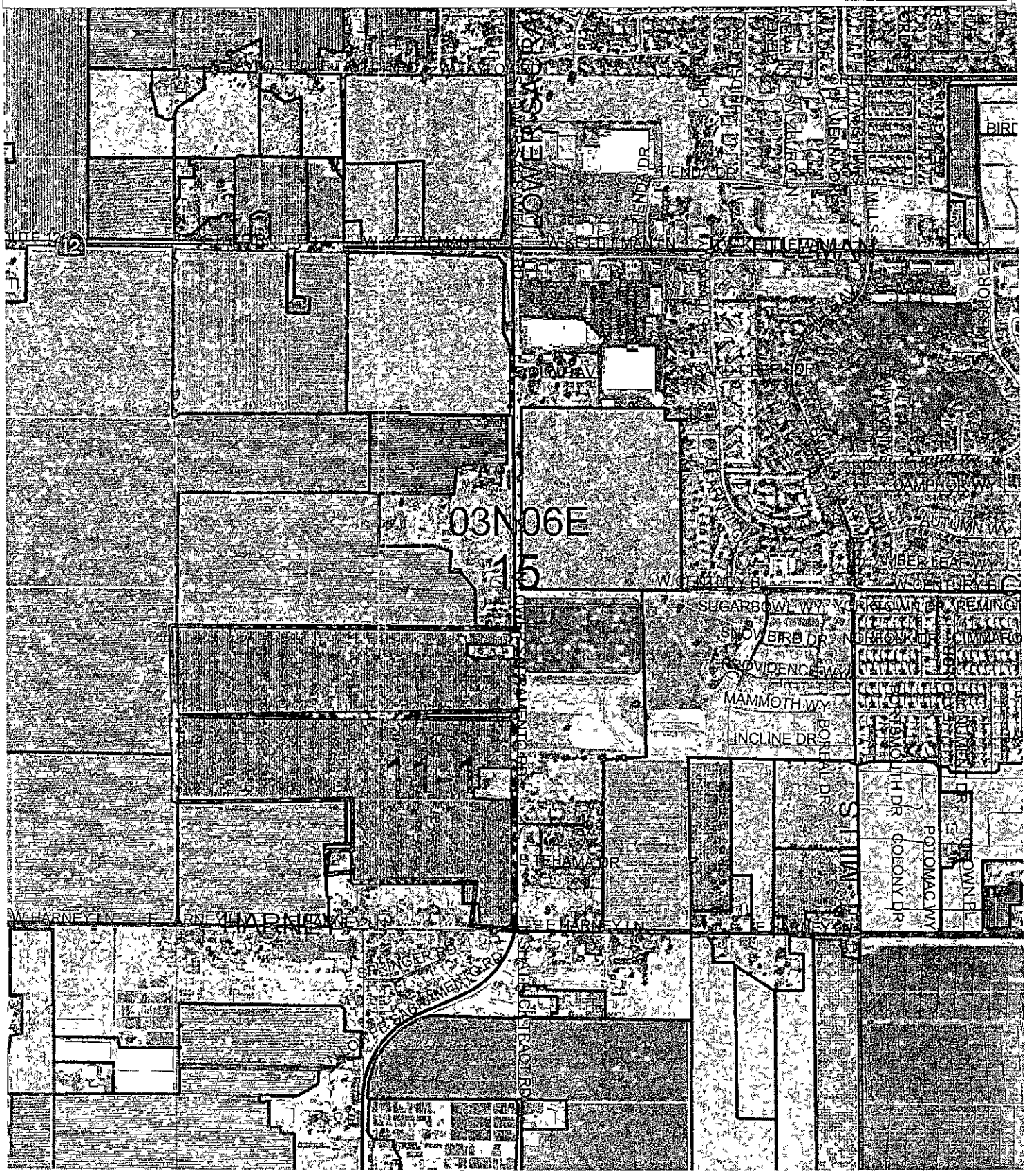
Permit #	Permittee	Map #
3904314	M & R PACKING	10



District E

Permit #	Permittee	Map #
3904314	M & R PACKING	11

Leaching GWPA



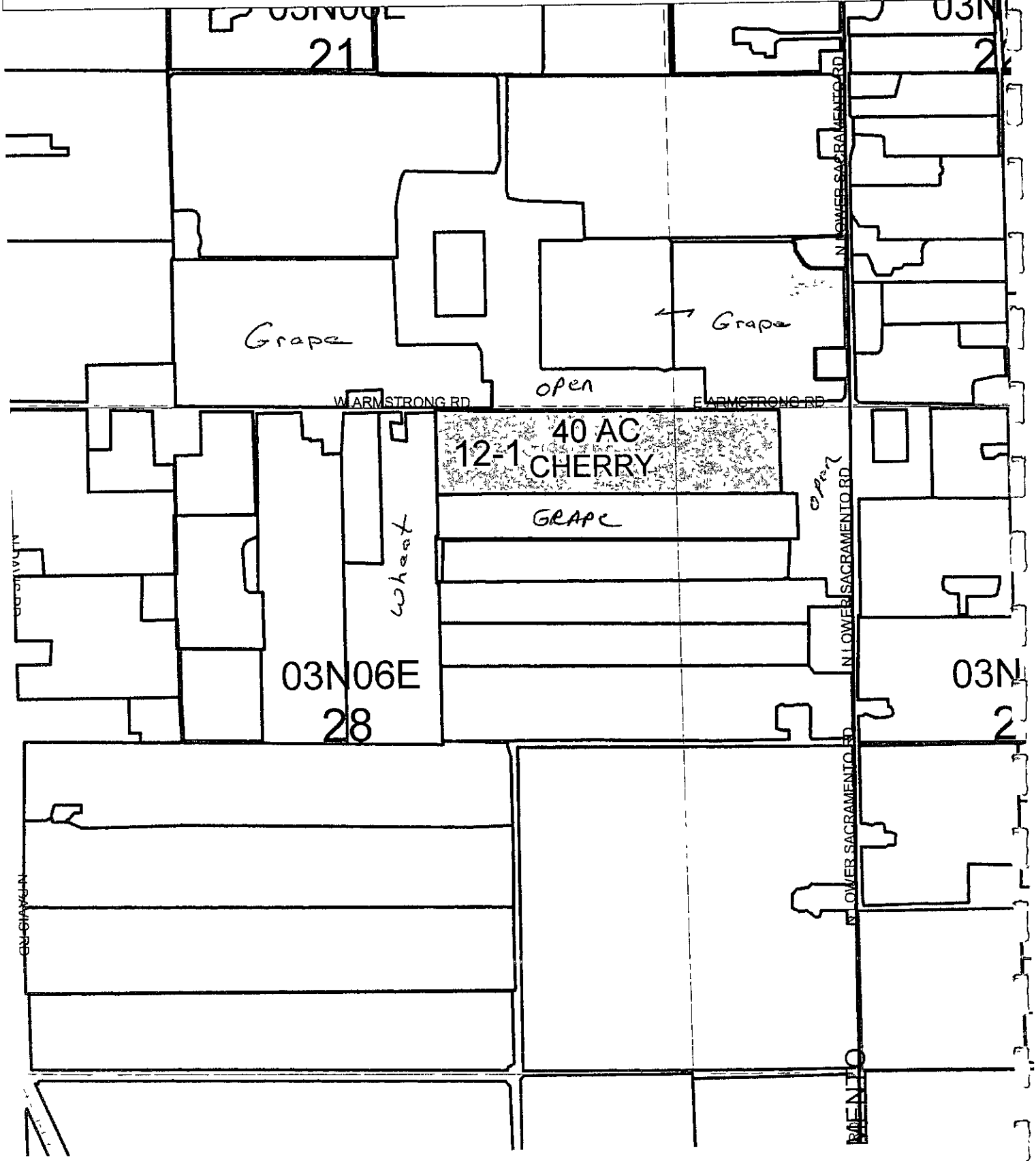
District E

Permit # 3904314

Permittee

Map # 12

M & R PACKING



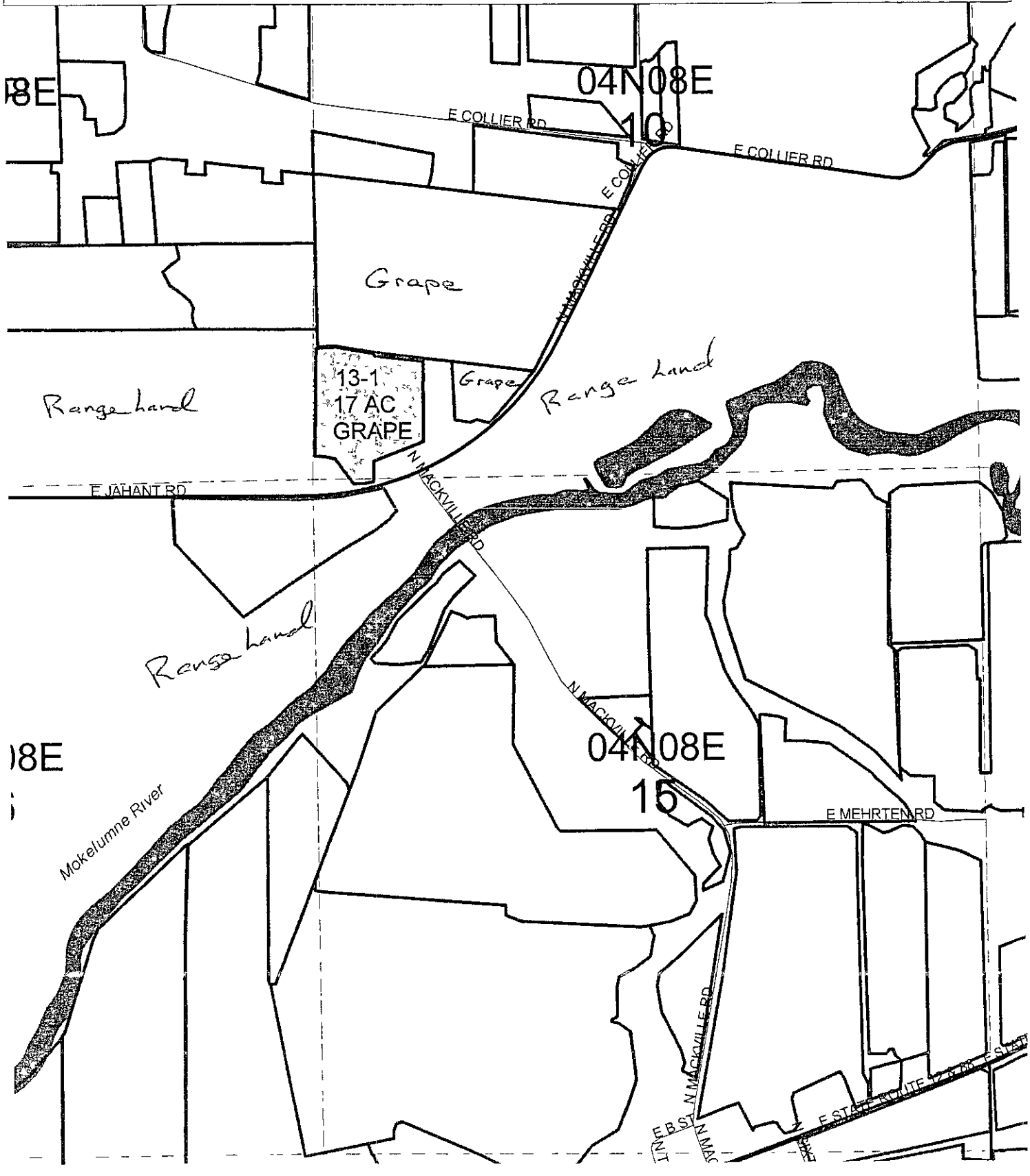
District E

Permit # 3904314

Permittee

Map # 13

M & R PACKING



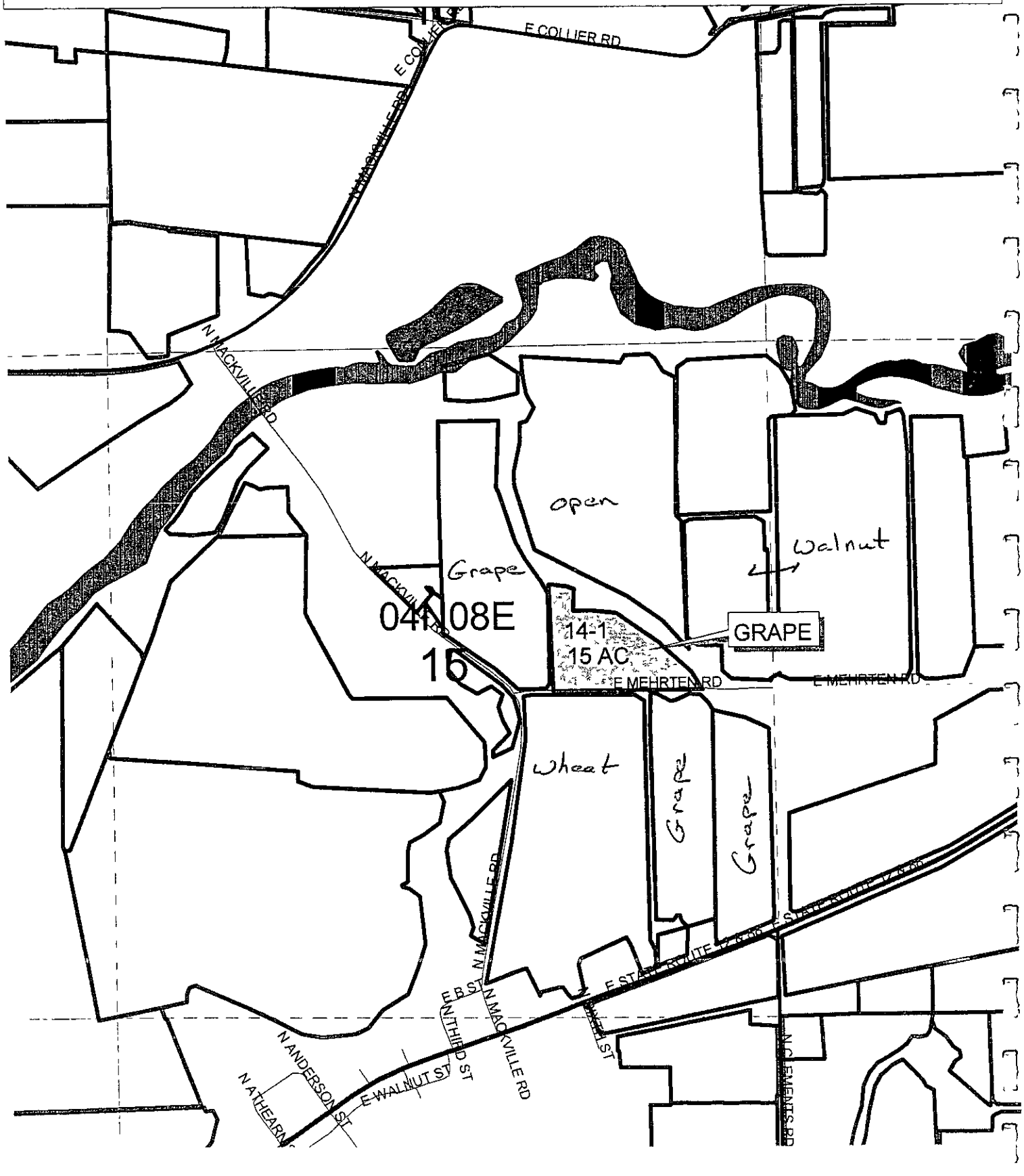
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 14



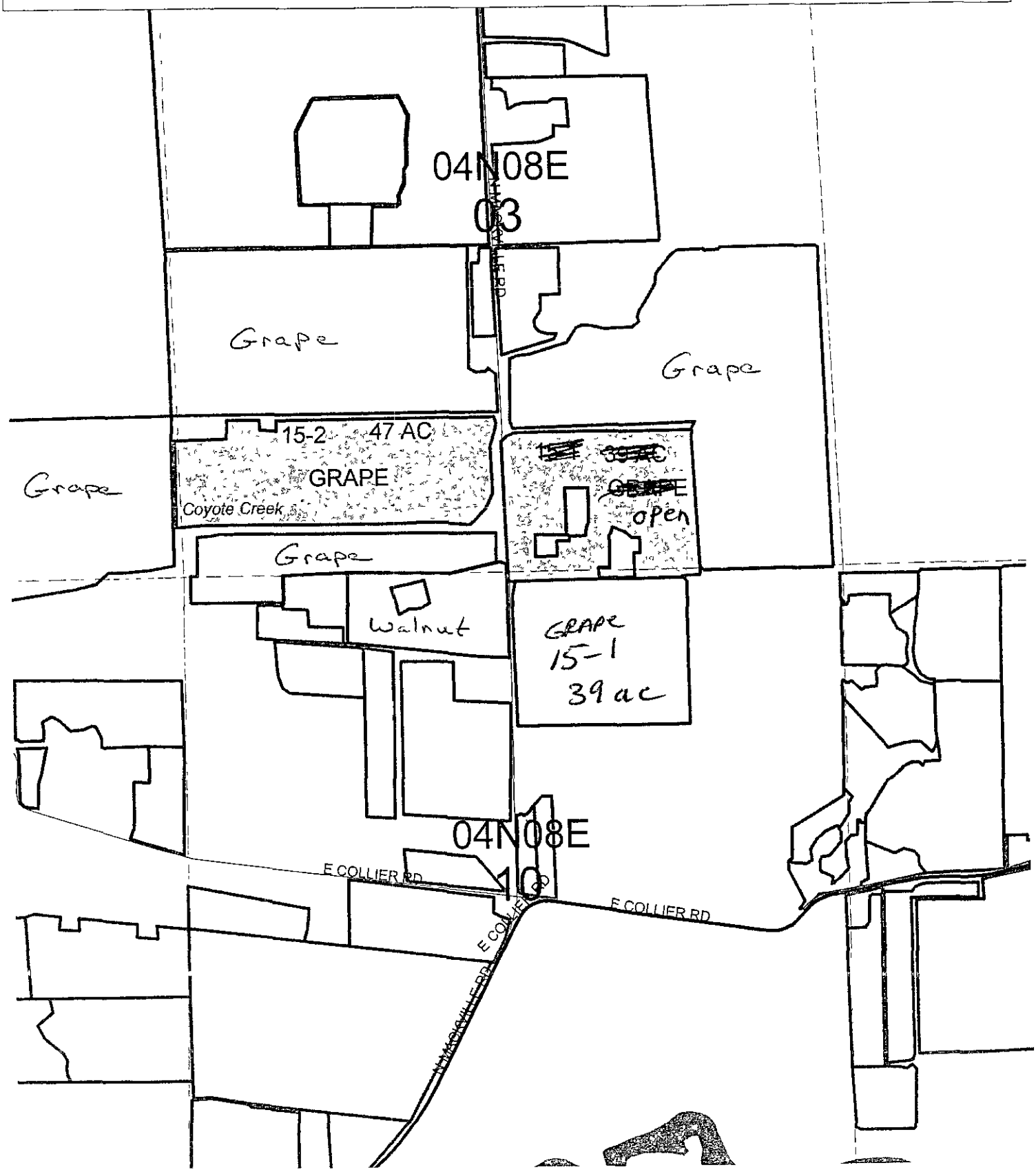
District E

Permit # 3904314

Permittee

Map # 15

M & R PACKING



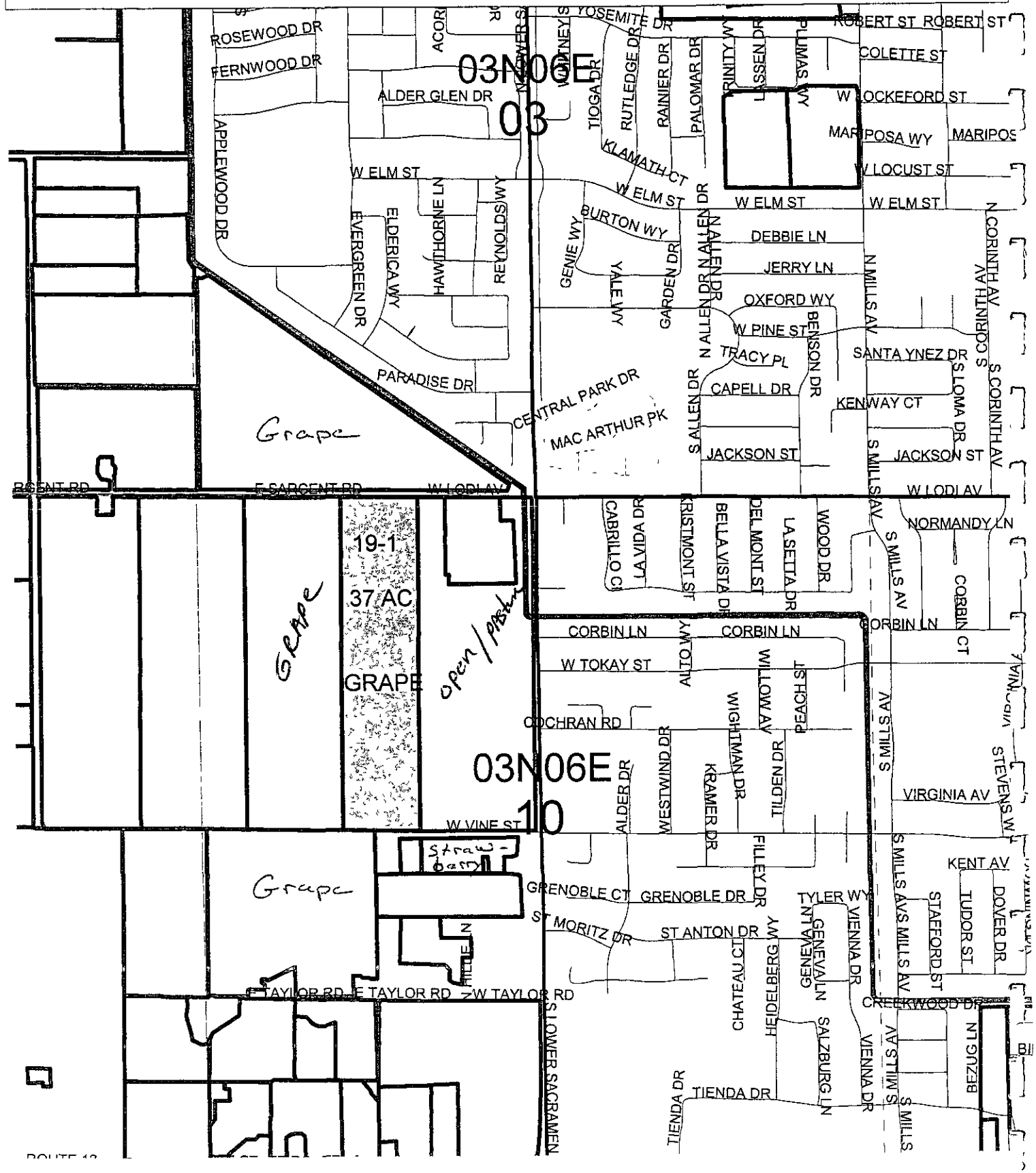
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 19



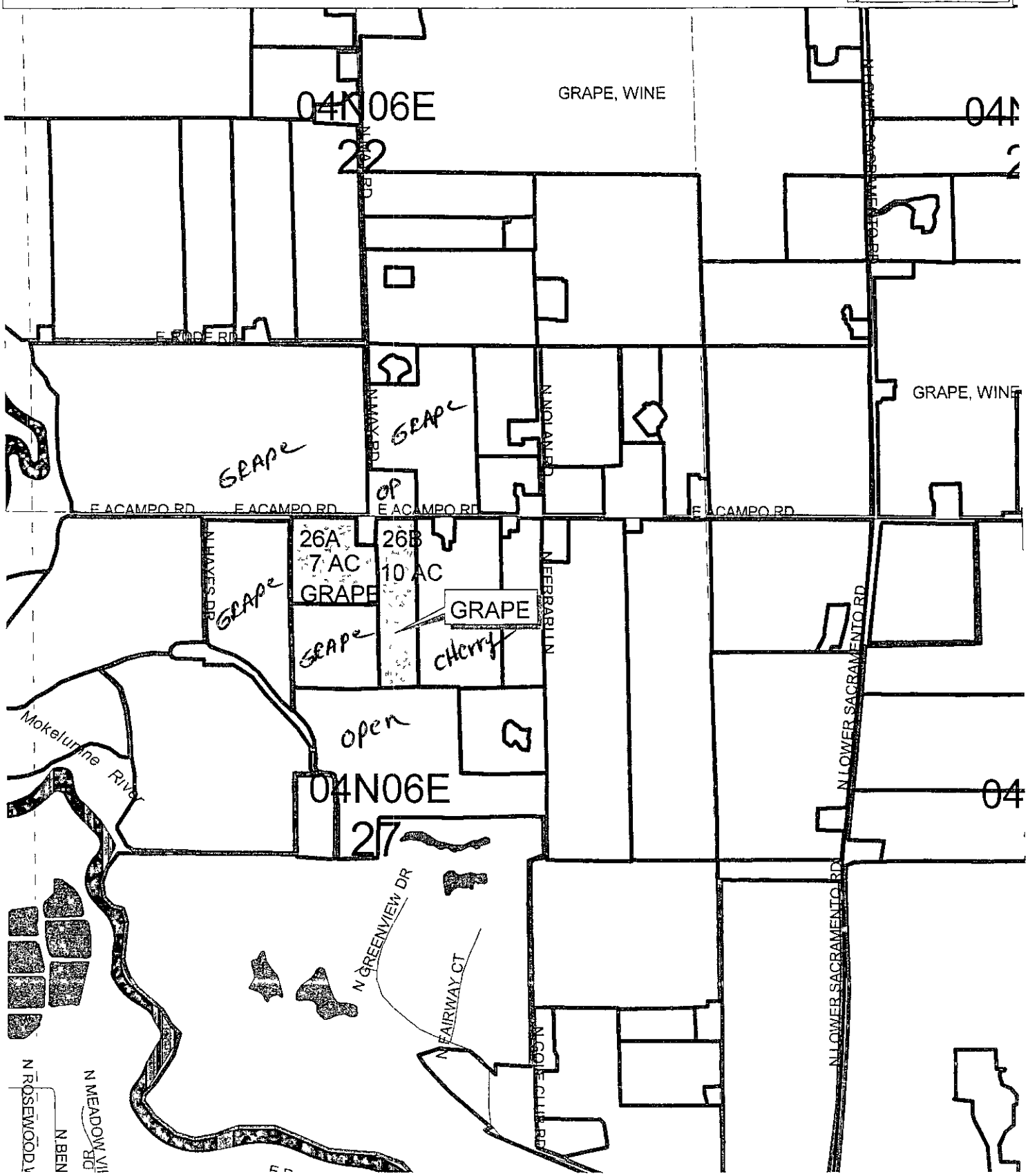
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 26



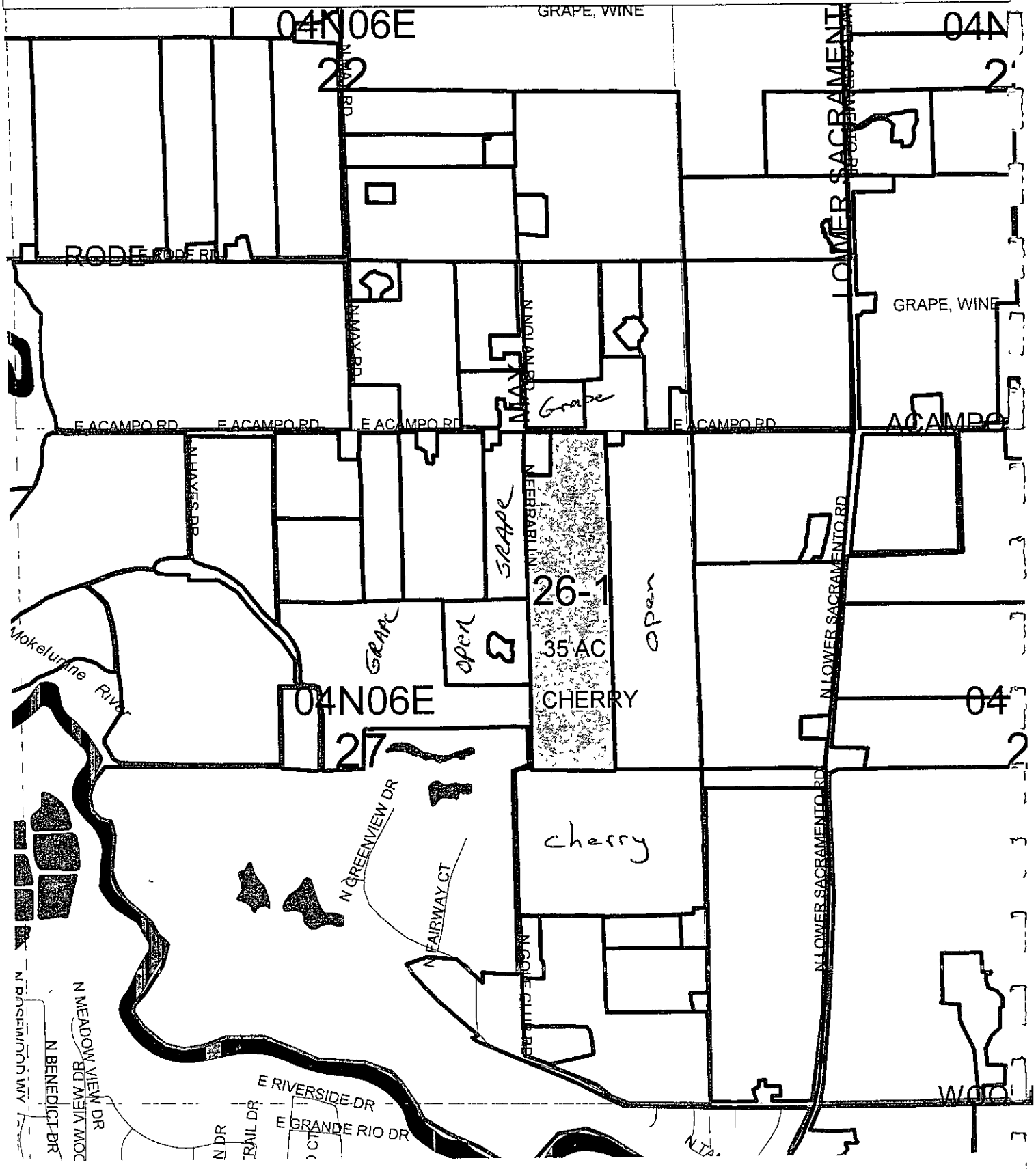
District E

Permit # 3904314

Permittee

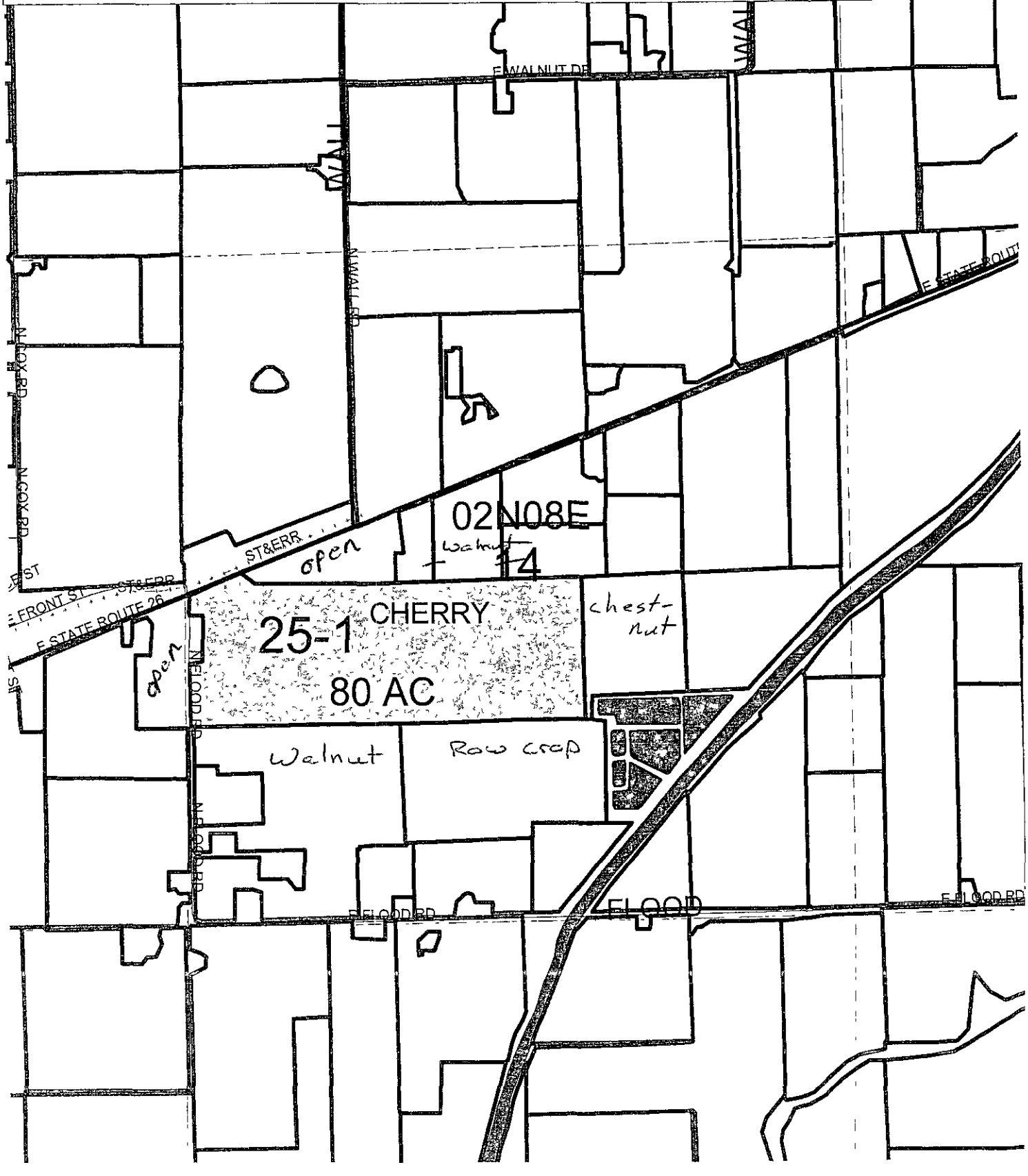
Map # 26

M & R PACKING



District E

Permit #	Permittee	Map #
3904314	M & R PACKING	25



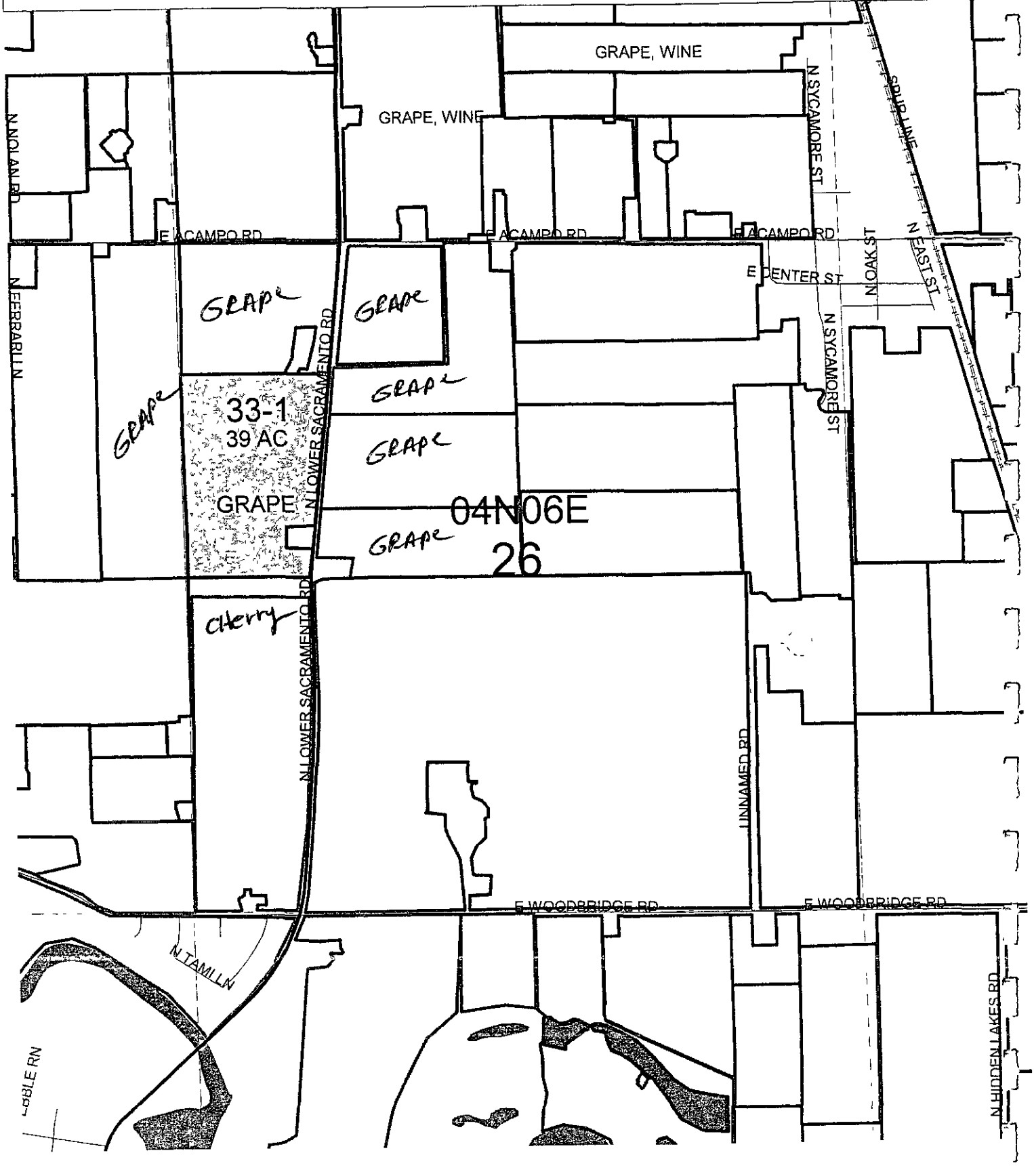
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 33

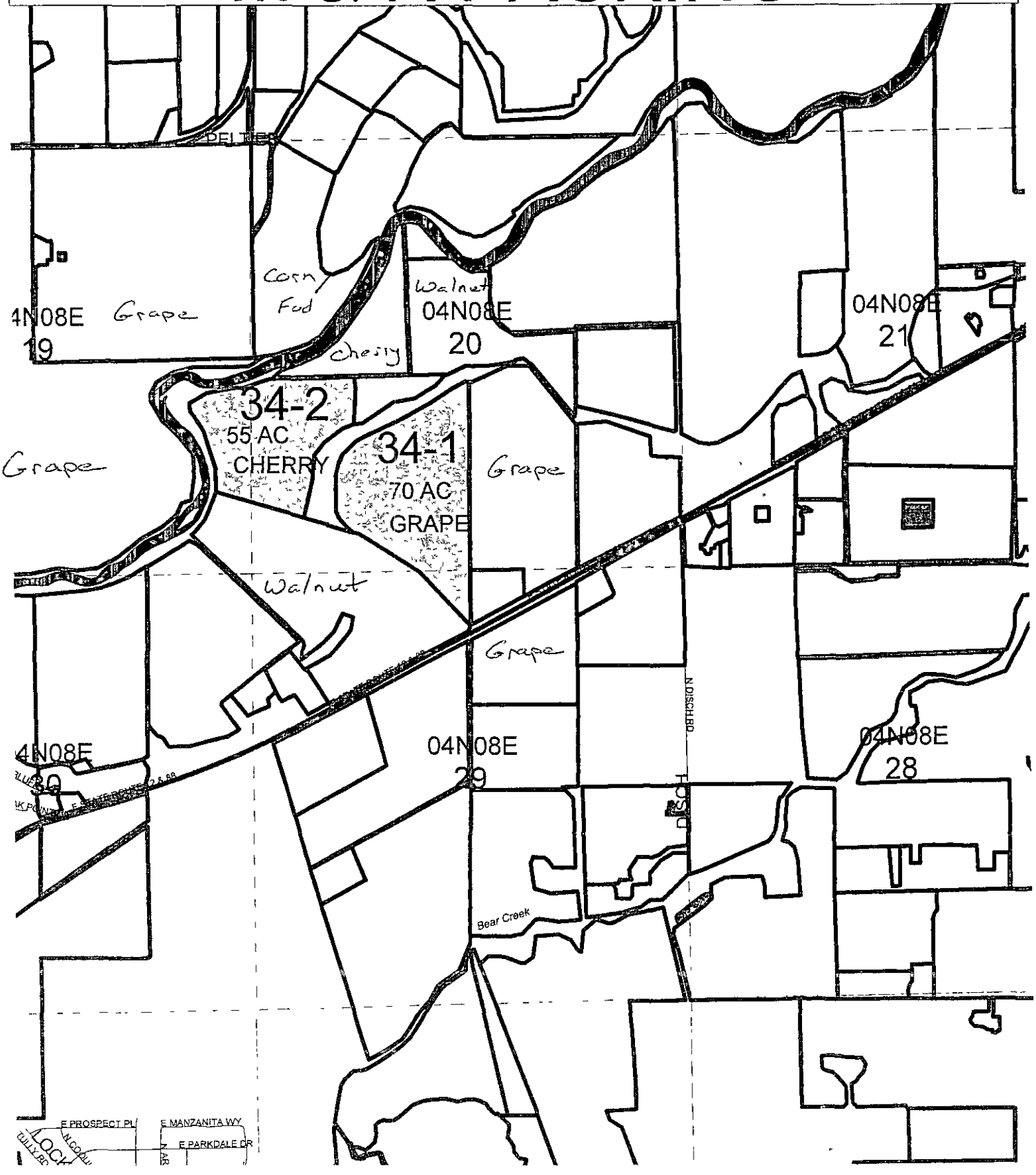


District E

Permit # 3904314

Permittee M & R PACKING

Map # 34



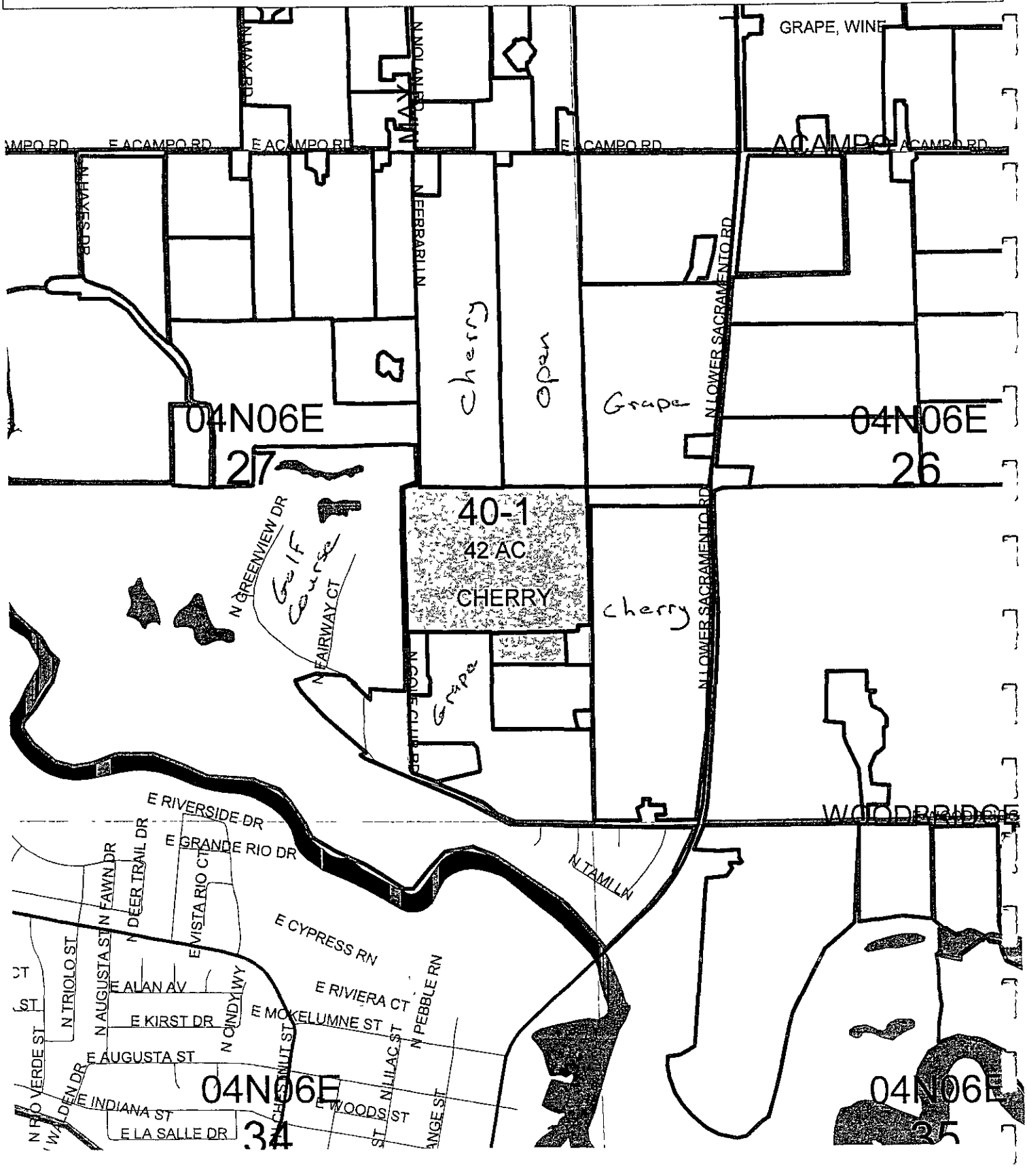
District E

Permit # 3904314

Permittee

Map # 40

M & R PACKING



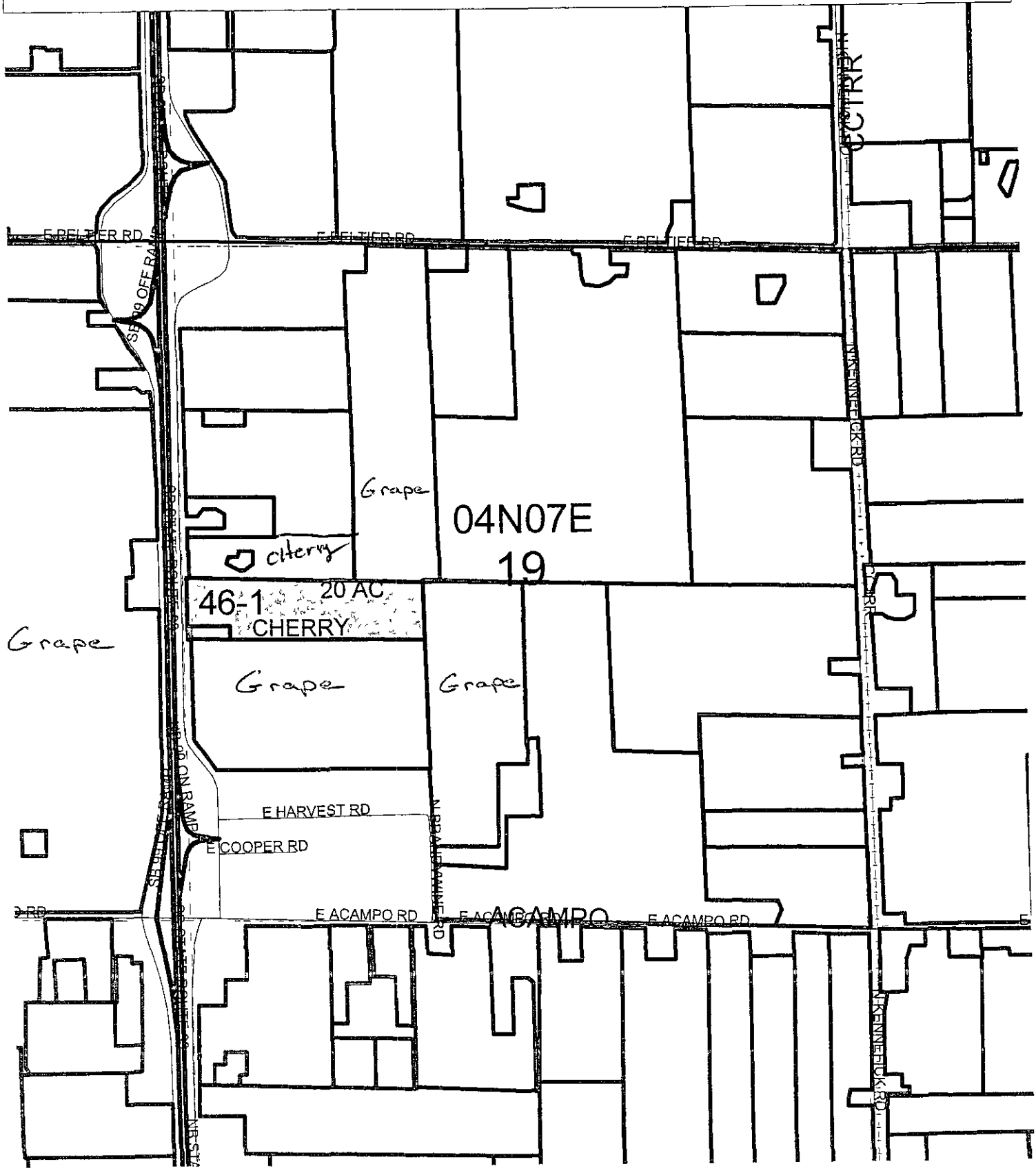
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 46



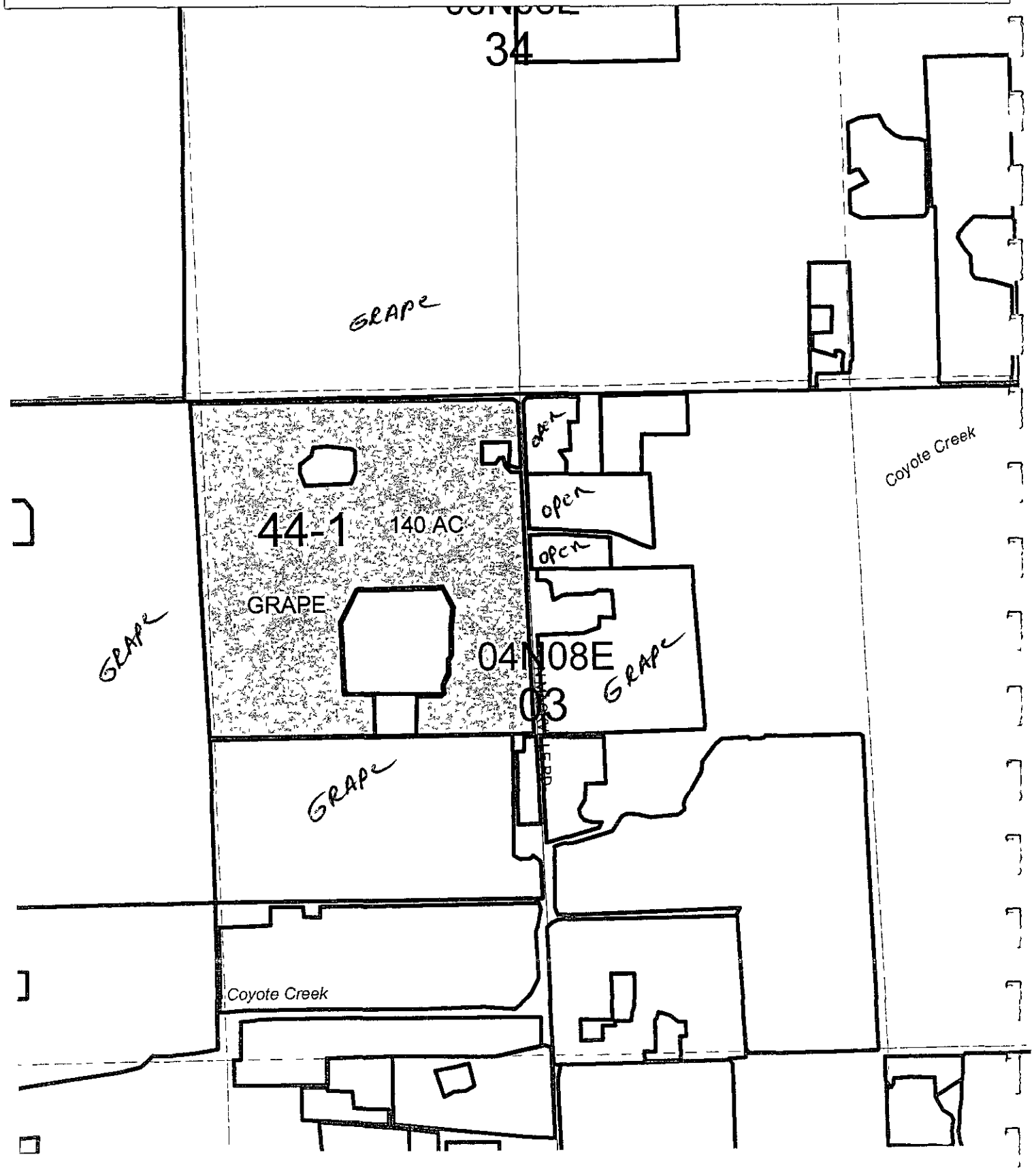
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 44



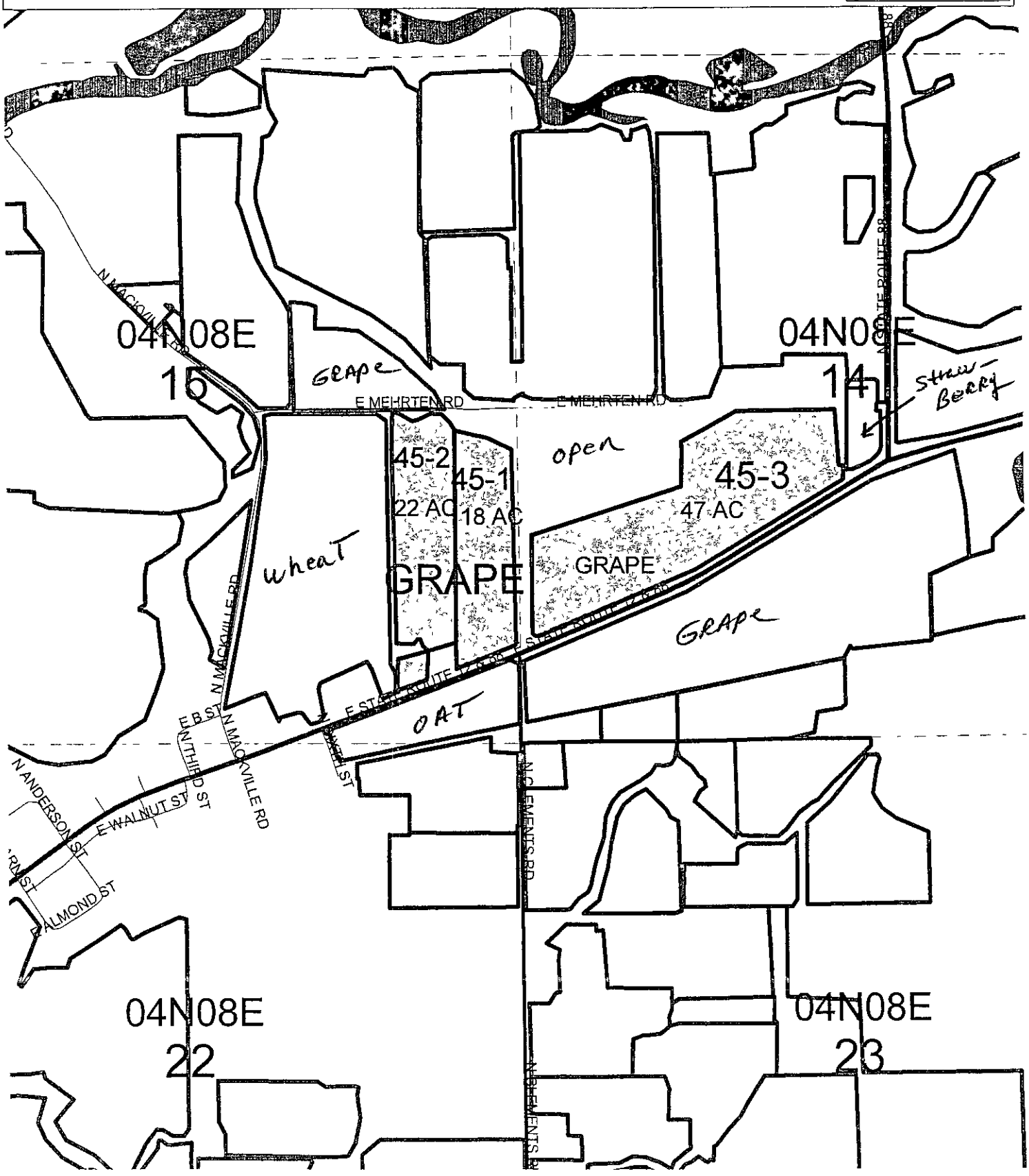
District E

Permit # 3904314

Permittee

Map # 45

M & R PACKING



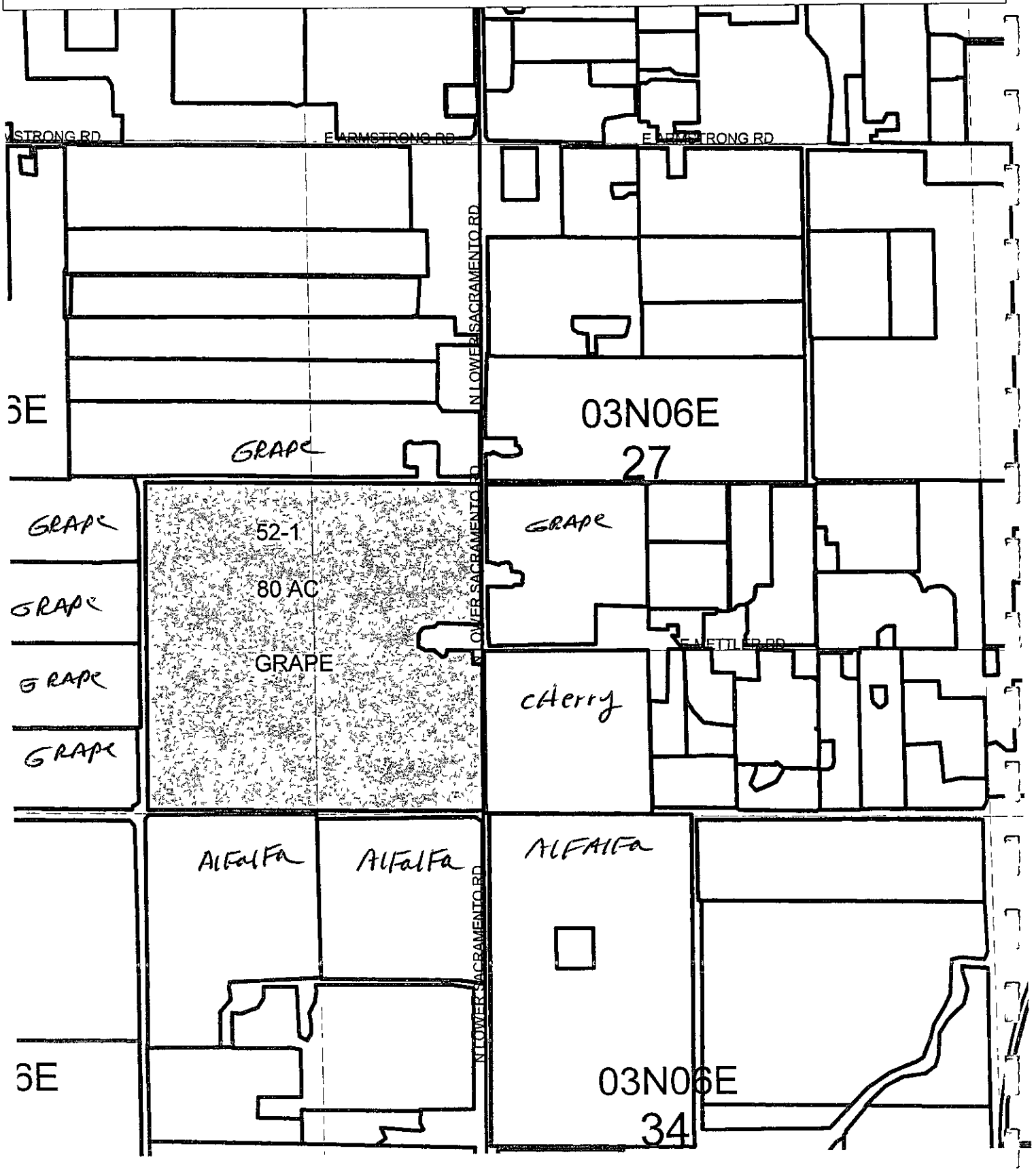
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 52



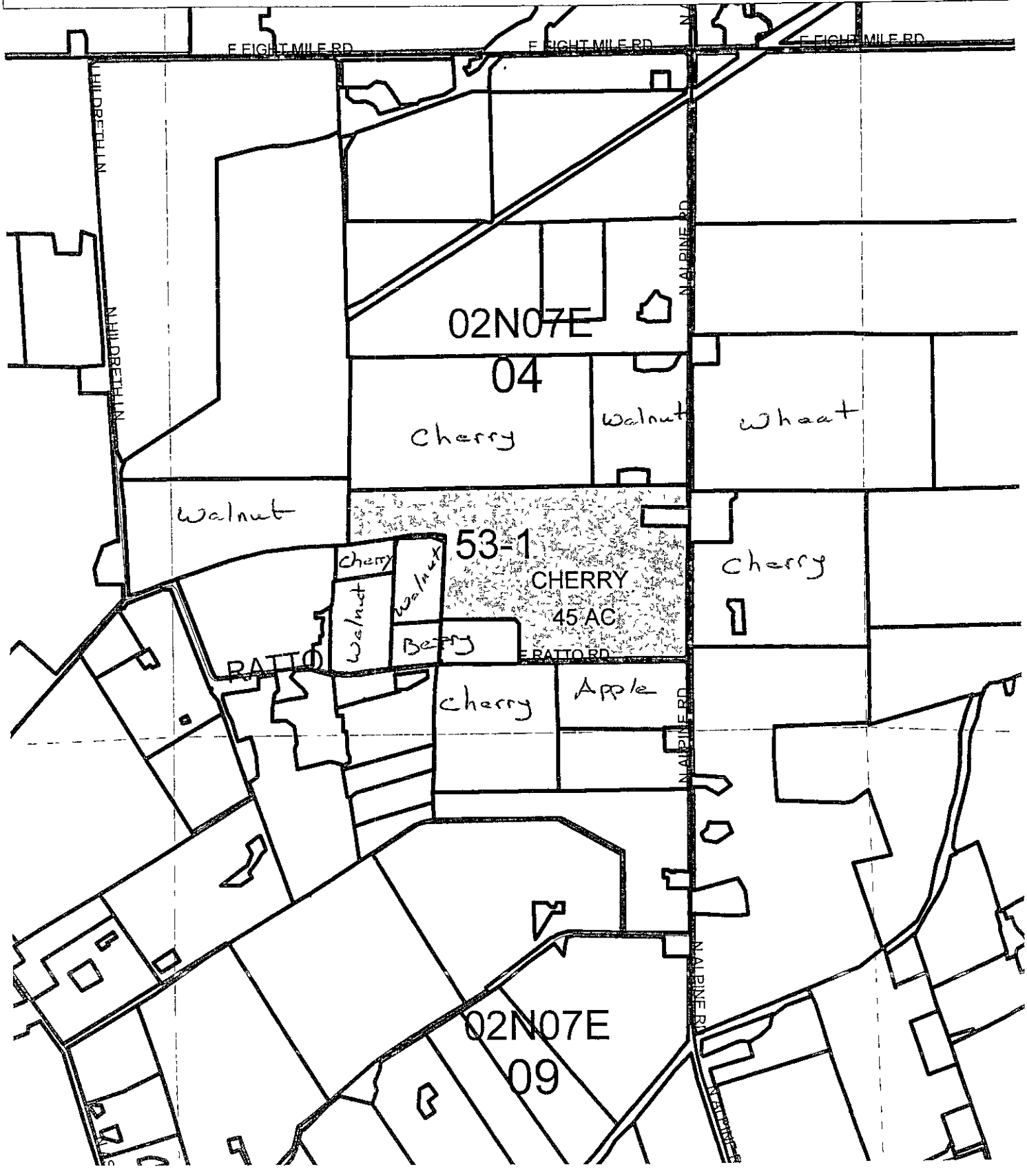
District E

Permit # 3904314

Permittee

Map # 53

M & R PACKING



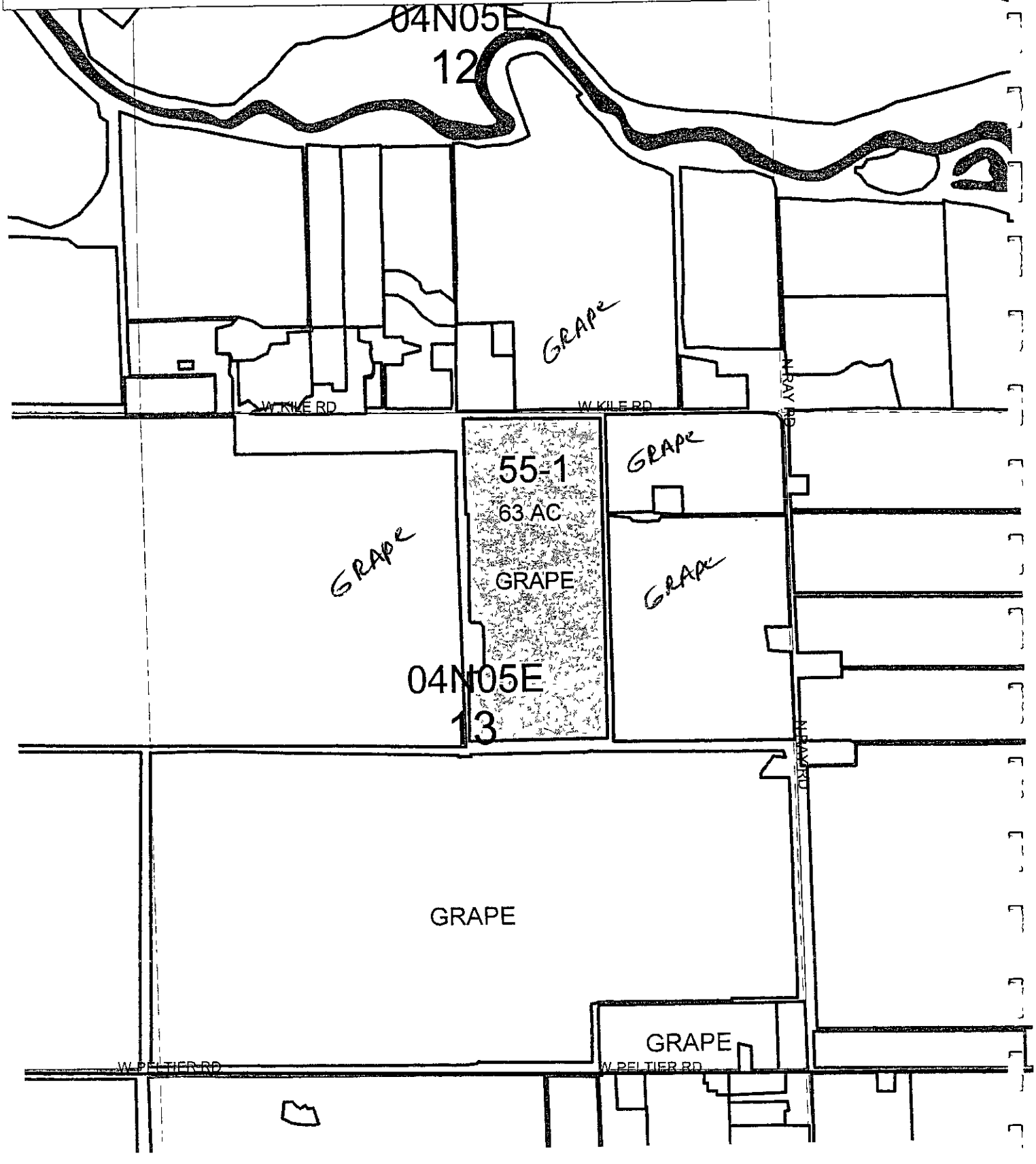
District E

Permit # 3904314

Permittee

M & R PACKING

Map #55



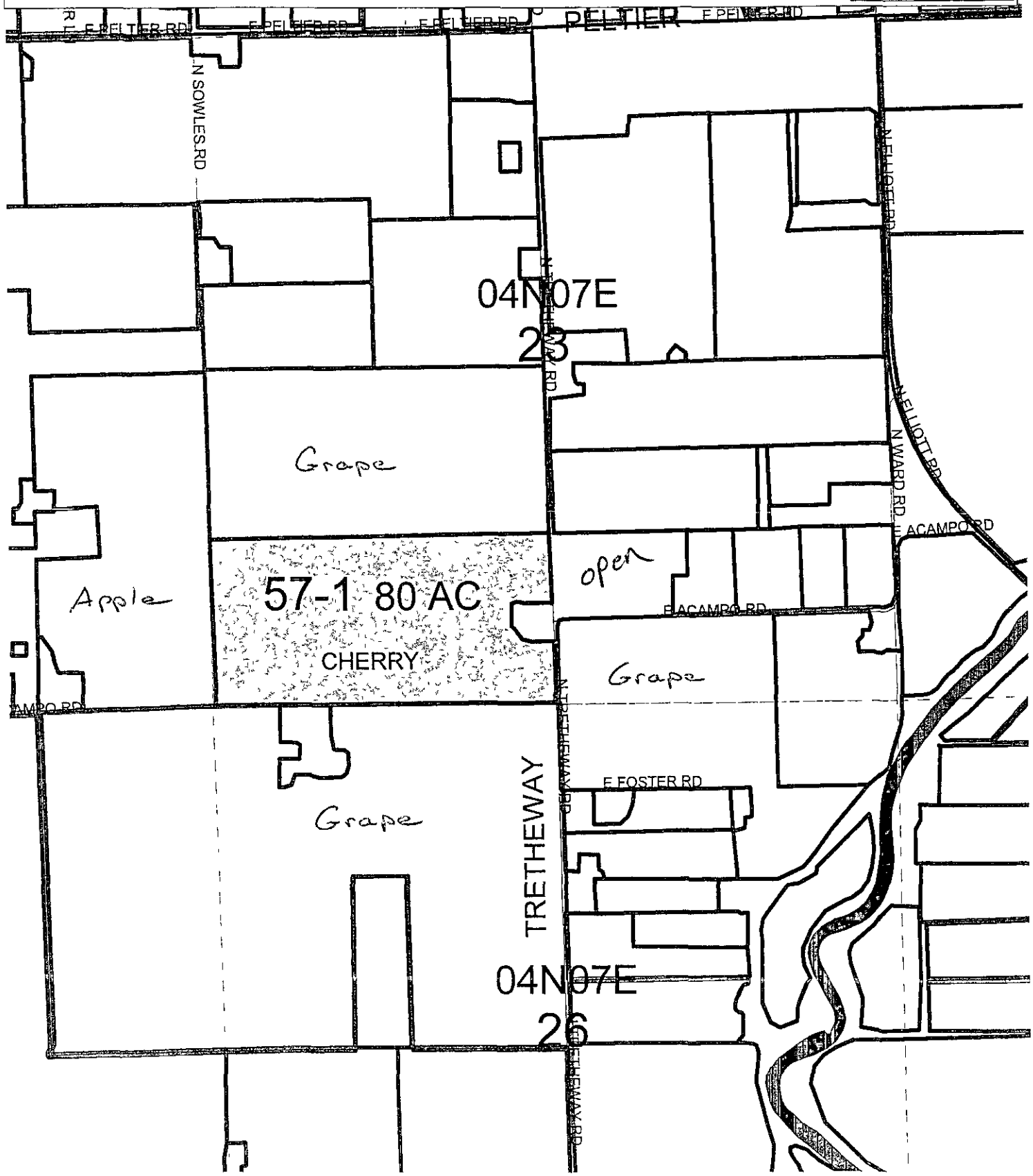
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 57



District E

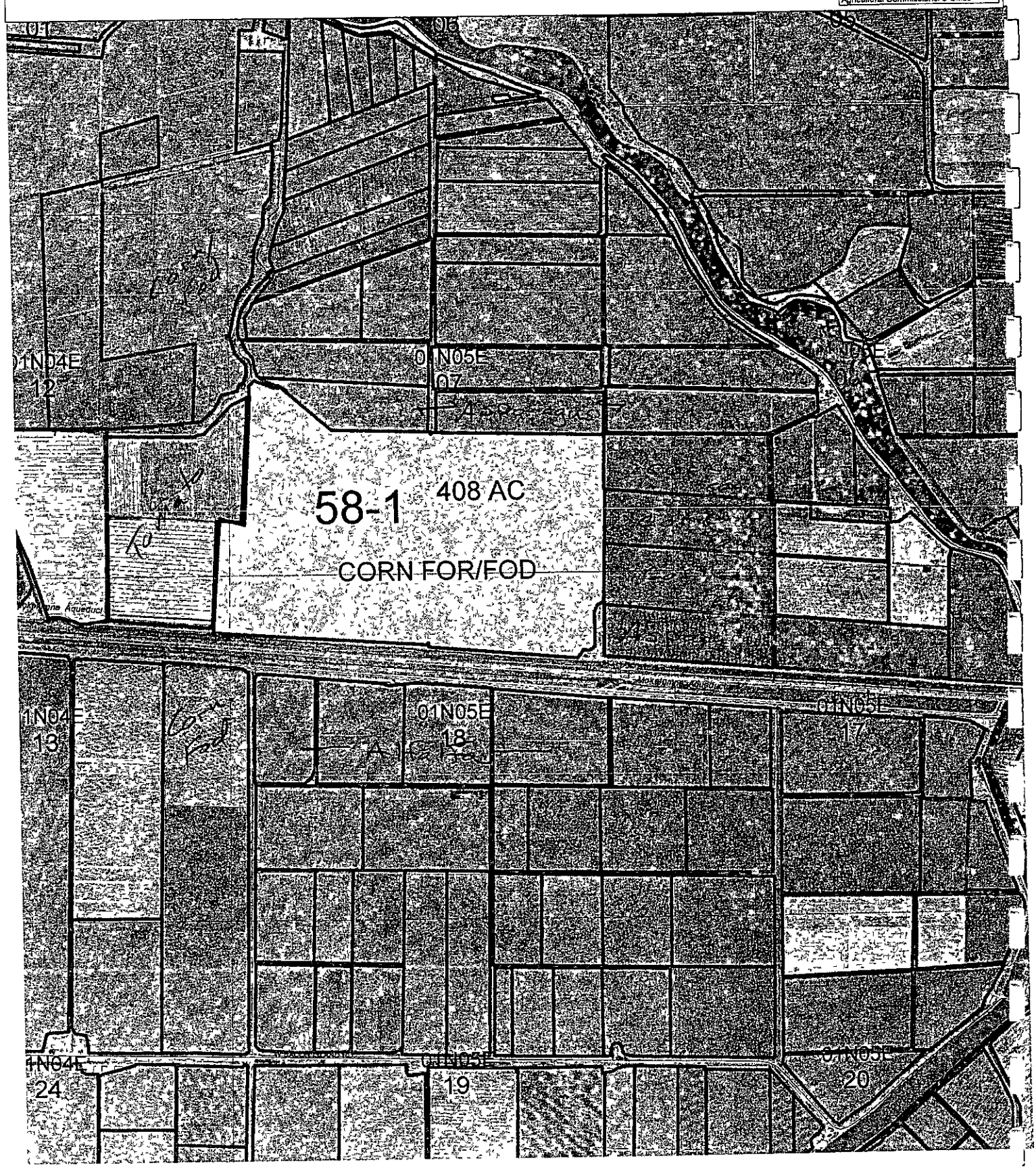
Permit #

3904314

Permittee

M & R PACKING

Map # 58



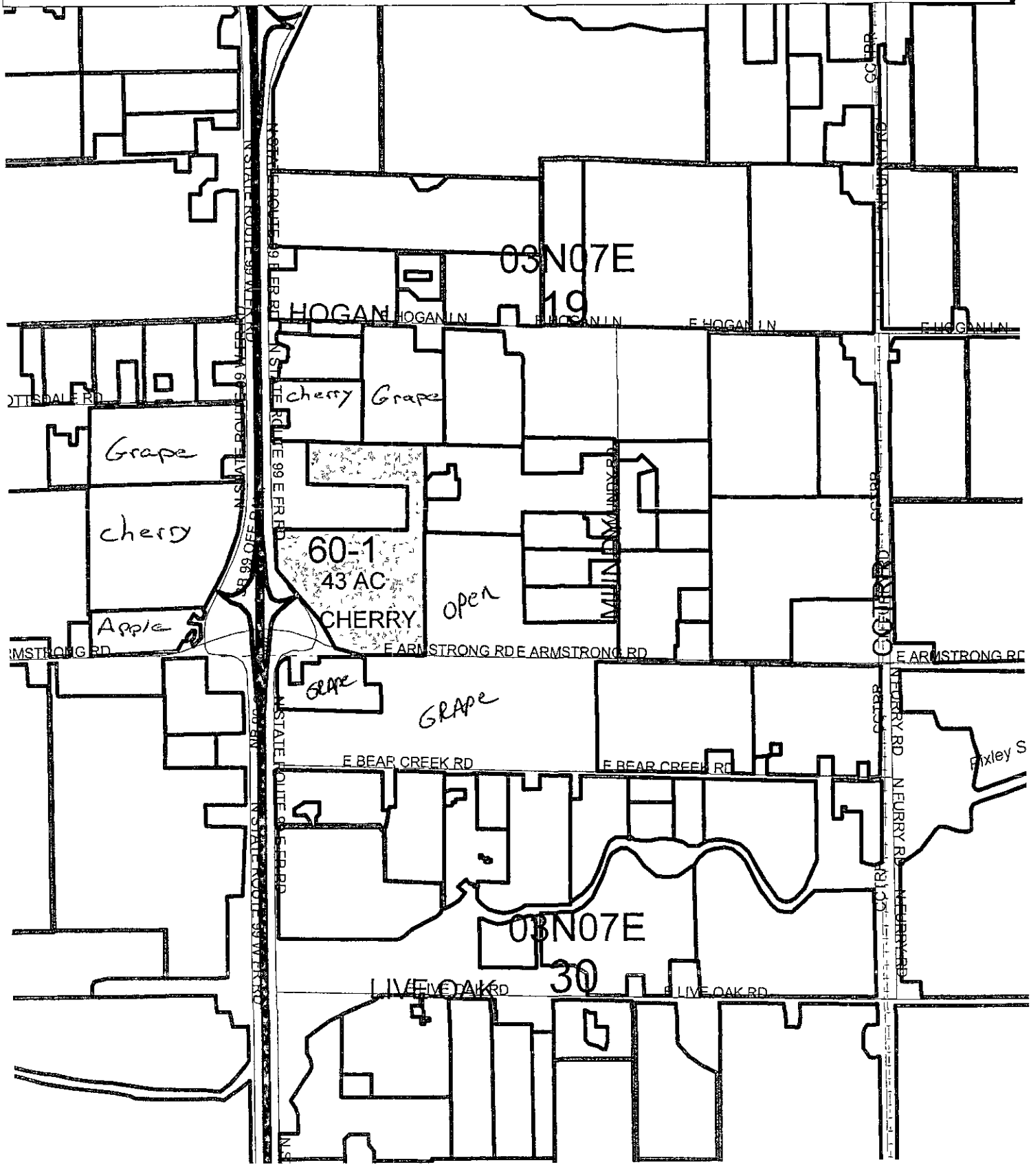
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 60



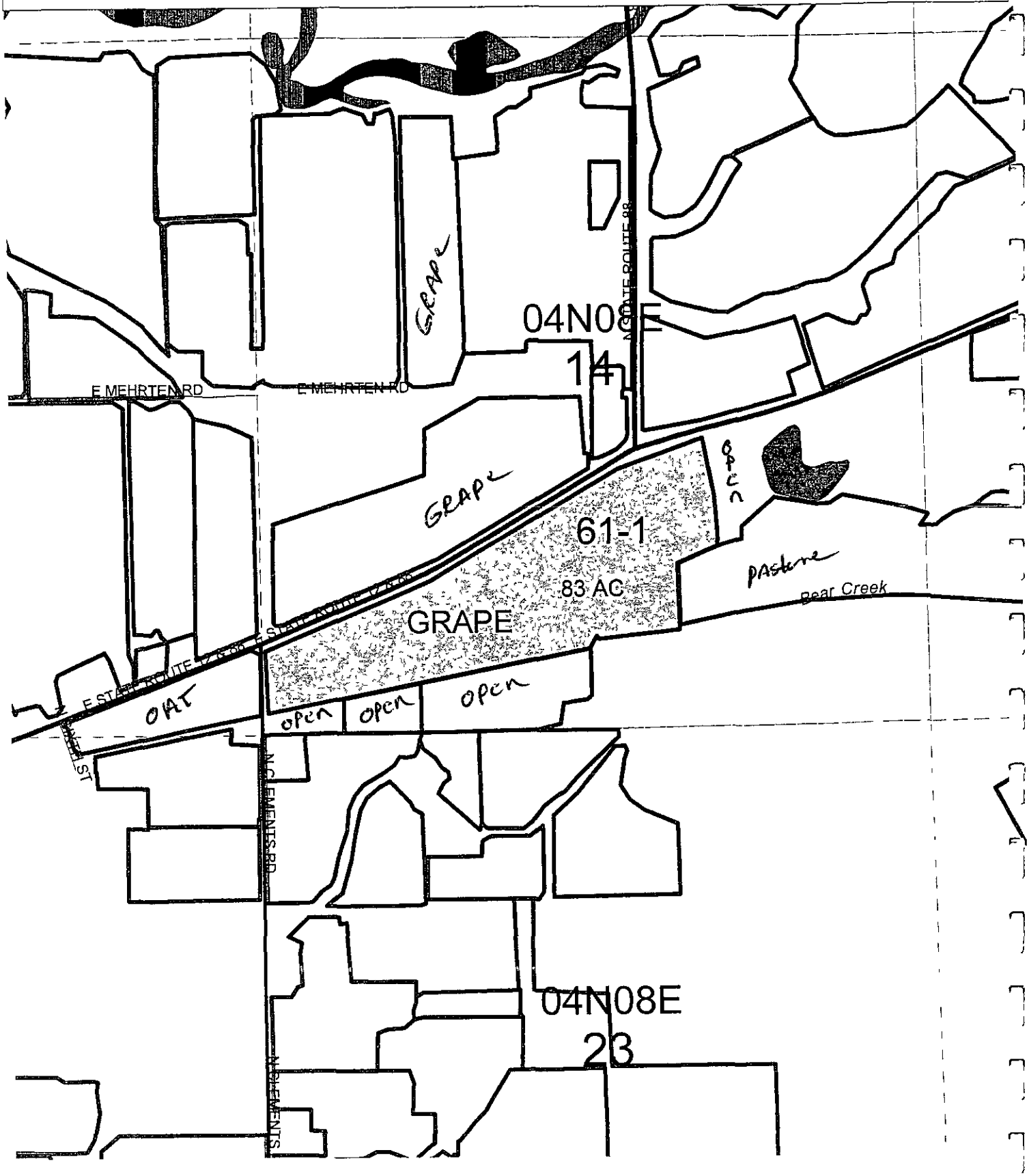
District E

Permit # 3904314

Permittee

Map # 61

M & R PACKING



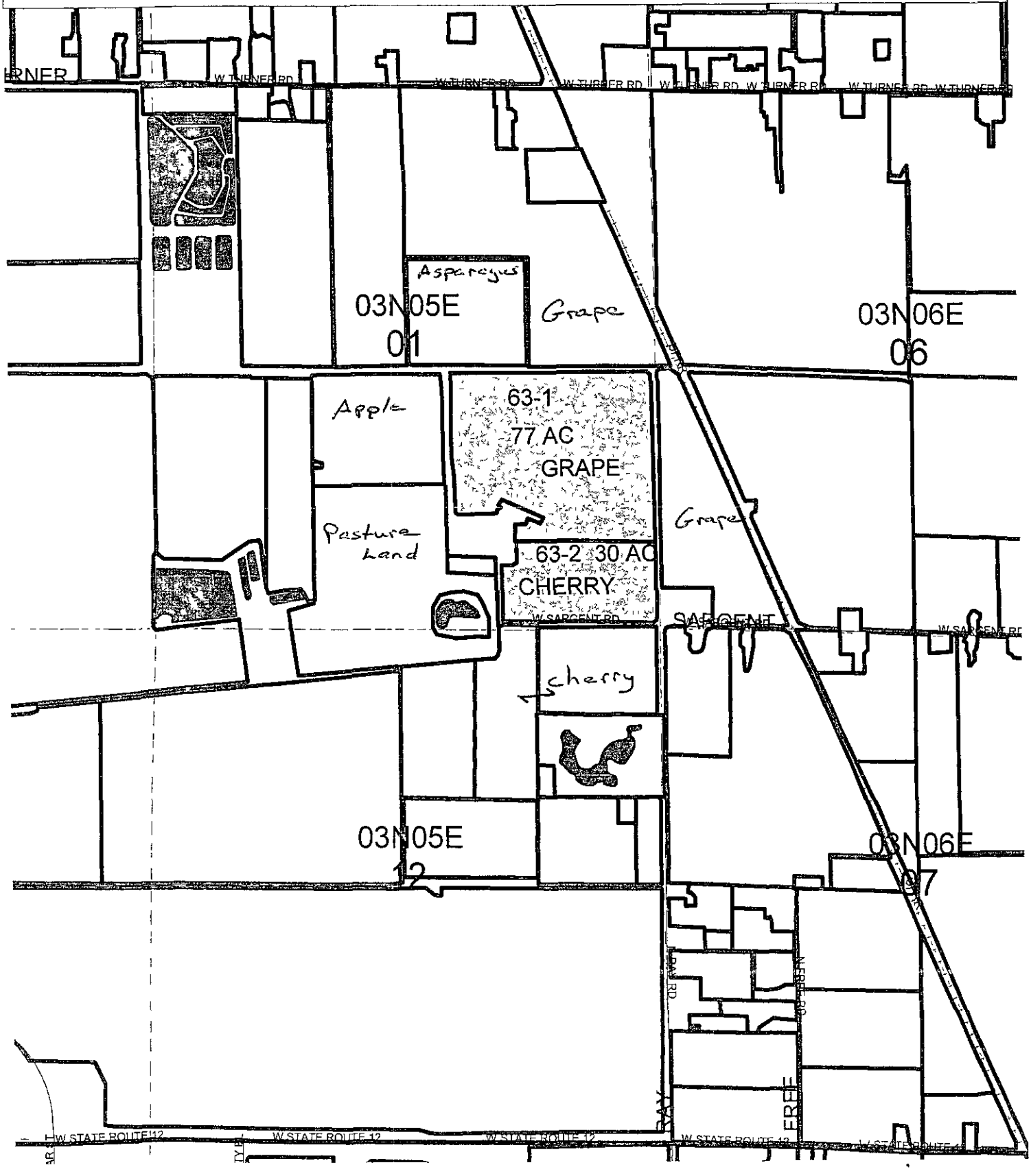
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 63



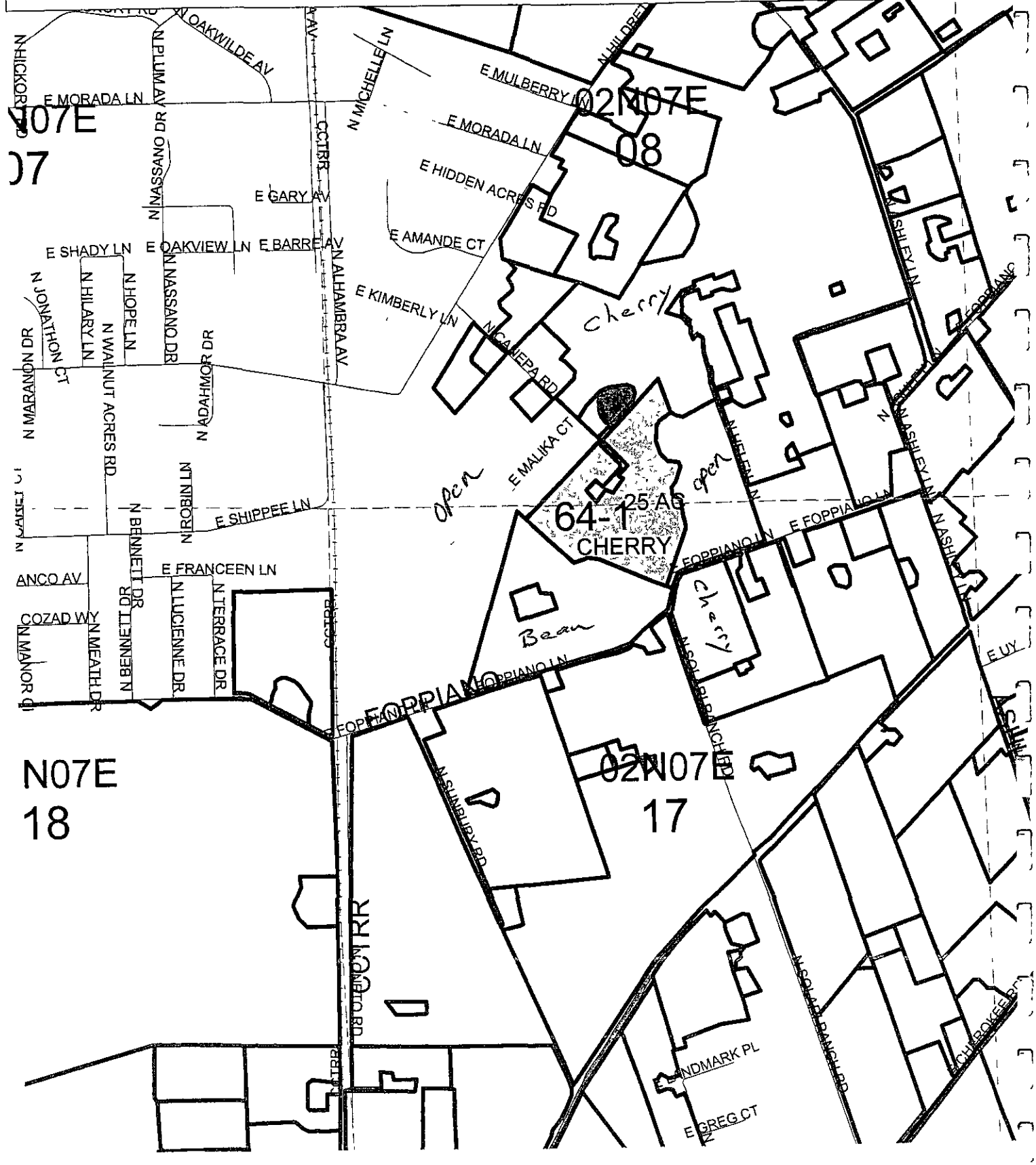
District E

Permit # 3904314

Permittee

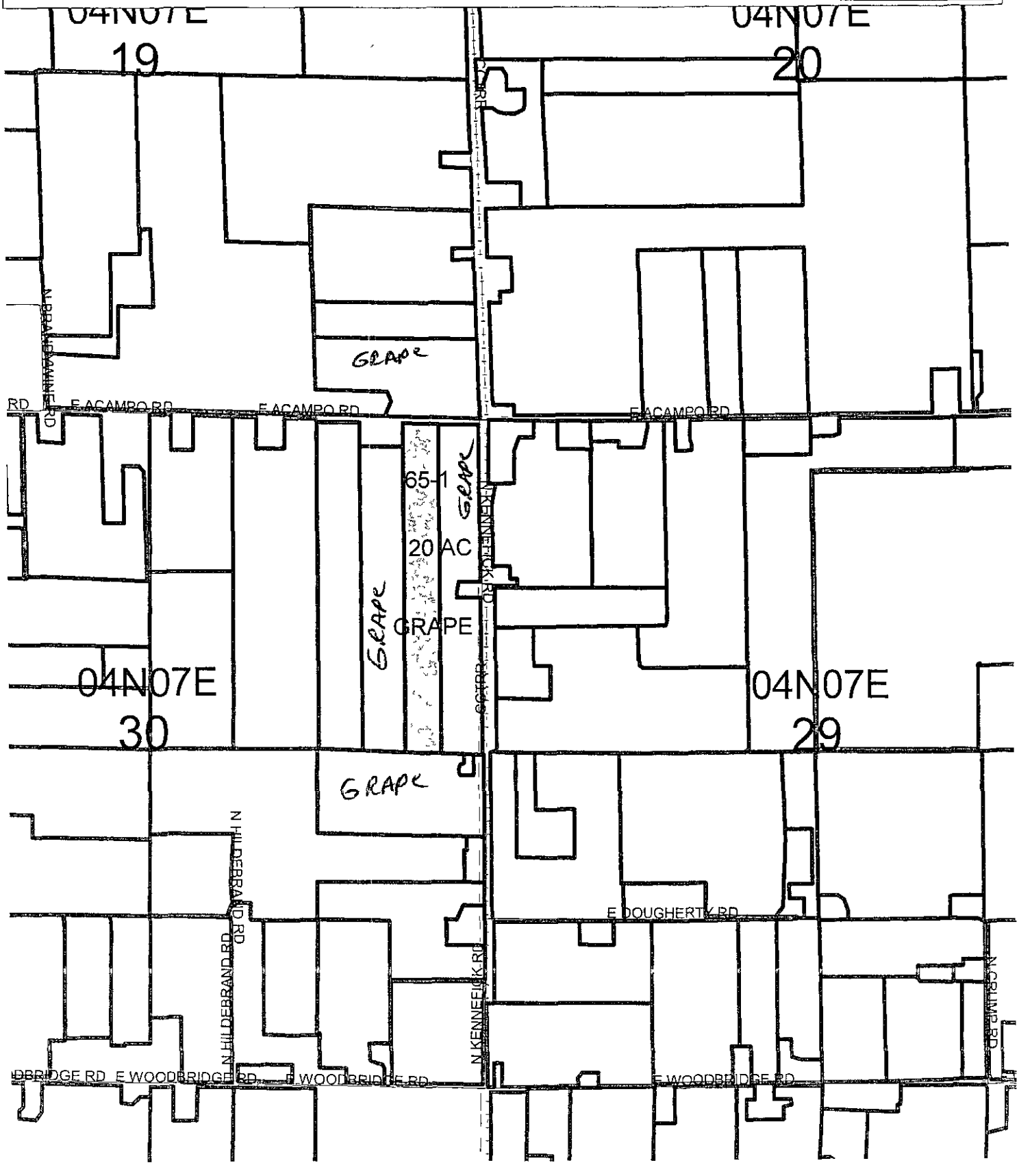
M & R PACKING

Map # 64



District E

Permit #	Permittee	Map #
3904314	M & R PACKING	65



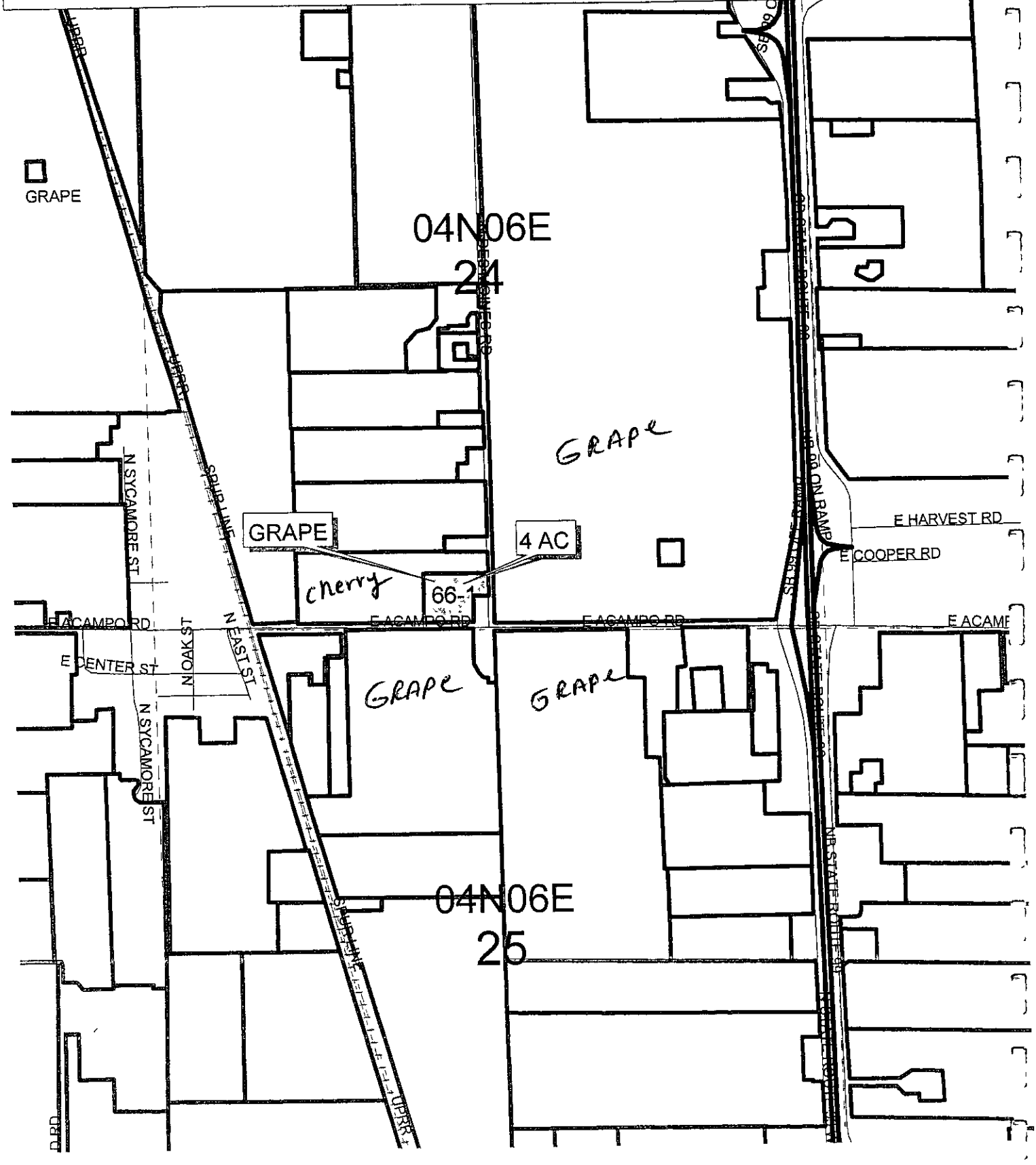
District E

Permit # 3904314

Permittee

Map # 66

M & R PACKING



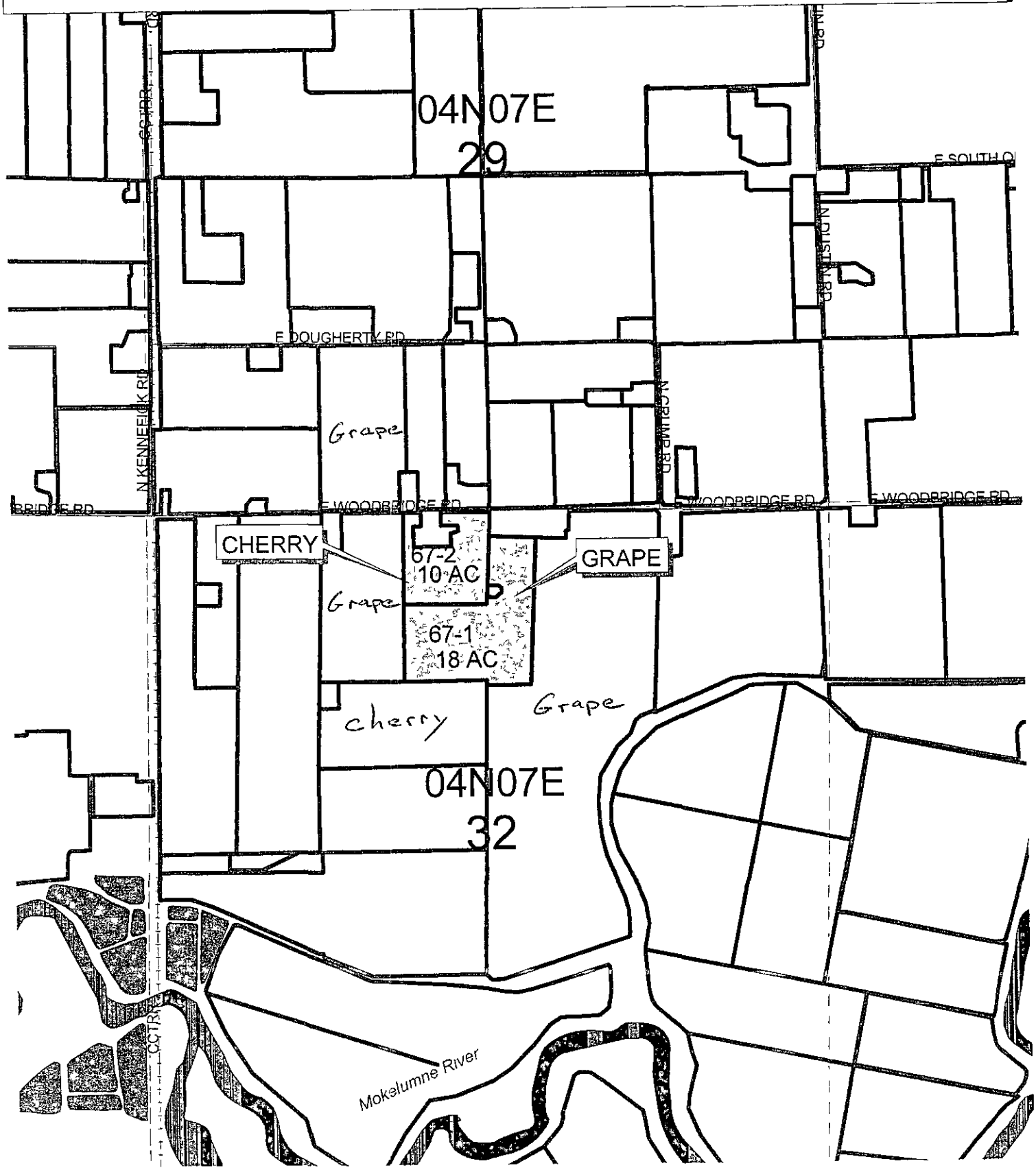
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 67

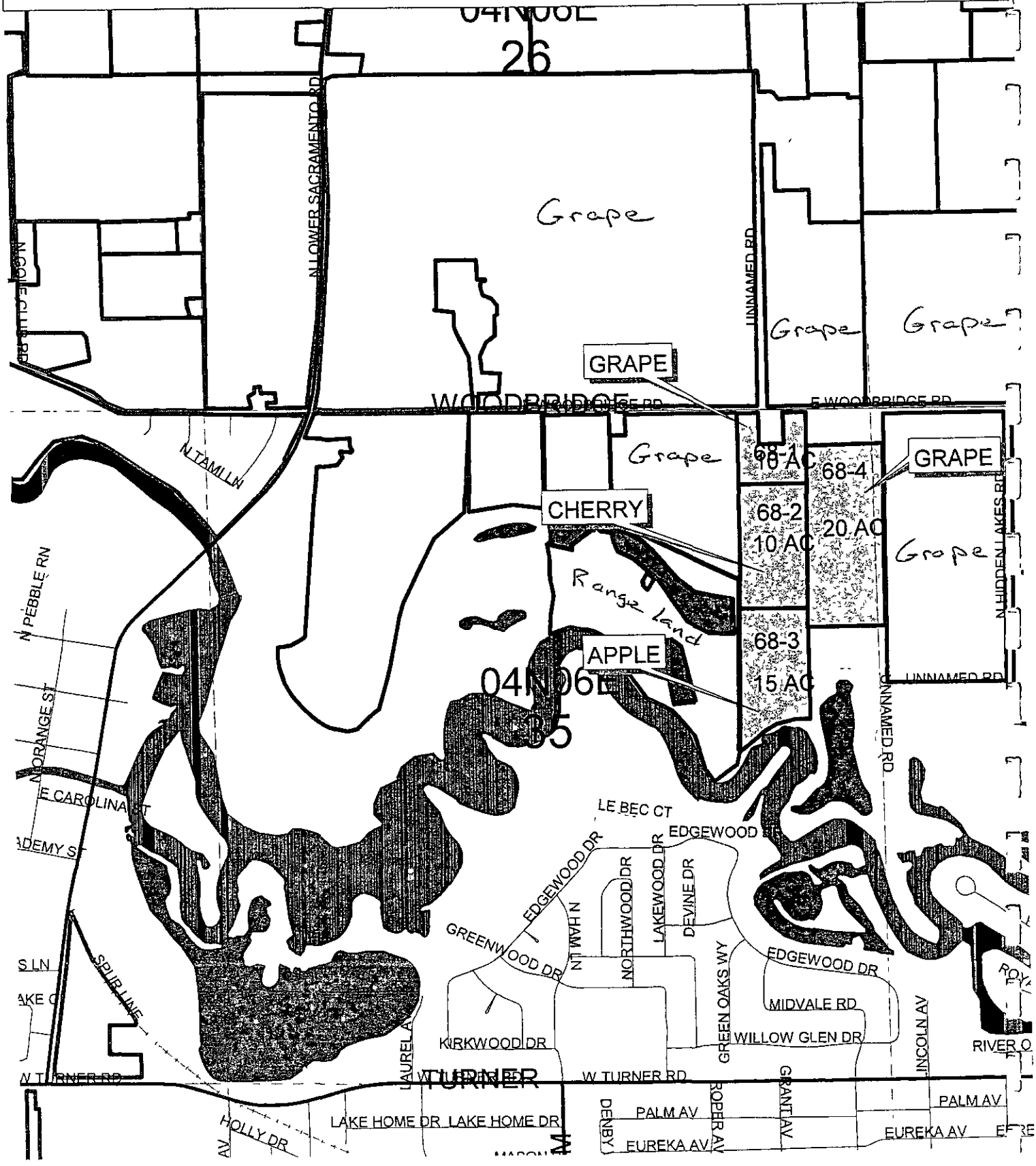


District E

Permit # 3904314

Permittee M & R PACKING

Map # 68



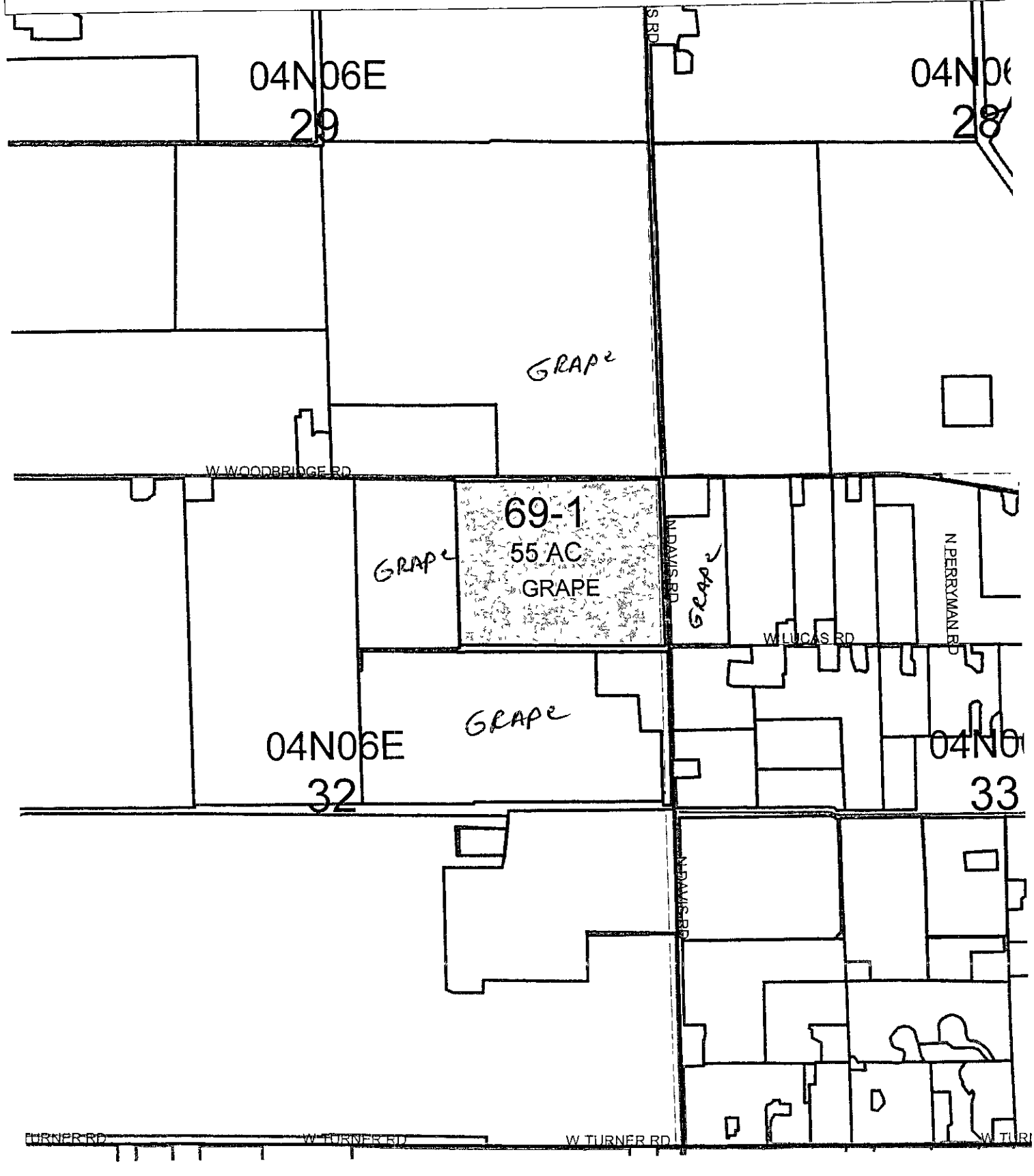
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 69



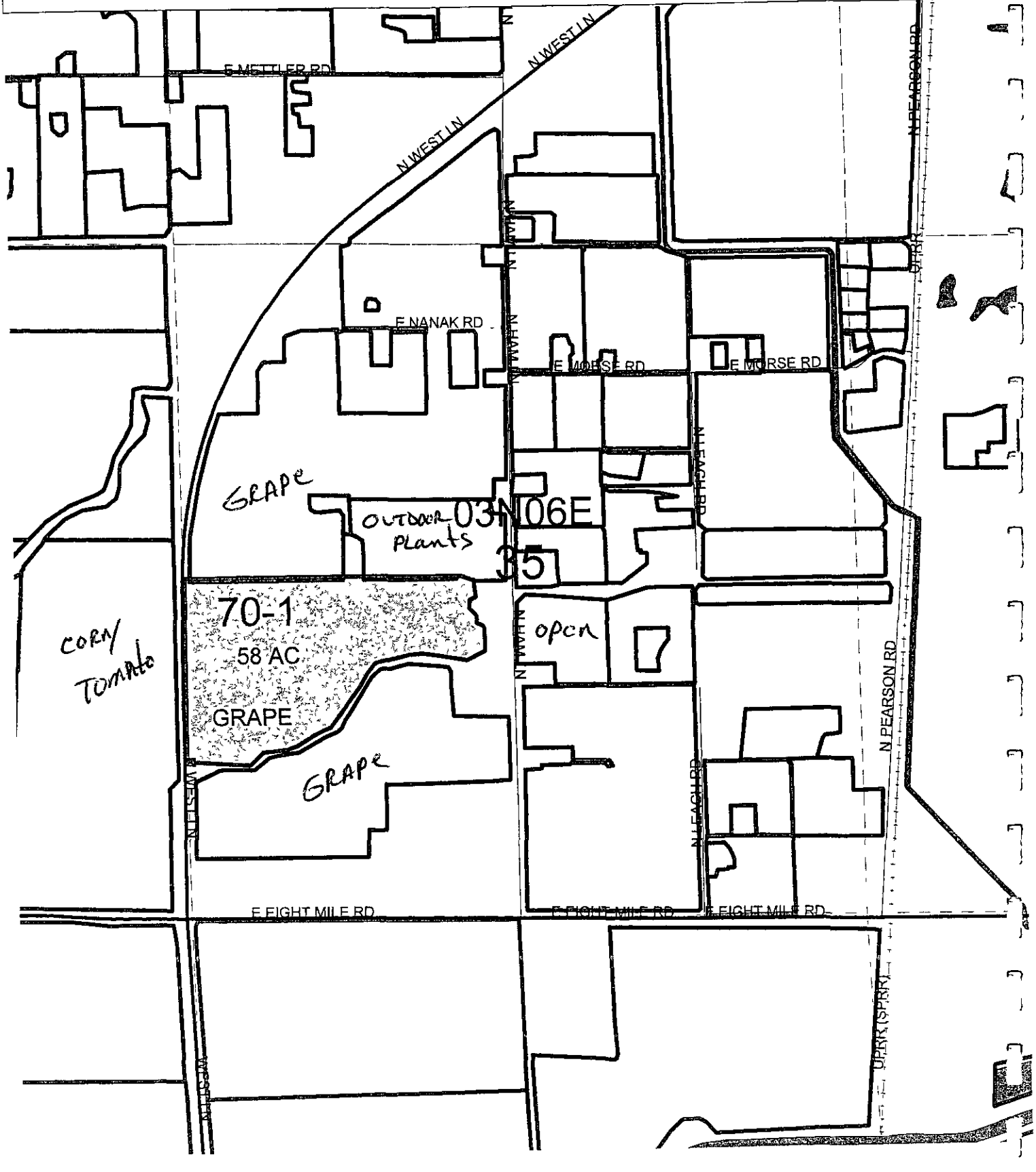
District E

Permit # 3904314

Permittee

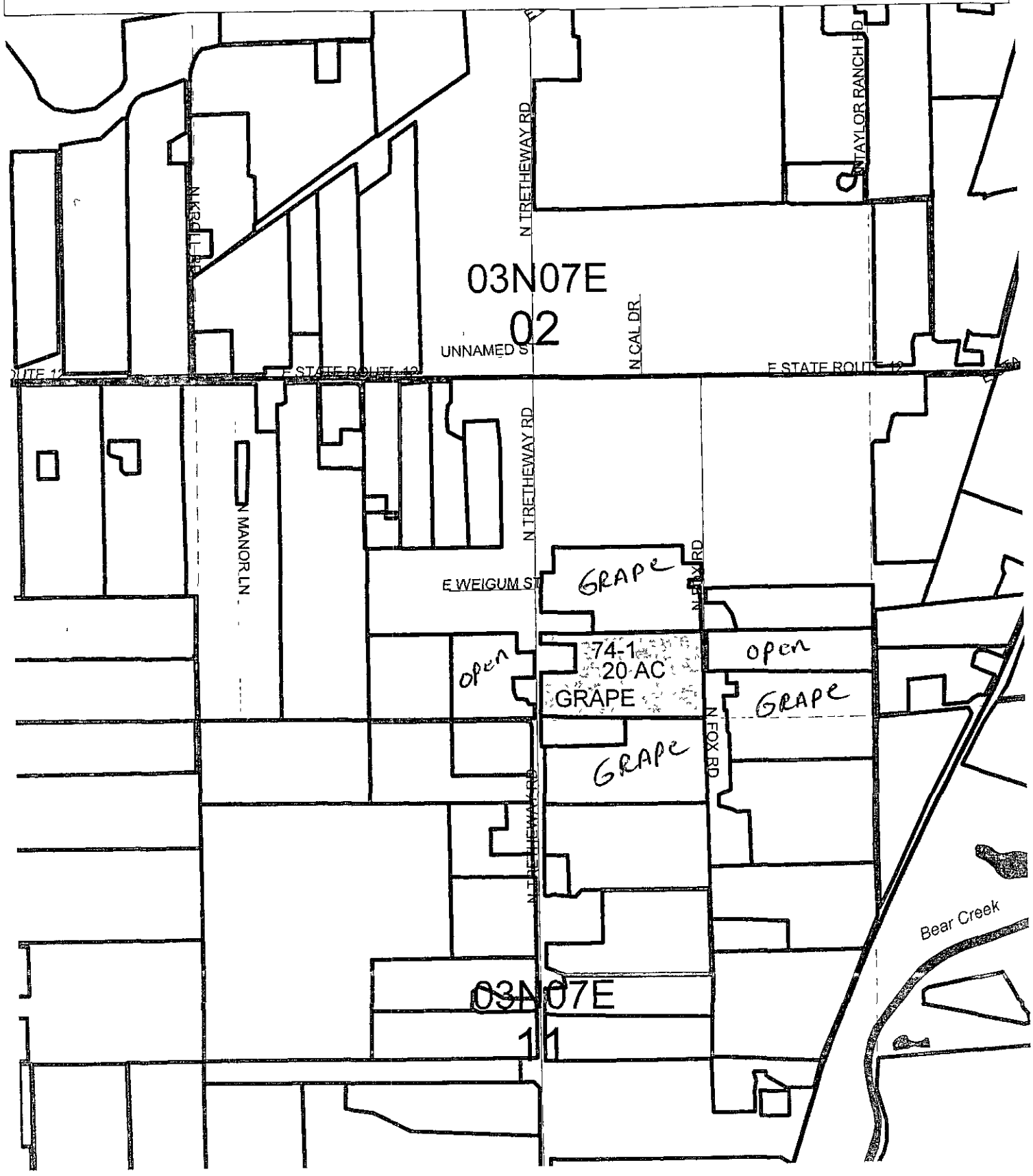
M & R PACKING

Map # 70



District E

Permit #	Permittee	Map #
3904314	M & R PACKING	74



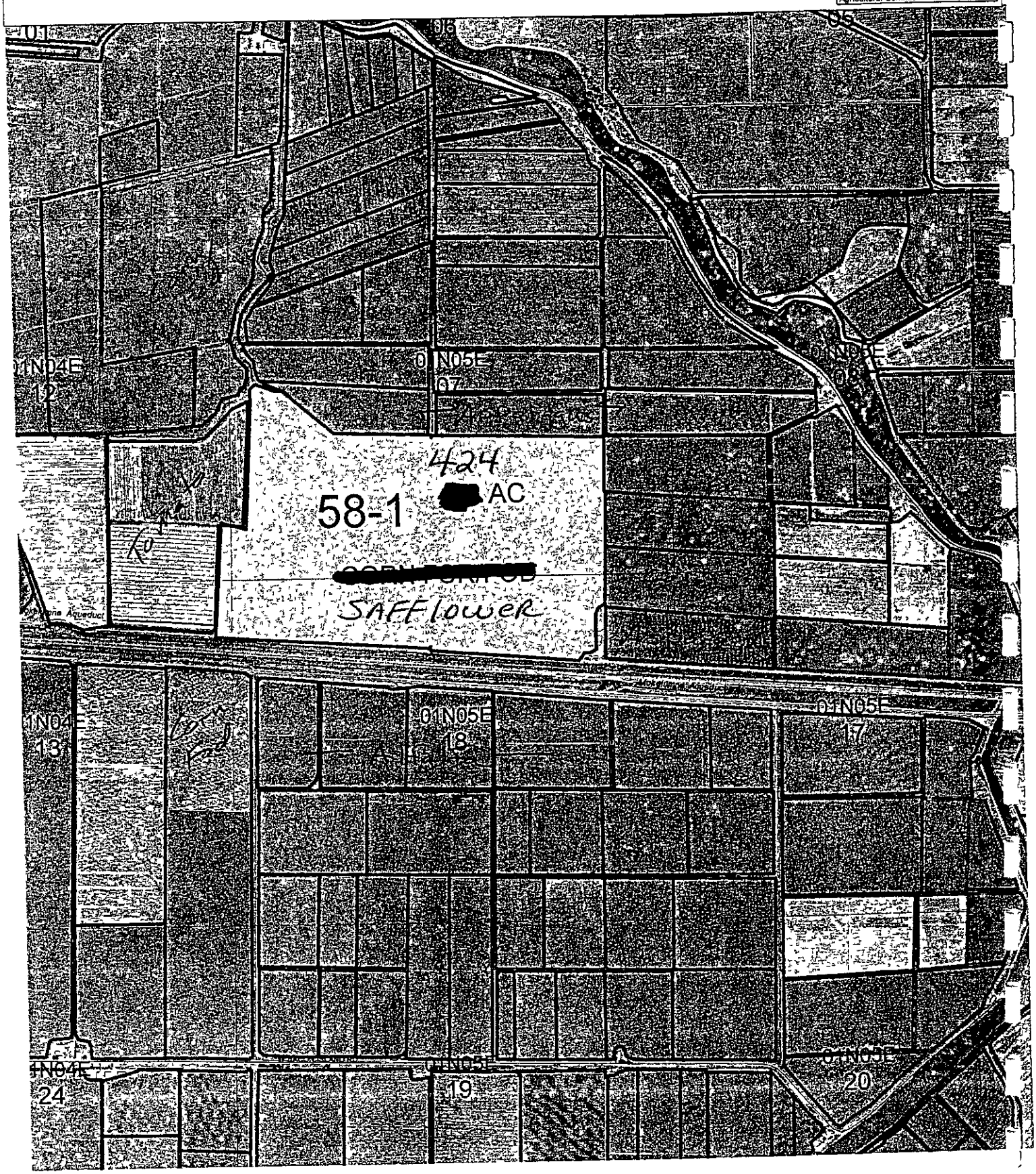
District E

Permit # 3904314

Permittee

M & R PACKING

Map # 58



State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 12 Year : 2001 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-01-3904314

Site Id Number	Total Planted Acres	County Number	Section	Town ship	N S	Range	E W	Base & Meridian
103-1 E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8706

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
12/11 0900	97.00 AC		10182-30-AA	96 PT	1.00000 PT/AC 50 GA	Gramoxone Extra Zeneca/ISK
12/11 0900	97.00 AC		707-243-AA	96 PT	1.00000 PT/AC 50 GA	Goal 2XL Rohm & Haas
12/11 0900	97.00 AC		19713-270-AA	120 LB	1.00000 LB/AC 50 GA	Simazine 90DF Drexel Chemical
12/11 0900	97.00 AC		7001-50616-AA	1024 OZ	6.00000 OZ/AC 50 GA	Ad Mor Simplot

Property Operator: Date:

Approved For: Holm Data Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 7 Year : 2001 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-01-3904314

Site Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
43 1 F	97.00	39	24	03	N	06	L	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8/8G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
7/09 0/00	97.00 AC		59639-35-AA	600 OZ	10.00000 OZ/AC 100 GA	Danitol 2.4 EC Valent
7/09 0/00	97.00 AC		100-917-AA	204 OZ	5.00000 OZ/AC 200 GA	Flint Novartis
7/09 0/00	97.00 AC		4301 374 AA	204 LB	8.00000 LB/AC 400 GA	Microbial Spec Atochem
7/09 0/00	97.00 AC		7001 50519 AA	2176 OZ	6.00000 OZ/AC 50 GA	Nutra Wet Simplot
7/09 0700	97.00 AC		1012 413 AA	33 LB	1.00000 LB/AC	Vendex 50WP Griffin Corp.
7/30 1300	97.00 AC		524-512-AA	6 GA	1.00000 GA/	Round Ultra Max Monsanto

RECEIVED
AUG 06 2001
SAN JOAQUIN COUNTY

Property Operator: _____ Date: _____

Approved for: Helm Dieta Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

nth : 6 Year : 2001 Grower: SKINNER RANCH
rsery : N
perator
Id: 39-01-3904314

ite Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
-1 E	97.00	39	24	03	N	06	E	M

mmodity/Crop	Field Location
RAPES	W.HWY 99 & 1/4 MI.S. HARNEY#1878G

te & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
/16 600	97.00 AC		707-215-AA	400 OZ	4.00000 OZ/AC 50 GA	Rally Rohm & Haas
/16 00	97.00 AC		3125-428-AA	85 OZ	1.00000 OZ/AC 100 GA	Provado Bayer
/16 00	97.00 AC		275-103-AA	153 LB	1.00000 LB/AC 50 GA	Dipel Abbott
/16 00	97.00 AC		7001-50519-AA	1088 OZ	6.00000 OZ/AC 50 GA	Nutra Wet Simplot
6/16 00	97.00 AC		4581-373-AA	510 LB	8.00000 LB/AC 400 GA	Microthiol Spec Atochem
6/21 00	97.00 AC		2935-503-AA	1940 LB	20.00000 LB/AC	Dusting Sulphur Wilbur Ellis

roperly Operator: _____ Date:

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 5 Year : 2001 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-01-3904314

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
03 1 L	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HANFY#870G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
5/08 0700	97.00 AC		4581 373 AA	420 LB	8.00000 LB/AC 400 GA	Microthiol Sp Atochem
5/08 0700	97.00 AC		1812-334-AA	84 LB	4.00000 LB/AC 400 GA	Kocide Griffin Corp.
5/08 0700	97.00 AC		7001-50516-AA	448 OZ	6.00000 OZ/AC 50 GA	Ad Wet Simplot
5/14 0600	97.00 AC		2935-503 AA	1940 LB	20.00000 LB/AC	Spec Flec Sulfu Wilbur Ellis
5/25 0600	97.00 AC		2935-503-AA	1940 LB	20.00000 LB/AC	Spec Flec Sulfu Wilbur Ellis

Property Operator: _____ Date:

Approved For: Holm Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agricultural Monthly Pesticide Use Report

Month : 4 Year : 2001 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 30 01 3504314

Site Id Number	Total Planted Acres	Crop Number	Section	Township	H S	Range	L W	Base & Meridian
1,-1 F	97.00	30	24	03	N	03	E	M

Commodity/Crop	Field Location
4.RAISIN	U.HWY 99 & 1/4 MI.S. HARRIS RD/06

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
4/13 0700	97.00 AC		4501 3250-601	100 LB	4.00000 LB/AC 400 GA	microbial Spec ialties
4/13 0700	97.00 AC		1012 644 AA	72 LB	1.00000 LB AI 400 GA	Kocide Griffin Corp.
4/13 0700	97.00 AC		2441-50616 AA	204 O	6.00000 PT/AC 400 GA	Ad Wet Simplot
4/27 0700	97.00 AC		2935-301 AA	1540 LB	20.00000 LB/AC	Spec Ilty Sulf Wilbur Ellis

Currently Operator: Date:

Approved For: Helm Grole Computer Systems, Inc.

San Joaquin Air

STATE OF CALIFORNIA

DEPARTMENT OF PESTICIDE REGULATION
PESTICIDE ENFORCEMENT BRANCH

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT : MULTIPLE SECTION

PR ENF 184 (EST 10/91)

№ 067176

SEE INSTRUCTIONS ON THE REVERSE OF THIS FORM

1 MONTH	2. YEAR	3 COUNTY NO
April	2001	39

4 COMMODITY / SITE TREATED	5 OPERATOR ID / PERMIT NO	6 OPERATOR (GROWER)	7 ADDRESS	8 CITY	9 ZIP CODE
Grapes	39-4313	M&R Packing	33 E Tokay St.	Lodi	95240

10 SECTION	11 TOWNSHIP	12 RANGE	13 BASE AND MERIDAN	14 SITE IDENTIFICATION NUMBER	15 DATE AND TIME APPLICATION COMPLETED	16 TOTAL PLANTED ACRES	17 TOTAL TREATED ACRES	18. APP METHOD (CHECK ONE)	19 EPA / CALIF REG NO FROM LABEL	20 TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE)	21 RATE PER ACRE	22 DILUTION	23. DAYS REENTRY	24 MANUFACTURER / NAME OF PRODUCT
24	3 (N) S	6 (E) W	S (M) H	3-1	4/27 @ 0730	97	97	GR AIR OTHER ☒	2935-48-AA	1940 LB OZ PT QT GA	20 lbs/ac	0		Sulfur
1	3 (N) S	5 (E) W	S (M) H	63-1	4/27 @ 0730	84	80	GR AIR OTHER ☒	" "	1600 LB OZ PT QT GA	20 lbs/Ac	0		"
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				
	N S	E W	S M H					GR AIR OTHER ☐		LB OZ PT QT GA				

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REPORT PREPARED BY G. Hamner DATE

REVIEWED BY
FOR AGENCY USE ONLY

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MAR 1 2 2001

SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 6 Year : 2002 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-02-3904314

Site Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
03-1 [	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MT.S. HARNEY#876G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
6/14 1600	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis
6/27 1600	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis

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SAN JOAQUIN COUNTY

Property Operator:_____ Date:_____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 2 Year : 2002 Grower : SKINNER RANCH
Amendment : N
Operator
Id: 39-02-3904314

Site Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
1 L	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
APES	W.HWY 99 & 1/4 MI.S. HARNEY@8/8C

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
2/08 400	97.00 AC		66196 2 AA	392 GA	6.00000 GA/AC 50 GA	Lime-Sulfur Sol A G Formulators

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SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

Property Operator: _____ Date: _____

Approved For: Hain-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 3 Year : 2002 Grower: WORCOM RANCH
Nursery : N
Operation
Id: 39-02 3904314

Site Id Number	Total Planted Acres	County Number	Section	Town Ship	N S	Range	E W	Base & Meridian
03-2	20.00	39	24	3	N	6	E	M

Commodity/Crop	Field Location
GRAPES	1/4 MI SE/HARNLY & HWY 99 #946G

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
8/05 8/08	20.00 AF		524 512 AA	2 GA	1.00000 GAL	Round Ultra Monsanto

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SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

Property Operator: Date:

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 8 Year : 2003 Grower: GORDON RANCH
Nursery : N
Operator
Id: 39-03-3904314

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
03-2	20.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	1/4 MI SE/HARNEY & HWY 99 #9460

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
8/09 1200	20.00 AC		524-512 AA	7.50 GA	1 00000 GA/	Round Ultra Max Monsanto

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SEP 05 2003
SEP 05 2003 DEPARTMENT
Pesticide Compliance

Property Operator: _____ Date: _____

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

nth : 8 Year : 2003 Grower: SKINNER RANCH
rsery : N
erator
Id: 39-03-3904314

te Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
-1 E	97.00	39	24	03	N	06	E	M

ommodity/Crop	Field Location
RAPES	W.HWY 99 & 1/4 MI.S. HARNEY#878G

ate & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
1/02 700	97.00 AC		3125-428-AA	48 OZ	1.00000 OZ/AC 100 GA	Provado 75 WSP Bayer
0/02 700	97.00 AC		707-229-AA	256 LB	2.00000 LB/AC 50 GA	Kelthane Rohm & Haas

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SEP 05 2003
SAN JOAQUIN COUNTY
AGRIC COMM.-LCEI

roperty Operator:_____ Date:_____

Approved For: Holm-Dietz Computer Systems, Inc.

Month : 6 Year : 2003
Nursery : N
Operator
Id: 39-03-3904314

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
03-1 E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8706

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
6/10 0600	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis
6/24 1000	97.00 AC		3125-559-AA	176 OZ	5.00000 OZ/AC 200 GA	Flint Bayer
6/24 1000	97.00 AC		72-50014-AA	33 PT	1.00000 PT/AC 100 GA	Exit Miller Chem

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STATE OF OREGON
DEPT OF AGRICULTURE

Property Operator:_____ Date:_____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 5 Year : 2003 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-03-3904314

Site Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
3-I E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#878G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
5/25 1900	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis
5/30 1600	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis

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JUN 0 9 2003
SAN JOAQUIN COUNTY
AGRI. COMM. - LODI

Property Operator:_____ Date:_____

Approved For: Holm-Dietz Computer Systems, Inc.

State of C[illegible]
Department of Fo[illegible]
Production Agriculture Mon[illegible]

Month : 4 Year : 2003 Grower: SKINNER RANCH
Nursery : N
Operator
Id: 39-03-3904314

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
[illegible] 1 E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8/8G

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product Manufacturer
4/02 0700	97.00 AC		4581-377-ZB	5[illegible]	[illegible]	[illegible]
4/02 0700	97.00 AC		1812-334-ZA	1[illegible]	[illegible]	[illegible]
4/02 0700	97.00 AC		65343-50005-AA	5[illegible]	[illegible]	[illegible]
4/29 0700	97.00 AC		55146-75	5[illegible]	[illegible]	[illegible]
4/29 0700	97.00 AC		1812-334-ZA	1[illegible]	[illegible]	[illegible]
4/29 0700	97.00 AC		65343-50005-AA	5[illegible]	[illegible]	[illegible]

Property Operator:_____ Date:_____

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

onth : 2 Year : 2003 Grower: SKINNER RANCH
ursery : N
perator
Id: 39-03-3904314

ite Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
3-1 E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#878G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution	Volume	Product & Manufacturer
2/02 1400	40.00 AC		66196-2-AA	448 GA	8.00000 GA/AC 50 GA		Lime-Sulfur Sol A G Formulator

Property Operator: _____ Date: _____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 1 Year : 2003 Grower: SKINNER RANCH
County : N
Operator
Id: 39-03-3904314

Field Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
1-1 E	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8780

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
1/16 10	97.00 AC		100-1074 AA	102 PT	1.00000 PT/AC 50 GA	Gramoxone Max Novartis Crop
1/16 10	97.00 AC		707-243-AA	102 PT	1.00000 PT/AC 50 GA	Goal 2XL Rohm & Haas
1/16 10	97.00 AC		19713-252-AA	136 LB	1.00000 LB/AC 50 GA	Simazine 90DF Drexel Chemical
1/16 00	97.00 AC		2935-50143-AA	1088 OZ	6.00000 OZ/AC 50 GA	R-11 Spreader Wilbur Ellis

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SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

Property Operator: _____ Date: _____

Approved Form [illegible] Computer Systems, Inc

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 1 Year : 2004 Grower: SKINNER RANCH
Nursery : N
Operator 33 East Tokay Street
Id: 39-04-3904114 Lodi CA 95240

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	F W	Base & Meridian
03-1 F	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#8786

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Dilution	Unit & Volume	Product & Manufacturer
1/27 0700	97.00 AC		100-1074-AA	105 PT	1.00000 50 GA	PT/AC	Gramoxone Max Syngenta
1/27 0700	97.00 AC		707-243-AA	105 PT	1.00000 50 GA	PT/AC	Goal 2XL Rohm & Haas
1/27 0700	97.00 AC		100-603-ZB	140 LB	1.00000 50 GA	LB/AC	Princep Cal 90 Novartis
1/27 0700	97.00 AC		2935-50142-AA	1120 OZ	6.00000 50 GA	OZ/AC	R-11 Spreader Wilbur Ellis

Property Operator _____ Date: _____

Approved For: Holm-Dietz Computer Systems, I

Page 4

State of California
Department of Food & Agriculture
Production-Agriculture Monthly Pesticide Use Report

: 12 Year : 2004 Grower: SKINNER RANCH
y : N
lor 33 East Tokay Street
ld: 39-04-3904314 Lodi CA 95240

d Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
	97.00	39	24	03	N	06	E	M

ity/Crop	Field Location
	W.HWY 99 & 1/4 MI.S. HARNEY#6/8G

Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
97.00 AC		100-1074-AA	105 PT	1.00000 PT/AC 50 GA	Gramoxone Max Syngenta
97.00 AC		707 243-AA	105 PT	1.00000 PT/AC 50 GA	Goal 2XL Rohm & Haas
97.00 AC		19713-252-AA	140 LB	1.00000 LB/AC 50 GA	Simazine 90DF Drexel Chemical
97.00 AC		7001 50519-AA	1120 OZ	6.00000 OZ/AC 50 GA	Nutra Wet Simplot

rty Operator: Date:

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

: 12 Year : 2004 Grower: GORDON RANCH
ry : N
ion 33 East Tokay Street
Id: 39-04-3904314 Lodi CA 95240

Field Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
	20.00	39	24	03	N	06	E	M

odity/Crop	Field Location
S	1/4 MI SE/HARNEY & HWY 99 1946G

&	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
5	20.00 AC		100-1074-AA	21 PT	1.00000 PT/AC 50 GA	Gramoxone Max Syngenta
5	20.00 AC		707 243-AA	21 PT	1.00000 PT/AC 50 GA	Goal 2XL Rohm & Haas
5	20.00 AC		72167-17 AA-73220	35 LB	1.00000 LB/AC 50 GA	Oryzalin Farm Saver LLC
5	20.00 AC		7001-50519-AA	224 OZ	6.00000 OZ/AC 50 GA	Nutra Wet Simplot

ity Operator: _____ Date: _____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

: 9 Year : 2004 Grower: GORDON RANCH
: N
r 33 East Tokay Street
ld: 39-04-3904314 Lodi CA 95240

Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
	20.00	39	24	03	N	06	E	M

ity/Crop Field Location
1/4 MI SE/HARNEY & HWY 99 #946G

Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
20.00 AC		524-512-AA	2.50 GA	1.00000 GA/	Round Ultra Max Monsanto

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OCT 08 2004

ity Operator: _____ Date: _____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

6 Year 2004 Grower: SKINNER RANCH
ry : N
tor 33 East Tokay Street
Id: 39-04-3904314 Lodi CA 95240

Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	F W	Base & Meridian
F	97.00	39	24	03	N	06	E	M

dity/Crop Field Location
S W.HWY 99 & 1/4 MI.S. HARNEY#8/BC

Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis
97.00 AC		2935-503-AA	1940 LB	20.00000 LB/AC	Spec Elec Sulfu Wilbur Ellis
97.00 AC		400-82-AA	400 LB	6.00000 LB/AC 400 GA	Omite-30W Uniroyal
97.00 AC		3125-428-AA	60 OZ	1.00000 OZ/AC 100 GA	Provado 75 WSP Bayer
97.00 AC		72-50003-AA	640 OZ	6.00000 OZ/AC 400 GA	Nu Film P Miller Chemical
97.00 AC		707-215-AA	200 OZ	4.00000 OZ/AC 50 GA	Rally Rohm & Haas

ity Operator: Date:

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

: 5 Year : 2004 Grower: SKINNER RANCH
y N
or 33 East Tokay Street
Id 39-04-3904314 Lodi CA 95240

d Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
E	97 00	39	24	03	N	06	E	M

dity/Crop Field Location
W.HWY 99 & 1/4 MI.S. HARNEY#8/86

Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution	Volume	Product & Manufacturer
97.00 AC		55146-75	540 LB	20.00000	LB/AC	Micro-Sulf Nufarm
97.00 AC		7001-00519 AA	576 OZ	6 00000	OZ/AC 50 GA	Nutra Wet Simplot
97.00 AC		2935 504-AA	1940 LB	20.00000	LB/AC	Signal Wilbur Ellis

ty Operator: _____ Date _____

Approved For Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

: 4 Year : 2004 Grower: SKINNER RANCH
ry : N
tor 33 East Tokay Street
Id: 39-04-3904714 Lodi CA 95240

Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	F W	Base & Meridian
E	97.00	39	24	03	N	06	F	M

dity/Crop	Field Location
S	W.HWY 99 & 1/4 MI.S. HARNEY#8780

Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
97 00 AC		100-1074-AA	18 PT	1.00000 PT/AC 50 GA	Gramoxone Max Syngenta
97 00 AC		45989-50012-AA	192 OZ	6 00000 OZ/AC 100 GA	Regulaid Kalo Ag Chems
97 00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis

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ity Operator Date:

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

onth : 3 Year : 2004 Grower: SKINNER RANCH
ecery : N
rator 33 East Tokay Street
Id: 39-04-3904314 Lodi CA 95240

e Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
3-1 E	97.00	39	24	03	N	06	E	M

ommodity/Crop	Field Location
APES	W.HWY 99 & 1/4 MI.S. HARNEY#8780

e & me	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
3/25 0	97.00 AC		55146-75	720 LB	20.00000 LB/AC	Micro-Sulf Nufarm
3/25 0	97.00 AC		65343-50005-AA	768 OZ	6.00000 OZ/AC 50 GA	Ad-Here XL Plant Health

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operty Operator: _____ Date: _____

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State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Usage Report

Month : 6 Year : 2005
Nursery : N
Operator
Id: 39-05-3904314

Grower: SKINNER RANCH
33 East Tokay Street
Lodi CA 95240

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridia
03-1 C	97.00	SJ	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#870G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
6/01 0600	97.00 AC		2935-504-AA	1940 LB	20.00000 LB/AC	Signal Wilbur Ellis
6/21 0600	97.00 AC		100-1074-AA	48 PT	1.00000 PT/AC 50 GA	Gramoxone Max Syngenta
6/21 0600	97.00 AC		36208-50014-AA	12 PT	1.00000 PT/AC 50 GA	Activator 90 Loveland Indu t
6/10 0600	97.00 AC		62719-134-AA	576 OZ	10.00000 OZ/AC 400 GA	Rubigan Dow Agroscie e
6/10 0600	97.00 AC			18 GA	1.00000 GA/AC 400 GA	Actagro PK-ZB
6/10 0600	97.00 AC		2935-50142-AA	576 OZ	6.00000 OZ/AC 50 GA	R-11 Spreader Wilbur Ellis

Approved For: Holm-Dietz Computer Systems, Inc

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 6 Year : 2005 Grower: SKINNER RANCH
Nursery : N
Operator 33 East Tokay Street
Id: 39-05-3904314 Lodi CA 95240

Site Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
03-1 E	97.00	SJ	24	03	N	06	F	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#878G

Date & Time	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
6/30 1900	97.00 AC		264-777-AA	192 OZ	5.00000 OZ/AC 200 GA	Flint Aventis
6/30 1900	97.00 AC		2935-50142-AA	512 OZ	6.00000 OZ/AC 50 GA	R-11 Spreader Wilbur Ellis

Property Operator: _____ Date: _____

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

Month : 7 Year : 2005 Grower : SKINNER RANCH
Nursery : N
Operator 33 East Tokay Street
Id: 39 00-3904314 Lodi CA 95240

Site Id Number	Total Planted Acres	County Number	Section	Township	N S	Range	E W	Base & Meridian
03-1 1	97.00	39	24	03	N	06	E	M

Commodity/Crop	Field Location
GRAPES	W.HWY 99 & 1/4 MI.S. HARNEY#870G

Date & Time	Acreage & Units Treated	How Applied	Registration From Label	Formulated Product Used	Rate Per Unit & Dilution Volume	Product & Manufacturer
7/19 0600	97.00 AC		2935-303-AA	1940 LB	20.00000 LB/AC	Dusting Sulphur Wilbur Ellis

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Property Operator: Date:

Approved For: Holm-Dietz Computer Systems, Inc.

State of California
Department of Food & Agriculture
Production Agriculture Monthly Pesticide Use Report

nth : 2 Year : 2006 Grower : Skinner Ranch
sery : N
rator 33 East Tokay Street
Id: 39-06-390431-4 Lodi CA 95240

e	Id Number	Total Planted Acres	County Number	Section	Town-ship	N S	Range	E W	Base & Meridian
-1	F	97.00	39	24	03	N	06	E	M

mmodity/Crop	Field Location
PES	W.HWY 99 & 1/4 MI.S.HARNEY(3/06

e- & me	Acreage & Units Treated	How Appld	Registration From Label	Formulated Product Used	Rate Per Unit Dilution	& Product Volume	& Product Manufacturer
06-0	97.00 AC		66196-2-AA-1/545	984 GA	6.00000 50 GA	GA/AC	Lime-Sul-Fur Sol Monterey Chemic

operly Operator: _____ Date: _____

Approved For: Holm-Dietz Computer Systems, Inc.

2002

SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205

Office: (209)468-3300 Recorder (NOI): (209)468-3300 FAX: (209)468-3330

RESTRICTED MATERIALS PERMIT

Permit#: 39-02-3904551
County HQ District#: E

TSUTSUMI, TOM
3725 E ARMSTRONG RD
LODI, CA 95240-

Expiration Date: 12/31/2002
Effective Date : 1/4/2002

GARY TSUTSUMI
3725 E ARMSTRONG RD
LODI, CA 95240-

Home: (209)368-8990
Shop. (209)368-5134
Fax:
Mobile: ( ) -

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App	[X]	Seasonal	[X]	Poss & Use	[X]	Phone	[X]	Fax	[ ]
Q A Cert	[ ]	Job	[ ]	Poss Only	[ ]	Box	[X]	Modem	[ ]
Ag PCO	[ ]					In Person	[X]		
Non-Ag	[ ]								

NOI required 24 hours prior to application

Numb	Pesticide	Pest(s)	Form.	Method(s)	Applicator(s)	
1051	SEVIN	LARVAE	Liquid	Ground	PCO	Grower
1061	FURADAN	NEMATODE	Fumigant	Ground	PCO	Grower
1360	CHLOROPICRIN	NEMATODE	Fumigant	Ground	PCO	Grower
3850	METHYL BROMIDE	SOIL/STORED	Fumigant	Ground	PCO	Grower
4840	ALUMINUM PHOSPH	RODENTS	Fumigant	Ground	PCO	Grower
5540	STRYCHNINE	GOPHERS	Bait	Ground	PCO	Grower
16011	PARAQUAT	WEEDS	Liquid	Ground	PCO	Grower
18571	NEMACUR	NEMATODE	Fumigant	Ground	PCO	Grower

Non-Ag Use:
Conditions: PW

I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides. I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit. I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be use in the treatment. [Form PR-ENF-125 (Rev. 07/92) Pesticide Enforcement Branch]

Permit Applicant: Gary Tsutsumi Sign [signature]

Title. owner Date. 1-4-2002

Issuing Officer [signature] Date. 1/4/2002

TSUTSUMI, TOM Permit#: 39-02-390455-1

Employees handle pesticides (Y or N) [Y]

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
CHERRY (5002-0)	1-3	E	24	03N	06E	M	5.00	A	PW
						NE ARMSTRONG & SPRR			
	1051, 1360, 3850, 5540, 16011								
	1-4	E	24	03N	06E	M	10.00	A	PW
						NW ARMSTRONG & MICKEGROVE			
	1051, 1360, 3850, 5540, 16011								
GRAPE (29141-0)	1-1	E	24	03N	06E	M	31.00	A	P
						NE/ARMSTRONG & SPRR			
	1051, 1061, 1360, 4840, 5540, 16011, 18571								
	1-2	E	24	03N	06E	M	15.00	A	P
						SE/HARNEY & SPRR			
	1051, 1061, 1360, 4840, 5540, 16011, 18571								

TSUTSUMI, TOM Permit#: 39-02-3904551

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[X] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[X] S - Metam Sodium (Vapam)
[_] T - Aldicarb (Temik)
[X] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9 Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary. 5,8)
[X] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true, and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

1-4-2000
Date

TSUTSUMI, TOM Permit#: 39-02-3904551

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

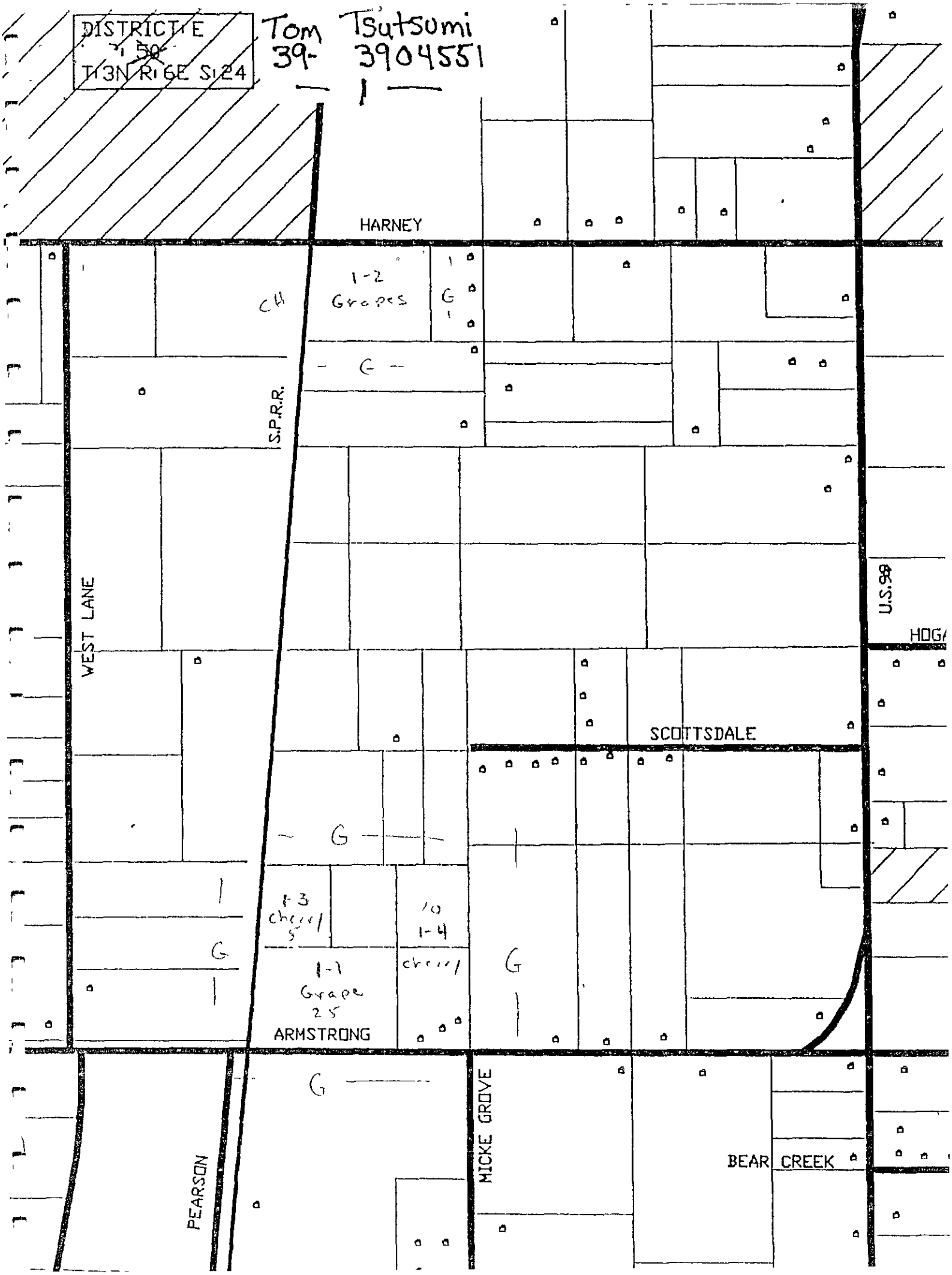
2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

*** Last Page ***


DISTRICT E
T3N R6E S24
Tom Tsutsumi
39- 3904551
HARNEY
1-2
Grapes
G
CH
S.P.R.R.
WEST LANE
U.S.99
SCOTTSDALE
1-3
cherry
5
10
1-4
cherry
1-1
Grape
25
ARMSTRONG
PEARSON
MICKE GROVE
BEAR CREEK

SCOTT HUDSON
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS & MEASURES
ANIMAL CONTROL

VICKI HELMAR
ASST AGRICULTURAL COMMISSIONER
ASST SEALER OF WEIGHTS & MEASURES

SAN JOAQUIN COUNTY

OFFICE OF THE

AGRICULTURAL COMMISSIONER

POST OFFICE BOX 1809
STOCKTON, CALIFORNIA 95201-1809
PHONE 209/468-3300
FAX 209/468-3330

MAIN OFFICE - STOCKTON
1868 E HAZELTON AVE

LODI OFFICE
210 N SACRAMENTO ST

TRACY OFFICE
503 E 10TH STREET

SIMMS STATION - RIPON
17620 E HWY 120

Date· December 1, 2000

To Paraquat (Gramoxone) Restricted Materials Multi-Year Permit Holders

From. Gary W Stockel, Deputy Agricultural Commissioner

Subject Permit Conditions for Paraquat Dichloride

The following permit conditions for the use of paraquat dichloride are now a part of your current Restricted Materials Permit

CONDITIONS FOR THE USE OF PARAQUAT DICHLORIDE (GRAMOXONE)

Persons working as applicators or flaggers (except applicators working in an enclosed cab or flaggers working in an enclosed vehicle) shall wear a dust/mist respirator approved by MSHA/NIOSH (number prefix TC-84-A).

These use conditions are added to your permit based on a determination by California Department of Pesticide Regulation that an inhalation hazard exists for applicators and flaggers exposed to paraquat dichloride outside of enclosed cabs or vehicles

If you have any questions about these conditions, please contact the San Joaquin County Agricultural Office that issued your permit

2005

SAN JOAQUIN COUNTY
1668 E HAZELTON AVENUE
STOCKTON, CA 95205

Web URL www co san-joaquin ca us/agcomm
E-Mail
Office (209)468-3300 Recorder (NOI) (209)468-3300 FAX (209)468-3330

RESTPICTED MATERIALS PERMIT PERMIT # 39-05-3904551
County HQ District # E

TSUTSUMI, TOM
3725 E ARMSTRONG RD
LODI, CA 95240-

Expiration Date 12/31/20
Effective Date ~~01/01/19~~ 1/10/03

GARY TSUTSUMI
3725 E ARMSTRONG RD
LODI, CA 95240-

Home (209)368-8990
Shop (209)368-5134
Fax
Mobile ( ) -

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App	X	Seasonal	X	Poss & Use	X	Phone	X	Fax	
Q A Cert		Job		Poss Only		Box	X	Modem	
Ag PCO						In Person	X	Web	
Non-Ag									

NOI required 24 hours prior to applicati

Non-Ag Use None
Conditions PW

I understand that this permit does not relieve me from liability for any damag to persons or property caused by the use of these pesticides I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit [authorize inspection at all reasonable times and whenever an emergency exists by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storag facilities for pesticides or emptied containers and equipment used or to be us in the treatment [Form PR-ENF-125 (Rev 07/92) Pesticide Enforcement Branch]

Permit Applicant GARY TSUTSUMI Sign
Title OWNER Issue Date 1/10/03
Issuing Officer Issue Date 1/10/03

TSUTSUMI, TOM Permit# 39-05-3904551

Employees handle pesticides (Y or N) |Y|

Permit Pesticides

Numb	Pesticide	Pest(s)	Form	Method(s)	Applicator(s)	
1051	SEVIN	LARVAE	Liquid	Ground	PCO	Grower
1061	FURADAN	NEMATODES	Fumigant	Ground	PCO	Grower
1360	CHLOROPICRIN	NEMATODES	Fumigant	Ground	PCO	Grower
3850	METHYL BROMIDE	SOIL PESTS	Fumigant	Ground	PCO	Grower
4840	ALUMINUM PHOSPH	RODENTS	Fumigant	Ground	PCO	Grower
5540	STRYCHNINE	GOPHERS	Bait	Ground	PCO	Grower
16011	PARAQUAT	WEEDS	Liquid	Ground	PCO	Grower
18571	NEMACUR	NEMATODES	Fumigant	Ground	PCO	Grower

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	
CHERRY (5002-0)	1-3	E	24	03N	06E	M	5 00	A	PW
					NE ARMSTRONG & SPRR				

PW

1051(SEVIN), 1360(CHLOROPICRIN), 3850(METHYL BROMIDE), 5540(STRYCHNIN
16011(PARAQUAT)

	1-4	E	24	03N	06E	M	10 00	A	PW
					NW ARMSTRONG & MICKEGROVE				

PW

1051(SEVIN), 1360(CHLOROPICRIN), 3850(METHYL BROMIDE), 5540(STRYCHNIN
16011(PARAQUAT)

GRAPE (29141-0)	1-1	E	24	03N	06E	M	31 00	A	P
					NE/ARMSTRONG & SPRR				

P

1051(SEVIN), 1061(FURADAN), 1360(CHLOROPICRIN)
4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE), 16011(PARAQUAT)
18571(NEMACUR)

	1-2	E	24	03N	06E	M	15 00	A	P
					SE/HARNEY & SPRR				

P

1051(SEVIN), 1061(FURADAN), 1360(CHLOROPICRIN)
4840(ALUMINUM PHOSPHIDE), 5540(STRYCHNINE), 16011(PARAQUAT)
18571(NEMACUR)

* * * LAST PAGE * * *

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

PERMIT NO 39045551

Tom Tsutsumi

PAGE NO

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	S/Armstrong														
9	W/SPRR	24	3N	6E		pre Grape	26	Telone	Soil pests						
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
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24															
25															
26															
27															
28															
29															
30															
31															
32															
33															

*Formulation L—Liquid B—Bait D—Dust F—Fumigant G—Granules WP—Wettable Powder O—Other

**Method A—Air F—Fumigation GR—Ground O—Other

APPLICANT SIGNATURE _____ DATE 4/15/04

ISSUED BY _____ DATE 4/13/04

PESTICIDE ENFORCEMENT BRANCH PR ENF 125A (Rev. 9

The Following Conditions Apply To ..... Permit#: 39-04-390455

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[_] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium & Metam Potassium
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9: Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[X] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

1-10-03
Date

The Following Conditions Apply To ..... Permit#: 39-04-390455

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

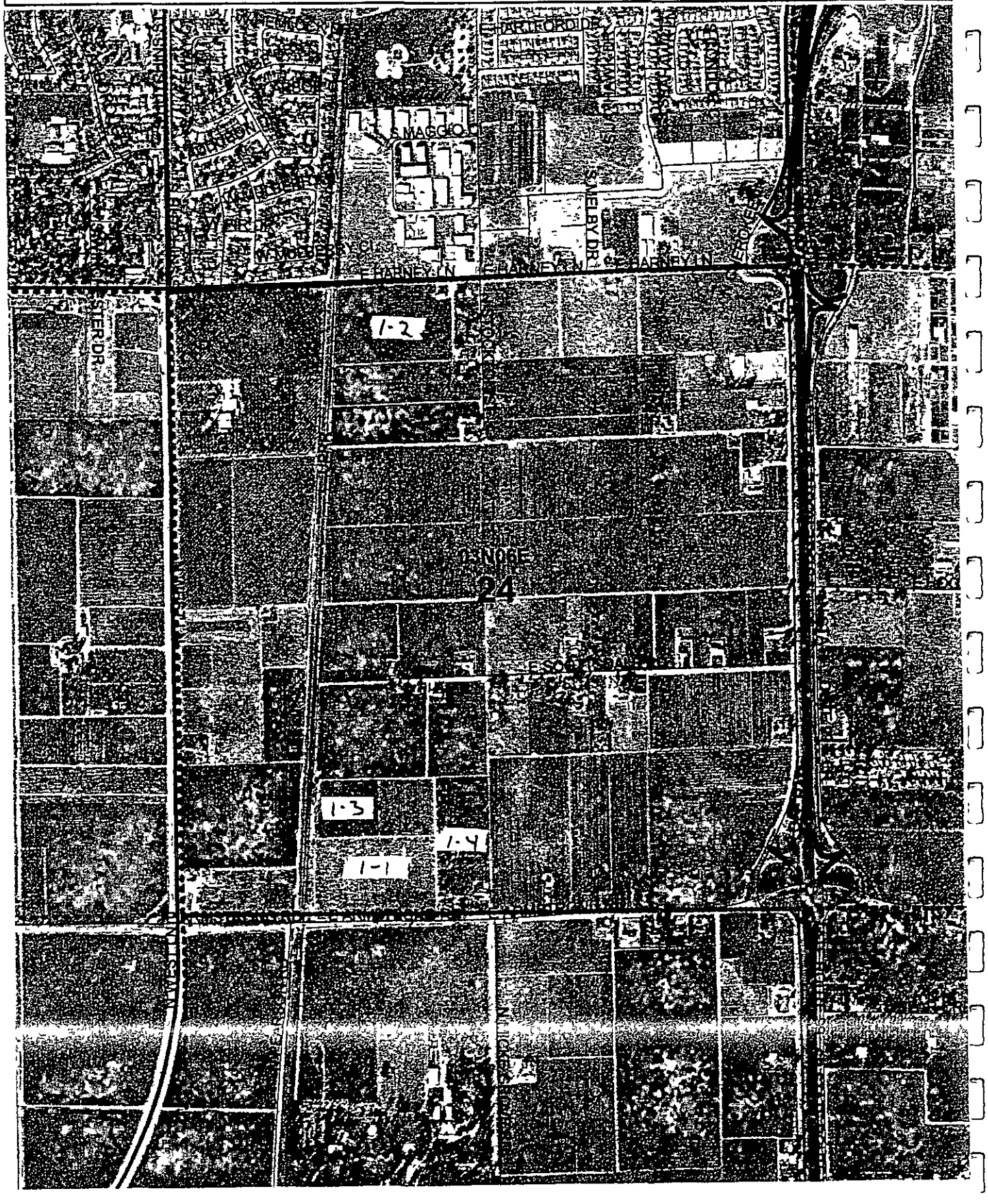
5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

*** Last Page Of Conditions ***

District E

Permit #: 4551 Permittee: Tom Tsutsumi Map #: 1

December 3, 2002 GIS



31, 200

GARY TSUTSUMI

OWNER/SON

1/31/06

Steve Dinardo

1/31/06

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]
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[illegible]	[illegible]

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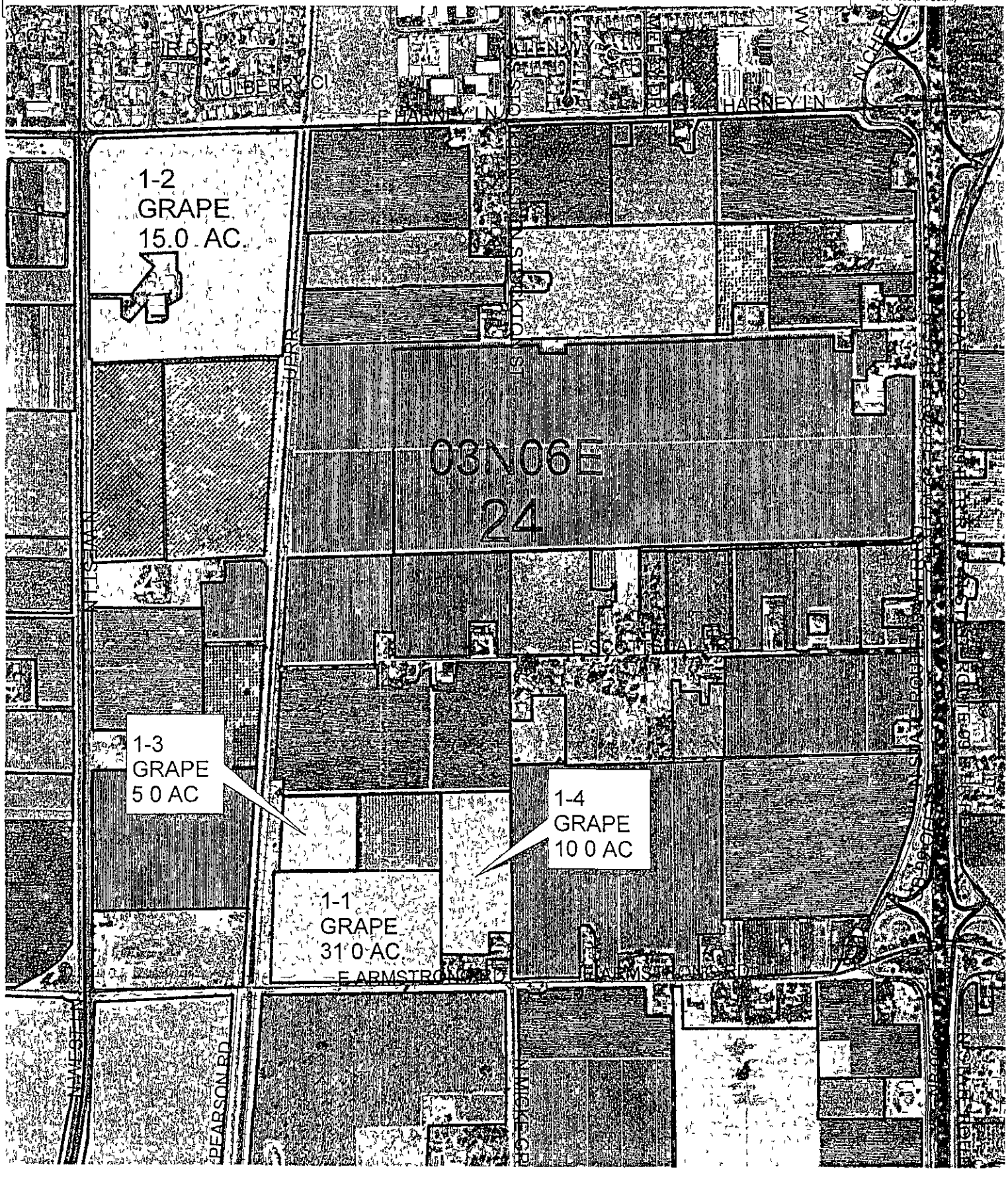
[illegible]

[illegible]

District E

Permit #	Permittee	Map #
3904551	TSUTSUMI, TOM	1



STATE OF CALIFORNIA

PRODUCTION AGRICULTURAL PESTICIDE USE REPORT

Date	Field
Month [illegible]	Year [illegible]

Field [illegible]

[illegible] Nursery 2

07-[illegible]-01 to 07-[illegible]

4 Operator ID, Use Permit	
39-[illegible]-35047[illegible]	

5 Operator/Grower	6 Address	7 City	8 Zip
TOP SOIL INC	3725 E. ARMSTRONG ROAD	LODI, CA	95240

9 Site ID	10 Planted Acres	11 County	12 Sec	13 Twn	14 Rng	15 M&D
[illegible]	15	39	24	3N	3E	M

17 Commodity Complete	18 Field Location
CLEARE (PRUNUS)	MAP 1 FIELD E. SE. HARVEY & [illegible]

20 Date Completed	21 Pest Pre-Treated	22 Acres Treated	23 Application Method	24 Registration #	25 Total Product	26 Date Applied	27 Rate	28 Unit
07-[illegible]-01 NEXTEA	15 [illegible] Acres	[illegible]	BASE	[illegible]	5.1875 lb	1	6.30 lbs /Treated Acl	[illegible]
07-[illegible]-01 VINGARD WO	15 [illegible] Acres	6.[illegible]160-00275-AP-[illegible]	NOVAPIE	[illegible]	5.8750 lb	[illegible]	10.[illegible] lbs /Treated Acl	[illegible]
10/7-17-01 SAVIGARD 300	15 [illegible] Acres	[illegible]2735-[illegible]-AA-[illegible]	[illegible]-TLLIP	[illegible]	[illegible] ozs	1	[illegible] ozs /100 Gal	[illegible]

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[illegible] 2001

STATE OF CALIFORNIA PMIS 011

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Month 2 Year 2

Field: TT1-2

☐ Nursery 3 06 01-01 to 06-31 01

4 Operator ID/ Use Permit#
39-02-3904551

5 Operator (Grower)	6 Address	7 City	8 Zip
TOM TSUTSUMI	2725 E. ARMSTRONG ROAD	LODI, CA	95240

9 Site ID	10 Plnt'd Acres	11 County	12 Sec	13 Twn	14 Rng	15 Mrdn
1-2 E	15	39	24	3N	6E	M

17 Commodity Crop Site (GRAPES (FRESH)) 18 Field Location MAP FIELD 2, SE/ BARNES & SPRR

21 Date/Time Complete	22 Area Treated	23 How Apply	24 Registration#	25 Total Product	26 Days Reentry	27 Rate	28 Dil. Vol.
06-09-01 / 1100	15.00 Acres	G	100100-00898-AA-00000 NOVARTIS	120.00 ozs	3	8.00 ozs /Treated Ac	100 Gal
AGRI-MEK 0.15 EC							
06-09-01 / 1100	15.00 Acres	G	100100-00910-AA-00000 NOVARTIS	1.8750 lb.	3	2.00 ozs /Treated Ac	100 Gal
FLINT FUNGICIDE							
06-09-01 / 1100	15.00 Acres	G	102935-00407-ZA-00000 WILBUR-ELLIS	45.00 lb.	3	3.00 lbs /Treated Ac	100 Gal
GOLDEN-DEW							
06-09-01 / 1100	15.00 Acres	G	102935-50142-AA-00000 WILBUR-ELLIS	1.89 gal	3	1.00 pts / 100 Gal.	100 Gal
R-11							

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RECEIVED
JUL 12 2001
AGR. COMM. - STOCKTON

Operator Signature

Operator Signature

Date: 09-09-02 Phone: [illegible]-5134

RECEIVED
SEP 30 2002
SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

STATE OF CALIFORNIA
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

August 2002
Month 1 Year 2

Field: [illegible]
08-01-02 to 08-31-[illegible]

1. Nursery 5

2 Operator ID/ Use Permit#
39-02-3904551

5 Operator(Grower	6 Address	7 City	8 Zip
(UN)SUTSUMI	3725 E. ARMSTRONG ROAD	LODI, CA	95240

9 Site ID	10 Plntd Acres	11 County	12 Sec	13 Twp	14 Rng	15 Mrdn
1-2 E	15	39	9	3N	6E	M

17 Commodity Crop/Site								18 Field Location
GRAPES (FRESH)	_	_	_	_	_	_	_	MAP 1 FIELD 2, 9E / HARNEY & SPRW

21 Date/ Time Complete	22 Area Treated	23 How Apply	24 Registration#	25 Total Product	26 Days Reentry	27 Rate	28 Total
08-04-02 1100	15.00 Acres	[illegible]	10182-00288-CA-00000 BAYER	7.7500 lb.		[illegible] gal/Treated Ac.	[illegible]
08-09-02 1100	15.00 Acres	[illegible]	51036-00106-CA-00000 BASF	6.1375 lb.		6.[illegible] lb/Treated Ac.	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]

[illegible] 25, [illegible]

ne

[illegible]

[illegible]

[illegible]

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: August YEAR 2: 2002

NURSERY 3: [ ]

Page ___ of ___

Operator ID/Permit No 4	Operator ~~(Grower)~~ 5	Address 6	City 7	Zip Code 8
39-02-39-4557	TSTSOM	3725 E ARMSTRONG	LODI	95240

Site ID No 9	Total Planted Acreage/Units 10	County No 11	Section 12	Township 13	Range 14	Base & Meridian 15
1-2-5	14	39	24	3 N/S	6 E/W	S M H

Commodity/Site Treated 17: GRAPES

Field Location 19: 3/8 HARDY

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	8/4/02 6AM	14	GR ☑ AIR ☐ OTHER ☐		03125-00388-ZA-0000	4 OZ LB OZ PT QT GA				ELITE
	4	"	GR ☐ AIR ☐ OTHER ☐		07969-00106-ZA-0000	6.6 OZ LB OZ PT QT GA				NOXTOX
	"	"	GR ☐ AIR ☐ OTHER ☐		02935-50161-AA-00000	4 OZ LB OZ PT QT GA				SYLGARD
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

POF ___ REP/ ___ BY [signature] DATE 8/19/02 REVIEWED BY ___

(1) CAC Submit to Agricultural Commissioner within 10 days of month following application 33-017C (3/90) For Agency Use Only

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

July — MONTH 1 | 2002 — YEAR 2

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 34-02-390455	5 TSUMI	6 3925 E ARMSTRONG	7 LODI	8 95240

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-2-G	10 14	11 39	12 24	13 3 (N)	14 6 (E)	15 S M H

Commodity/Site Treated: 17 GRAPES

Field Location: 19 S/G HARNEY / SPRR

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	7/13/02		GR ☐ AIR ☐ OTHER ☐		03125-00388-ZA-00000	4 OZ/AC LB OZ PT QT GA				[redacted] BLUE
			GR ☐ AIR ☐ OTHER ☐		07969-00106-ZA-00000	6.6 OZ/AC LB OZ PT QT GA				NOXTON
			GR ☐ AIR ☐ OTHER ☐		07935-50161-AA-0000	4 OZ/AC LB OZ PT QT GA				SUGARD
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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REPORT PREPARED BY [signature] DATE 7/31/02 | REVIEWED BY ___

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: June YEAR 2: 2002

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 39-023904551	5 TSUTSUMI	6 372 S E ARMSTRONG	7 LODI	8 95240

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-2-6	10 14	11 39	12 24	13 3 N S	14 6 E W	15 S M H

Commodity/Site Treated: 17 GRAPES

Field Location: 19 S/O HARNEY / SPRR

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	6/19/02 6AM	14	GR ☐ AIR ☑ OTHER ☐		2935-18-1702	15 LB OZ PT QT GA				Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6/19/02	14	GR ☐ AIR ☑ OTHER ☐		02935-50102-AA-0000	4 OZ LB OZ PT QT GA				Stylgard
			GR ☐ AIR ☐ OTHER ☐		02935-00407-ZA-00000	~~Bt~~/AC LB OZ PT QT GA				Golden Oil
	6/19/02 6AM	14	GR ☐ AIR ☑ OTHER ☐		00707-00215-AA-00000	5 OZ/AC LB OZ PT QT GA				Rally 40W
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: May YEAR 2: 2002

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 3902-390455	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-2-B	10 14	11 39	12 24	13 3 N/S	14 6 E/W	15 S M H

Commodity/Site Treated: 17 Grapes

Field Location: 19 S/B HARNEY/SPRD

21 Chemical Number	22 Date/Time Application Completed	23 Acreage/Units Treated	24 App Meth (Check One)	25 Block ID (If Applicable)	26 EPA/Calif Reg No From Label	27 Total Product Used (Circle One Unit of Measure)	28 Days Reentry	29 Rate Per Acre	30 Dilution	31 Product/Manufacturer
	5/1/02 6AM	14	GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15 LB OZ PT QT GA				Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/12/02 7AM		GR ☐ AIR ☐ OTHER ☐		00100-00828-AA-000	10 oz/a LB OZ PT QT GA				Vangard
			GR ☐ AIR ☐ OTHER ☐		02935-00407-ZN-0000	3# /AC LB OZ PT QT GA				Golden Dew
			GR ☐ AIR ☐ OTHER ☐		02935-50161-AA-00	4QT/AC LB OZ PT QT GA				Sylgard
			GR ☐ AIR ☐ OTHER ☐		Recent	6# /AC LB OZ PT QT GA				Mord-Lock
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/23/02 7AM	14	GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15 LB OZ PT QT GA				Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: April
YEAR 2: 2002

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 39-02-390455	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-25	10 14	11 39	12 24	13 3 N S	14 6 E W	15 S M H

Commodity/Site Treated: 17 GRAPES

Field Location: 19

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	4/13	14	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	15 LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4/21		GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15 LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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33-017C (3/90) For Agency Use Only

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

January (MONTH 1) 2002 (YEAR 2)

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NO	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-02-3904551	5 TSU TSUMI	6 3725 E Armstrong	7 Lodi	8 95240

SITE ID NO	TOTAL PLANTED ACREAGE/UNITS	COUNTY NO	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2-6	10 14	11 39	12 24	13 3 N/S	14 6 E/W	15 S M H

COMMODITY/SITE TREATED: 17 Grapes

FIELD LOCATION: 19 SG/Harney ÷ SPRR

CHEMICAL NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METH (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA/CALIF REG NO FROM LABEL 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT/MANUFACTURER 31
	1-20-02	14	GR ☐ AIR ✓ OTHER ☐		62707-00243-AA-20000	8pts/AC LB OZ PT QT GA				GOAL 2XL
	"	"	GR ☐ AIR ✓ OTHER ☐		10182-00280-AA-00000	1.5pts/AC LB OZ PT QT GA				GRAMOXONE
	"	"	GR ✓ AIR ☐ OTHER ☐		1050990-50016-AA-000	4qts/AC LB OZ PT QT GA				RNA ACTIVATOR
	"		GR ☐ AIR ✓ OTHER ☐		10182-00258-AA-70506	8#/AC LB OZ PT QT GA				DELWICOL
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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(1) CAC Submit to Agricultural Commissioner within 10 days of month following application 33-017 C (3/90)

STATE OF CALIFORNIA
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

PMIE-0117

January	2002
Month 1	Year 2

Fields TT1-2

01-01-02 to 01-31-02

Worksheet 3

4 Operator ID, Use Permit
3P-UC-39 4352

5 Operator Grower	6 Address	7 City	8 Zip
TCP TULTSMI	2728 E. PARKTRUNS RD-1	LODI, CA	95240

9 Site ID	10 Planted Acres	11 County	12 Sec	13 Twp	14 Rng	15 Mrdn
1-3	15	SJ	01	3N	6E	M

16 Commodity, Crop/Site	17 Field Location
0FA165 (FARSH)	NAF 1 FIELD 2, SE, HARRIS & CRPP

21 Date, Time Applied	22 Applied Area Acres Treated	23 Registration#	25 Total Product	26 Date Insertn.	27 Rate	28 Dil Vol.
1-31-02 11:00	15.00 Acres	101-222-0.WDU-14-0.000 WATERSHIP-GAN	4.30 gal P	1	0.01 gal Treated Acl	50 Gal.
01-20-02 1:00	15.00 Acres	3110132-2028-AA-0000 CONECA	1.15 gal P	1	1.51 gal Treated Acl	50 Gal.
01-21-02 1:00	15.00 Acres	3125935-50-2-AA-0000 WILBUR-ELLIS	1.51 gal P	1	4.00 gal 100 Gal.	50 Gal.

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G=Ground Application

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STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

July (MONTH 1) 2003 (YEAR 2)

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NO	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-05-390455	5 TSUBOMI	6 3726 E ARMSTRONG	7 LODI	8

SITE ID NO	TOTAL PLANTED ACREAGE/UNITS	COUNTY NO	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2-E	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

COMMODITY/SITE TREATED 17

FIELD LOCATION 19 N/E HARNEY / SPRE

CHEMICAL NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METH (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA/CALIF REG NO FROM LABEL 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT/MANUFACTURER 31
	7/16/03	14	GR ☑ AIR ☐ OTHER ☐		00400-00427-AA-0000	5#/AC LB OZ PT QT GA				Omite
			GR ☑ AIR ☐ OTHER ☐		03125-00388-ZA-0000	40z/AC LB OZ PT QT GA				Elite
			GR ☐ AIR ☑ OTHER ☐		EXEMPT	5#/AC LB OZ PT QT GA				MORA LEAF
			GR ☑ AIR ☐ OTHER ☐		03125-00428-AA-0000	.70z/AC LB OZ PT QT GA				PROVADO
			GR ☐ AIR ☐ OTHER ☐		02935-50161-AA-0000	40z AC LB OZ PT QT GA				SYLGARD
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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Agricultural Commissioner within 10 days of month following application

33 017C (3/90)

For Agency Use Only

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: JUNE
YEAR 2: 2003

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 39-05-3904551	5 TSUTSUMI	6	7	8

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-2-6	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

Commodity/Site Treated 17

Field Location 19 N/O HARNEY

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	6/13/03	14	GR ☑ AIR ☐ OTHER ☐			3½# /AC LB OZ PT QT GA				ACREMITE
			GR ☐ AIR ☐ OTHER ☐		00707-00215-AA-00000	4 OZ/AC LB OZ PT QT GA				RAPTOR
			GR ☐ AIR ☐ OTHER ☐		Exempt	LB OZ PT QT GA				MORA LEAF
			GR ☐ AIR ☐ OTHER ☐		02935-50161-AA-00000	4 OZ/AC LB OZ PT QT GA				SYLGARD
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6/25		GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15# LB OZ PT QT GA				SULFER
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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88-0176 (3/90)

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

MONTH 1: May
YEAR 2: 2003

☐ NURSERY 3

Page ___ of ___

Operator ID/Permit No	Operator (Grower)	Address	City	Zip Code
4 39-05-3904551	5 TJUTSUMI	6	7 LODI	8

Site ID No	Total Planted Acreage/Units	County No	Section	Township	Range	Base & Meridian
9 1-2-G	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

Commodity/Site Treated: 17 GRAPES

Field Location: 19 N/E HARNEY / SPRR

Chemical Number 21	Date/Time Application Completed 22	Acreage/Units Treated 23	App Meth (Check One) 24	Block ID (If Applicable) 25	EPA/Calif Reg No From Label 26	Total Product Used (Circle One Unit of Measure) 27	Days Reentry 28	Rate Per Acre 29	Dilution 30	Product/Manufacturer 31
	5/5/03	14	GR ☐ AIR ☐ OTHER ☐		00707-00215-AA-0000	4 OZ/AC LB OZ PT QT GA				RALLOY
			GR ☐ AIR ☐ OTHER ☐		02935-00407-ZA-00000	3 #/AC LB OZ PT QT GA				GOLDEN DEW
			GR ☐ AIR ☐ OTHER ☐		EXEMPT	6#/AC LB OZ PT QT GA				MORA LEAF
			GR ☐ AIR ☐ OTHER ☐		02935-~~5066~~ 50144-AA-0000	~~4 OZ/AC~~ LB OZ PT QT GA	1.5 pts/AC			~~SYLGARD~~ R56
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/16/03		GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15# LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/26		GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15# LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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(1) CAC Submit to Agricultural Commissioner within 10 days of month following application 33-017C (3/90)

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: April YEAR 2: 2003

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2-E	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 GRAPES	19 N/O HARNEY / SPRR

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	4/12/03	14	GR ☐ AIR ☑ OTHER ☐		2935-18-1702	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4/18/03		GR ☑ AIR ☐ OTHER ☐		"	15#/A LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4/28/03		GR ☑ AIR ☐ OTHER ☐		"	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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DEPARTMENT OF PESTICIDE REGULATION
PR-ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

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MONTH 1: JAN YEAR 2: 2003

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Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2-E	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 GRAPES	19 SE HARNEY & SPRR

21 CHEMICAL CODE NUMBER	22 DATE/TIME APPLICATION COMPLETED	23 ACREAGE/UNITS TREATED	24 APP METHOD (CHECK ONE)	25 BLOCK ID (IF APPLICABLE)	26 EPA OR STATE REGISTRATION NUMBER (FROM LABEL)	27 TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE)	28 DAYS REENTRY	29 RATE PER ACRE	30 DILUTION	31 PRODUCT AND MANUFACTURER
	1/26/03	14	GR ☑ AIR ☐ OTHER ☐		62719-0024-00000	4 pt/AC LB OZ PT QT GA				GOAL
	"	"	GR ☑ AIR ☐ OTHER ☐		72167-00017-AA-73220	8 pt/AC LB OZ PT QT GA				ORYZALIN 4 AS
	"	"	GR ☑ AIR ☐ OTHER ☐		00100-01074-00000	1 pt/AC LB OZ PT QT GA				~~Gramox~~ GRAMOXONE
	"	"	GR ☑ AIR ☐ OTHER ☐		02935-58142-AA-00001	4 pt/AC LB OZ PT QT GA				R11
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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REPORT PREPARED BY _____ DATE 1-31-03 REVIEWED BY _____

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT 2004

Submit to the Agricultural Commissioner within 10 days of the month following application

Field 13363
12-01-2004 to 01-31-2005

December (Month) 2004 (Year)

☐ Nursery

Operator ID / Permit No	Operator (Grower)	Address	City	Zip Code
39-05-3904551	TSUTSUMI SR, TOM M	3725 E ARMSTRONG ROAD	LODI, CA	95240

Site Identification #	Total Planted Acres	County	Section	Township	Range	Base & Meridian
1-2	15	39(San Joaquin)	24	03 ☒ N ☐ S	06 ☒ E ☐ W	☐ S ☒ M ☐ H

Commodity / Crop / Site Treated: GRAPES (WINE)

Field Location: MAP 1 FLD 2

Chemical Code Number	Date / Time Completed	Area Treated	Application Method	Block ID	EPA or State Registration # (From Label)	Total Product	Days Reentry	Application Rate	Dilution	Product and Manufacturer
	01/15/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		00100-01074-AA-00000	18 75 Pints	12 Hrs	2 50 Pts / Treated Ac	40 Gallons	GRAMOXONE MAX HERBICIDE SYNGENTA
	01/15/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		62719-00424-AA-00000	7 50 Pints	24 Hrs	1 00 Pt / Treated Ac	40 Gallons	GOAL 2XL DOW AGROSCIENCE
	01/15/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-50142-AA-00000	6 00 Pints	<a>	2 00 Pts / 100 Gal	40 Gallons	R-11 WILBUR-ELLIS
	01/15/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		72167-00017-AA-73220	30 00 Pints	24 Hrs	4 00 Pts / Treated Ac	40 Gallons	ORYZALIN 4 A S FARMSAVER COM

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R ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

nstructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

JUNE (MONTH 1) 2002 (YEAR 2)

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

ITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
1-2-6	10 14	11 39	12 24	13 3 N S	14 6 E W	15 S (M) H

OMMODITY/SITE TREATED: 7 GRAPES

FIELD LOCATION: 19 SE HARNEY LN / SPRR

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	4/10/04	14	GR ☐ AIR ☒ OTHER ☐		2935-18-1702	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6/18/04	14	GR ☐ AIR ☒ OTHER ☐		00400-00427-AA-0000	7½#/AC LB OZ PT QT GA				OMITE
	"	"	GR ☐ AIR ☐ OTHER ☐		00787-00215-AA-0000	4 OZ/AC LB OZ PT QT GA				RALLY
			GR ☐ AIR ☐ OTHER ☐		02935-5014-AA-0000	½pt/AC LB OZ PT QT GA				R56
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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ATE OF CALIFORNIA
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PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH: MAY (1) YEAR: 2004 (2)

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Page ___ of ___

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
1-2-6	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 7 GRAPES

FIELD LOCATION: 19 SE HARNEY LN / SPRR

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	5/5/04	14	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/14/04	14	GR ☑ AIR ☐ OTHER ☐		02935-00407-ZA-00000	3#/AC LB OZ PT QT GA				GOLDEN DEW
	"	"	GR ☑ AIR ☐ OTHER ☐		EXEMPT	5#/AC LB OZ PT QT GA				MORA LEAF
			GR ☐ AIR ☐ OTHER ☐		02935-50144-AA-00000	1½ Pt/AC LB OZ PT QT GA				R56
			GR ☐ AIR ☐ OTHER ☐		[redacted]	4 OZ/AC LB OZ PT QT GA				[redacted]
			GR ☐ AIR ☐ OTHER ☐		7969-199	10.5 OZ/AC LB OZ PT QT GA				PRISTINE
	5/29/04	"	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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R-ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

nstructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

APRIL — MONTH 1
2004 — YEAR 2

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Page ___ of ___

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
1-2-E	10 14	11 39	12 24	13 3 (N) S	14 6 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 7 GRAPES

FIELD LOCATION: 19 2 E HARNEY / SPRR

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	4/23	14	GR ☐ AIR ☐ OTHER ☐		2935-18-1702	15#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

ctions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

) 1 YEAR 2004 2

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R ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
5-390451	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

TIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
1-2-E	10 14	11 39	12 24	13 3 N S	14 6 E W	15 S (M) H

Y/SITE TREATED	FIELD LOCATION
GRAPES	19 SE HARNEY / SPIER

L ER	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	2/1/04	14	GR ✓ AIR OTHER		62719-0024-0000	4pt/ac LB OZ PT QT GA				GOAL
	"	"	GR ✓ AIR OTHER		02935-50142-AA-00000	4pt/AC LB OZ PT QT GA				R11
	"	"	GR ✓ AIR OTHER		00100-01074-0000	1½pt/AC LB OZ PT QT GA				GRAMOXONE
	-	"	GR ✓ AIR OTHER		72167-00017-AA 73220	80pt/AC LB OZ PT QT GA				ORYZALIN 4AS
			GR AIR OTHER			LB OZ PT QT GA				
			GR AIR OTHER			LB OZ PT QT GA				
			GR AIR OTHER			LB OZ PT QT GA				
			GR AIR OTHER			LB OZ PT QT GA				
			GR AIR OTHER			LB OZ PT QT GA				
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STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT 2005

Submit to the Agricultural Commissioner within 10 days of the month following application

Field 13363
11-01-2005 to 11-30-2005

November (Month) 2005 (Year)

☐ Nursery

Operator ID / Permit No	Operator (Grower)	Address	City	Zip Code
39-05-3904551	TSUTSUMI SR, TOM M	3725 E ARMSTRONG ROAD	LODI, CA	95240

Site Identification #	Total Planted Acres	County	Section	Township	Range	Base & Meridian
1-2	15	39(San Joaquin)	24	03 ☒ N ☐ S	06 ☒ E ☐ W	☐ S ☒ M ☐ H

Commodity / Crop / Site Treated: GRAPES (WINE) — u n q u a l

Field Location: MAP 1 FLD 2

Chemical Code Number	Date / Time Completed	Area Treated	Application Method	Block ID	EPA or State Registration # (From Label)	Total Product	Days Reentry	Application Rate	Dilution	Product and Manufacturer
	11/18/2005 1545	15 00 Acres	Ground ☒ Air ☐ Other ☐		00100-01074-AA-00000	18 75 Pints	12 Hrs	2 50 Pts / Treated Ac	30 Gallons	GRAMOXONE MAX HERBICIDE SYNGENTA
	11/18/2005 1545	15 00 Acres	Ground ☒ Air ☐ Other ☐		59639-00099-AA-00000	90 00 Ounces	12 Hrs	12 00 Oz / Treated Ac	30 Gallons	CHATEAU SW VALENT
	11/18/2005 1545	15 00 Acres	Ground ☒ Air ☐ Other ☐		72167-00017-AA-73220	45 00 Pints	24 Hrs	6 00 Pts / Treated Ac	30 Gallons	ORYZALIN 4 A S FARMSAVER COM
	11/18/2005 1545	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-50142-AA-00000	4 50 Pints	<a>	2 00 Pts / 100 Gal	30 Gallons	R-11 WILBUR-ELLIS

<a> Not Specified

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DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

July (MONTH 1) 2005 (YEAR 2)

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Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-05-3904551	5 GARY TOTSUMI	6 3725 E ARMSTRONG RD	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2	10 15	11	12 24	13 03N (N/S)	14 06 (E/W)	15 S (M) H

COMMODITY/SITE TREATED: 17 GRAPES

FIELD LOCATION: 19

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	7/1/05 6:00AM	15	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	20#/AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	7/8/05 5:AM	15	GR ☑ AIR ☐ OTHER ☐		100-828-ZA	10OZ/AC LB OZ PT QT GA				VANGARD WG
		"	GR ☑ AIR ☐ OTHER ☐		400-427-AA	5#/AC LB OZ PT QT GA				OMITE
			GR ☑ AIR ☐ OTHER ☐		62719-410	40Z/AC LB OZ PT QT GA				RALLY 40WSP
		"	GR ☑ AIR ☐ OTHER ☐		2935-5016-AA	20Z/AC LB OZ PT QT GA				SYLGARD
			GR ☐ AIR ☐ OTHER ☐			5#/AC LB OZ PT QT GA				MORA LEAF - K
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				AUG 03 2005
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

REPORT PREPARED BY [signature] DATE 7/31/05 REVIEWED BY

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DEPARTMENT OF PESTICIDE REGULATION
PR ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH (1): JUNE YEAR (2): 2005

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Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-05-3904551	5 TSUTSUMI	6 3725 E ARMSTRONG RD	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2	10 15	11	12 24	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 GRAPES

FIELD LOCATION: 19

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	6/4/05 6AM	6/15	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	20# /AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6/12/05	15	GR ☑ AIR ☐ OTHER ☐		2935-407-AA	5# /AC LB OZ PT QT GA				GOLDEN DEW POWDERY MILDEW
	"	"	GR ☑ AIR ☐ OTHER ☐		62719-410	4oz /AC LB OZ PT QT GA				RALLY 40WSP
			GR ☐ AIR ☐ OTHER ☐		2935-5011-AA	LB OZ PT QT GA				SYLGARD
			GR ☐ AIR ☐ OTHER ☐			5# /AC LB OZ PT QT GA				MORA LEAF 833
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6/23/05		GR ☑ AIR ☐ OTHER ☐		2935-18-1702	20# /AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

AUG 03 2005

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STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Submit to the Agricultural Commissioner within 10 days of the month following application

June (Month) 2005 (Year)

Field 13363
06-01-2005 to 06-30-2005

☐ Nursery

Operator ID / Permit No	Operator (Grower)	Address	City	Zip Code
39-05-3904551	TSUTSUMI SR, TOM M	3725 E ARMSTRONG ROAD	LODI, CA	95240

Site Identification #	Total Planted Acres	County	Section	Township	Range	Base & Meridian
1-2	15	39(San Joaquin)	24	03 ☒ N ☐ S	06 ☒ E ☐ W	☐ S ☒ M ☐ H

Commodity / Crop / Site Treated	Field Location
GRAPES (WINE)	MAP 1 FLD 2

Chemical Code Number	Date / Time Completed	Area Treated	Application Method	Block ID	EPA or State Registration # (From Label)	Total Product	Days Reentry	Application Rate	Dilution	Product and Manufacturer
	06/08/2005 1408	15 00 Acres	Ground ☒ Air ☐ Other ☐		62719-00410-ZC-00000	60 00 Ounces	24 Hrs	4 00 Oz / Treated Ac	100 Gallons	RALLY 40 WSP DOW AGROSCIENCE
	06/08/2005 1408	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-00407-ZA-00000	75 00 Pounds	3	5 00 Lbs / Treated Ac	100 Gallons	GOLDEN-DEW WILBUR-ELLIS
	06/08/2005 1408	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-50161-AA-00000	30 00 Ounces	<a>	2.00 Oz / 100 Gal	100 Gallons	SYLGARD 309 WILBUR-ELLIS

<a> Not Specified

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DEPARTMENT OF PESTICIDE REGULATION

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Submit to the Agricultural Commissioner within 10 days of the month following application

Field 13363
05-01-2005 to 05-31-2005

May (Month) 2005 (Year)

[ ] Nursery

Operator ID / Permit No	Operator (Grower)	Address	City	Zip Code
39-05-3904551	TSUTSUMI SR, TOM M	3725 E ARMSTRONG ROAD	LODI, CA	95240

Site Identification #	Total Planted Acres	County	Section	Township	Range	Base & Meridian
1-2	15	39(San Joaquin)	24	03 ☒ N ☐ S	06 ☒ E ☐ W	☐ S ☒ M ☐ H

Commodity / Crop / Site Treated: GRAPES (WINE)
Field Location: MAP 1 FLD 2

Chemical Code Number	Date / Time Completed	Area Treated	Application Method	Block ID	EPA or State Registration # (From Label)	Total Product	Days Reentry	Application Rate	Dilution	Product and Manufacturer
	05/08/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		07969-00199-AA-00000	157 50 Ounces	24 Hrs	10 50 Oz / Treated Ac	50 Gallons	PRISTINE FUNGICIDE BASF
	05/08/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-00407-ZA-00000	75 00 Pounds	3	5 00 Lbs / Treated Ac	50 Gallons	GOLDEN-DEW WILBUR-ELLIS
	05/08/2005 1025	15 00 Acres	Ground ☒ Air ☐ Other ☐		02935-50144-ZD-00000	45 00 Ounces	<a>	6 00 Oz / 100 Gal	50 Gallons	R-56 WILBUR-ELLIS

<a> Not Specified

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06-04-05

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PR-ENF 017C (REV. 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: May YEAR 2: 2005

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Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-053904551	5 TSUTSUMI	6 3725 E ARMSTRONG RD	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-2	10 15	11	12 24	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 GRAPES FIELD LOCATION: 19

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	5/7/05	15	GR ☑ AIR ☐ OTHER ☐		2935-407-AA	5# /AC LB OZ PT QT GA				GOLDEN DEW
			GR ☑ AIR ☐ OTHER ☐			10/Ø# /AC LB OZ PT QT GA				PRISTINE
			GR ☑ AIR ☐ OTHER ☐		2935-50141-AA	2Ø2 /AC LB OZ PT QT GA				SYLGARD
			GR ☑ AIR ☐ OTHER ☐		Exempt	5# /AC LB OZ PT QT GA				MORA LEAF
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/14	15	GR ☑ AIR ☐ OTHER ☐		2935-18-1702	20# /AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5/26	15	GR ☑ AIR ☐ OTHER ☐		"	20# /AC LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

AUG 03 2005
SAN JOAQUIN COUNTY
AGRIC. COMM. - LODI

DATE 5/31/05 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: April YEAR 2: 2005

NURSERY 3: [ ]

Page ___ of ___

OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-05-390551	BUTSUMI	3725 E ARMSTRONG	LODI, CA	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
1-2	15		24	03 N/S	06 E/W	S M H

COMMODITY/SITE TREATED 17: [ ]

FIELD LOCATION 19: HARNEY LN / SPRR

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	4/25	15	GR ☑ AIR ☐ OTHER ☐		293-18-1702	20# LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4/30	15	GR ☑ AIR ☐ OTHER ☐		" "	200# LB OZ PT QT GA				SULFUR
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

AUG 03 2005
SAN JOAQUIN VALLEY AGRICULTURAL - LODI

DATE 4/30/05 REVIEWED BY

TATE OF CALIFORNIA
EPARTMENT OF PESTICIDE REGULATION
H ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

nstructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

January (MONTH 1) 2005 (YEAR 2)

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
39-05-390551	5 TSUTSUMI	6 3725 E ARMSTRONG	7 LODI	8 95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
1-2	10 15	11	12 24	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 GRAPES	19 HARNEY / SPER

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	1/23/05	15	GR ☐ AIR ☐ OTHER ☐		100-1074-AA	2.5pt/AL LB OZ PT QT GA				GRAMOXONE MAX
	6AM "	"	GR ☐ AIR ☐ OTHER ☐		02935-5014-AA-0000	1 pt LB OZ PT QT GA				R11
	"	"	GR ☐ AIR ☐ OTHER ☐		72167-00017-AA-3272	6PTS/AL LB OZ PT QT GA				SURFLAN
	"	"	GR ☐ AIR ☐ OTHER ☐		10707-00843-AA-0000	1 PT/AL LB OZ PT QT GA				GOAL
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

AUG 03 2005

REPORT PREPARED BY [signature] DATE 1-31-05 REVIEWED BY

2002

SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205

Office: (209)468-3300 Recorder (NOI). (209)468-3300 FAX (209)468-3330

RESTRICTED MATERIALS PERMIT

Permit#: 39-02-3904229
County HQ District#: E

HOFFMAN-STOCKAR
P O BOX 673
VICTOR, CA 95253

Expiration Date: 12/31/2002
Effective Date 1/1/00

PAT STOCKAR
4920 E HOGAN LN
LODI, CA 95240

Home: (209)333-7301
Shop: (209)333-7301
Fax.
Mobile (209)479-1053

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App	[X]	Seasonal	[X]	Poss & Use	[X]	Phone	[X]	Fax	[ ]
Q A Cert	[ ]	Job	[ ]	Poss Only	[ ]	Box	[X]	Modem	[ ]
Ag PCO	[ ]					In Person	[X]		
Non-Ag	[ ]								

NOI required 24 hours prior to application

Numb	Pesticide	Pest(s)	Form.	Method(s)	Applicator(s)	
5540	STRYCHNINE	GOPHERS	Bait	Ground	PCO	Grower
9801	2,4-D AMINE	WEEDS	Liquid	Ground	PCO	Grower
16011	PARAQUAT	WEEDS	Fumigant	Ground	PCO	Grower

Non-Ag Use:
Conditions: PQ

I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides. I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit. I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be used in the treatment. [Form PR-ENF-125 (Rev. 07/92) Pesticide Enforcement Branch]

Permit Applicant Pat Stockar Sign

Title: Owner Date: 12/31/99

Issuing Officer: Date: 12-31-99

HOFFMAN-STOCKAR Permit#: 39-02-3904229

Employees handle pesticides (Y or N) [N]

Crop	Site#	Dist	Sect	Town	Range	Mer	Quantity	Unit	Condition
RANGELAND (28045-0)	1-2	F	35	04N	06E	M	40.00	A	PQ
						S/WOODBRIDGE 1/2 M E/LOW SAC			
5540, 9801									
GRAPE (29141-0)	1-1	F	35	04N	06E	M	25.00	A	P
						S/WOODBRIDGE 1/2 M E/LOW SAC			
5540, 16011									
	2-1	E	19	03N	07E	M	28.00	A	P
						S/HOGAN 2/3 M E/HWY 99			
5540, 16011									
	3-1	E	25	03N	06E	M	68.00	A	P
						S/ARMSTRONG 1/4 M W/HWY 99			
5540, 16011									

HOFFMAN-STOCKAR Permit#: 39-02-3904229

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[X] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium (Vapam)
[_] T - Aldicarb (Temik)
[X] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9. Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary 5,8)
[X] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true, and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

12/31/88
Date

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

HOFFMAN-STOCKAR Permit#: 39-02-3904229

==========

CONDITION - Q

DICAMBA AND PHENOXY HERBICIDES - CENTRAL VALLEY/HAZARDOUS AREA

==========

In addition to all applicable laws, regulations and label restrictions, the CONDITIONS CHECKED BELOW APPLY to applications covered by this permit.

[X] 1. No ester formulation applications allowed.

[_] 2. A smoke column is reqired at the application site for all Phenoxy and Dicamba applications by aircraft begining March 16 and continuing through October 15.

[X] 3. Do not discharge material more than 10 feet above the crop or target.

[_] 4. A drift reducing agent shall be added to the spray mixture at label rates.

[X] 5. Maximum wind velocity for Phenoxy herbicides 10 m.p.h

[X] 6. Maximum wind velocity for Dicamba - 10 m.p.h. EXCEPT when wind is moving in direction of sensitive crops, the maximum wind velocity - 5 m.p.h.

[_] 7. No Dicamba application allowed in the vicinity of sensitive crops when the maximum temperature on the day of application is predicted to exceed 85 degrees Fahenheit. Predicted temperature for the following day will be determined by the 3:30 p.m. prediction by the National Weather Station - Stockton Airport.

[_] 8. Dicamba applications by aircraft are restricted to a minimum distance of 2 miles from the following susceptible crops beans, grapes, sunflower, tomato, safflower, curcurbits, potatoes.

[_] 9. Dicamba applications by ground are restricted to a minimum distance of 20 feet from the following susceptible crops: beans, safflower, tomato, curcurbits, potatoes and 1/4 mile from grapes and sunflowers.

[X] 10. No Dicamba or Phenoxy herbicide applications allowed begining March 16 and continuing through October 15, and until grape leaves in the vicinity of the treated area are "browned off".

10/90 REVISED

*** Last Page ***

APPLICATION — RESTRICTED MATERIALS — SUPPLEMENT

PERMIT NO 4429

Hoffman-Stocker

PAGE NO 5

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	SW/ Harney + H 99	24	3N	6E	4-1	Grapes	18	5540, 16011							
9															
10															
11															
12															
13.															
14															
15.															
16															
17															
18															
19															
20															
21															
22.															
23.															
24															
25															
26															
27															
28															
29															
30.															
31															
32.															
33															
34.															

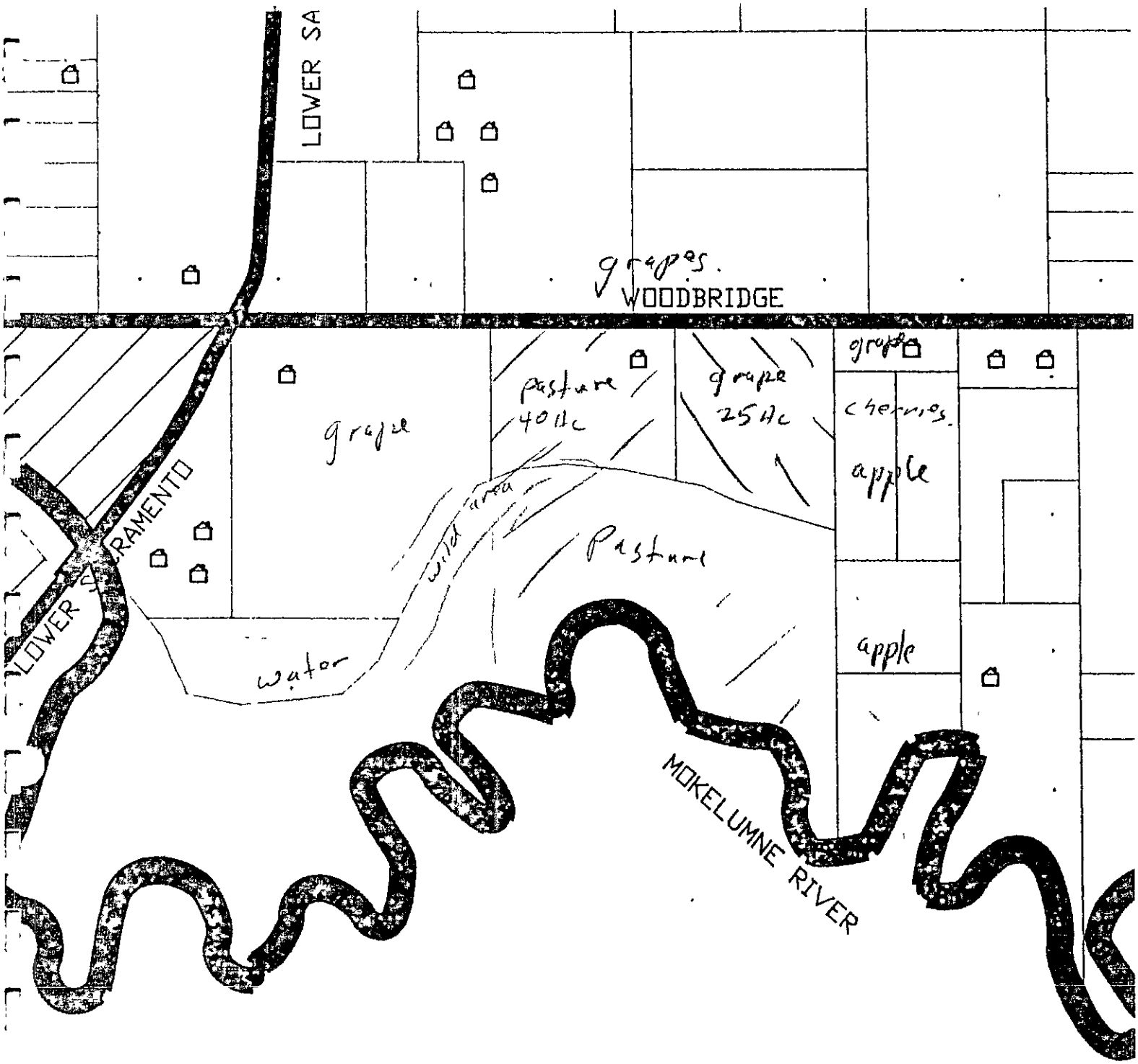
* Formulation: L-Liquid B-Bait D-Dust F-Fumigant G-Granules WP-Wettable Powder O-Other

**Method: A-Air F-Fumigation Gr-Ground O-Other

APPLICANT SIGNATURE _____ DATE _____

ISSUED BY _____ Date 12/21/94

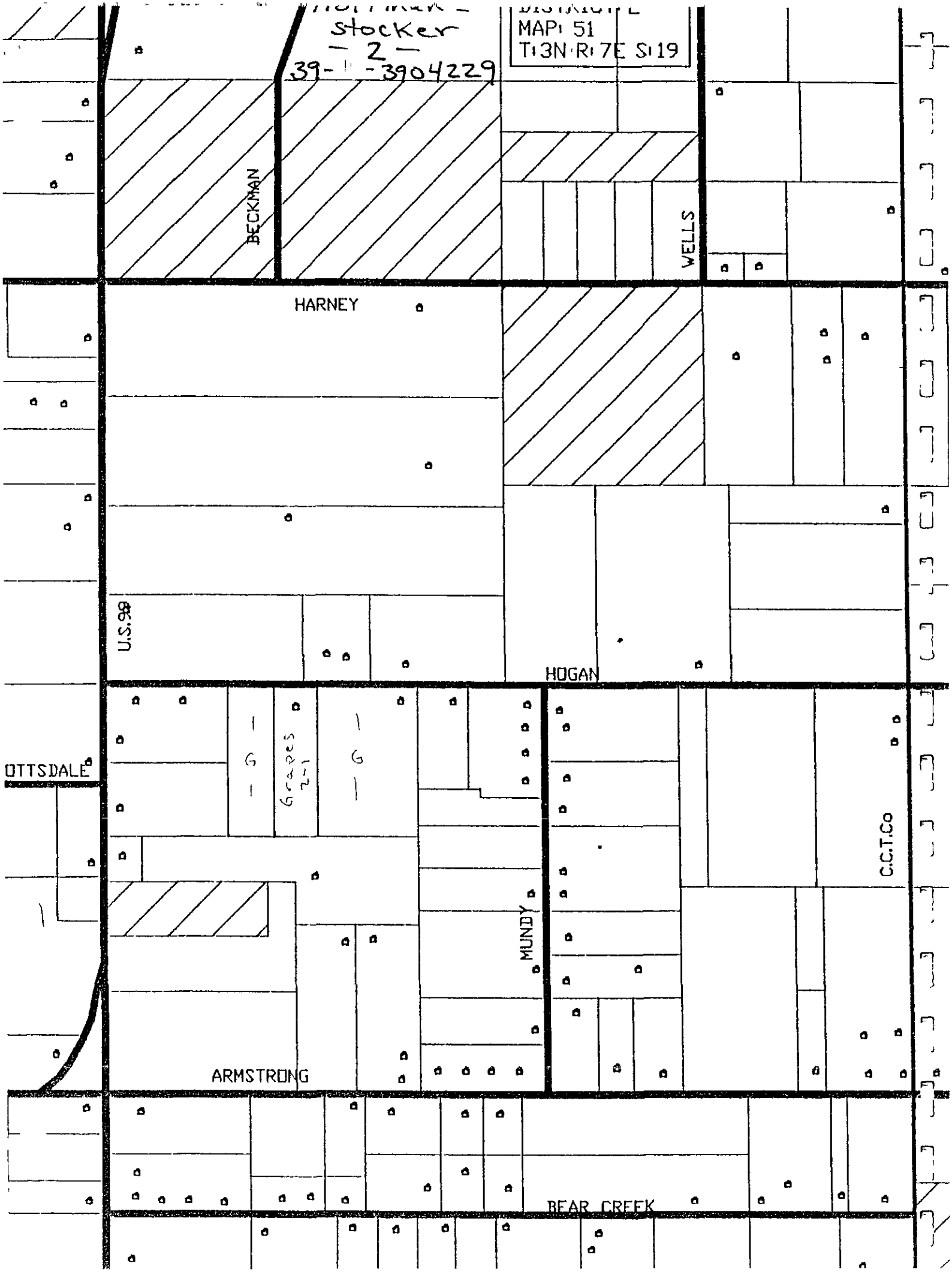
PESTICIDE ENFORCEMENT BRANCH PR-ENF-128A (Rev. 2/92)

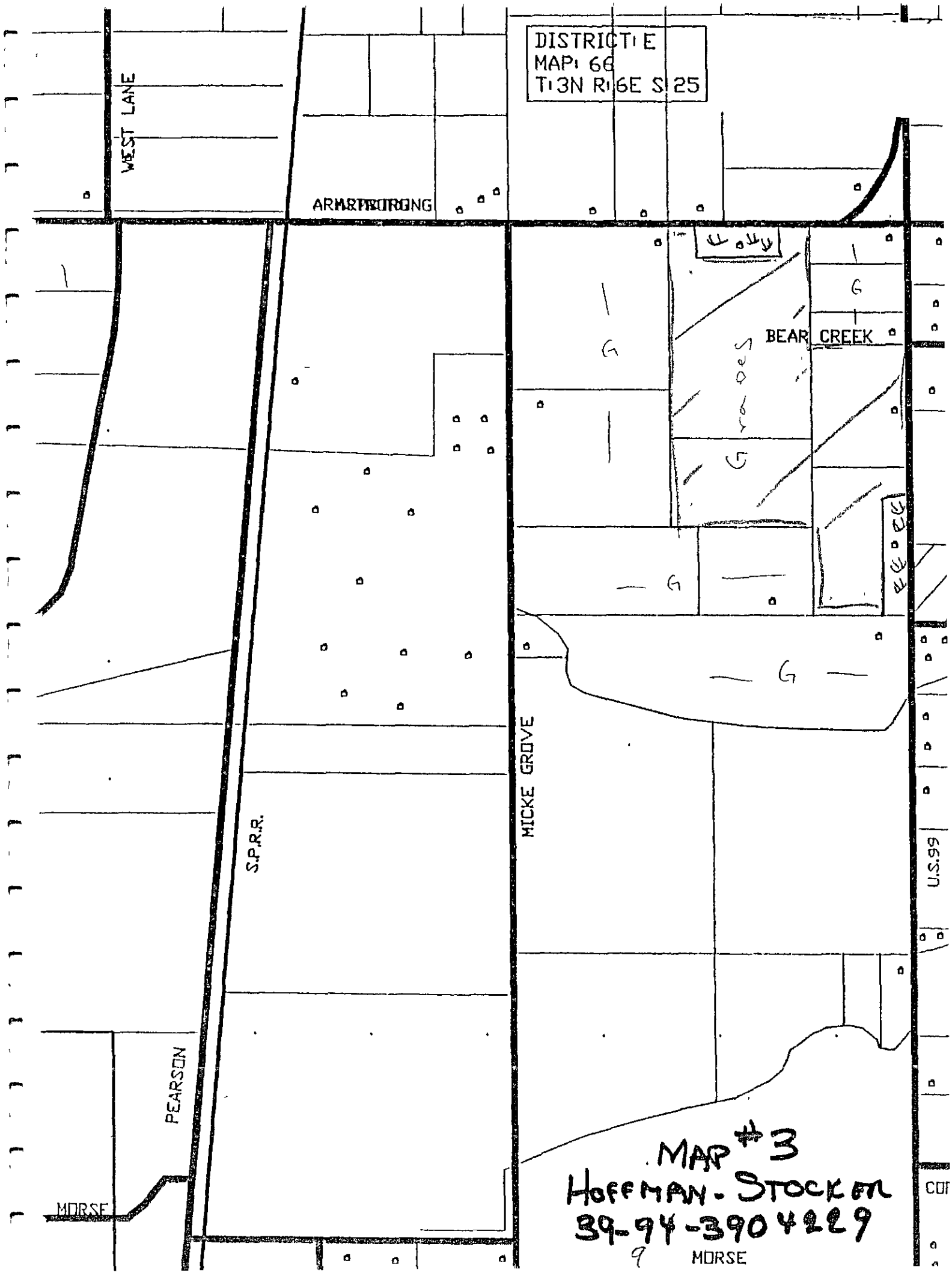


Hoffman/Stockton

39-9 -3904229

MAP: ~~125~~ 1
DISTRICT: F
T:4N R:6E S:35


Stocker
— 2 —
39- -3904229
MAP: 51
T:3N R:7E S:19
BECKMAN
WELLS
HARNEY
U.S.99
HOGAN
OTTSDALE
G
Graves
G
C.C.T.Co
MUNDY
ARMSTRONG
BEAR CREEK


DISTRICT: E
MAP: 66
T:3N R:6E S:25
WEST LANE
ARMSTRONG
BEAR CREEK
MICKE GROVE
S.P.R.R.
U.S.99
PEARSON
MORSE
MORSE
MAP #3
HOFFMAN-STOCKTON
39-94-3904229

SCOTT HUDSON
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS & MEASURES
ANIMAL CONTROL

VICKI HELMAR
ASST AGRICULTURAL COMMISSIONER
ASST SEALER OF WEIGHTS & MEASURES

SAN JOAQUIN COUNTY

OFFICE OF THE

AGRICULTURAL COMMISSIONER

POST OFFICE BOX 1809
STOCKTON, CALIFORNIA 95201-1809
PHONE 209/468-3300
FAX 209/468-3330

MAIN OFFICE - STOCKTON
1868 E. HAZELTON AVE

LODI OFFICE
210 N SACRAMENTO ST

TRACY OFFICE
503 E 10TH STREET

SIMMS STATION - RIPON
17620 E HWY 120

Date: December 1, 2000

To: Paraquat (Gramoxone) Restricted Materials Multi-Year Permit Holders

From: Gary W Stockel, Deputy Agricultural Commissioner

Subject: Permit Conditions for Paraquat Dichloride

The following permit conditions for the use of paraquat dichloride are now a part of your current Restricted Materials Permit:

CONDITIONS FOR THE USE OF PARAQUAT DICHLORIDE (GRAMOXONE)

Persons working as applicators or flaggers (except applicators working in an enclosed cab or flaggers working in an enclosed vehicle) shall wear a dust/mist respirator approved by MSHA/NIOSH (number prefix TC-84-A)

These use conditions are added to your permit based on a determination by California Department of Pesticide Regulation that an inhalation hazard exists for applicators and flaggers exposed to paraquat dichloride outside of enclosed cabs or vehicles

If you have any questions about these conditions, please contact the San Joaquin County Agricultural Office that issued your permit

SAN JOAQUIN COUNTY
1868 E HAZELTON AVENUE
STOCKTON, CA 95205

2005

Web URL www co san-joaquin ca us/agcomm
E-Mail
Office (209)468-3300 Recorder (NOI) (209)468-3300 FAX (209)468-3330

==========

RESTRICTED MATERIALS PERMIT PERMIT #: 39-05-3904229
County HQ District #: E

HOFFMAN-STOCKAR
P O BOX 673
VICTOR, CA 95253

Expiration Date: 12/31/2005
Effective Date ~~01/01/1996~~ 2/3/03

PAT STOCKAR
4920 E HOGAN LN
LODI, CA 95240

Home: (209)333-7301
Shop: (209)333-7301
Fax
Mobile: (209)479-1053

==========

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App	X	Seasonal	X	Poss & Use	X	Phone	X	Fax	
Q A Cert		Job		Poss Only		Box	X	Modem	
Ag PCO						In Person	X	Web	
Non-Ag									

NOI required 24 hours prior to application

==========

Non-Ag Use None
Conditions: PQZ

==========

I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be used in the treatment [Form PR-ENF-125 (Rev 07/92) Pesticide Enforcement Branch]

Permit Applicant: Patrick F. Stockar Sign: P.F.

Title: owner/operator Issue Date

Issuing Officer: Issue Date: 2/3/03

HOFFMAN-STOCKAR Permit# 39-05-3904229

Employees handle pesticides (Y or N) |N|

Permit Pesticides

Numb	Pesticide	Pest(s)	Form	Method(s)	Applicator(s)	
5540	STRYCHNINE	GOPHERS	Bait	Ground	PCO	Grower
9801	2,4-D AMINE	WEEDS	Liquid	Ground	PCO	Grower
16011	PARAQUAT	WEEDS	Fumigant	Ground	PCO	Grower

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit
RANGELAND (28045-0)	1-2	F	35	04N	06E	M	40 00	A PQ
					S/WOODBRIDGE 1/2 M E/LOW SAC			

PQ

5540(STRYCHNINE), 9801(2,4-D AMINE)

GRAPE (29141-0)	1-1	F	35	04N	06E	M	25 00	A P
					S/WOODBRIDGE 1/2 M E/LOW SAC			

P

5540(STRYCHNINE), 16011(PARAQUAT)

	2-1	E	19	03N	07E	M	28 00	A P
					S/HOGAN 2/3 M E/HWY 99			

P

5540(STRYCHNINE), 16011(PARAQUAT)

	3-1	E	25	03N	06E	M	40 ~~68~~ 00	A P
					S/ARMSTRONG 1/4 M W/HWY 99			

P

5540(STRYCHNINE), 16011(PARAQUAT)

	4-1	E	24	03N	06E	M	18 00	A P
					SW HARNEY & HWY 99			

P

5540(STRYCHNINE), 16011(PARAQUAT)

* * * LAST PAGE * * *

ADD Site

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

HOFFMAN-STOCKAR

PERMIT NO 3904229

PAGE NO

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	½ m W/ lower SAC	26	4n	6e		OAT FOR Forage	40	(4801) 2,4-D	Weeds	L	G	as	per NOI		
9	S/ ACAMPO Rd							Amine							
10															
11															
12															
13															
14															
15															
16															
17															
18															
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27															
28															
29															
30															
31															
32															
33															

*Formulation L—Liquid B—Bait D—Dust F—Fumigant G—Granules WP—Wettable Powder O—Other

**Method A—Air F—Fumigation GR—Ground O—Other

APPLICANT SIGNATURE [signature] DATE 3-3-2005

ISSUED BY Steve Denardi DATE 3-3-2005

ADD Site

APPLICATION - RESTRICTED MATERIALS - SUPPLEMENT

HoFFman - Stockar

PERMIT NO 4229

PAGE NO

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	NW/ Winery Road	~~6~~	~~3N~~	~~7E~~	5-1	GRAPES	20	same pesticides							
9	Hwy 99	36	4N	6E				on permit FOR GRAPES							
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
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29															
30															
31															
32															
33															

*Formulation L—Liquid B—Bait D—Dust F—Fumigant G—Granules WP—Wettable Powder O—Other

**Method A—Air F—Fumigation GR—Ground O—Other

APPLICANT SIGNATURE [signature] DATE 3/30/2004

ISSUED BY Steve Durnad DATE 3/30/2004

DISTRIBUTION WHITE & YELLOW—COUNTY PINK & GOLD—PERMITTEE

PESTICIDE ENFORCEMENT BRANCH PR ENF-125A (Rev-3/00)

The Following Conditions Apply To ..... Permit#: 39-05-3904229

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[X] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium & Metam Potassium
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9: Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[_] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true, and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

P.T. [illegible] 2/3/03

Purchaser Date

The Following Conditions Apply To ..... Permit#: 39-05-3904229

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and othe more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY T APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications c zinc phosphide bait.

The Following Conditions Apply To ..... Permit#: 39-05-390422

CONDITION - Q

DICAMBA AND PHENOXY HERBICIDES - CENTRAL VALLEY/HAZARDOUS AREA

In addition to all applicable laws, regulations and label restrictions, the CONDITIONS CHECKED BELOW APPLY to applications covered by this permit.

[X] 1. No ester formulation applications allowed.

[_] 2. A smoke column is reqired at the application site for all Phenoxy and Dicamba applications by aircraft begining March 16 and continuing through October 15.

[X] 3. Do not discharge material more than 10 feet above the crop or target.

[_] 4. A drift reducing agent shall be added to the spray mixture at label rates.

[X] 5. Maximum wind velocity for Phenoxy herbicides 10 m.p.h.

[X] 6. Maximum wind velocity for Dicamba - 10 m.p.h. EXCEPT when wind is moving in direction of sensitive crops, the maximum wind velocity - 5 m.p.h.

[_] 7. No Dicamba application allowed in the vicinity of sensitive crops when the maximum temperature on the day of application is predicted to exceed 85 degrees Fahenheit. Predicted temperature for the following day will be determined by the 3:30 p.m. prediction by the National Weather Station - Stockton Airport.

[_] 8. Dicamba applications by aircraft are restricted to a minimum distance of 2 miles from the following susceptible crops: beans, grapes, sunflower, tomato, safflower, curcurbits, potatoes.

[_] 9. Dicamba applications by ground are restricted to a minimum distance of 20 feet from the following susceptible crops: beans, safflower, tomato, curcurbits, potatoes and 1/4 mile from grapes and sunflowers.

[X] 10. No Dicamba or Phenoxy herbicide applications allowed begining March 16 and continuing through October 15, and until grape leaves in the vicinity of the treated area are "browned off".

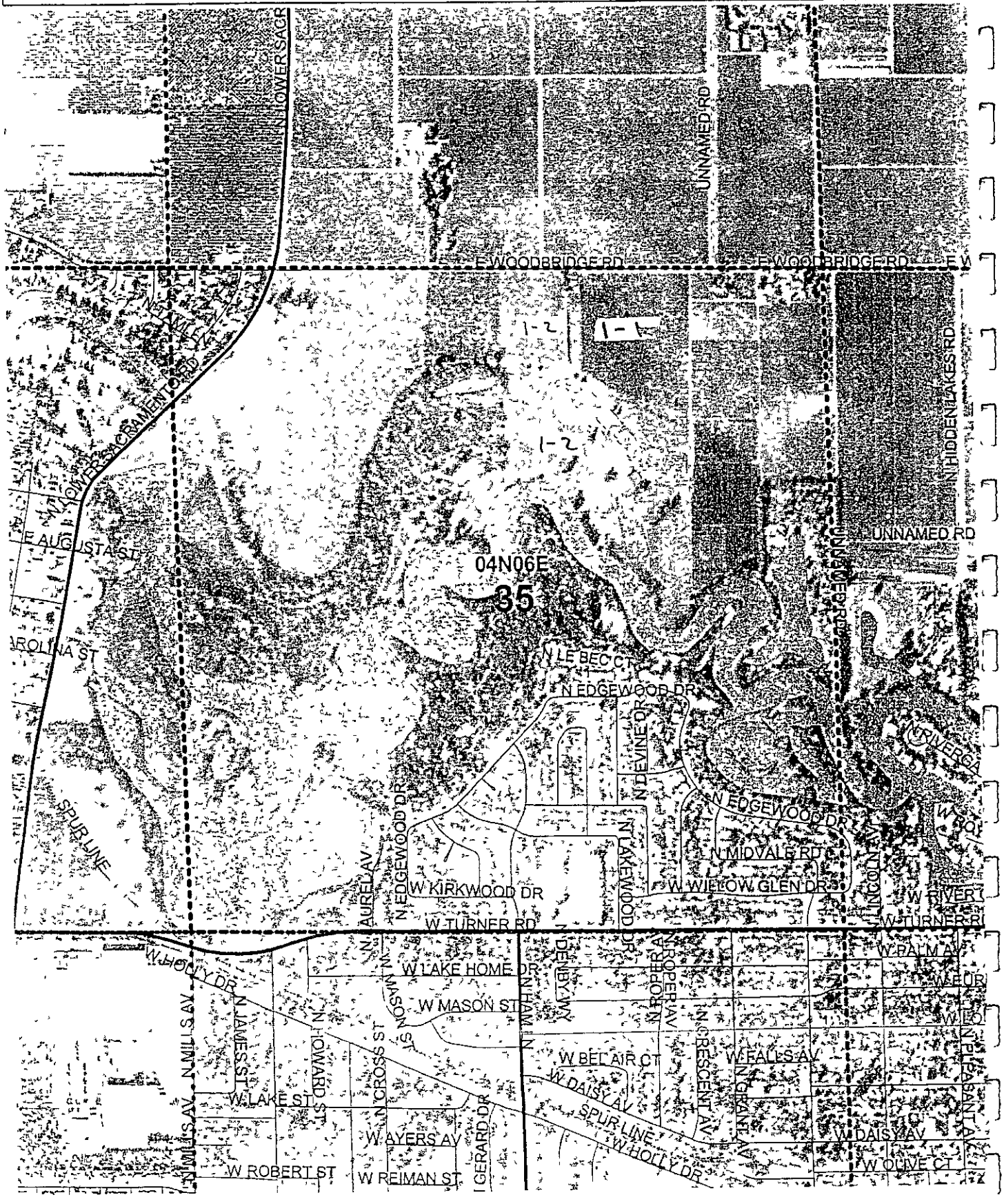
10/90 REVISED

*** Last Page Of Conditions ***

District F

Permit # 4229 Permittee Hoffman - Stocker Map # 1

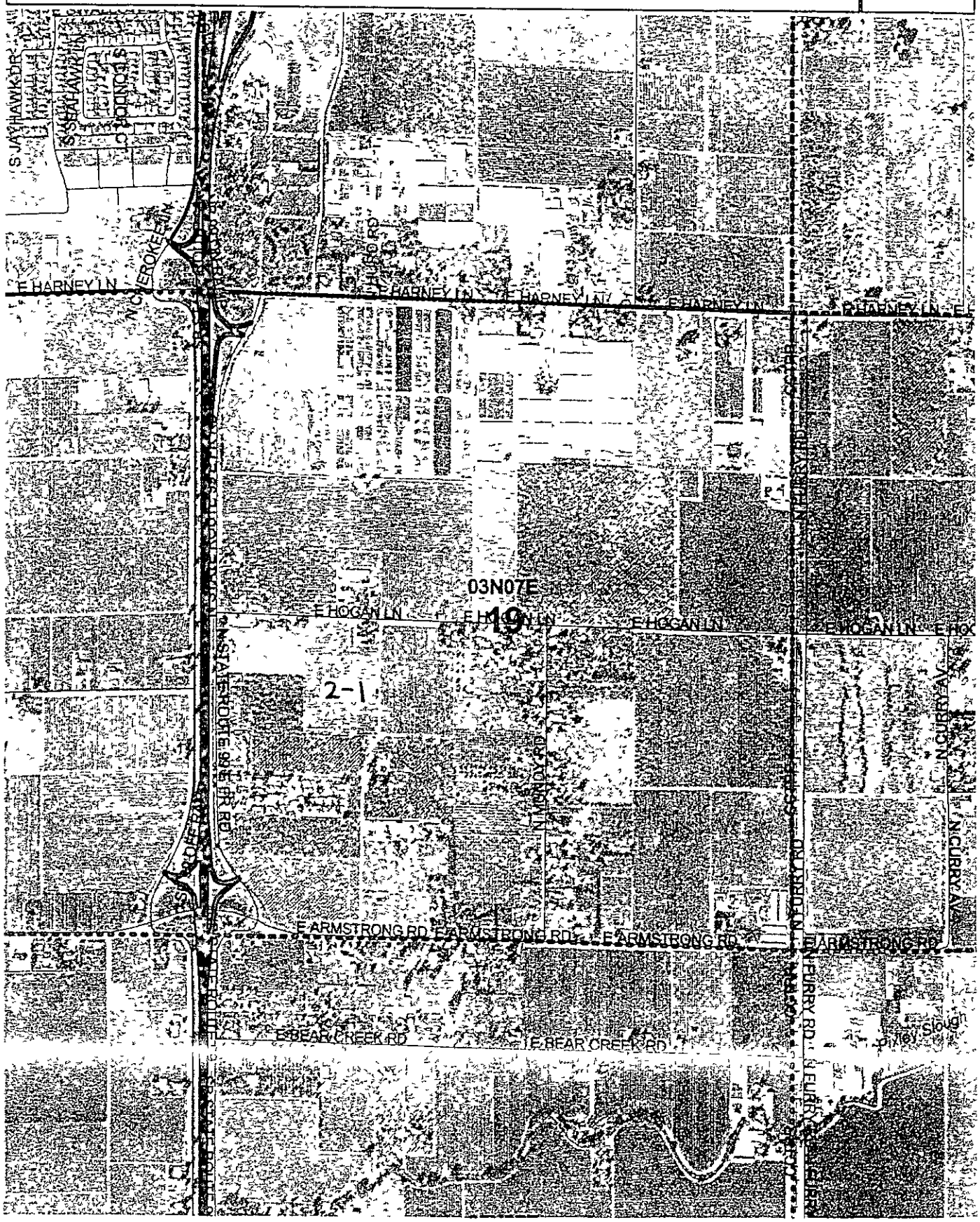
December 7 2012 G S



District E

Permit # 4229 Permittee Hoffman - Stocker Map # 2

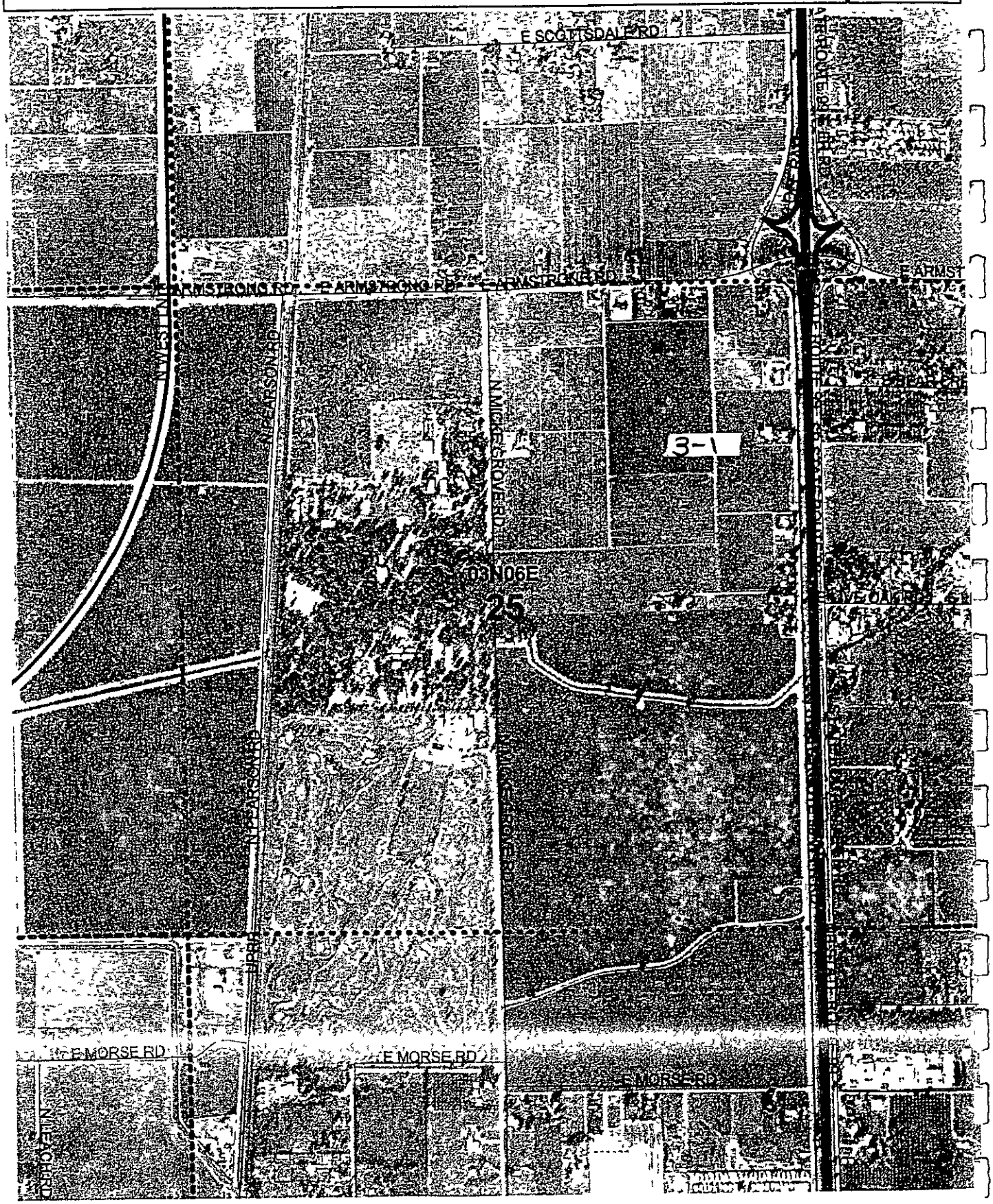
December 3 2002 GIS



District E

Permit #. 4229 Permittee: Hoffman - Stocker Map #: 3

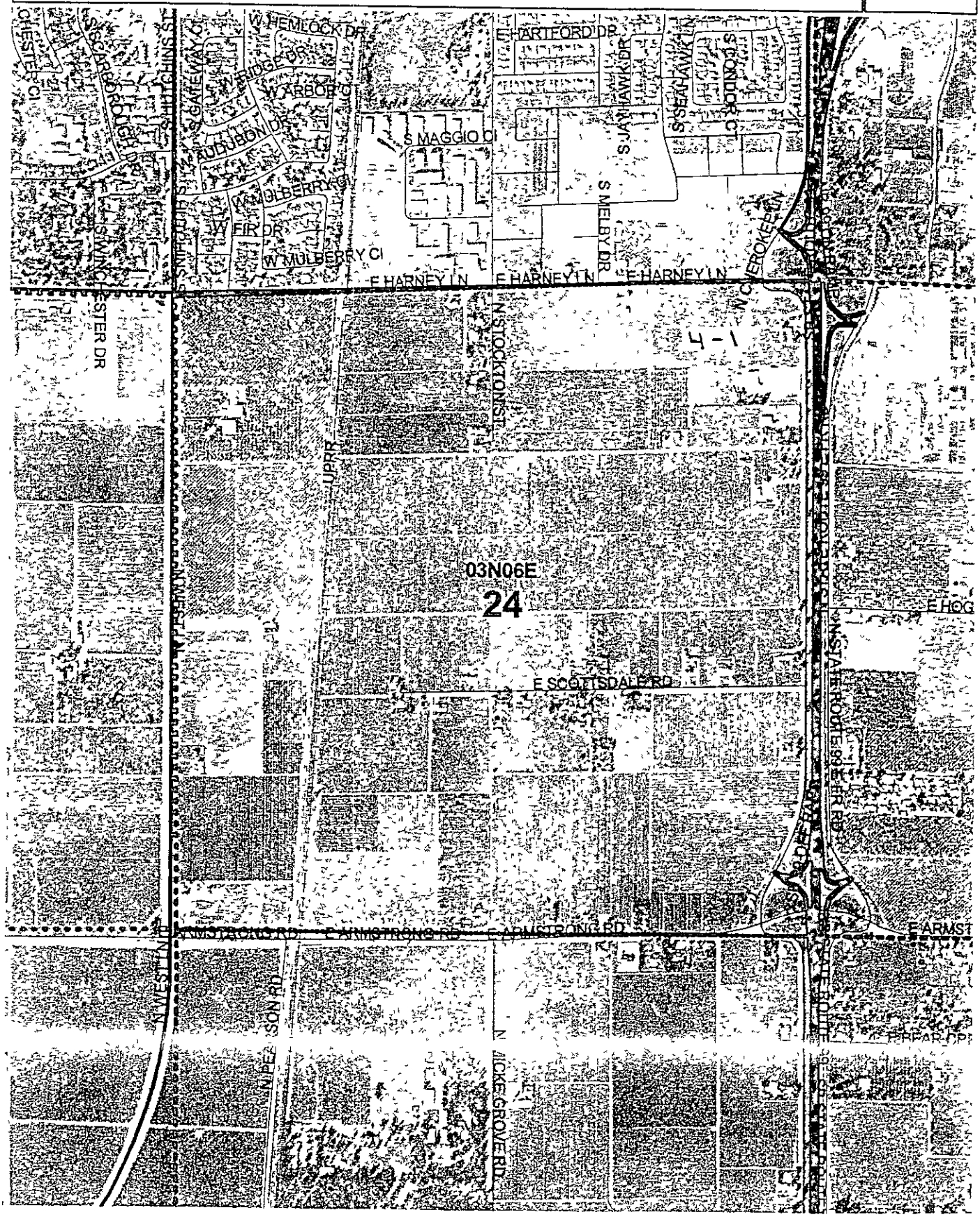
December 3, 2002 GIS



District E

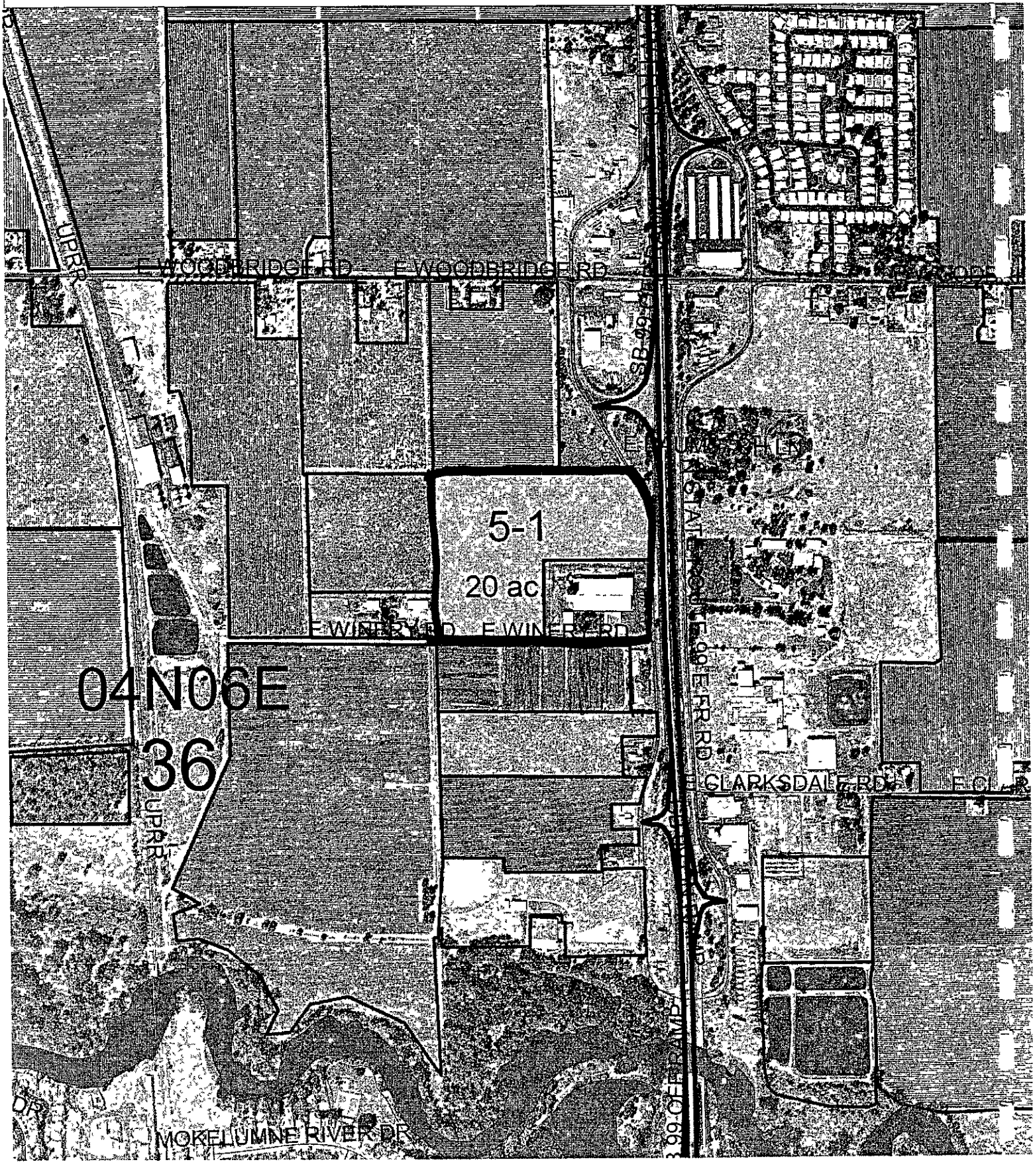
Permit # 4229 Permittee Hoffman - Stocker Map # 4

December 3, 2002 GIS



District E

Permit #	Permittee	Map #
3904229	HOFFMAN-STOCKAR	1



STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit [redacted] copy to the Agricultural Commissioner within 10 days of month following application.

MONTH May 1 YEAR 2001 2

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
1 55-022-390-12-49	5 Hoffman/Stocker	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 Grapes Wine	19 SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
1	8/6/2001 11:00 Am	18	GR ☑ AIR ☐ OTHER ☐		2935-43 AA	360 (LB) OZ PT QT GA	72hr.	20.16		Wilbur Ellis Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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REPORT PREPARED BY P T Rubin DATE 8/1/2001 REVIEWED BY _____

Grower Operator ID Pesticide Applicator DPR Grower Applicator/Coldgrand Applicator

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STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the [redacted] copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: June
YEAR 2: 2001

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-02-3904229	5 Hoffman Stocker	6 PO Box 672	7 Vacaville	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 Grapes Wine	19 SW corner Horney Ln & Hwy 99

21 CHEMICAL CODE NUMBER	22 DATE/TIME APPLICATION COMPLETED	23 ACREAGE/UNITS TREATED	24 APP METHOD (CHECK ONE)	25 BLOCK ID (IF APPLICABLE)	26 EPA OR STATE REGISTRATION NUMBER (FROM LABEL)	27 TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE)	28 DAYS REENTRY	29 RATE PER ACRE	30 DILUTION	31 PRODUCT AND MANUFACTURER
	6/7/2001 7:00AM	18	GR ☒ AIR ☐ OTHER ☐		100-919	36 LB (OZ) PT QT GA	72hr	2oz	100gal	Nonionic Film
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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REPORT PREPARED BY [signature] DATE 8/1/01 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH (1): Apr. 1 YEAR (2): 2001

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER (4)	OPERATOR (GROWER) (5)	ADDRESS (6)	CITY (7)	ZIP CODE (8)
57-02-390-4227	Hoffman Stockar	P.O. Box 673	VICTOR	95253

SITE IDENTIFICATION NUMBER (9)	TOTAL PLANTED ACREAGE/UNITS (10)	COUNTY NUMBER (11)	SECTION (12)	TOWNSHIP (13)	RANGE (14)	BASE & MERIDIAN (15)
4-1	18	39	26	03 N S	06 E W	S (M) H

COMMODITY/SITE TREATED (17): Grapes Wine

FIELD LOCATION (19): SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	4/6/2001		GR ☑ AIR ☐ OTHER ☐		7969-61-51036	54 (LB) OZ PT QT GA	72hr.	5 lb.	100 gal	MicroFlo Kumulus
	4/6/2001	18	GR ☑ AIR ☐ OTHER ☐		275-103	18 (LB) OZ PT QT GA	72hr.	1 lb	100 gal	Abbott Lab Dipel
	4/6/2001	18	GR ☑ AIR ☐ OTHER ☐		100-919	36 LB (OZ) PT QT GA	72hr.	2 oz	100 gal	Novartis Flint
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4/27/2001	18	GR ☑ AIR ☐ OTHER ☐		2935-48 AA	3600 (LB) OZ PT QT GA	72hrs.	20 lbs	NA	Wilbur Ellis Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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REPORT PREPARED BY: [signature] DATE: 5/1/2001

REVIEWED BY: _____ FOR AGENCY USE ONLY

Original - WKA ... County Agricultural Commissioner, Pink copy--DPR, Canary--Applicator, Goldenrod--Applicator

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR-ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: February YEAR 2: 2001

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 59-02-39012729	5 Hoffman Stocker	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 Grapes Wine

FIELD LOCATION: 18 SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	2/9/2001 10:00 PM	18	GR ☑ AIR ☐ OTHER ☐		707-243	2.25 LB OZ PT QT (GA)	72hr.	1pt.	50gal	Rohm Haas Goal
	"	"	GR ☑ AIR ☐ OTHER ☐		10182-250	2.25 LB OZ PT QT (GA)	72hr.	1pt.	50gal	ICI Gramoxone
	"	"	GR ☑ AIR ☐ OTHER ☐		35916-1260063	18 (LB) OZ PT QT GA	72hr.	1pt.	50gal	Sipcam Pintrol
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

***Instructions:* Submit the white copy to the Agricultural Commissioner within 10 days of month following application.**

MONTH (1): June YEAR (2): 2002

NURSERY (3): ☐

Page ____ of ____

OPERATOR ID/PERMIT NUMBER (4)	OPERATOR (GROWER) (5)	ADDRESS (6)	CITY (7)	ZIP CODE (8)
39-02-3904229	Hoffman Stocker	P.O. Box 673	Victor	95253

SITE IDENTIFICATION NUMBER (9)	TOTAL PLANTED ACREAGE/UNITS (10)	COUNTY NUMBER (11)	SECTION (12)	TOWNSHIP (13)	RANGE (14)	BASE & MERIDIAN (15)
4-1	18	39	26	08 (N) S	06 (E) W	S (M) H

COMMODITY/SITE TREATED (17): Grapes Wine

FIELD LOCATION (19): SW corner Harney & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	6/4/2002 6:00am	18	GR ☑ AIR ☐ OTHER ☐		707-215	72 LB (OZ) PT QT GA	72hrs	4oz	Wagel	Rohm Haas Rally
	6/4/2002 6:00Am	18	GR ☑ AIR ☐ OTHER ☐		7969-67-51036	54 (LB) OZ PT QT GA	72hrs	3lbs	100gal	Microflo Kumulus
	6/23/2002	18	GR ☑ AIR ☐ OTHER ☐		100-919	36 LB (OZ) PT QT GA	72hrs.	2oz	350gal	Novartis Flint
	6/23/2002	18	GR ☑ AIR ☐ OTHER ☐		no epa #	4.5 LB OZ PT QT (GA)	72hr	1pt.	350gal	Fruitwash REA
	6/24/2002	18	GR ☑ AIR ☐ OTHER ☐		347-04-393	225 (LB) OZ PT QT GA	72hrs.	20lbs.	n/a	Clean Crop Copper Sulfur Dust
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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AUG 14 2002

REPORT PREPARED BY: PT Fowler DATE: 8/14/02 REVIEWED BY: _____ FOR AGENCY USE ONLY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: May YEAR 2: 2002

☐ NURSERY 3

Page ____ of ____

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-02-39042229	5 Hoffman Stocker	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 07 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 Grapes Wine

FIELD LOCATION: 18 SW corner of Harney & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	8/10/02 3:00 am	18	GR ☑ AIR ☐ OTHER ☐		55479-3-AA	450 (LB) OZ PT QT GA	72hrs	25lbs.	n/a	CSC Dusting Sulfur
	8/25/02 2:00 pm	18	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	450 (LB) OZ PT QT GA	72hrs	25lbs.	n/a	CSC Dusting Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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AUG 14 2002

REPORT PREPARED BY [signature] DATE 8/29/02

REVIEWED ____ FOR AGENCY USE ONLY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR-ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH (1): April YEAR (2): 2002

☐ NURSERY (3)

Page ____ of ____

OPERATOR ID/PERMIT NUMBER (4)	OPERATOR (GROWER) (5)	ADDRESS (6)	CITY (7)	ZIP CODE (8)
39-02-3904229	Hoffman Stocker	P.O. Box 673	Victor	95253

SITE IDENTIFICATION NUMBER (9)	TOTAL PLANTED ACREAGE/UNITS (10)	COUNTY NUMBER (11)	SECTION (12)	TOWNSHIP (13)	RANGE (14)	BASE & MERIDIAN (15)
4-1	18	39	26	03 (N) S	06 (E) W	S (M) H

COMMODITY/SITE TREATED (17): Grapes Wine

FIELD LOCATION (19): SW corner Harney Ln & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	4/3/02 9:00 AM	18	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	450 (LB) OZ PT QT GA	72hrs.	25 lbs	n/a	CSC Dusting Sulfur
	4/20/02 7:00 AM	18	GR ☑ AIR ☐ OTHER ☐		100-919	36 LB (OZ) PT QT GA	72hrs.	2oz	100 gal	Novartis Flint
	4/20/02 7:00 AM	18	GR ☑ AIR ☐ OTHER ☐		3125-428	13.5 LB (OZ) PT QT GA	72hrs	3/4 oz	100 gal	Bayer Provado
	4/20/02 7:00 AM	18	GR ☑ AIR ☐ OTHER ☐		7969-61-51036	72 (LB) OZ PT QT GA	72hrs	4 lbs.	100 gal	Microflo Kumulus
	4/25/02 7:00 AM	18	GR ☑ AIR ☐ OTHER ☐		56336-25	6.6 LB (OZ) PT QT GA	72hrs.	.37/oz	100 gal	Checkmate OLR Concep
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

RECEIVED AUG 14 2002

REPORT PREPARED BY: PT Pendleton DATE: 8/14/2002

REVIEWED BY: _____ FOR AGENCY USE ONLY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: February YEAR 2: 2002

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-02-39042229	Hoffman Stockar	P.O. Box 673	VICTOR	95253

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
4-1	18	39	26	03 (N) S	06 (E) W	S (M) H

COMMODITY/SITE TREATED 17: Grapes - Wine

FIELD LOCATION 19: 3 Mile corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	Feb 27 11:00 AM	18	GR ☑ AIR ☐ OTHER ☐		10182-280	2.25 LB OZ PT QT (GA)	72 hrs.	1 pt.	50 gal	ICI Gramoxone
	"	"	GR ☑ AIR ☐ OTHER ☐		10182-362	18 (LB) OZ PT QT GA	72 hrs.	1 lb	50 gal	Griffin Dirca
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

RECEIVED AUG 14 2002

REPORT PREPARED BY [signature] DATE 8/14/02 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

03

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 7 (1) YEAR 2003 (2)

☐ NURSERY 3

Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 29-02-3904279	5 Hoffman/Tatacker	6 PO Box 673	7 VICTOR	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 Grapes Wine	19 SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	7/2/03 3:00	18	GR ☒ AIR ☐ OTHER ☐		707-215	72 LB (OZ) PT QT GA	72 hrs	4oz	100gal	Rohm Haas Rally
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

AUG 22 2003

REPORT PREPARED BY [illegible] DATE 8/20/2003 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR-ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: June
YEAR 2: 2003

NURSERY 3: [ ]

Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-03-39104229	5 Hoffman/Stockar	6 P.O. Box 673	7 VICTOR	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED
17 Grapes Wine

FIELD LOCATION
19 SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	6/8/03 8:00 am	18	GR ☑ AIR ☐ OTHER ☐		707-215	72 LB (OZ) PT QT GA	72hrs	4 oz	100 gal	Rohm Haas Pully
	6/8/03 8:00 am	18	GR ☑ AIR ☐ OTHER ☐		7969-154	100 8 LB (OZ) PT QT GA	72hrs	5 oz	100 gal	BASF Sovran
	6/8/03 8:00 am	18	GR ☑ AIR ☐ OTHER ☐		3125-428	13 5 LB (OZ) PT QT GA	72hrs	3/4 oz	100 gal	Bayer Prowl
	6/15/03 6:00 am	18	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	450 (LB) OZ PT QT GA	12hrs	20 lbs	N/A	CSC Dusting Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

REPORT PREPARED BY | DATE | REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

***Instructions:* Submit the white copy to the Agricultural Commissioner within 10 days of month following application.**

MONTH 1: July YEAR 2: 2003

☐ NURSERY 3

Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-63-37042291	5 Hoffman/Stocker	6 PO Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 N S	14 06 E W	15 S M H

COMMODITY/SITE TREATED: 17 Grapes Wine

FIELD LOCATION: 19 SW corner Herrey Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	6/12/03 10:00am	10	GR ☑ AIR ☐ OTHER ☐		707-215	LB (OZ) PT QT GA 72	72hr.	40z	100gal	Polyram Wave Rally
	"	"	GR ☑ AIR ☐ OTHER ☐		7969-154	LB (OZ) PT QT GA 100 8	72hr	5.6oz	100gal	BASF Cuprex
	"	"	GR ☑ AIR ☐ OTHER ☐		56336-25	LB (OZ) PT QT GA 6 6	72hrs	1.37oz	100gal	Checkmate OLR Concep
	"	"	GR ☑ AIR ☐ OTHER ☐		7969-61-51036	(LB) OZ PT QT GA 54	72hrs	3 lbs.	100gal	Microthio Kumulus Wet S.
	6/23/03 6:30pm	"	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	(LB) OZ PT QT GA 450	72hrs.	20 lbs	n/a	CSC Dusting Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

REPORT PREPARED BY: DT Fowler DATE: 8/20/2003 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

MONTH 1: April YEAR 2: 2003

☐ NURSERY 3

Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 39-03-39042227	5 Hoffman/Stocker	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 4-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 Grapes Wine

FIELD LOCATION: 19 SW corner Harney Lane Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	4/5/03 5:00 am	18	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	450 (LB) OZ PT QT GA	72hrs	25 lb	n/a	CSC Dusting Sulfur
	4/17/03 6:00 am	18	GR ☑ AIR ☐ OTHER ☐		55429-3-AA	450 (LB) OZ PT QT GA	72 hrs	25 lbs	n/a	CSC Dusting Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

RECEIVED AUG 29 2003

REPORT PREPARED BY [signature] DATE 5/1/03

RECEIVED

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STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions. Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

March (MONTH 1) 2003 (YEAR 2)

☐ NURSERY 3

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 29-03 3510-4229	5 Hoffman / Stockmer	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 H-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
17 Grapes Wine	19 SW corner of Harney Ln & Hwy 99

21 CHEMICAL CODE NUMBER	22 DATE/TIME APPLICATION COMPLETED	23 ACREAGE/UNITS TREATED	24 APP METHOD (CHECK ONE)	25 BLOCK ID (IF APPLICABLE)	26 EPA OR STATE REGISTRATION NUMBER (FROM LABEL)	27 TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE)	28 DAYS REENTRY	29 RATE PER ACRE	30 DILUTION	31 PRODUCT AND MANUFACTURER
	3/6/03 11:00 am	18	GR ☑ AIR ☐ OTHER ☐		~~Atochem~~ 4581-373	90 (LB) OZ PT QT GA	24hrs	5 lbs	50 gal	Atochem Mic Wet Sulfur
	3/22/03 10:00 am	18	GR ☑ AIR ☐ OTHER ☐		4581-373	90 (LB) OZ PT QT GA	24hrs	5 lbs	50 gal	Atochem Mic Wet Sulfur
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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AUG 22 2003

REPORT PREPARED BY [illegible] DATE 8/22/03 REVIEWED BY

STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR-ENF-017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

Instructions: Submit the white copy to the Agricultural Commissioner within 10 days of month following application.

February (MONTH 1) 2003 (YEAR 2)

☐ NURSERY 3

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
4 19-03-390-4229	5 Hoffman/Stocker	6 P.O. Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
9 1-1	10 18	11 39	12 26	13 03 (N) S	14 06 (E) W	15 S (M) H

COMMODITY/SITE TREATED: 17 Grapes (Wine)

FIELD LOCATION: 19 SW corner Herrington & Hwy 99

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
	2/9/03 11:07 am	18	GR ☑ AIR ☐ OTHER ☐		10182-280	18 LB OZ (PT) QT GA	72hrs	1 pt.	50 gal	ICI Gramoxone
	"	"	GR ☑ AIR ☐ OTHER ☐		10182-362	18 (LB) OZ PT QT GA	72hrs.	1 lb	50 gal	~~Rohm Haas Goal~~ Griffin Direx
	"	"	GR ☑ AIR ☐ OTHER ☐		702-243	18 LB OZ (PT) QT GA	72hrs.	1 pt	50 gal	Rohm Haas Goal
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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RECEIVED AUG 22 2003

REPORT PREPARED BY [illegible] Applicator Coordinator Applicator

WED

FOR AGENCY USE ONLY

2001

SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205

Office: (209)468-3300 Recorder (NOI): (209)468-3300 FAX (209)468-3330

RESTRICTED MATERIALS PERMIT

PERMIT/OPERATOR I.D. #: 39-99-3904416
County HQ District #: E
Expiration Date: 12/31/2001
Issue Date: 2/19/1999

PARISES, DAN
13322 N STOCKTON
LODI, CA 95240-

DAN PARISES
13322 N STOCKTON
LODI, CA 95240-

Home: (209)369-1851
Shop: (209)369-1851
Mobile ( ) -

FOR RESTRICTED MATERIALS PERMIT USE ONLY

Permit Type Poss. Only [ ] Seasonal [X] Poss. & Use [X] Job [ ]
Permittee Type: Q.A Cert [ ] Ag. PCO [ ] Private App [X] Non-Ag [ ]
NOI required 24 hours prior to application.
Method: Phone [X] Box [X] Person [X] Modem [ ] Fax [ ]

Numb	Pesticide	Pest(s)	Form.	Method(s)	Applicator(s)	
1051	SEVIN	Larvae	Liquid	Ground	PCO	Grower
3830	METHOMYL	Larvae	Liquid	Ground	PCO	Grower
16011	PARAQUAT	Weeds	Liquid	Ground	PCO	Grower

Non-Ag Use:
Conditions: P

I understand that this permit does not relieve me from liability for any damage to persons or property caused by the use of these pesticides. I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit. I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides or emptied containers and equipment used or to be used in the treatment. [Form 23-125(v2.52 (Rev. 02/16/90) Pesticide Enforcement Branch]

Permit Applicant Dan Parises Sign Dan Parises

Title. Owner Date: 2-19-99

Issuing Officer [signature] Date 2-19-99

PARISES, DAN Permit #: 39-99-3904416

Employees handle pesticides (Y or N) [N]

Contact People:	Phone	PCO	PCA	PCD	Other

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
GRAPES (29141-0)	1-1 SW/ARMSTRONG & HWY 99 1051, 16011	E	25	03N	06E	M	3.00	A	P
	1-2 SW ARMSTRONG & MICKEGROVE RD 1051, 16011	E	25	03N	06E	M	45.00	A	P
	3-1 SE/HARNEY & STOCKTON STS 1051, 16011	E	24	03N	06E	M	10.00	A	P
	3-2 SW/HARNEY & HWY 99 1051, 16011	E	24	03N	06E	M	19.00	A	P
UNCUL NON-AG (67000-0)	ALL ALL LOCATIONS 16011	E	25	03N	06E	M	5.00	A	P

PARISES, DAN Permit # 39-99-3904416

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-3 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[_] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium (Vapam)
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9. Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[_] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[_] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[✓] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true, and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Dan Parises 2-19-99

Purchaser Date

PARISES, DAN Permit #: 39-99-3904416

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit. THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2 No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

*** Last Page ***

APPLICATION — RESTRICTED MATERIALS — SUPPLEMENT

PERMIT NO. 39-99-3904416.

Dan Parises.

PAGE NO. 5

	LOCATION	SEC	TWN	RNG	MAP ID	COMMODITY	ACRES/ UNITS	PESTICIDES	PESTS	F*	M**	RATE	DILUTION/ VOLUME	APPL	DATE/ TIMING
8	S/E Hogan & Hwy 99	19	3N	7E	2-1	Grapes	7	Sevin	Larvae	L	G				
9								Paraquat	weeds	L	G				
10															
11															
12															
13															
14															
15															
16															
17.															
18															
19															
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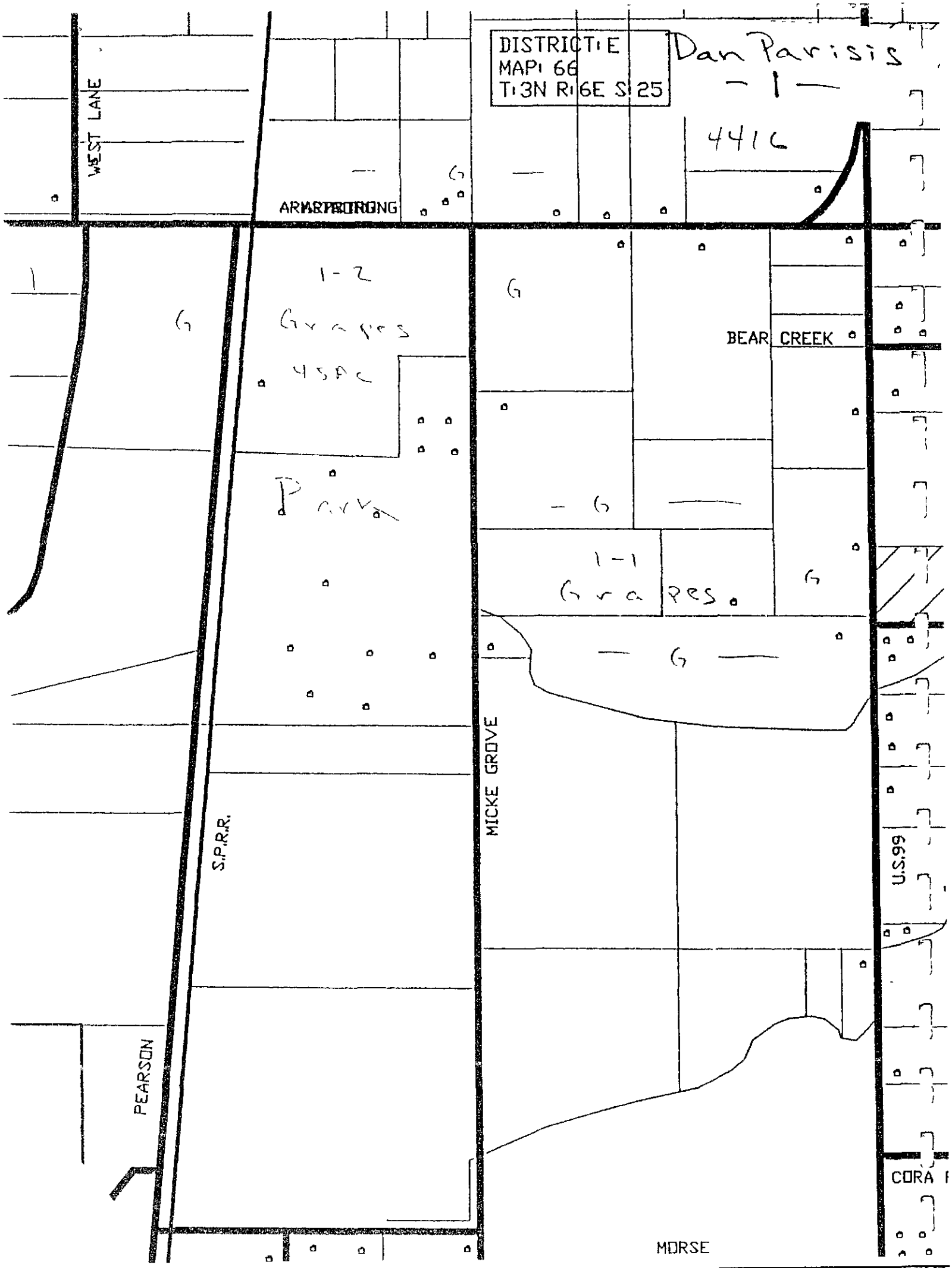
22.															
23															
24.															
25.															
26															
27															
28															
29.															
30															
31.															
32															
33															
34.															

* Formulation. L-Liquid B-Bait D-Dust F-Fumigant G-Granules WP-Wettable Powder O-Other

APPLICANT SIGNATURE Dan Parises DATE 2/19/99

ISSUED BY [illegible] DATE 2/19/99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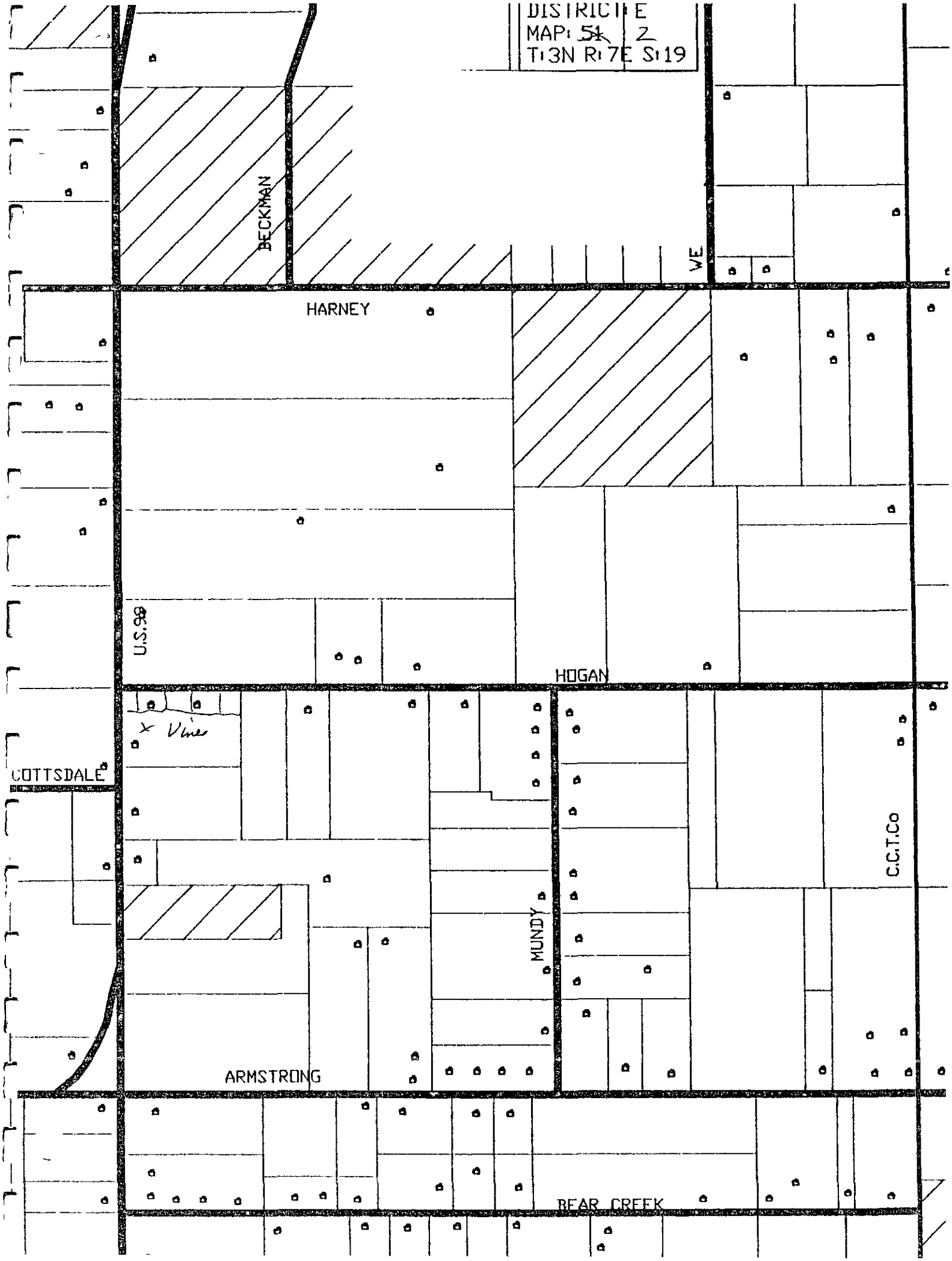
MAP: 66
T:3N R:6E S:25
Dan Parisis
-1-
441C
WEST LANE
ARMSTRONG
G
1-2
Grapes
4.5AC
Park
BEAR CREEK
1-1
Grapes
MICKE GROVE
S.P.R.R.
U.S.99
PEARSON
CORA
MORSE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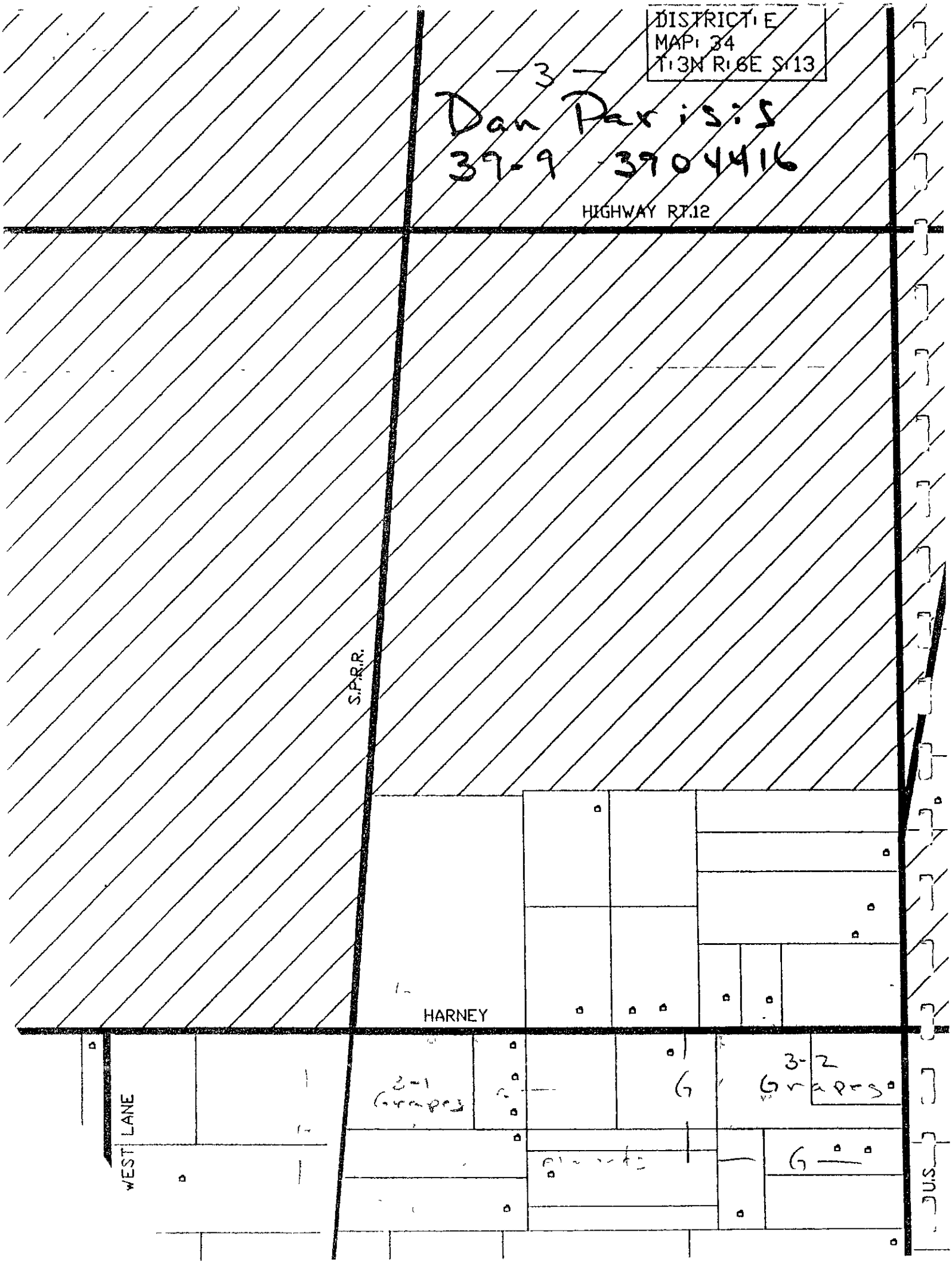
BECKMAN
WE
HARNEY
U.S.99
HOGAN
Vine
COTTSDALE
C.C.T.Co
MUNDY
ARMSTRONG
BEAR CREEK


DISTRICT: E
MAP: 34
T:3N R:6E S:13
3
Dan Parisi
39-9 3904416
HIGHWAY RT.12
S.P.R.R.
HARNEY
WEST LANE
3-1
Garages
3-2
Garages
G
G
U.S.

SAN JOAQUIN COUNTY
1868 E HAZELTON AVENUE
STOCKTON, CA 95205

Web URL www co san-joaquin ca us/agc E-Mail
Office (209)468-3300 Recorder (NOI) (209)468-3300 FAX (209)468-3330

==========

RESTRICTED MATERIALS PERMIT PERMIT #: 39-04-3904416
County HQ District # E

PARISES, DAN
13322 N STOCKTON
LODI, CA 95240-

Expiration Date: 12/31/20
Effective Date: ~~01/01/19~~ 3/25/0

DAN PARISES
13322 N STOCKTON
LODI, CA 95240-

Home: (209)369-1851
Shop: (209)369-1851
Fax
Mobile ( ) -

==========

Permittee Type		Permit Type		Possession		NOI Method of Submission			
Private App	X	Seasonal	X	Poss & Use	X	Phone	X	Fax	X
Q A Cert		Job		Poss Only		Box	X	Modem	
Ag PCO						In Person	X	Web	
Non-Ag									

NOI required 24 hours prior to applicati

==========

Non-Ag Use: None
Conditions: PZ

==========

I understand that this permit does not relieve me from liability for any damag to persons or property caused by the use of these pesticides I waive any claim of liability for damages against the County Department of Agriculture based on the issuance of this permit I further understand that this permit may be revoked when pesticides are used in conflict with the manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit I authorize inspection at all reasonable times and whenever an emergency exists, by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storag facilities for pesticides or emptied containers and equipment used or to be us in the treatment [Form PR-ENF-125 (Rev 07/92) Pesticide Enforcement Branch]

Permit Applicant DAN PARISES Sign Dan Parises

Title: Issue Date:

Issuing Officer Issue Date: 3/25/02

PARISES, DAN Permit# 39-04-3904416

Employees handle pesticides (Y or N) |N|

Permit Pesticides

Numb	Pesticide	Pest(s)	Form	Method(s)	Applicator(s)	
1051	SEVIN	LARVAE	Liquid	Ground	PCO	Grower
3830	METHOMYL	LARVAE	Liquid	Ground	PCO	Grower
16011	PARAQUAT	WEEDS	Liquid	Ground	PCO	Grower

Permit Commodities

Crop	Site #	Dist	Sect	Town	Range	Mer	Quant	Unit	Cond
GRAPE (29141-0)	1-1	E	25	03N	06E	M	3 00	A	P
					SW/ARMSTRONG & HWY 99				
1051(SEVIN), 16011(PARAQUAT)									
	1-2	E	25	03N	06E	M	45 00	A	P
					SW ARMSTRONG & MICKEGROVE RD				
1051(SEVIN), 16011(PARAQUAT)									
	2-1	E	25	03N	06E	M	10 00	A	P
					SE/HOGAN & H99				
1051(SEVIN), 16011(PARAQUAT)									
	3-1	E	24	03N	06E	M	10 00	A	P
					SE/HARNEY & STOCKTON STS				
1051(SEVIN), 16011(PARAQUAT)									
	3-2	E	24	03N	06E	M	19 00	A	P
					SW/HARNEY & HWY 99				
1051(SEVIN), 16011(PARAQUAT)									
UNCUL NON-AG (67000-0)	ALL	E	25	03N	06E	M	5 00	A	P
					ALL LOCATIONS				
16011(PARAQUAT)									

* * * LAST PAGE * * *

The Following Conditions Apply To ..... Permit#: 39-04-3904416

CONDITION - P
General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT.

1. Maximum wind velocities for applications of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are:
   a. Spray - 12 m.p.h.
   b. Dust - 8 m.p.h.
   c. Pellets, granular or baits - 16 m.p.h.

2. No pesticide application shall be made or continued when there is the likelihood of contaminating any persons, nontarget crops, animals or other public or private property.

3. Unless specifically named as a dust on this permit NO DUST FORMULATIONS are allowed.

4. Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s).

5. A flagger is required at the application site for all AIR applications of zinc phosphide bait.

*** Last Page Of Conditions ***

The Following Conditions Apply To ..... Permit#: 39-04-3904416

WORKERS SAFETY SERIES ATTACHED

[X] A-1 through A-9 General Info. | [_] B-1 Cholinesterase Testing

PERMIT CONDITIONS ATTACHED

[X] P - General
[_] Q - Dicamba & Phenoxy Herbicides - Central Valley/Hazardous Area
[_] R - Dicamba & Phenoxys - Special Hazardous Area
[_] S - Metam Sodium & Metam Potassium
[_] T - Aldicarb (Temik)
[_] U - Endosulfan (Thiodan)
[_] V - Rice Pesticides Program
  [_] Molinate (Ordram) Worker Safety
  [_] Attachments 1-9: Molinate (1,6) thiobencarb (2,6,7), carbofuran (3,6), methylparathion (4,9) and malathion (voluntary: 5,8)
[_] W - Methyl Bromide
  [_] Soil within greenhouses
  [_] Commodity
  [_] Soil injection
  [_] Tarped potting soil
  [_] Single tree site
[_] X - Furadan chemigation of grapes
[X] Z - Other

PESTICIDE SALES: GROUNDWATER PROTECTION

[X] The material I am purchasing will not be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use.

[_] The material I am purchasing will be used in a Pesticide Management Zone (as described in Section 6802, Title 3, California Code of Regulations) for agricultural, outdoor institutional or outdoor industrial use and a copy of my restricted materials permit is attached.

Material purchased: [_] Atrazine [_] Simazine [_] Bromacil
[_] Diuron [_] Prometon [_] Bentazon

I Certify under penalty of perjury that the foregoing statement is true and that I will not apply any material listed in Section 6800(a) in any Pesticide Management Zone for agriculture, outdoor institutional or outdoor industrial uses except in accordance with a permit issued by the county agricultural commissioner or the director in a county in which there is no commissioner.

Purchaser

3-25-0

Date

SAN JOAQUIN COUNTY
RESTRICTED MATERIALS PERMIT CONDITIONS

PERMITTEE: _____ PERMIT NO: 4416

CONDITION X

FURADAN CHEMIGATION OF GRAPES

A CERTIFICATION AND TRAINING

1 Each person prior to handling Furadan 4F for use on grapes must become "Certified trained" by attending training provided by the registrant All records of attendance and training shall be maintained by the employer

2 During all "handling" activities "Handlers" must have in possession, proof that they received the training and are "certified trained"

B APPLICATION REQUIREMENTS

1 Apply a minimum of ten gallons of water per vine through drip (trickle) emitter

2 Do not apply Furadan 4F for at least seven days after harvest to allow berries on the ground to dry (raisined)

3 For post-harvest drip irrigations, apply up to a maximum of two applications of three quarts per acre, or up to a maximum of three applications of two quarts per acre only

4 After the application and irrigation in soils where puddling is known to occur, look for, and eliminate, puddles, or enough time must be allowed to ensure dissipation of puddles two hours prior to sunrise

5 No daylight irrigation is to occur until the minimum gallonage is applied, or at least 21 days after Furadan 4F application

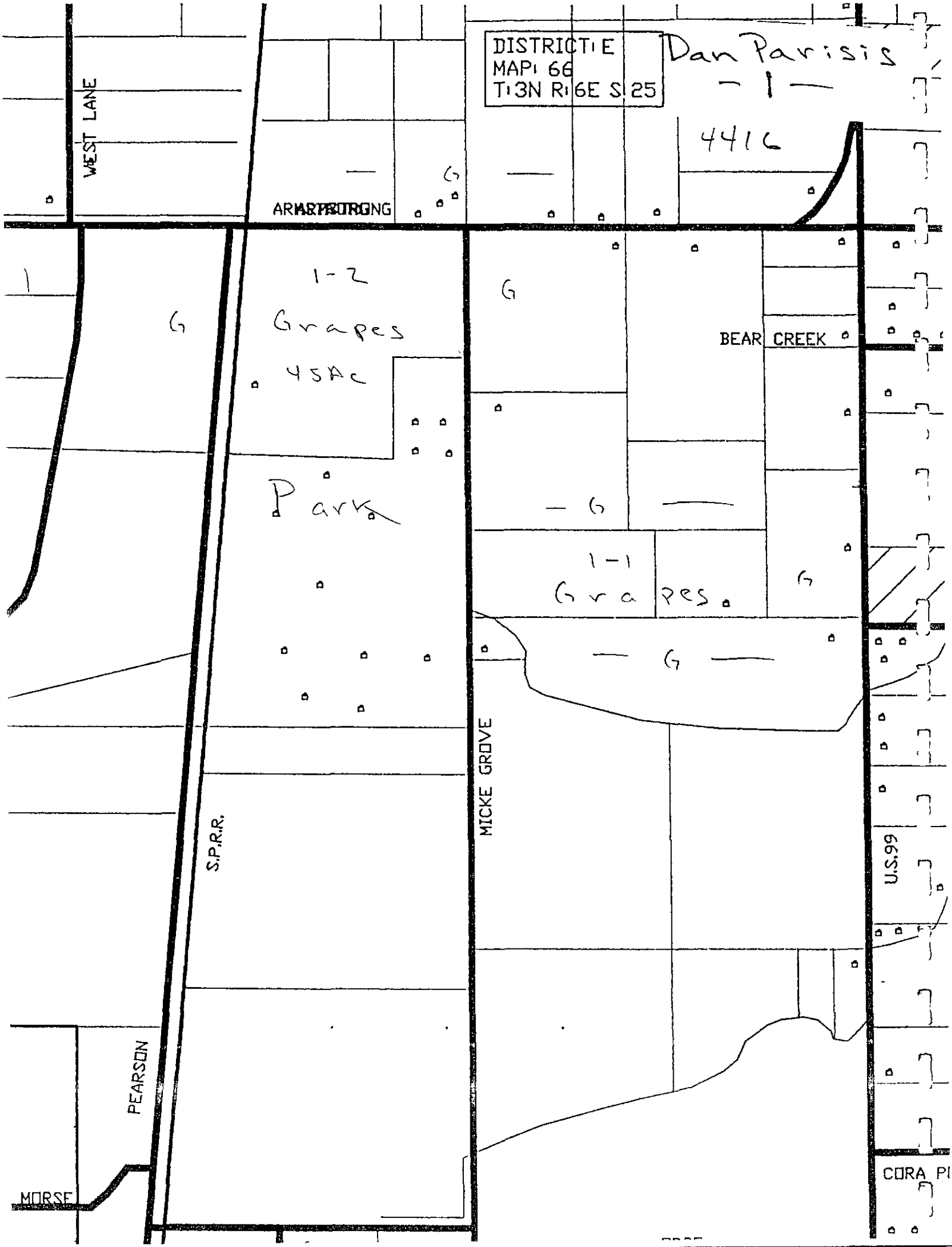
6 A "certified trained" person shall be at the application site during the application and until the flushing of the lines is completed The "certified trained" person shall shut the system down and make necessary adjustments should the need arise

7 Within 24-hours of the completion of the application and flushing, the property owner will survey the entire treated area for dead birds Carcasses will be held under refrigeration and given to the agricultural commissioner's office or disposed of as directed by the agricultural commissioner

CONDITION Z

Paraquat dichloride (Gramoxone)

Persons working as applicators or flaggers (except applicators working in an enclosed cab or flaggers working in an enclosed vehicle) shall wear a dust/mist respirator approved by MSHA/NIOH (number prefix TC-84-A).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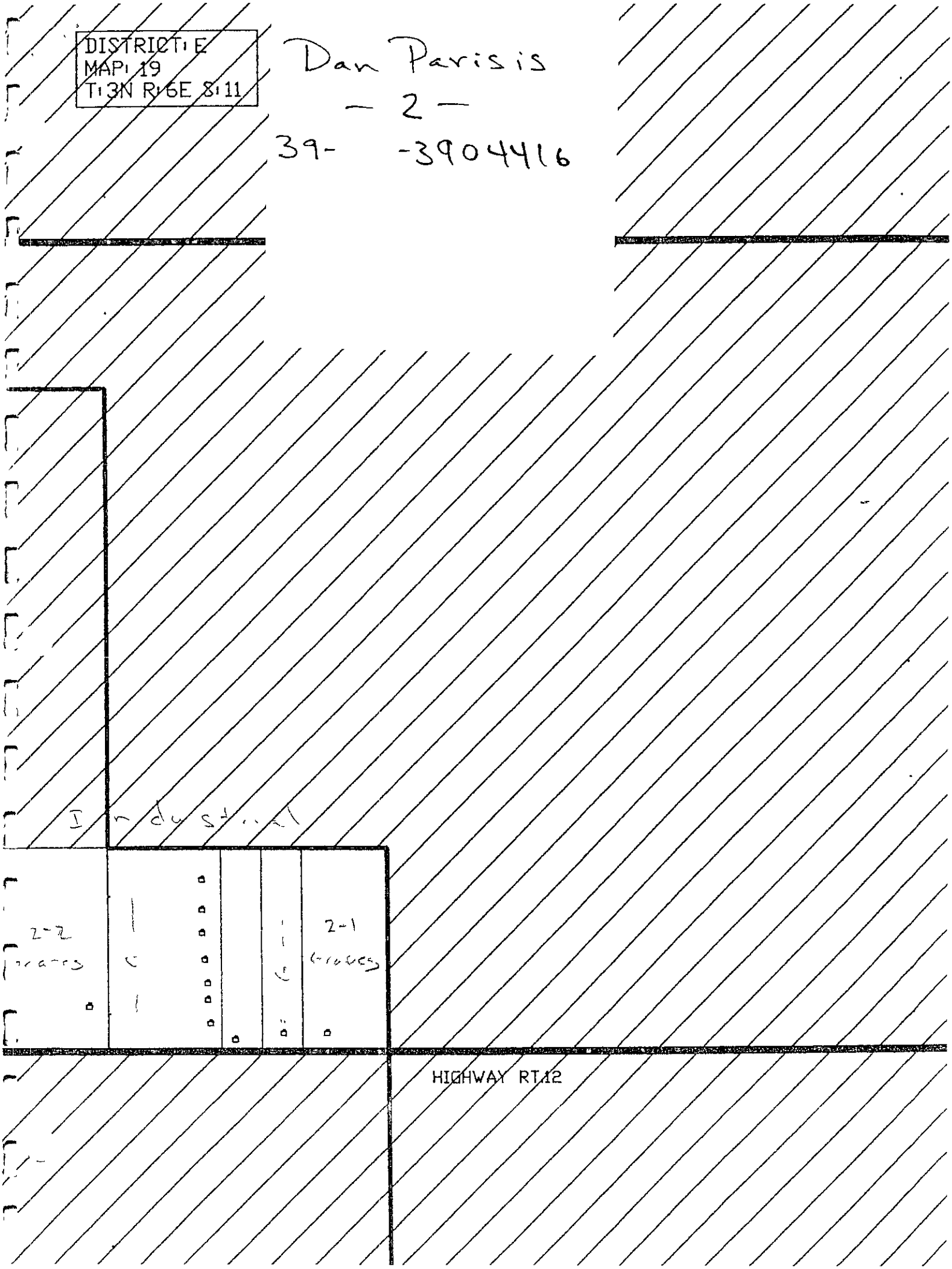
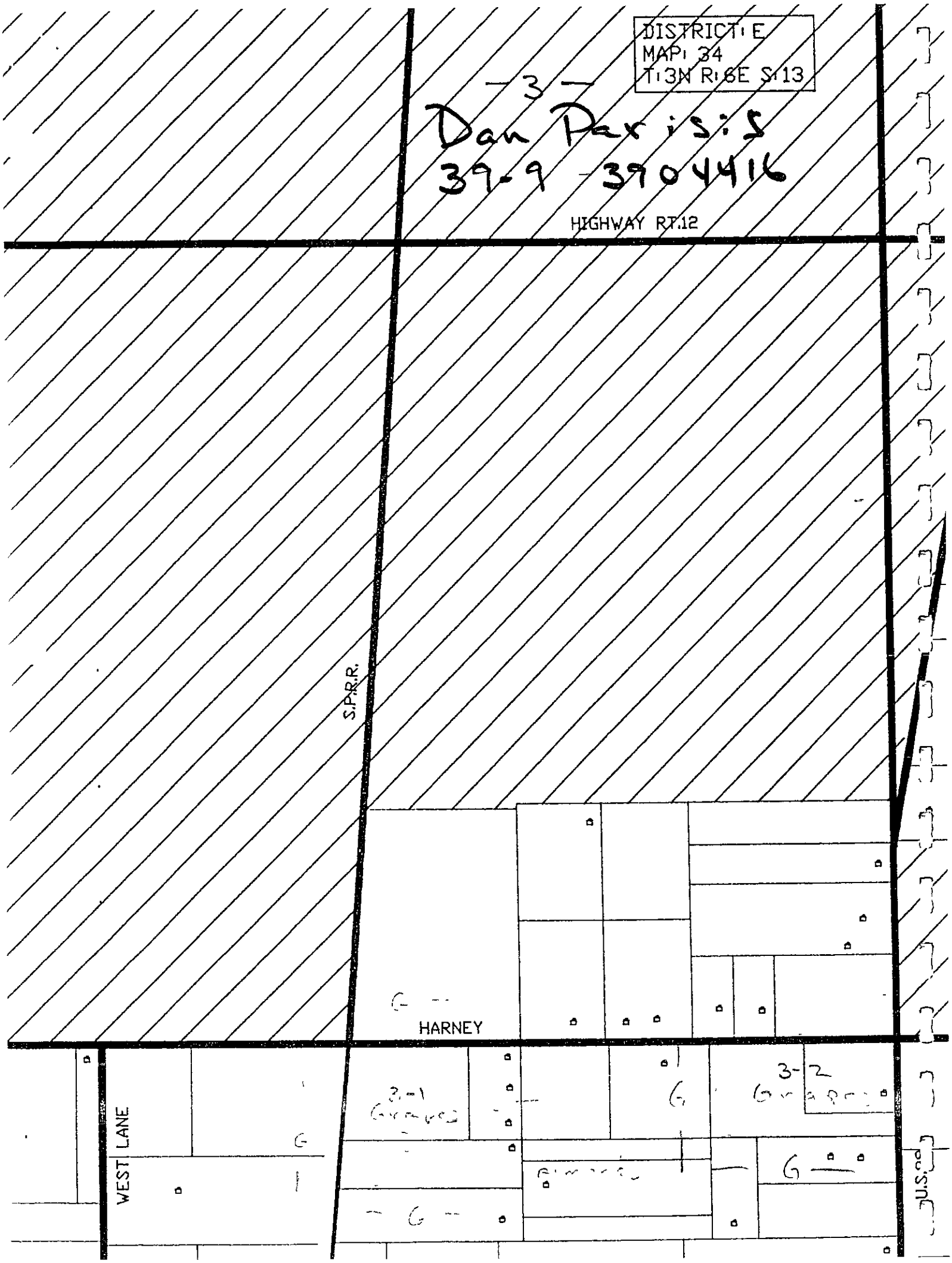
MAP: 66
T:3N R:6E S:25
Dan Parisis
- 1 -
4416
WEST LANE
ARMSTRONG
G
1-2
Grapes
45Ac
Park
BEAR CREEK
1-1
Grapes
MICKE GROVE
S.P.R.R.
U.S.99
PEARSON
MORSE
CORA PI

DISTRICT: E
MAP: 19
T: 3N R: 6E S: 11

Dan Parisis
— 2 —
39- -3904416




DISTRICT: E
MAP: 34
T:3N R:6E S:13
3
Dan Parsis
39-9 3904416
HIGHWAY RT.12
S.P.R.R.
HARNEY
WEST LANE
3-1
3-2
U.S.Rd

SAN JOAQUIN COUNTY
1868 E. HAZELTON AVENUE
STOCKTON, CA 95205-

E-mail: Web: www.co.sanjoaquin.ca.us/agcomm
Office (209)468-3300 Fax (209)468-9330 Recorder (NOI's) (209)466-3302

2007

RESTRICTED MATERIALS PERMIT

PARISES, DAN
13322 N STOCKTON
LODI, CA 95240-

Permit Number: 39-07-3904416
County District #: E
Expiration Date: December 31, 2007
Effective Date: ~~January 1, 1990~~ 4-12-05

DAN PARISES
13322 N STOCKTON
LODI CA 95240-

Home Phone: (209)369-1851
Shop Phone: (209)369-1851
Mobile Phone: ( ) -329-5135
Fax:

Permittee Type: Private Applicator
Permit Type: Seasonal
Possession: Possession & Use

NOI Method of Submission
Phone: X Fax: X Email:
In Person: X Modem: Web:
NOI required 24 hours prior to application

Conditions: A, B, GWP-L3, GWP-L2, GWP-L3
See end of permit for code descriptions

I understand that this permit does not relieve me from liability for any damages to any persons or property caused by the use of these pesticides. I waive any claims of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that this permit may be revoked when pesticides are used in conflict with their manufacturer's labeling or in violation of applicable laws, regulations and specific conditions of this permit. I authorize inspection at all reasonable times and whenever an emergency exists by the Department of Pesticide Regulation or the County Department of Agriculture of all areas treated or to be treated, storage facilities for pesticides, empty containers and equipment used or to be used in the treatment. (Form PP-EnF-125 (Rev. 07/02) Pesticide Enforcement Branch)

Printed Applicant: DAN PARISES (Please Print) Signature: Dan Parises

Title: Owner (Please Print) Issue Date: 4-12-05

Issuing Official: Steve Dinardi Issue Date: APRIL 12, 2005

Employees do not handle pesticides.

Contact Name	License#	Code	Exp. Date	Phone Number	Contact Type
PARISES, DAN	5904416		12/31/2007	(209)369-1851	Grower-Permittee
PARISES,DAN	3998307		12/31/2004		Pesticide Applicator Certif

PERMIT PESTICIDES

Number	Pesticide	Pests	Forms	Methods	Applicators
1081	SEVIN	LARVAE	Liquid	Ground	PG
2310	DIURON	WEEDS	All Reg	Air Ground	PG
5330	METHOMYL	LARVAE	Liquid	Ground	PG
5310	SIMAZINE	WEEDS	All Reg	Air Ground	PG
16011	PARAQUAT	WEEDS	Liquid	Ground	PG
20191	NICOSULFURON	WEEDS	All Reg	Air Ground	PG

PERMIT COMMODITIES

Crop / Site	Location/Site Narrative/Site Conditions	District	Section / Quantity	Town / Units	Range	Meridian
GRAPE (29141-0)						
1-1	SW/ARMSTRONG & HWY 99 RUNOFF GWPA	E	25 / 5.00	03N / A	06E	M
	Site Conditions GWP-R3 1081 (SEVIN), 16011 (PARAQUAT),					
1-2	SW ARMSTRONG & MICKE GROVE RD RUNOFF GWPA	E	25 / 45.00	03N / A	06E	M
	1081 (SEVIN), 16011 (PARAQUAT),					
3-1	SE/HARNEY & STOCKTON STC LEACHING GWPA	E	24 / 10.00	03N / A	06E	M
	Site Conditions GWP-LA 1081 (SEVIN), 16011 (PARAQUAT),					
UNCUL NON-AG (67000-0)						
ALL	ALL LOCATIONS	E	25 / 5.00	03N / A	06E	M
	16011 (PARAQUAT),					
UNCULTIVATED AG (66000-0)						
1-2	SW ARMSTRONG & MICKE GROVE RD RUNOFF GWPA	E	25 / 45.00	03N / A	06E	M

Permittee PARISES, DAN | Permit Number. 39-07-390441

Decription of Conditions on this Permit

Condition ID	Description
A	Permit Cond.Table of Contents

A - PERMIT CONDITIONS - TABLE OF CONTENTS

WORKER SAFETY SERIES ATTACHED

[ ] A-1 through A-11 General Information

PERMIT CONDITIONS ATTACHED

[X] P - General
[ ] Q - Dicamba & Phenoxy Herbicides - Central Valley Hazardous Area
[ ] R - Dicamba & Phenoxys - Special Hazardous Area
[ ] S - Metam Sodium & Metam Potassium
[ ] T - Aldicarb (Temik)
[ ] U - Endosulfan (Thiodan)
[ ] V - Rice Pesticides Program
  [ ] - Molinate (Ordram) Worker Safety (a)
  [ ] - Attachments 1-10 Molinate (1, 6), Thiobencarb (2,3,7), Methylparathion (3,9), Seepage Control (5), Propanil (10) and Malathion (voluntary 4,8)
[ ] W - Methyl Bromide
  [ ] - Soil within greenhouses
  [ ] - Commodity
  [ ] - Soil injection
  [ ] - Tarped potting soil
  [ ] - Single tree site
[ ] X - Endosulfan chemigation of grapes
[ ] Y - 1, 3 - Dichloropropene
[ ] Z - Other

GROUNDWATER PROTECTION PERMIT CONDITIONS

These conditions apply to pesticides labeled for agricultural, outdoor industrial, or outdoor institutional use that contain chemicals listed in 3CCR section 6800(a) ATRAZINE, SIMAZINE, BROMACIL, DIURON (except products with less than 2% active ingredient applied to forage), PROMETON, BENTAZON, AND NORFLURAZON. Ground Water Protection Areas (GWPA), for San Joaquin County, are designated in the Department of Pesticide Regulation document EH03-01. A list of GWPAs may be obtained from the Commissioner's Office or DPR's website (www.cdpr.ca.gov/docs/gwp).

Engineered rights of way are defined as areas within a ground water protection area (GWPA) that are constructed in a way that results in increased runoff and collection of storm water, such as railroad ballast and berms, public roadsides and highway median strips or similar areas but not canal or ditch banks or utility areas.

[illegible] GROUNDWATER PROTECTION PERMIT CONDITIONS ATTACHED

GWP-[illegible] - Unlined canal and ditch banks
[ ] 1 - Permeation rate is than or equal to 0.2 inches per hour
[ ] 2 - Applied six months prior to irrigation
[ ] 3 - All applications are prohibited below high water line

GWP-RDW - Engineered rights-of-way within San Joaquin County GWPA
[ ] 1 - Soil saturated within 7 days
[ ] 2 - Irrigation
[ ] 3 - Supplemental [illegible]

[ ] 3 - Compliance with NPDES permit

GWP-R Runoff GWPAs within San Joaquin County
[ ] 1 - Soil disturbance
[ ] 2 - Incorporated
[ ] 3 - Band treatment
[ ] 4 - Applied between April 1 and July 31
[ ] 5 - Runoff water held onsite
[ ] 6 - Runoff water stored offsite
[ ] 7 - Runoff to adjacent fallow field

GWP-L Leaching GWPAs within San Joaquin County
[ ] 1 - No irrigation
[ ] 2 - Bed or berm application
[ ] 3 - Managed irrigation

GWP-Director Director Approved Alternative Management Practices or Interim Use
[ ] 1 - Director approved alternative
[ ] 2 - Director approved interim use

Revised 1/04

GWP-L2 **Bed or berm application**

CONDITION - GWP-L2 - LEACHING GROUND WATER PROTECTION AREAS BED OR BERM APPLICATION

The permittee shall apply 3CCR section 6800(a) pesticides to the planting bed or the berm above the level of irrigation water in the furrow or basin and the water level shall remain at or below that level for six months following the application.

GWP-L3 **Managed irrigation**

CONDITION - GWP-L3 - LEACHING GROUND WATER PROTECTION AREAS MANAGED IRRIGATION

For six months after the application of 3CCR section 6800(a) pesticides, the permittee shall manage irrigation so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1.33 or less

GWP-R3 **Band treatment**

CONDITION - GWP-R3 - RUNOFF GROUND WATER PROTECTION AREAS BAND TREATMENT

3CCR section 6800(a) pesticides shall be applied as a band treatment immediately adjacent to the crop row so that not more than 33 percent of the distance between rows is treated

P **General**

CONDITION - P - General

In addition to all applicable laws, regulations, label restrictions and other more restrictive conditions of this permit, THE FOLLOWING CONDITIONS APPLY TO APPLICATIONS COVERED BY THIS PERMIT

1. Maximum wind velocities for application of Restricted Materials unless otherwise covered by the label, law, regulation, other permit conditions or environmental conditions at the application site are

   a. Spray - 12 mph
   b. Dust - 8 mph
   c. Pellets, granular or bait - 15 mph

2. The pesticide applicator should consider wind direction and other factors that may increase the likelihood of contaminating surrounding areas or other protected areas

3 Unless specifically named as a dust on this permit, NO DUST FORMULATIONS are allowed

4 Apply pesticides covered by SLN(s) and Section 18(s) in conformance with the SLN(s) and Section 18(s)

5 A flagger is required at the application site for all AIR applications of Zinc Phosphide bait

Revised 12/90

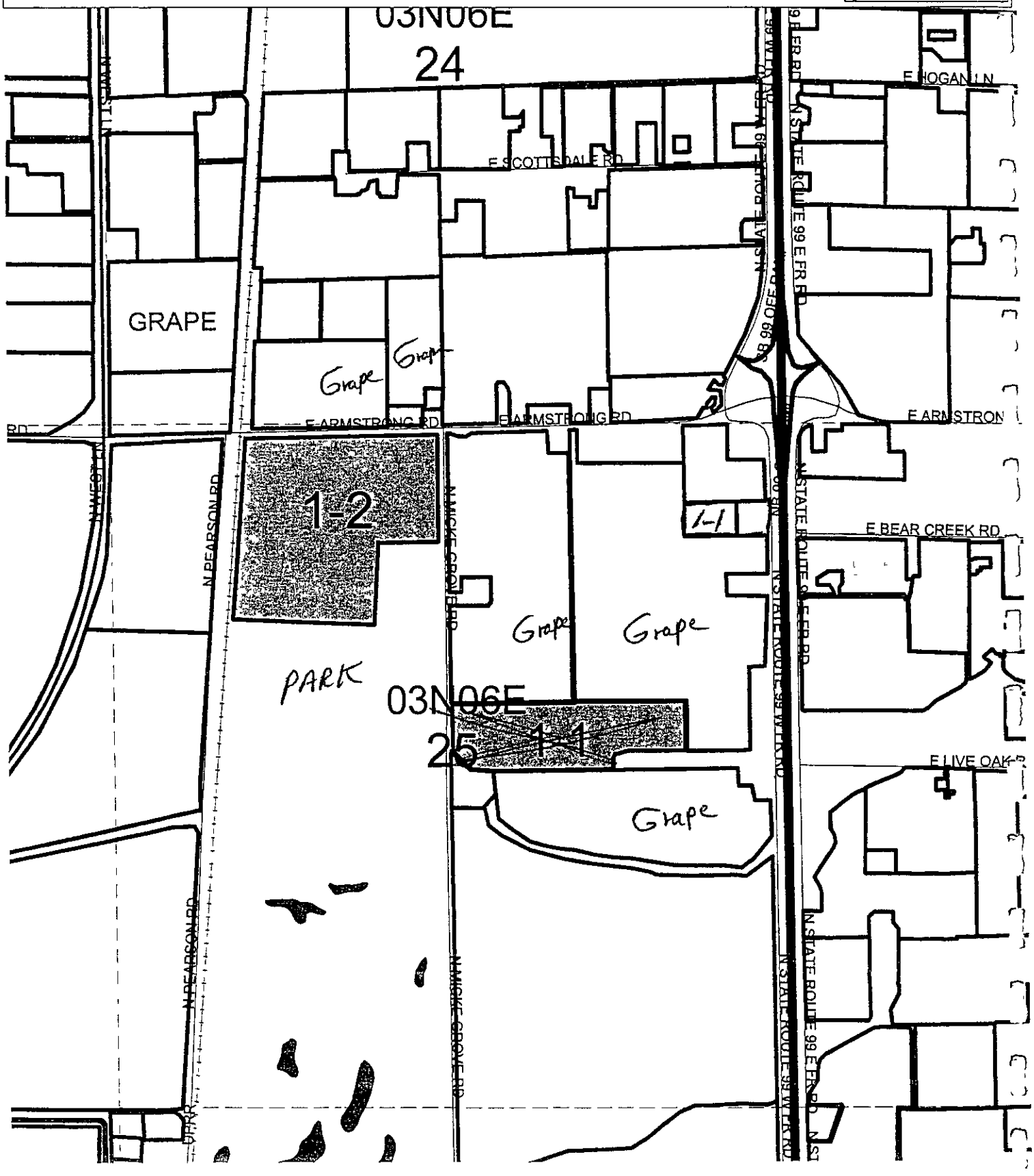
Description of Custom Site Conditions

Condition ID	Description

*** LAST PAGE ***

District E

Permit #	Permittee	Map #
3904416	PARISES, DAN	1

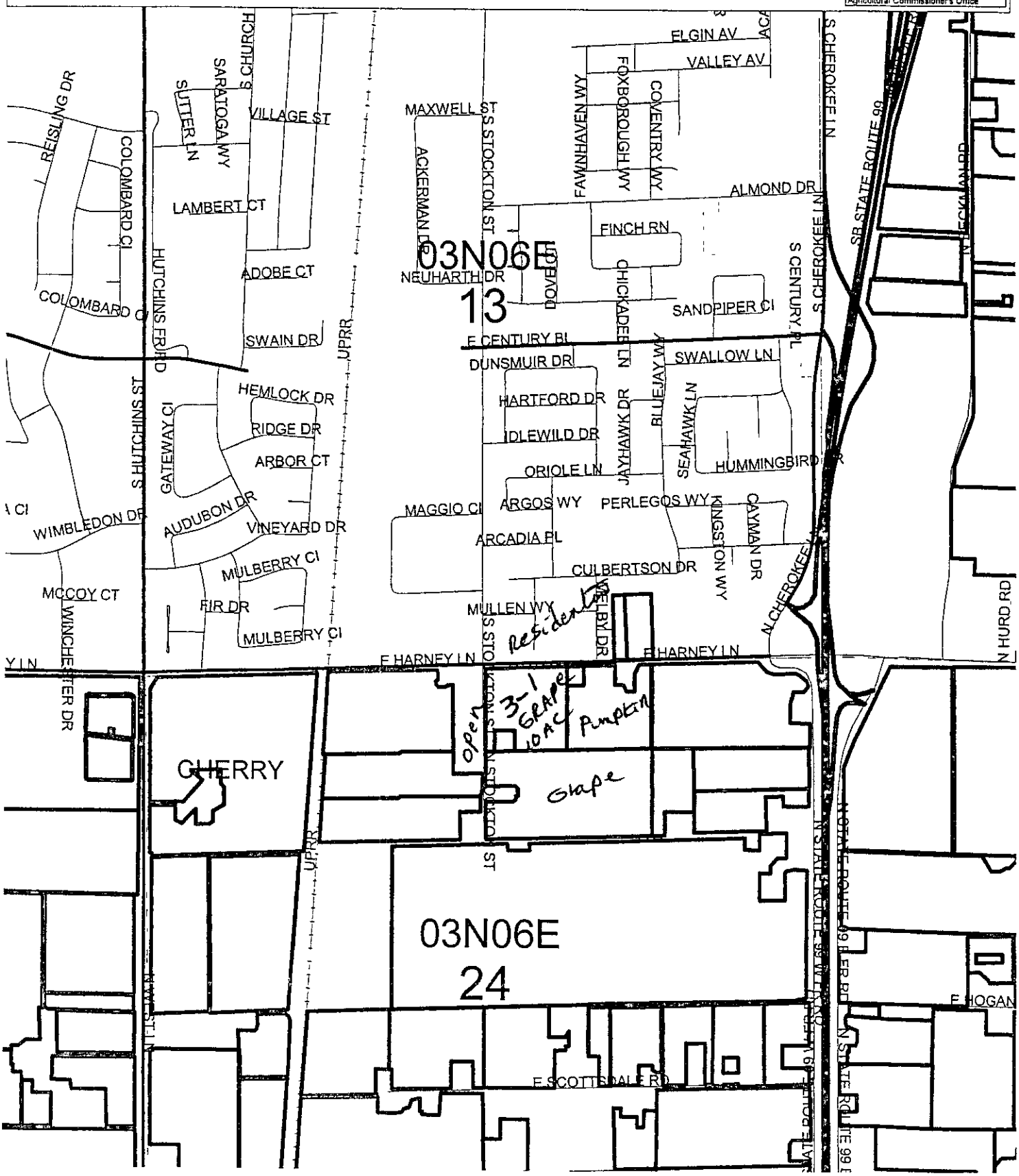


District E

Permit # 3904416

Permittee PARISES, DAN

Map # 3



STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PR ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

3991

Instructions: Submi[redacted] copy to the Agricultural Commissioner within 10 days of month following application.

MONTH July 1 YEAR 2001 2

☐ NURSERY 3

Page ___ of ___

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER)	ADDRESS	CITY	ZIP CODE
57-02-39041229	5 Hoffman Stocker	6 PO Box 673	7 Victor	8 95253

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS	COUNTY NUMBER	SECTION	TOWNSHIP	RANGE	BASE & MERIDIAN
4-1	10 18	11 39	12 26	13 03 N S	14 06 E W	15 S (M) H

COMMODITY/SITE TREATED	FIELD LOCATION
7 Grapes Wine	19 SW corner of Harney Ln & Hwy 99

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
	7/10/2001 6:00AM	18	GR ☑ AIR ☐ OTHER ☐		100-919	36 LB (OZ) PT QT GA	72hrs	2oz	100gal	Novartis Flint
	"	"	GR ☑ AIR ☐ OTHER ☐		3125-428	13.5 LB (OZ) PT QT GA	72hrs.	3/4oz	100gal	Bayer Prevado
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

RECEIVED AUG 03 2001

REPORT PREPARED BY [signature] DATE 8/1/2001 REVIEWED BY

TATE OF CALIFORNIA
EPARTMENT OF PESTICIDE REGULATION
R ENF 017C (REV 2/99)

PRODUCTION AGRICULTURE MONTHLY PESTICIDE USE REPORT

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MONTH 1: July YEAR 2: 2001

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Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-99-3904416	Dan Parises	13322 N Stockton St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
~~39-99-3904416~~ 3-1	10	39	24	3 N S	6 E W	S M H

COMMODITY/SITE TREATED 17: Zins-Wine grapes

FIELD LOCATION 19:

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	7-15 6-7AM		GR ☐ AIR ☐ OTHER ☐		EPA 55429-3-AA	150 (LB) OZ PT QT GA		15/Ac		Sulfur CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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Page 1 of 1

OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-99-390446	Dan Parise	13322 N Stockton St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED 17: ZINS - Wine grapes

FIELD LOCATION 19: SE Corner Harney + Stockton St.

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6-15 6-7Am		GR ☐ AIR ☐ OTHER ☐		EPA 55429-3-AA	150 (LB) OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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OPERATOR ID/PERMIT NUMBER	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-99-3904416	Dan Parsies	13322 N Stockton St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 N/S	6 E/W	S (M) H

COMMODITY/SITE TREATED 17: ZIN5-Wine grapes

FIELD LOCATION 19: SE Harney + Stockton St

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT (QT) GA				
	3-1	10	GR ☐ AIR ☐ OTHER ☐		EPA 10182-429	LB OZ PT (QT) GA 1		1 pt/Strip Ac		Touchdown - Zeneca
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	3-1	10	GR ☐ AIR ☐ OTHER ☐		EPA 19713-252	(LB) OZ PT QT GA 10		4 LB/Strip Ac		Sumayene 90 DF
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	3-1	10	GR ☐ AIR ☐ OTHER ☐		2955-501 42 AA	LB (OZ) PT QT GA 8		4 oz/100 gal H20		R 11 Wilbur - Ellis
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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MONTH 1: May YEAR 2: 2001

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OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-99-3904416	Dan Parises	13322 N Stockton St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED 17: Zins - Winegrapes

FIELD LOCATION 19:

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5-5 6-7Am		GR ☐ AIR ☐ OTHER ☐		EPA 55429-3-AA	150 (LB) OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5-29 6-7Am		GR ☐ AIR ☐ OTHER ☐		EPA 55429-3-AA	150 (LB) OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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MONTH (1): June YEAR (2): 2002

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OPERATOR ID/PERMIT NUMBER (4)	OPERATOR (GROWER) (5)	ADDRESS (6)	CITY (7)	ZIP CODE (8)
39-04-3904416	Dan Parnes	13322 N Stkn St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER (9)	TOTAL PLANTED ACREAGE/UNITS (10)	COUNTY NUMBER (11)	SECTION (12)	TOWNSHIP (13)	RANGE (14)	BASE & MERIDIAN (15)
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED (17): Juice - wine grapes

FIELD LOCATION (19): SE Harney + Stkn St.

CHEMICAL CODE NUMBER (21)	DATE/TIME APPLICATION COMPLETED (22)	ACREAGE/UNITS TREATED (23)	APP METHOD (CHECK ONE) (24)	BLOCK ID (IF APPLICABLE) (25)	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) (26)	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) (27)	DAYS REENTRY (28)	RATE PER ACRE (29)	DILUTION (30)	PRODUCT AND MANUFACTURER (31)
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6-15 6AM	10	GR ☐ AIR ☑ OTHER ☐		EPA # 55429-AA	(LB) OZ PT QT GA		15/ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6-28 6AM	10	GR ☐ AIR ☑ OTHER ☐		EPA # 65387-AR-002	LB (OZ) PT QT GA		2/ac		Provado
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6-28 6AM	10	GR ☐ AIR ☑ OTHER ☐		EPA # 707-215	LB (OZ) PT QT GA		2/ac		Rally
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	6-28 6Am	10	GR ☐ AIR ☑ OTHER ☐		EPA # 7969-106	LB (OZ) PT QT GA		6.6/ac		Nexter
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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MONTH 1: May YEAR 2: 2002

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OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-04-390416	Dan Parisos	13322 N Stkn St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED 17: Zinfandel grapes

FIELD LOCATION 19: SE Harney + Stkn St.

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5-12 6AM	10	GR ☒ AIR ☐ OTHER ☐		EPA # 55429-AA	(LB) OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	5-27 6AM	10	GR ☒ AIR ☐ OTHER ☐		EPA # 55429-AA	(LB) OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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MONTH 1: April YEAR 2: 2002

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OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-04-3904416	Dan Pariso	13322 N Stkn St	Lodi Ca	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED 17: Zins - wine grapes

FIELD LOCATION 19: SE Harney + Stkn St.

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4-10 6AM	10	GR ☐ AIR ☐ OTHER ☐		EPA# 55429-AA	LB OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	4-27 6AM	10	GR ☒ AIR ☐ OTHER ☐		EPA # 55429-AA	LB OZ PT QT GA		15/Ac		Sulfur - CSC
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
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			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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OPERATOR ID/PERMIT NUMBER 4	OPERATOR (GROWER) 5	ADDRESS 6	CITY 7	ZIP CODE 8
39-04-39044/6	DAN PARISES	13322 N. STKN. ST.	LODI	95240

SITE IDENTIFICATION NUMBER 9	TOTAL PLANTED ACREAGE/UNITS 10	COUNTY NUMBER 11	SECTION 12	TOWNSHIP 13	RANGE 14	BASE & MERIDIAN 15
3-1	10	39	24	3 (N) S	6 (E) W	S (M) H

COMMODITY/SITE TREATED 17: Zins - wine grapes

FIELD LOCATION 19: SE Harney & Stkn St.

CHEMICAL CODE NUMBER 21	DATE/TIME APPLICATION COMPLETED 22	ACREAGE/UNITS TREATED 23	APP METHOD (CHECK ONE) 24	BLOCK ID (IF APPLICABLE) 25	EPA OR STATE REGISTRATION NUMBER (FROM LABEL) 26	TOTAL PRODUCT USED (CIRCLE ONE UNIT OF MEASURE) 27	DAYS REENTRY 28	RATE PER ACRE 29	DILUTION 30	PRODUCT AND MANUFACTURER 31
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	1-8 8AM	10	GR ☐ AIR ☒ OTHER ☐		EPA 19713-252	(LB) 1 OZ PT QT GA		1 Strip ac		Sinnagine
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	1-8 8AM	10	GR ☐ AIR ☒ OTHER ☐		Round-Up ~~EPA 524-475~~	LB OZ PT (QT) GA 1½		1100 gal H2O		Round up.
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
	1-8 8AM	10	GR ☐ AIR ☒ OTHER ☐		2955-50142 AA	LB (OZ) PT QT GA 4		1100 gal H2O		R-11 Wilbur-Ellis spreader.
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				
			GR ☐ AIR ☐ OTHER ☐			LB OZ PT QT GA				

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AGENCY RECORDS SUMMARY

	AGENCY	DATE	CONTACT NAME	PHONE	TYPE OF INFORMATION
San Joaquin County	Office of Emergency Services	2/16/06	Michelle Halliwell	209 468-3962	Hazardous material incidents, hazardous material business plan and storage documents
State	Department of Toxic Substance Control	2/16/06	Ms Bobbi Jensen	916 255-3758	List of properties that show up on Cal-Sites database or on SLIC database
State	Fire Marshall, Pipeline Safety Office	2/16/06	Ms Lisa Dowdy	562 982-9115	Hazardous material pipelines and/or hazardous material incidents on or adjacent to the site
San Joaquin County	Community Development	2/11/06	http //www co san-joaquin ca us/	N/A	Contacted for information regarding zoning for the site
San Joaquin County	Environmental Health Department	2/16/06	Diane Martinez	209 468-3420	Hazardous material incidents, hazardous material business plan and storage documents Lists of businesses that handle hazardous materials, USTs, wells, and hazardous material incidents

APPENDIX E

PROPOSAL

File 02001PROP ENV/STO6P053
January 30, 2006

Mr Robert Sun
Senior Planner
WILLDAN
13191 Crossroads Parkway North, Suite 405
Industry, CA 91746-3497

Via Facsimile (562) 695-2120

Subject **Proposal**
Phase I Environmental Site Assessment
Approximately 220-Acres
Bound by State Route 99 to the East/Harney Lane to the North/UPRR to the West and Near Scottsdale Road to the South
Lodi, California

Dear Mr Sun

Please review the enclosed scope of work for a Phase I Environmental Site Assessment (ESA) of the subject property Kleinfelder's scope of work will be completed in accordance with the ASTM E1527-00 "Standard Practice for Environmental Assessments Phase I Environmental Site Assessment Process" requirements unless directed otherwise by WILLDAN It is our understanding that the subject property is bound by State Route 99 to the east, Harney Lane to the north, Union Pacific Railroad to the west and near Scottsdale Road to the south and consists of approximately 220 acres of vacant agricultural land The proposed use of the site is of mix uses, including, a 40-acre retail center, a 20-acre office complex, 134-acres of residential land, a 10-acre school site, 9-acres of parkland and a 1-acre fire station

Pertinent information obtained during the project will be verbally reported prior to the final report of findings A final report will include results, discussions of concerns, and recommendations for additional work, if needed The proposed scope of work can be completed for the lump sum fee of $4,800 and will be completed 3 to 4 weeks from the date we receive written authorization to proceed The length of time required to complete the Phase I is dependent upon how long it takes local regulatory agencies to process our requests for information Our estimated completion time is based on our current workload and our experience with local agency response times in the project area

If our research indicates that additional investigation or sampling and analysis are recommended, a separate scope of work, budget, and schedule will be submitted for

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your approval A Phase I ESA does not typically include sampling and analysis Other services can be provided to further understand the site conditions These services include, but are not limited to, soil vapor surveys, asbestos building material surveys, threatened/endangered species assessments, wetlands surveys, geophysical surveys, geotechnical investigations, and industrial compliance assessments These services can be provided for additional fees

If the proposal is acceptable to you, we can begin work as soon as we receive one of the original copies of this proposal complete with the signed acceptance signature block We would, of course, have to approve any requested changes before proceeding Please retain the second original copy of this proposal for your records *In addition, we request a map delineating the site boundaries (including assessor's parcel numbers), any grading/site plans, copies of any known reports regarding subsurface conditions or environmental concerns, a copy of your site access agreement, any chain-of-title reports you possess, and the names of at least two individuals we can interview regarding site history (can include current owner or real estate broker)* The signed accepted original copy of this proposal and maps will serve as authorization to proceed with the project

Kleinfelder appreciates the opportunity to be of service on this project If there are any questions, or if we may be of further assistance, please don't hesitate to contact us at (209) 948-1345

Respectfully submitted,

KLEINFELDER, INC.

Don D'Amico, CAC
Environmental Group Manager

Attachments/Enclosures Proposal
General Conditions 2006

Client agrees to the Scope of Work described in this Proposal and Cost Estimate and the General Conditions attached and incorporated herein Please return one of the originals of this **entire** proposal to us to indicate your approval

By _____
Client Signature

Title _____

Date _____

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PROPOSAL
PHASE I ENVIRONMENTAL SITE ASSESSMENT
APPROXIMATELY 220-ACRES
BOUND BY STATE ROUTE 99 TO THE EAST/HARNEY LANE TO THE NORTH/ UPRR TO THE WEST AND NEAR SCOTTSDALE ROAD TO THE SOUTH
LODI, CALIFORNIA

INTRODUCTION

This proposal was developed after discussion with Mr Robert Sun, and is a preliminary understanding of WILLDAN's desires Kleinfelder is committed to providing quality service to its clients, commensurate with their wants, needs and desired level of risk All work for this project will be completed in accordance with the ASTM E1527-00 "Standard Practice for Environmental Site Assessments Phase I Environmental Site Assessment Process" If a portion of this proposal does not meet the needs of WILLDAN, or if those needs have changed, Kleinfelder will consider appropriate modifications, subject to the standards of care to which we adhere as professionals Modifications such as changes in scope, methodology, scheduling, and contract terms may result in changes to the risks assumed by WILLDAN as well as adjustments to our fees We look forward to the opportunity to serve you

SCOPE OF WORK

Task 1.0 Regulatory Agency and Other Records Review

1 1 Standard Environmental Record Sources Federal and State

A review of published lists of state and federal regulatory agency investigations and/or enforcement actions for the site and within the following ASTM minimum search distances of the site

- United States Environmental Protection Agency (U S EPA) National Priority List (NPL), RCRA Corrective Action (CORRACTS) Treatment, Storage and Disposal (TSD) facilities, and the Cal-EPA Department of Toxic Substances Control (DTSC) Cal-Sites List including the Bond Expenditure Plan (BEP) and Annual Workplan for the site and properties within one mile of the site
- U S EPA CERCLIS List, the RCRA non-CORRACTS TSD List, the Cal-EPA Office of Environmental Information Hazardous Waste and Substances Sites List (formerly the CORTESE List) Regional Water Quality Control Board Tank Tracking System, Regional Quality Control Board, SLIC List, the SWAT/WMUDS list (landfills), and California Integrated Waste Management Board SWIS list within one-half mile of the site

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- The RCRA generators list, and the local or state list of registered underground storage tanks for the site and adjacent properties The Emergency Response Notification System (ERNS) for the subject site only

1 2 Additional Environmental Sources, State and Local

1 2 1 Review of reasonably ascertainable state and local regulatory agency records for information pertaining to environmental permits, site investigations, and documented enforcement actions for the subject site and adjacent facilities only State and local agencies contacted may include the following as appropriate

The local agency branch of the State Office of Emergency Services, the Regional Water Quality Control Board, the local Environmental Health Department, the local Fire Department, the Air Quality Management District or Air Pollution Control District, the local Planning Department, the Building Department, or the local utility company

1 2 2 Interviews with local government officials for information regarding use, storage, and disposal of hazardous substances for the subject site or adjacent properties Local government officials contacted may include the following as appropriate

- Local fire department,
- Local health agency,
- Local agency with responsibility for hazardous waste disposal or other environmental matters such as State of California Department of Water Resources for on-site water wells, the California Department of Conservation, Division of Oil and Gas for onsite oil wells, the Office of the California State Fire Marshall or Public Utilities Commission for pipelines, or the local Agricultural Commissioner for restricted pesticide use permits for the site

Task 2.0 Site History and Setting

In order to comply with ASTM E1527-00 one or more of the following reasonably ascertainable standard historical sources will be consulted for information regarding the subject site

2 1 Review obtainable Sanborn Fire Insurance Company Maps to gain knowledge of past operations, facilities, or activities of environmental concern for the subject site and adjacent properties

2 2 Review readily obtainable aerial photographs for discernible physical features regarding past operations, facilities, and activities of environmental concern for the subject site and adjacent properties

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2 3 Review available city directories for prior business names which operated at the subject site

2 4 Review chain-of-title or recorded document guarantee report (*if provided by client*) dating back 50 years which lists current and former easements and ownership As an alternative a preliminary title report describing existing easements and current ownership may be reviewed if provided by the client

2 5 A reasonable attempt will be made to interview available "key site managers" who may have historical environmental information of the subject site Key site managers may include current or past owners of the site *Interviews will be conducted unless you request that we omit this task to protect confidentiality of the transaction* Interviews will be limited, to a maximum of two selected key personnel per site WILLDAN will be responsible for supplying the names and phone numbers of two key personnel to be interviewed

2 6 Review geological and hydrogeological information for the area in which the site is located

Task 3 0 Site Reconnaissance

3 1 Conduct a site visit to observe field conditions indicating recognizable environmental conditions in connection with the property which may include for example

- Note obvious location(s) of suspected past and present hazardous substance storage, application, use, and disposal areas
- Note obvious location(s) of aboveground and underground storage tanks, pipelines, wells, and transformers Any pertinent information or helpful documents that the client has or can obtain regarding as-built drawings, environmental permits or registrations previous assessments, etc , for underground tanks etc , is requested to be made available for use by Kleinfelder
- Note obvious uses and environmental conditions concerns as noted in the review of the aerial photography
- Note facilities adjacent to the site that have an obvious potential to affect the environmental conditions at the site
- Photographically document conditions at the time of the site visit

Task 4.0 Final Report of Findings

Provide a final report of findings The report of findings will include an evaluation of the information obtained from the Phase I ESA The report will include illustrations, color

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photographs, and pertinent regulatory agency documentation regarding the site The report will discuss findings and recommendations

ASSUMPTION AND CLIENT RESPONSIBILITIES

The proposed scope of services and estimated budget are based on the following

- The cover letter (attached) is an integral part of this proposal
- The client will provide Kleinfelder with the authorization to access the site The client will provide a written right of entry authorization, if requested
- The client is responsible for providing an accurate map delineating site boundaries If site boundaries are not clearly marked in the field, then it is the client's responsibility to arrange for such
- The site visit for the Phase I ESA can be conducted in one day If the site visit cannot be completed in one day, additional fees will be incurred
- Sampling and analysis are not included in the scope of services
- Two copies of the report of findings will be delivered to the client
- Client meetings and revisions to the ESA report are not included in the budget estimate, but can be provided on a time and materials basis at the client's request
- The review of regulatory agency files is limited to the site and adjacent facilities only If regulatory agency file reviews for additional sites are recommended, then client will be contacted for authorization of additional fees
- This proposal and our associated fee are based on use of Kleinfelder's attached contract Use of a client provided contract, may cause delays due to upper management review of the contract as well as an increase in our fees in the event that the terms and conditions are significantly different
- Client to provide preliminary title report which lists existing easements and current ownership or a 50-year Chain-of-Title (*optional under ASTM*) If Kleinfelder is asked to obtain this information, additional expenses will be incurred
- Review of the 50-Year Chain-of-Title will consume less than 3 hours of professional time If the review takes more time, additional fees will be incurred

FEE AND SCHEDULE

Kleinfelder can perform the described scope of work for a fee of $4,800 on a lump sum basis, and will be completed 3 to 4 weeks from the date we receive you acceptance of this proposal If additional investigative efforts or sampling and analysis are recommended based upon our research, a separate scope of work, schedule, and budget will be submitted for your approval

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AUTHORIZATION

A signed original proposal, returned to us, will serve as our formal authorization to proceed If there is a need for any change in the proposal, please call us immediately Changes may require revision of the proposed fee, which will be communicated to you upon assessment of the requested changes' effect on the fee

The proposal will remain in effect for 90 days from the date shown on the proposal and therefore shall be null and void unless our original proposal for the work performed has been accepted using the acceptance signature block by an authorized client representative and one of the entire proposal returned to Kleinfelder

All information gathered during the study by Kleinfelder is considered confidential and will be released only upon written authorization of the client or as required by law California law requires a person to inform the State if a situation is encountered that can be considered an immediate endangerment to the public's health or welfare and/or to the environment Therefore, the client will be contractually bound to make any said disclosures in lieu of Kleinfelder, its owners, principals, employees or subcontractors

LIMITATIONS

The proposed scope of work requested by WILLDAN is limited to evaluating environmental concerns associated with the potential presence of hazardous substances in conjunction with the transfer or financing of the referenced property This limited environmental evaluation does not include sampling and analysis or other services not described Other environmental or geotechnical investigative services can be provided for additional fees The scope of services described here is not intended to be inclusive, to identify all potential concerns, or to eliminate the possibility of environmental problems Within current technology, no level of assessment can show conclusively that a property or its structures are completely free of hazardous substances Therefore, Kleinfelder cannot offer a certification that the property is clear of environmental liability

Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing hazardous substances being encountered or present on the project site, or from the discovery of such hazardous substances Kleinfelder offers a range of investigative and engineering services to suit the varying needs of our clients Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help understand and manage the degree of risk Since such detailed services involve greater expense, our clients participate in determining the level of service, which provide adequate information for their purposes at an acceptable level of risk Acceptance of this proposal will indicate that WILLDAN has reviewed the scope of service and determined that it does not need or want more services than are being proposed at this time Any exceptions should be noted and may result in a change in fees

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Kleinfelder will perform its services in a manner consistent with the standards of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services will be performed No warranty or guarantee, expressed or implied, is part of the services offered by this proposal

This proposal may be used only by the client and only for the purposes stated, within a reasonable time from its issuance Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time

Provided the Consultant's report is still reliable (as determined by Consultant), Consultant may issue a third-party reliance letter to a party that Client identifies in writing under the following conditions that the third party, including Client's successors and assigns, by such reliance, (1) agree in writing to be bound by Consultant's Terms and Conditions and (2) agree to pay Consultant's then-current fees for issuing such letters

The fees presented in this proposal are based on prompt payment for services presented in Kleinfelder's standard invoicing format Additional charges will be applied for specialized invoicing and/or if backup documentation is needed These special services will be charged on a time and expense basis Late fees will be charged if payment is not received in accordance with terms contained in our terms and conditions for professional services

This proposal is based on Kleinfelder's standard General conditions (Professional Services) which is attached If changes are made to the scope of work and/or terms and conditions, or if an additional insurance or liability coverage is desired, Kleinfelder reserves the right to modify its proposal/fee Additionally, if an alternative contract is desired, some delays may be incurred as a consequence of our review

The safety of our employees is of paramount concern to Kleinfelder You will be notified if the location of your project represents a potential safety concern to our employees Unsafe conditions for field work will require a modification of our estimated scope of work and associated fees We will advise you of the additional costs necessary to mitigate these unanticipated conditions, if applicable

This project has not been identified as being subject to prevailing wage laws As such, our wages for field personnel are based on the competitive marketplace and may not be in compliance with the requirements for prevailing wage projects In the event that prevailing wages are deemed by proper authority to apply to this project, additional, legally-mandated, labor-related charges will require a corresponding increase in our fee

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KLEINFELDER, INC GENERAL CONDITIONS (PROFESSION SERVICES)

1 **Services** This Agreement is entered into between Client and Kleinfelder, Inc ("Consultant") wherein Client engages Consultant to provide professional services ("Services") in connection with the project described in the proposal ("Project") to which these General Conditions are attached Client agrees that services not specifically described in the Scope of Services identified in Consultant's proposal are not included in the Scope of Services described by Consultant This Agreement, including the proposal, these General Conditions, Consultant's Addenda and Fee Schedule, represents the entire Agreement between the parties and supercedes any and all agreements between the parties, either oral or in writing, including any purchase or work order issued by Client

2 **Payment** Client shall pay invoices upon receipt Invoices not paid within thirty (30) days of the invoice date shall be subject to a late payment fee of 1½ % per month from the date of invoice Additionally, Consultant may, upon five (5) calendar days' notice to Client, suspend all Services until paid in full and may terminate the Agreement

3 **Prevailing Wages** It is Client's legal responsibility to determine whether the Project is covered under prevailing wage regulations Unless Client specifically informs Consultant in writing that the Project is a prevailing wage project and is identified as such in Consultant's Scope of Services, Client agrees to reimburse Consultant and to defend, indemnify and hold harmless Consultant from and against any liability, including costs, fines and attorneys' fees, resulting from a subsequent determination that the Project was covered under prevailing wage regulations

4 **Work Product** Services provided under this Agreement, including all reports, information, recommendations, or opinions ("Reports") prepared or issued by Consultant, are for the exclusive use and benefit of Client or its agents in connection with the Project, are not intended to inform, guide or otherwise influence any other entities or persons with respect to any particular business transactions, and should not be relied upon by any entities or persons other than Client or its agents for any purpose other than the Project Client will not distribute or convey such Reports to any other persons or entities without Consultant's prior written consent which shall include a release of Consultant from liability and indemnification by the third party Consultant's Reports, boring logs, maps, field data, drawings, test results and other work products are part of Consultant's professional services, do not constitute goods or products and are copyrighted works of Consultant However, such copyright is not intended to limit the Client's use of its work product in connection with the Project

5 **Standard of Care** Consultant will strive to perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the Consultant's profession practicing in the same locality under similar circumstances at the time the services are performed This Agreement creates no other representation, warranty or guarantee, express or implied

6 **Limitation of Liability** Consultant's potential liability to Client and others is grossly disproportionate to Consultant's fee due to the size, scope, and value of the Project Therefore, unless Client and Consultant otherwise agree in writing in consideration for an increase in Consultant's fee, Client, including its directors, officers, partners, employees, agents, contractors and their respective assigns, agree to limit Consultant's liability (whether arising from contract, statutory violation or tort) to the greater of $25,000 or the amount of Consultant's fee This limitation of liability shall apply to all phases of Services performed in connection with this Project, whether subsequent to or prior to the execution of this Agreement In no event shall Consultant be liable for consequential, incidental or special damages

7 **Construction Observation** If included in the Services, Consultant's services during construction, shall be limited to observation and testing of construction operations Consultant shall not be responsible for constant or exhaustive inspection of the work, the means and methods of construction or the safety procedures employed by Client's contractor Performance of construction observation services does not constitute a warranty or guarantee of any type, since even with diligent observation, some construction defects, deficiencies or omissions in the Contractor's work may occur Client shall hold its contractor solely responsible for the quality and completion of the Project, including construction in accordance with the construction documents Any duty hereunder is for the sole benefit of the Client and not for any third party, including the contractor or any subcontractor Client, or its designees, shall notify Consultant at least twenty-four (24) hours in advance of any field tests and observations required by the construction documents

8 **Certifications** Consultant shall sign certifications only if (a) Consultant approves the form of such certification prior to the commencement of Services, (b) such certification is included in Consultant's Services, (c) the certification is limited to a statement of professional opinion and does not constitute a warranty or guarantee, express or implied Any certification shall not relieve any entity of its obligations

9 **Samples** All samples shall remain the property of the Client Client shall promptly, at its cost, remove and lawfully dispose of samples, cuttings and hazardous materials If appropriate, Consultant shall preserve samples obtained no longer than sixty (60) days after the issuance of any document that includes the data obtained from those samples After that date, Consultant may dispose of the samples or return them to Client at Client's cost

10 **Client Responsibilities** Client shall bear sole responsibility for (a) jobsite safety, (b) notifying third parties including any governmental agency or prospective purchaser, of the existence of any hazardous or dangerous materials located in or around the Project site, and (c) providing and updating Consultant with accurate information regarding existing conditions, including the existence of hazardous or dangerous materials, proposed Project site uses, the correct location of Project property boundaries, any change in Project plans, and all subsurface installations, such as pipes, tanks, cables and utilities within the Project site Client shall cooperate with all requests by Consultant, including obtaining permission for access to the Project site Client releases Consultant from liability for any incorrect advice, judgment or decision based on inaccurate information furnished by Client or others If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including hazardous materials, encountered on the site, Consultant shall immediately stop work in the affected area and report the condition to Client

11 **Electronic Media** Because data stored on electronic media can deteriorate undetected or be modified without Consultant's knowledge, the Client accepts responsibility for the completeness or readability of the electronic media after an acceptance period of 30 days from delivery of the electronic files

12 **Indemnification** To the fullest extent permitted by law, Client, including its directors, officers, partners, employees, agents, contractors and their respective assigns, agrees to indemnify, defend, and hold harmless Consultant, its directors, officers, employees and subcontractors from and against all claims, liability, damages, or expenses ("Claims") arising out of, in connection with or relating to any alleged act, failure to act, or other conduct of Consultant, including but not limited to, Claims alleging the negligence or other fault of Consultant, but specifically excepting Claims arising out of Consultant's sole negligence or willful misconduct Client shall indemnify Consultant even if Client is partially or wholly without fault for such Claims

13 **Dispute Resolution** The parties shall attempt resolution of any dispute arising under or related to this Agreement by mediation Notwithstanding the foregoing, in the event of Client non-payment, Consultant may, at its sole option, waive mediation Either party may demand mediation by serving a written notice on the other party stating the essential nature of the dispute The mediation shall be conducted in accordance with the AAA Construction Industry Mediation Rules then in effect within forty-five (45) days from the service of notice The parties shall share the fees equally If mediation fails, either party may institute litigation in the state or federal court of the county in which Consultant's office issuing the proposal is located The prevailing party shall be entitled to attorneys' fees, cost, including costs incurred in the mediation and costs of enforcement of any judgment The parties expressly waive any statute of limitations for a longer period of time and agree that any action shall be brought within one year from the date of Consultant's final invoice The parties expressly waive any and all rights to a trial by jury in any action, proceeding or counterclaim brought by either of the parties against the other with respect to any matter relating to, arising out of or in any way connected with this Agreement

14 **Changed Conditions** If during the course of performance of this Agreement conditions or circumstances are discovered which were not contemplated by Consultant at the commencement of this Agreement, Consultant shall notify Client of the newly discovered conditions or circumstances, and Client and Consultant shall renegotiate, in good faith, the terms and conditions of this Agreement If amended terms and conditions cannot be agreed upon within thirty (30) days after notice, Consultant may terminate this Agreement and Consultant shall be paid for its services through the date of termination

15 **Governing Law** The laws of the State where the Agreement was entered into shall govern interpretation of this Agreement If any term is deemed unenforceable, the remainder of the Agreement shall stay in full force and effect

16 **Additional Provisions** Neither party may assign its interest in this Agreement without the prior written consent of the other Any modification to this Agreement will be effective only if it is in writing signed by the party to be bound, except that if Consultant has performed services in reliance on Client's verbal approval to proceed, Client shall be bound by such verbal approval One or more waivers of any term, condition or covenant by either party shall not be construed as a waiver of any other term, condition or covenant This Agreement may be signed in counterpart

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Appendix F

Noise Impact Assessment

Giroux & Associates
Environmental Consultants

NOISE IMPACT ANALYSIS

REYNOLDS RANCH

CITY OF LODI, CALIFORNIA

Prepared for:

Willdan
Attn: Robert Sun
13191 Crossroads Parkway North, Suite 405
Industry, California 91746-3497

Date:

May 8, 2006

Project No.: P06-021N

3 Rushingwind, Irvine, California 92614 - Phone (949) 387-5477 - Fax (949) 387-5478

NOISE SETTING

NOISE DESCRIPTORS

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure ratioed to the lowest sound level detectable by a young person with good auditory acuity is called a decibel (dB). Because sound or noise can vary in intensity by over one million times within the range of human hearing, decibels are a logarithmic progression used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called "A-weighting" written as dBA. Any further reference to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are normally expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or, alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

NOISE STANDARDS

The City of Lodi has established guidelines for acceptable community noise levels that are based upon the CNEL rating scale. The guidelines rank noise/land use compatibility in terms of four noise level categories; "presumed to be acceptable" (required no mitigation), "conditionally acceptable" (with acceptability depending on the land use and the extent of mitigation required), "normally unacceptable" (new construction or development should be discouraged, although mitigation may be possible), and "presumed to be unacceptable" (mitigation measures unlikely to be available). The City of Lodi noise/land use compatibility guidelines have been used as the evaluation criteria for land uses that may be affected by the proposed project.

CNEL-based standards are used to make land use decisions as to the suitability of a given site for its intended use. They apply to those noise sources not amenable to local control such as on-road traffic, aircraft, trains, etc. Because cities cannot regulate the noise created by such sources, they control the types of land use or levels of mitigation required by the receiving property. The noise compatibility standards for Lodi are shown in Figure 1.

Figure 1

Land Use Compatibility Standards
City of Lodi

	Land Use Compatibility by Outdoor L_{dn} or CNEL Value							Supplemental Indoor Noise Criteria (Outdoor Noise Sources)
	Below 55 dB	55-60 dB	60-65 dB	65-70 dB	70-75 dB	75-80 dB	Over 80 dB	
Residential, including Apartments and Mobile Homes								Ldn or CNEL <45 dB in sleeping quarters
Motels, Hotels, Other Transient Lodgings, Hospitals, and Convalescent Facilities								Ldn or CNEL <45 dB in sleeping quarters
Schools, Libraries, Churches, and Meeting Halls								Leq >40 dBA for the noisiest our of the day
Theaters, Auditoriums, and Concert Halls								Leq <35 dBA for the noisiest hour of the day
Business Offices, Medical and Dental Offices, Retail and Wholesale Facilities								Ldn or CNEL <50 dB in fully enclosed portions of the building
Manufacturing and Other Industrial Facilities								Indoor criteria for outdoor noise sources not applicable
Sports Areas, Amusement Parks, and Outdoor Spectator Sports								Indoor criteria for outdoor noise sources not applicable
Parks, Playgrounds, Golf Courses, Riding Stables, Outdoor Amphitheaters, and Passive Open Space								Indoor criteria not applicable

Presumed To Be Acceptable; no special noise mitigation required.

Conditionally Acceptable; acceptability depends on specific property uses and the extent of noise mitigation provided.

Normally Unacceptable; acceptability requires specific findings outlined in Policy A-1 of the Noise Element text.

Presumed To Be Unacceptable; adequate mitigation measures unlikely to be available.

Notes: CNEL criteria apply to outdoor noise from sources that operate continuously or that operate frequently throughout most of a 24-hour period.

CNEL criteria should be applied to noise conditions that are typical for the noise source, not to conditions reflecting temporary peak activity periods.

Land use compatibility classifications for areas affected primarily by intermittent or discontinuous noise sources must be made on a case-by-case basis, reflecting the magnitude, duration, and temporal pattern of ambient noise.

Supplemental indoor noise criteria represent minimum performance standards to be met through building design and acoustic insulation.

Source: City of Lodi General Plan Section 6. Noise Element.

The noise/land use compatibility standards considers exterior exposures up to 60 dB CNEL "presumed to be acceptable" for residential use, and exposures of 60-65 dB CNEL are "conditionally acceptable". For commercial uses proposed in this project, average daily noise levels of up to 65 dB CNEL are "presumed to be acceptable". Exterior levels up to 75 dB CNEL are considered "conditionally acceptable" for office or retail uses. Because such uses rarely have any usable space (except perhaps for a courtyard or dining patio), ambient noise levels are typically not siting issues for offices or stores. Schools are considered "presumed to be acceptable" with exterior noise levels of up to 60 dB CNEL and 60-70 dB CNEL are "conditionally acceptable".

The Lodi Municipal Code also addresses interior noise levels through extension of the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code to all new convalescent facilities, hospitals, and single-family residential developments, in addition to the multifamily and transient lodging developments already covered by the State Noise Insulation Standards. A 45 dB CNEL interior exposure is required for single and multi-family residential uses for the City of Lodi.

For purposes of this analysis, an exterior level of up to 65 dBA CNEL will be allowed for residential use provided exterior noise levels have been substantially mitigated through as reasonable application of the best available noise reduction technology and interior noise exposure does not exceed 45 dBA CNEL with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning and/or mechanical ventilation. The City of Lodi noise standards do not address retail/commercial interior noise levels.

CNEL-based standards are the land use planning standards that are applied to noise sources for which the City of Lodi is pre-empted from exercising local control. Those noise sources that are amenable to local control are regulated by the City of Lodi Municipal Code. The ordinances therein establish allowable levels of sound that may cross any adjacent property line, as well as prohibiting general nuisance noise and identifying a number of specific prohibitions. The City of Lodi Municipal Code regulations relevant to this project include:

- 9.24.020 a. General Noise Regulations. Notwithstanding any other provision of this chapter, and in addition thereto, it is unlawful for any persons to willfully make or continue or permit or cause to be made or continued, any loud, unnecessary or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal noise sensitivity.

- 9.24.030 c. It is unlawful for any person, firm or corporation to cause, permit or generate any noise or sound as described herein between the hours of 10:00 p.m. and 7:00 a.m. which exceeds the ambient noise levels at the property line of any residential property as determined at the time of such reading by more than five decibels. This section shall be applicable whether such noise or sound is of a commercial or noncommercial nature.

The City of Lodi Municipal Code exempts any sound equipment that has a valid City license or permit. Construction activities would need authorization under City issuance of construction permits before any work could commence on-site. The municipal code does not establish the

time period that this exempted activity may occur. However, limits to construction hours would be determined in the special provisions for construction activities by the City Building Inspector.

BASELINE NOISE LEVELS

Existing noise levels around the project vicinity derive almost exclusively from vehicular sources on the streets throughout the area, particularly adjacent SR-99, and the Union Pacific railroad (operations are currently conducted by Burlington Northern). In order to better define the existing noise environment in the project vicinity, a 24-hour noise measurement program was conducted on March 9-10, 2006. On-site noise measurements were made at three locations. One meter was placed between the second and third house just south of Harney Lane at the north of the site. Another meter was placed at the southwest corner of the parcel near the train tracks. The third meter was placed at the northeastern perimeter of the site, only 18 yards to the fence bordering Highway 99. Table 1 summarizes the measurement results.

The City of Lodi exterior noise standard for residential use is 65 dBA CNEL. The measured noise levels along the railroad tracks are already excessive in terms of City of Lodi standards by a large margin. The peak noise levels close to the tracks occur late at night when track utilization is highest. Every train from 10 p.m. to 7 a.m. is the "noise equivalent" of ten daytime trains in calculating CNEL. The weighted CNEL is therefore 4 dB higher than even the noisiest hours of the day which occur around midnight and from 5-6 a.m. Any homes adjacent to the tracks will require either distance separation from the tracks or a noise wall.

The measured noise data shows that areas adjacent to SR-99 also substantially exceed City standards. As near the railroad, the high percentage of nocturnal traffic, especially heavy trucks, creates a CNEL that is several dB higher than the noisiest hour of the day. However, this area has a planned commercial use and will not have any residential receivers.

The measured noise levels are already excessive in terms of City of Lodi standards for noise sensitive land uses. Any usable outdoor space at the nearest homes without noise walls facing Harney Lane, the railroad tracks, or that are adjacent to SR-99 are already noise impacted. Interior noise levels are likely also high, unless windows are tightly closed and central air conditioning is used on warmer days. Any modified roadway geometries or increased traffic volumes due to projected traffic growth may further impact these areas.

Table 1

On-Site Noise Monitoring Results (dBA)
Reynolds Ranch Subdivision
South of Harney Lane (West of Hwy 99)

Parameter	Property Line		
	Meter placed between 2nd and 3rd Houses, South of Harney Lane	**Southwest Corner of Parcel, Near Train Tracks**	**Houses, Northeast Corner of Parcel (18 yards to Hwy 99 Fence)**
24-hour CNEL	68	76	74
Maximum 1-Hour LEQ	69	72	72
When (?)	6:00 a.m. to 7:00 a.m.	11 p.m. to midnight.*	7:00 a.m. to 8:00 a.m.
2nd-Highest 1-Hour LEQ	63	71	72
When (?)	5:00 p.m. to 6:00 p.m.*	5:00 a.m. to 6:00 a.m.	8:00 a.m. to 9:00 a.m.
Minimum 1-Hour LEQ	52	45	63
When (?)	4:00 a.m. to 5:00 a.m.	9:00 a.m. to 10:00 a.m.	1:00 a.m. to 2:00 a.m.*
1-Second Maximum	93	96	93
1-Second Minimum	43	39	44

* Measurement occurs at other hours as well

IMPACT SIGNIFICANCE CRITERIA

Noise impacts are considered significant if:

1. They create violations of noise standards, or,

2. They substantially worsen an already excessive noise environment, or,

3. They substantially increase an existing quiet environment even if noise standards are not violated by the proposed action.

The term "substantial increase" is not defined by any responsible agency. The limits of perceptibility by ambient grade instrumentation (sound meters) or by humans in a laboratory environment is around 1.5 dB. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dB difference. A threshold of 3 dB is commonly used to define "substantial increase." An increase of +3 dBA CNEL in traffic noise would be consistent a significant impact.

Two characteristic noise sources are typically identified with land use intensification such as that proposed for the development of Reynolds Ranch. Construction activities, especially heavy equipment, will create short-term noise increases near the project site. Such impacts would be important for nearby noise-sensitive receptors. Upon completion, project-related traffic will cause an incremental increase in area-wide noise levels throughout the project area. Traffic noise impacts are generally analyzed both to insure that the project not adversely impact the acoustic environment of the surrounding community, as well as to insure that the project site is not exposed to an unacceptable level of noise resulting from the ambient noise environment acting on the project. This project will cause an increase in area wide traffic but the increase will likely be small relative to the overall traffic projections once area build-out is completed.

THRESHOLDS OF SIGNIFICANCE

According to the current CEQA Appendix G guidelines, noise impacts are considered potentially significant if they cause:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise levels exceeding the City of Lodi General Plan Noise Standards or Municipal Code would be considered significant.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

CEQA Guidelines also identify potential impact significance due to aircraft noise. CEQA states that for a project located within an airport land use plan or where such a plan has not been adopted, within two miles of an airport, a project could have a significant effect on the environment. The closest airport to the project site is the Lodi Airpark. This airport is 4-5 miles WSW of the site, and supports 20-30 operations per day. The airport's noise "footprint" does not extend beyond the immediate airport boundary. Aircraft noise is not further considered in this analysis.

Construction noise is not governed by ordinance limits on allowable times of equipment operations but time limits may be placed on grading or other construction permits. Construction activities would need authorization under City issuance of construction permits before any work could commence on-site. Construction activities should be limited to the hours of 7 a.m. to 10 p.m., Monday through Sunday, consistent with the City's Noise Ordinance (Section 9.24.030.c) if activities will occur within proximity (500 feet) of any noise sensitive land uses.

CONSTRUCTION NOISE IMPACTS

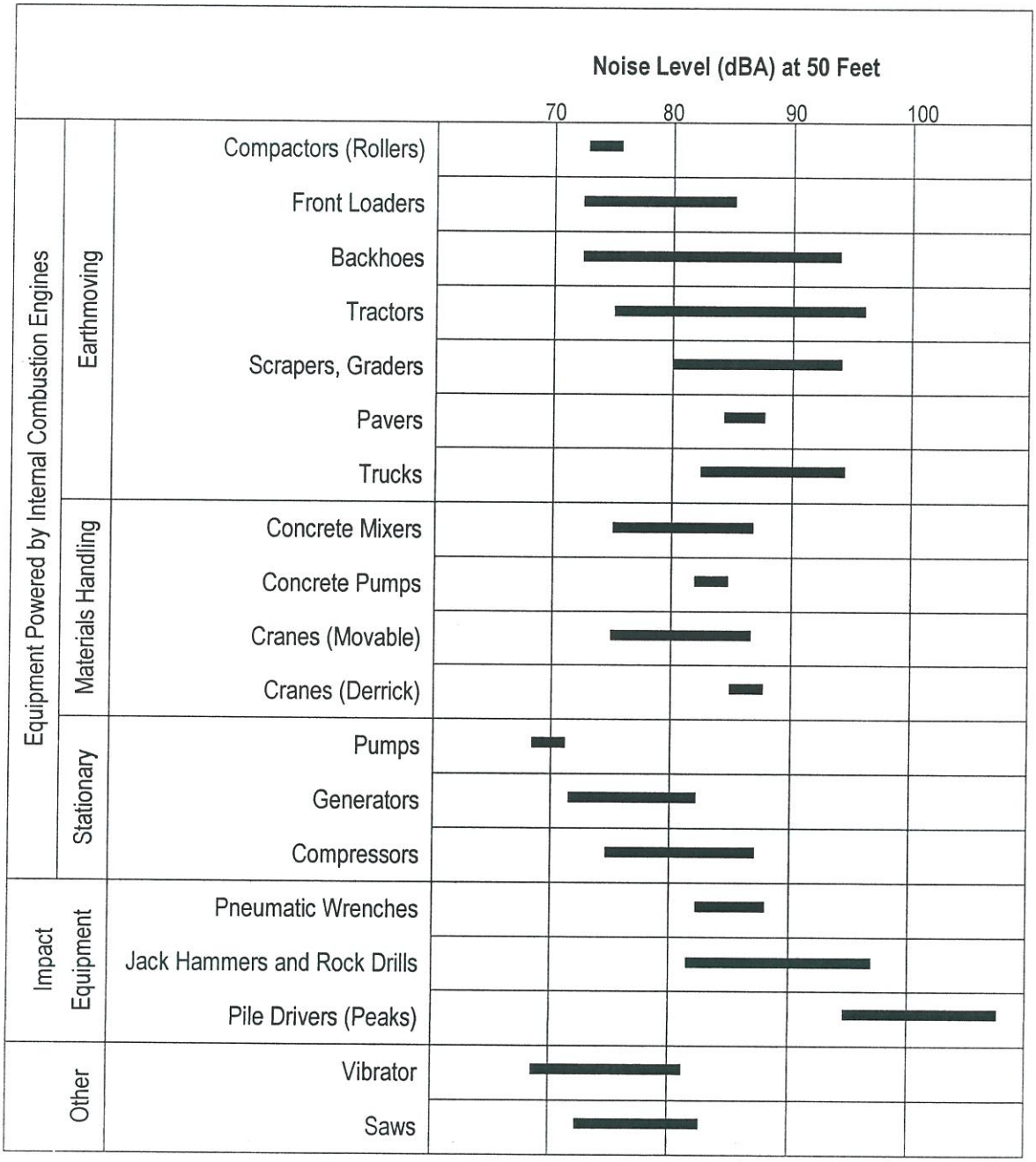
Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated initially by earth-moving sources, then by foundation and parking area construction, and finally for finish construction.

Figure 2 shows the typical range of construction activity noise generation as a function of equipment used in various building phases. The earth-moving sources are seen to be the noisiest with equipment noise ranging up to about 90 dBA at 50 feet from the source. Several pieces of equipment operating in close proximity to each other may create a combined noise level of around 93 dB. Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 20 dB in 500 feet of propagation. The loudest earth-moving noise sources will therefore sometimes be detectable above the local background beyond 1,000 feet from the construction area. An impact radius of 1,000 feet or more pre-supposes a clear line-of-sight and no other machinery or equipment noise that would mask project construction noise. With buildings and other barriers to interrupt line-of-sight conditions, the potential "noise envelope" around individual construction sites is reduced. Construction noise impacts are, therefore, somewhat less than that predicted under idealized input conditions.

Because of close proximity, construction noise impacts would most likely affect the exterior nearby residential uses to the north of the property, along Harney Lane. Additionally, because site development is phased, any existing tenants of an already completed phase could be subject to construction noise from subsequent phases. Discretionary scheduling of noisiest activities may be required to minimize such possible construction noise intrusion. Noise can also be mitigated by locating all stationary noise generating construction equipment as far as practical from existing residences. If impulsive noise generation such as pile driving or jack-hammers is necessary close to noise-sensitive users, activity scheduling to minimize off-site impacts, or

Figure 2

Typical Construction Equipment Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

erection of temporary barriers, may be necessary. Construction activity noise impacts are considered less-than-significant with proper impact mitigation planning.

Section 9.24.030 (c) of the Municipal Code considers any noise generated between 10 p.m. and 7 a.m. that exceeds ambient levels by more than five (5) dB at any residential property to be "excessive, offensive or disturbing." Construction activity noise near existing or future noise sensitive uses may exceed ambient levels by more than five (5) dB. A construction activity restriction time of 7 a.m. to 10 p.m. for allowable operation of any heavy equipment within 500 feet of any residence is recommended to mitigate this impact.

PROJECT-RELATED VEHICULAR NOISE IMPACTS

Long-term noise concerns from the increase of residential, retail, and office uses at the project site center primarily on mobile source emissions on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, roadway speeds, or noise barriers.

Table 2 summarizes the 24-hour CNEL level at 50 feet from the roadway centerline along eighteen (18) roadway segments for existing conditions and for future conditions, with and without the project. Specifically, five time frames were examined (existing, interim year 2008 with and without project, and build-out year 2030 with and without project). The data represent traffic only and do not include noise generated from train movements, addressed later in this document.

Existing traffic noise levels in the project vicinity are somewhat elevated; with almost half of the 18 roadway segments analyzed currently exceeding 65 dB CNEL at 50 feet from the centerline. The interim time frame (2008) will see little change from the existing noise environment, with or without the project. Only a portion of Phase I is scheduled for completion by 2008.

By 2030, at area-wide build-out, road noise will have increased substantially along many roadways. Traffic volume changes from infill development and from conversion of existing agricultural uses will substantially increase in the future and will modify the area's acoustic environment. The noise-level difference between "with project" versus "no project" scenarios is, however, less-than-significant. At any off-site roadway the maximum project-related increase in 2008 will be +0.5 dB, and +2.9 dB CNEL in 2030. The 2.9 dB increase is directly adjacent to SR-99, and is not near any noise sensitive land uses. The maximum off-site project traffic noise impact near any residential uses is +1.4 dB along Harney Lane, directly north of the project site. Individual traffic noise impacts will be well below the adopted +3.0 dB CNEL significance threshold.

Cumulatively, a number of roadway segments will experience significant noise level increases compared to existing noise levels at the same locations. Comparison of existing conditions to conditions in 2030 without the project show some segments experiencing an increase of up to +2.8 dB from cumulative growth without the project. About 60 percent of the segments

Table 2

Reynolds Ranch
Traffic Noise Impact Analysis
(dBA CNEL at 50 feet from centerline)

	Existing	2008	2008/ w Project	2030	2030/w Project
North-South Segments					
Hutchins St/					
N of Harney	68.4	68.5	68.7	69.5	70.0
Harney-Armstrong	70.3	70.4	70.4	72.4	72.5
West Ln/					
S of Harney	69.5	69.5	69.6	72.1	72.3
Stockton St/					
N of Harney	65.9	66.0	66.0	66.9	67.8
S of Harney	46.9	46.9	49.3	47.4	60.6
Cherokee Ln/					
N of Harney	65.8	66.3	66.4	66.5	65.9
W Frontage Rd/					
Harney-SR-99 SB Ramp	58.3	58.3	56.6	59.0	61.9
SR-99 SB Ramp-Armstrong	62.6	62.6	62.9	64.9	65.8
S of Armstrong	57.8	57.8	57.8	60.1	60.1
East-West Segments					
Harney Ln/					
Ham-Hutchins	67.3	68.5	68.7	70.1	71.0
Hutchins-Stockton	68.7	69.4	69.7	70.7	71.9
Stockton-W Frontage Rd	67.9	68.8	69.3	70.2	71.6
W Frontage-E Frontage	67.1	67.8	68.3	69.1	70.2
E of E Frontage Rd	65.2	65.8	65.9	67.2	67.6
Armstrong Rd/					
W of Hutchins	64.1	64.1	64.1	66.4	66.5
Hutchins-W Frontage Rd	62.2	62.2	62.3	64.5	65.0
W Frontage-E Frontage	60.7	60.7	60.9	63.0	63.6
E of E Frontage Rd	55.9	55.9	55.9	58.2	58.7

Source: Reynolds Ranch Traffic Study, April 2006

analyzed will exceed the 65 dB CNEL threshold, even without implementation of the proposed project.

The proposed project will, however, cause cumulative noise levels at off-site locations to increase by more than +3.0 dB CNEL when project traffic and cumulative growth are combined. Cumulatively significant traffic noise level increases will occur in 2030 along the following roadway segments:

Roadway Segment	Increase from Existing (dB)	
	w/o Project	w/Project
W. Frontage Road*		
Harney Lane-SR 99 SB Ramp	+0.7	+3.6
Harney Lane		
Ham-Hutchins	+2.8	+3.7
Hutchins-Stockton	+2.0	+3.2
Stockton-Frontage	+2.3	+3.2

* dominated by freeway noise, not considered significant

Project traffic noise impacts are considered cumulatively significant. The impact is mitigated by the required inclusion of perimeter walls on new residential development that abuts Harney Lane.

On-site traffic noise exposure for any proposed residential use will result primarily from Harney Lane or from internal collector roads. One segment, Stockton Street south of Harney Lane, will experience a very large increase of +13.2 dB. However, this link will be an entrance to the new Reynolds Ranch development. Even with this substantial increase, on-site traffic noise at 50 feet from the Stockton Street centerline of 60.6 dB CNEL will be well below the City's 65 dB CNEL exterior standard. This will not create any constraint for siting noise-sensitive land uses.

On-site noise levels at proposed residential uses south of Harney Lane may be exposed to noise levels exceeding City of Lodi standards at the first tier of development closest to the roadway. Under acoustically "soft" conditions (landscaping and irregular surfaces), the 65 dB CNEL contour will extend 145 feet south of the centerline. Exterior recreational uses within 145 feet would require shielding from traffic noise. Perimeter noise walls of 6-7 feet in height would reduce rear yard noise levels to within City Standards.

If exterior levels exceeded 65 dB CNEL, enhanced structural protection is needed to allow the 45 dB CNEL interior standard to be met. The 65 dB CNEL contour at any upstairs building façade would be characterized by acoustically "hard" propagation conditions. The upstairs 65 dB CNEL contour distance will extend up to 245 feet from the Harney Lane centerline. Any two-story residential uses within 245 feet will require dual-paned windows and supplemental ventilation/air conditioning. In order to meet City of Lodi noise standards the following measures are thus required along the northern site perimeter:

1. Outdoor recreational space within 145 feet of the Harney Lane centerline must be shielded by solid perimeter walls of 6-7 feet in height, and,

2. Habitable second-story residential space within 245 feet of the Harney Lane centerline must have upgraded structural protection to include dual-paned windows and supplemental ventilation to allow for window closure.

ON-SITE NOISE GENERATION

In areas where commercial and residential uses share a common property line, it is often not the overall magnitude of the noise that leads to conflict. It is more typically some unique aspect of the noise (music, amplified voice, whine or hum, etc.), or, most commonly, the time of day of the noise event that causes conflicts. Early morning deliveries, back-up alarms, rumbling and idling diesel trucks, late night fast-foot outlet loudspeakers, young persons assembling in shopping center parking lots with loud car music late in the evening, or very early trash pick-up or parking lot sweeping, are sources that can engender noise conflicts in a mixed use environment. Since planned on-site commercial activities will be located near residences, nocturnal on-site activities could be audible late at night when background noise levels are lowest

Such impacts would possibly derive from unloading activities at the rear of the major stores from site maintenance such as sweeping or trash pick-up, from mechanical equipment on building roofs, and from on-site traffic patterns. The menu board loudspeakers at fast food restaurants could also impact noise.

Phase I anticipates construction of office space in the southeastern corner of the site, west of SR–99 and the Frontage Road. The nearest sensitive receptor to the office use will be the high-density residential development to the west. Commercial uses will be sited to the north, SR-99 is to the east and agricultural uses exist south of the site. The only potential nuisances for the nearby future residences from office building operations would be trash pick up and HVAC equipment. Because trash pick up would only be a daytime event this would not cause a siting constraint. The distance from the western building wall to the boundary of the high-density residential parcel is 260 feet.

Mechanical equipment noise was presumed to be typical of comparable HVAC sources. Commercial air conditioners ("package units") are typically rated at around 55 dB at 50 feet from the equipment. Distance separation to the nearest homes at 260 feet will reduce HVAC noise to well below the ambient "hum" from SR-99 traffic.

The office building will work two shifts. The arrival of the early shift and the departure of the late shift may occur during noise-sensitive hours. However, more of the parking will be on the eastern side of the building with the building itself creating a noise barrier. Highway 99 traffic also creates an elevated baseline that will mask any employee arrival/departure. The semi-trucks traveling at 70 mph on SR-99 are tens of times louder than slow-speed passenger cars within the office parking lot. Any mitigation measures used within the proposed high density residential west of the office building (dual-pane windows, extra insulation, etc.) to block out freeway noise will also shield the parking lot activity from any shift changes.

Phase II involves construction of a commercial/retail parcel at the northeast corner of the property. This parcel is bounded by SR-99 to the west, off-site residential uses to the north, across Harney Lane, and medium-density, high-density and senior high-density developments on the west and southwest, across "A" Street.

The medium-density housing just south of Harney Lane will have the least setback from any of the retail buildings, about 125 feet. The high-density senior housing will have approximately 180 to 200 feet of separation from the closest shops and the high-density residential bounding the office parcel will have about 140 feet of separation from the nearest commercial/retail space.

As noted above, all residential parcels experience sufficient distance separation from the buildings to prevent HVAC equipment from being a nuisance. Only the major stores would have loading docks, and none are sited near the on-site residential parcels. The only potential issue could be if fast food restaurants or drive thru-facilities are planned on the "A" Street perimeter. Sound boards where ordering takes place can be a nuisance especially at night. Many fast food restaurants keep late hours or are open 24-hours. If the sound boards cannot be oriented away from nearby residences then sound walls may have to be erected around the order boards. Additionally, time restrictions may be necessary. These details must be dealt with during the design stage.

On all office and commercial sites, maintenance activities such as refuse collection or parking lot sweeping, or stacking or retrieval of temporary outdoor storage could be a noise source. Possible mitigation would include time restrictions on these activities or sound walls. These details also must be dealt with during the design stage.

Any current or future residential uses opposite Harney Drive are anticipated to be approximately 300 feet from the nearest major retail use. Measured noise levels at this site are currently in excess of 65 dB CNEL due to Freeway proximity. This background noise, in addition to the setback distance, will serve to mask any potential noise associated with truck delivery and unloading at the planned major retailers for off-site residential uses.

TRAIN NOISE

Train noise is not well characterized by the CNEL descriptor. The train noise pattern will be approximately 59 minutes of very quiet conditions with one minute of loud rumble. However, federal noise compatibility standards are based upon 1- or 24-hour exposures. A measurement of train noise was conducted using data collected by sound meters placed on site March 9-10, 2006. The meter positioned on the southwest corner of the parcel, near the train tracks determined a CNEL of 75.8 dB. According to Wayne Horiuchi of the Union Pacific Railway Company, in a letter dated March 13, 2006, it is difficult to predict future usage as demand for services are driven by shippers needs for goods.

In order to gauge a worst case scenario for train noise, for the purposes of the study, a doubling of train movements was assumed for the future. Because of the logarithmic nature of noise, a, 100% increase in train movement would translate into a +3 dB growth, raising the daily CNEL to

79 dB (76 dB + 3). To mitigate noise to 65 dB at the nearest sensitive receptor with no sound wall, a setback distance of 430 feet from the tracks would be required. Other noise mitigation options include construction of a sound wall.

Currently all planned residential uses adjacent to the train tracks will be separated by a proposed mini-storage facility. If the mini-storage facility is constructed as a continuous structure, it will replace the need for a sound wall. If there are continuity breaks, a sound wall will be required in those areas. As currently laid out, residential uses adjacent to the train tracks will benefit from approximately 300 feet of distance separation.

If a sound wall is the preferred option, at the nearest homes for outdoor recreational uses, at 300 feet from the track, a 6 foot sound wall would provide the necessary attenuation. The sound wall would provide the needed mitigation for usable outdoor space and the first story of a residence. If the home were two stories, then upgraded acoustical windows and ventilation would be required to achieve an interior sound level of 45 dB CNEL. In residential construction, the structural noise level reduction (in dB) is almost equal to the rated sound transmission class (STC) of any openable windows. Sound-rated windows with an STC of 31 or 32 will likely be required for the second stories of western perimeter units.

Mitigation requirements for a 430 foot residential set-back (requiring no perimeter walls), versus a 300 foot setback (requiring walls or shielding by the mini-storage), for the closest noise-sensitive uses are as follows:

Train Mitigation Noise Summary

	Option 1	**Option 2**
Setback Distance from Tracks	430 feet	300 feet
Noise Loading in Useable Outdoor Space (soft site)	65 dB CNEL	67 dB CNEL
Wall Required?	No	6 feet high
Noise Loading at Second Story (hard site)	70 dB CNEL*	71 dB CNEL*

* Upgraded acoustical features required to achieve a 45 dB CNEL. West facing perimeter homes shall be equipped with sound rated windows of STC= 31 or 32 and a supplemental fresh air duct capable of delivering 75 CFM of outside air to the west-facing facades.

A supplemental acoustical analysis should be submitted in conjunction with the issuance of building permits to verify that adequate structural noise protection exists in perimeter residences closest to the train tracks to meet the 45 dBA CNEL interior standard. Supplemental ventilation (most likely air conditioning) is required in any livable space where window closure to shut out train noise is needed to meet interior standards. Disclosure of the presence of the tracks should

be included in all real estate transfer documents to anyone buying or leasing a property within 500 feet of the train tracks. The notification should state that although the train noise levels do not exceed City of Lodi Noise Standards, train noise may still be clearly audible, particularly train horns near at-grade crossings.

Train passage may also create perceptible vibrations. According to the US Department of Transportation Transit Noise and Vibration Impact Assessment, the screening distance for train vibration for a heavy railway is 200 feet. All planned residential development is well outside this distance and therefore will not be subject to vibration perception.

DETENTION BASIN PUMP NOISE

A Detention Basin is planned in the southwest corner of the property. It is not known if the basin will be totally passive, or if a pumping system will be required to drain the basin after winter rain storms. If a pump will be used, the location and size of the associated pump has not yet been determined. If the pump is located on the north, or east side of the basin it could be as close as 70 feet to future residential development. Depending on the size of the pump, noise levels could range from 68-80 dBA at a distance of 50 feet from the source. Therefore, even at the lower end of this range the noise from a pump located in a worst-case location along the east or north of the basin would be audible at the nearest future dwellings. Pump noise at a distance of 70 feet will be 65-77 dBA. For this analysis it is assumed that a 55 dBA nighttime noise threshold for residential uses was appropriate. Even with a quiet pump, the 55 dB standard would be exceeded to 225 feet from the unit under line-of-sight conditions. With several pumps in simultaneous operation, the noise "envelope" could be greater.

An open-top walled enclosure of the pump array would reduce off-site noise levels, but likely not for second story residences. Noise level reductions of 5-10 dB from walled enclosures would still create an audible "hum" during pumping operations. Therefore, if the pumps are located near any to the residential dwellings the pump station would need to be enclosed. This would provide approximately 30-35 dBA of noise attenuation and render pumping activities inaudible.

AGRICULTURAL NOISE

Early morning or nighttime farm operations may also create a perceptible noise intrusion at proposed residential uses. Irrigation pumps, crop duster airplanes, or harvesting equipment can be noisy in residential bedrooms when operating during typical "quiet times". An orchard buffer will be created along the southern site perimeter, the mini-storage will shield activities in the west, and the Harney Lane project frontage will have sound walls to the north. Site development will gradually isolate the site from agricultural activity noises. It is recommended that all real estate transfer documents notify the buyer that noise, dust, and odor or other nuisance may be experienced as residential use encroaches into agricultural areas. However, the agricultural activities will gradually be pushed further away from such uses as the site develops. The expanding set-back distance will ultimately minimize any nuisance perception from agriculture.

MITIGATION

Construction activities from project development may impact existing surrounding residential uses and will at times. Such impacts are somewhat mitigated by required compliance with grading/construction permits. These considerations include:

1. All construction and general maintenance activities within 500 feet of an occupied residence, except in an emergency, shall be limited to the hours of 7:00 a.m. to 10:00 p.m. Monday thru Saturday.

2. Staging areas shall be located away from existing residences.

3. All construction equipment shall use properly operating mufflers.

Traffic noise impact analyzed at a "project" versus "no project" condition in the interim year and at build-out in 2030 shows project-related noise is not individually significant.

Traffic noise is cumulatively significant from this project and from forecasted growth, when comparing build-out in 2030 with existing conditions. Cumulatively significant traffic noise impacts are forecasted to occur along Harney Lane from west of the project site to SR-99. Cumulative impacts will be mitigated by the installation of adequate sound walls for new residential development both north and south of Harney Lane.

Proposed residential uses south of Harney Lane may be exposed to traffic noise in excess of 71 dB CNEL. The following mitigation is required to meet the City of Lodi Noise Compatibility Standards:

1. Outdoor recreational space within 145 feet of the Harney Lane centerline must be shielded by solid perimeter walls of 6-7 feet in height, and,

2. Habitable second-story residential space within 245 feet of the Harney Lane centerline must have upgraded structural protection to include dual-paned windows and supplemental ventilation to allow for window closure.

Project-related commercial on-site noise may impact proposed on-site residential uses. This noise includes, but is not limited to fast food restaurant loudspeakers, early morning deliveries to the rear of stores, early morning trash pickup for commercial uses. These potential impacts must be evaluated and mitigated during the design stage.

Current and future homes across Harney Lane will be shielded from noise associated with major retail uses by the already elevated ambient background freeway noise and by setback distances of approximately 300 feet.

Homes situated adjacent to the train tracks require either a setback distance of 430 feet or an 6 foot sound wall to mitigate train noise to 65 dB at the residential exterior and ground floor

interior. This attenuation may be achieved by the design of the mini-storage project. An interior noise analysis should be submitted in conjunction with building plan check to verify that structural noise reduction will be achieved in a livable upstairs space at the perimeter tier of homes by the specified structural components (windows, walls, doors, roof/ceiling assembly) shown on building plans. Disclosure of the presence of the tracks should be included in all real estate transfer documents to anyone buying or leasing a property within 500 feet of the train tracks.

Residential development is currently planned at 300 feet or more from the centerline of the train tracks. At this distance no train related vibration should be perceptible.

A detention basin pump system may be required to empty the detention basin. The planned proximity of homes to the basin would likely require substantial shielding if such pumps were to operate at night. Any pump station should be enclosed in order to not create a nocturnal noise nuisance at the nearest residences.

Noisiest agricultural activities will have substantial set-back from on-site residences particularly as the site continues to develop. Buyer notification of the presence of possible agricultural activity noise should be made as part of any property transfer documents.

Appendix G

Public Services Responses

1. The project could potentially overcrowd the current elementary school which is projected to be at capacity in the 2006-07 school year. Therefore, measures would be taken to increase the capacity of the current elementary school in this boundary or build a new school in the proposed Reynolds Ranch development. As a result of increasing capacity or building a new facility, personnel would need to be hired and equipment purchased for operation.

2. There are no concerns about sitting a school for this project.

3. The proposed location of the school site at this point seems satisfactory. However, the California Department of Education has guidelines to follow when choosing a school site. One criteria of concern is the proximity to Highway 99. The District is required to submit other documentation or studies requested by the SFPD field representative to evaluate the unique characteristics and environment of the proposed school site. This includes, but is not limited to, studies of: noise, traffic, railroads, pipelines, electric transmission lines, and flooding. (California *Code of Regulations, Title 5*, Section 14010)

4. Based on Lodi Unified School District's present generation rates, we conclude the number of dwelling units proposed would generate approximately 205 K-6 students, 53 middle school students and 99 high school students. Lodi Unified School District is currently updating their Master Plan and is presently looking into schools facilitating K-8 students. Facility needs include school buildings, multi-purpose room and playing fields.

5. The main obstacle the District faces is obviously funding. The current cost of land purchases and construction exceeds the district's current level of income. The overwhelming development in recent years has caused the school district to build a number of facilities with Bond funds and as a result depleted available revenue.

6. The project is subject to development fees. At the present time fees are as follows:
   Level II $3.75 per square foot
   Commercial/Industrial $.36 per square foot
   Senior Housing is subject to the Commercial/Industrial Fee Rate

Lodi Unified School District

1. What services do you provide?

   LUSD provided education needs in preschool, kindergarten to 12th grade, adult education, and alternative education promoting student achievement and lifelong learning.

2. How many elementary, middle, and high schools in the district? 56 schools with five future elementary
   a. Elementary: 27 Traditional + 3 Year Round = 30 Elementary
      i. 3 Future Sanctuary Elementary Schools
      ii. Mosher Elementary, constructing
      iii. Podesta Elementary, yet to break ground
      iv. 1 Gate School, Grade 3-6
   b. Middle: 6 Traditional + 1 Gate School = 7 Middle Schools
   c. High: 4 Traditional + 2 Alternatives = 6 High Schools
   d. Other Programs: 10 schools
      i. Joe Serna Charter
      ii. Davis CDS
      iii. Henderson CDS
      iv. Lakewood CDS
      v. Sutherland LOC CDS
      vi. Middle College
      vii. Alt – Liberty ISP
      viii. Alt – Plaza Robles ISP
      ix. Horizon
      x. Needham
   e. Charter Schools: 3 schools
      i. UPS
      ii. River Oaks
      iii. Ben Holt

3. Number of personnel currently employed? LUSD has 3,018 contracted employees

4. How many teachers are currently employed? LUSD employs 1,573 teachers

5. Current average classroom size?
   The average classroom remain in accordance with the LUSD teachers contract of K-3: 20; 4-6: 31; and 7-12: 30

6. Current goals for classroom sizes? The goal is per contract as follows:
   a. K-3: 20, if after 10 days students are not moved or class size reaches 25, a sub or a classified aide will assist in classroom until students can be moved.
   b. 4-6: 31, if after 10 days students are not moved or class size reaches 35, a sub or a classified aide will assist in classroom until students can be moved.
   c. 7-12: goal of 30 students to one teacher

7. Current student-to-teacher ratio?
   Current student to teacher ratios remain in accordance with the LUSD teachers contract of student ratio goals: K-3: 20:1; 4-6: 31:1; and 7-12: 30:1

8. Current student to teacher ratio goals?

K-3: 20:1 4-6: 31: 1 7-12: 30:1

DRAFT

Economic &
Planning Systems

Public Finance
Real Estate Economics
Regional Economics
Land Use Policy

TECHNICAL MEMORANDUM

To	Blair King, *City of Lodi* Randy Hatch, *City of Lodi*
From	Russ Powell and Tepa Banda
Subject	Fiscal Study for Annexation Territories, EPS #15539
Date	May 11, 2006

The City of Lodi (City) has requested Economic & Planning Systems, Inc , (EPS) to evaluate the fiscal impacts of the three annexation areas as currently proposed The three proposed annexation areas are these

- Southwest Gateway
- Westside
- Reynolds Ranch

A fiscal study examines the costs of providing basic city services to a project and compares those costs to operating revenues that would be generated by the project Such a study weighs a city's ongoing service costs and operating revenues and excludes any consideration of capital funding for public infrastructure Capital funding, because it represents a one-time investment for the life of the infrastructure, usually is not considered in a fiscal impact study

The City should use the results of this fiscal study to determine whether the Project is likely to reduce the level of citywide services because project-related contributions to revenues in the City's General Fund and Road Fund do not fully cover the costs of serving the Project Conversely, it may be that the Project will enhance citywide services because project-related revenues will be more than what will be required to fund services provided to the Project This memorandum briefly describes the preliminary results of the fiscal study with the understanding that a full report characterizing the study's assumptions, results, and interpretation will be forthcoming

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This fiscal study examines the impact of the proposed annexation areas (Project) under one analysis This fiscal study evaluates the impacts to the general fund and road funds, based on two scenarios

- **Scenario 1**—Residential Uses Development without Commercial Development
- **Scenario 2**—Residential and Nonresidential Uses Development

PROJECT DESCRIPTION

The Project, consisting of 628 non-contiguous acres, is located in the southern area of the City and contains residential, office, commercial, and various public uses Residential uses account for approximately 466 acres consisting of 1,692 low density single-family units, 695 medium-density residential units, and 833 high-density residential units Commercial uses are proposed for 40 acres Office uses are proposed for 20 acres The remaining 102 acres will be for public uses including schools and parks

PURPOSE AND CONTEXT FOR THE FISCAL ANALYSIS

This analysis evaluates the fiscal impact of the Project on the annual operating budget of the City The objective of this fiscal study is to determine if, at build out of the Project, the City has adequate revenue to provide City services, such as law enforcement and fire protection, to the employees, customers, and other persons who visit the site Part of the City's administration costs also are assumed to increase after development of the Project

The fiscal analysis takes into account the effects of the State budget crisis from 2002 and 2003 and is based on the assumption that local government revenue will be restored by Fiscal Year (FY) 2007, the year in which construction is anticipated to begin [1] The analysis is based on the adopted FY 2005–06 City budget, current tax regulations and statutes, and the general assumptions discussed on the following pages

The development schedule and land uses are based on information provided by the City and combined with historical and projected demographic data from the California Department of Finance (DOF), California Employment Development Department (EDD), and Sacramento Area Council of Governments (SACOG) The results of the

---

[1] Because the development of the Project does not begin before FY 2007, no decrease in property tax allocations from the 2-year shift in the Educational Revenue Augmentation Fund (ERAF) to the City's General Fund or other Special Funds is assumed In other words, when the Project is built out, it is assumed that the State-mandated shifts of the City's property tax revenues will have been restored, and the fiscal study assumes the City's current allocation of the 1-percent property tax

Analysis will vary if development plans change from those upon which this Analysis is based

The actual fiscal impacts of the development will vary from those presented in this study, depending on changes in the City budget or actual construction costs and sales prices in the development area The variability of commercial construction prices directly affects the amount of property tax revenue generated by the affected service providers, as well as the levels of anticipated sales tax revenues

Each revenue item is estimated based on current State legislation and current San Joaquin County (County) resolution or ordinance Future changes by either State legislature or the County can affect the revenues estimated in this study

GENERAL ASSUMPTIONS

The following list documents the key assumptions used in this analysis

- **Expense and revenue multiplier basis for Project**—As detailed in **Table B-1** and **Table C-1**, impacts to the City's operating budget are derived through either a case study analysis or by estimating the impact of the Project relative to the current persons served in the City One "person served" is defined as a City resident or one-fourth of an employee working in the City The Project's addition to most expense categories and to selected revenue categories is estimated using the number of persons served, or one-fourth the total employee count, located in the Project The one-fourth employee standard was recommended by City staff and based on staff estimations, in this case local commercial retail activity, on the City's services A case study was used to determine the costs of maintaining parks (**Table C-3**)
- **Sales tax assumptions**—The estimated increase in sales tax revenues (**Table B-5**) was calculated through two methodologies A Market Support Methodology (**Table B-5A**) uses estimated household income levels for each category of residential density to forecast retail sales that will be generated by the new residential development Retail sales generated by the new local commercial development are estimated through an Adjusted Retail Space Methodology (**Table B-5B**)
- **Property tax assumptions**—Property taxes are the largest source of new revenue produced by the Project Impact on the City's assessed property values was determined through a market analysis of comparable residential and commercial development in the City The property tax sharing agreement between the City and the County states that the City will receive 20 percent of the property tax

revenue accruing to the County and detaching special districts before annexation Second, the City's property tax revenue will be reduced as a result of the State-mandated ERAF shift The ERAF shift is approximate and represents the average for the County

RESULTS OF THE FISCAL ANALYSIS

Table 1 shows that at buildout the development proposed for the Project will result in a net fiscal deficit for the City (i e , development-generated revenues will not be sufficient to fund General Fund– and Road Fund–related expenditures for the Project) In the Residential Only scenario, annual expenditures are projected to exceed revenues by almost $1 2 million, or $381 per residential unit The Commercial and Residential scenario projects revenues will increase above the Residential Only scenario because of the significant amount of commercial uses for the Project The Residential and Commercial scenario still projects an annual deficit of $894,842, or $278 per residential unit

The City has noted that the new annexation areas will have greater levels of landscaping along major roadways This analysis did not look at these costs EPS assumes that these costs would be offset by a revenue source, such as a Landscaping and Lighting District EPS estimates that these costs will be approximately $100 annually per residential unit in 2006 dollars If this amount is added to the shortfall per residential unit shown in **Table 1**, then the Residential Only scenario shortfall becomes $481 per residential unit, and the Residential and Commercial scenario shortfall becomes $378 per residential unit

Table 2 shows that property taxes totaling $1,064,345 under the Residential Only scenario and $1,124,799 under the Commercial and Residential scenario represent approximately 24 percent of project-generated revenues that will accrue to the General Fund The annual Bradley-Burns 1-percent and the Proposition 172 Public Safety sales tax revenues generated by the Project are estimated to be $88,343 under the Residential Only scenario and $384,061 in the Residential and Commercial scenario

Table 2 also shows estimated Project-related General Fund expenditures by the City to be $5 3 million for the Residential Only and $5 5 million for the Commercial and Residential scenarios The largest expenditure category in the City's General Fund is police protection The Project is projected to increase Police costs by $1 39 million and for the Residential Only and by $1 45 million for the Commercial and Residential scenarios The Fire Department, at approximately $975,000 in both scenarios, is also a significant General Fund cost factor Street Fund expenditures are estimated to result in almost $400,000, approximately, in additional costs to the City Budget

CONCLUSION

The General Fund and Street Fund shortfall shown in this report represents the difference between the cost of providing existing levels of services to new annexation areas and the amount of estimated revenue that will be generated in new taxes and other revenues Any increased service levels will increase the shortfall shown in **Table 1**

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Table 1
City of Lodi New Annexation Fiscal Impact Analysis
Fiscal Impact Summary

Scenario At Buildout	City Budget Fund [1] General Fund	City Budget Fund [1] Street Fund [2]	TOTAL	Per Dwelling Unit [3]
Residential Only				
Revenues	$3,920,037	$145,872	**$4,065,909**	
Expenditures	$4,905,687	$387,939	**$5,293,626**	
Surplus/(Deficit)			**($1,227,717)**	**($381)**
Commercial and Residential				
Revenues	$4,478,846	$159,050	**$4,637,896**	
Expenditures	$5,127,275	$405,463	**$5,532,738**	
Surplus/(Deficit)			**($894,842)**	**($278)**

"sum_all"

[1] Annual impacts
[2] Does not include the estimated costs of maintaining landscaped corridors and street lights in the annexation areas The City estimates that service standards for landscaping and lighting maintenance will increase above levels found in other areas of the City
[3] EPS estimates that the greater levels of landscaping along major roadways in the annexation areas will add approximately $100 per unit in additional funding shortfall EPS did not include an estimate of these costs in the fiscal study under the assumption there would be an offsetting revenue source to fund maintenance costs, such as a Landscaping and Lighting District

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Table 2
City of Lodi New Annexation Fiscal Impact Analysis
Revenue and Expenditure Summary, General and Street Funds

	At Buildout	
Revenue or Expenditure / Fund	Residential Only	Commercial and Residential
REVENUES		
General Fund		
Property Tax	$1,064,345	$1,124,799
Property Tax in Lieu of Sales Tax	$34,704	$150,870
Property Tax in Lieu of VLF	$1,231,315	$1,301,252
Real Property Transfer Tax	$28,188	$30,734
Sales Tax (Incl Prop 172 - Public Safety)	$88,343	$384,061
Business License Tax	$114,531	$124,878
Franchise Fees	$1,183,141	$1,183,141
Licenses [1]	$0	$0
Fees [1]	$0	$0
Intergovernmental Revenue	$65,633	$65,633
Motor Vehicle in-Lieu	$69,523	$69,523
Fines and Forfeitures	$40,313	$43,955
Subtotal, General Fund Revenues	**$3,920,037**	**$4,478,846**
Street Fund	**$145,872**	**$159,050**
TOTAL ANNUAL REVENUES	**$4,065,909**	**$4,637,896**
EXPENDITURES		
General Fund		
City Attorney	$47,076	$49,202
City Manager	$284,425	$297,273
City Clerk	$60,085	$62,799
Finance	$263,790	$275,705
Community Events	$12,798	$13,376
Police	$1,386,866	$1,449,510
Fire Dept	$946,944	$989,717
Public Works	$682,844	$713,688
Community Center	$74,856	$78,237
Non-Departmental	$626,358	$654,650
Parks & Recreation	$519,645	$543,117
Subtotal, General Fund Expenditures	**$4,905,687**	**$5,127,275**
Street Fund	**$387,939**	**$405,463**
TOTAL ANNUAL EXPENDITURES	**$5,293,626**	**$5,532,738**
SURPLUS / (DEFICIT)	**($1,227,717)**	**($894,842)**

'sum_detail"

[1] Adjusted for user fees and cost recovery amounts

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Regional Economics
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APPENDICES

APPENDIX A: FISCAL IMPACT SUMMARY AND ASSUMPTION TABLES

APPENDIX B: REVENUE-ESTIMATING TABLES

APPENDIX C: EXPENDITURE-ESTIMATING TABLES

APPENDIX D: SUPPORTING TABLES FOR REVENUE ESTIMATES

Economic &
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Public Finance
Real Estate Economics
Regional Economics
Land Use Policy

APPENDIX A

FISCAL IMPACT SUMMARY AND ASSUMPTION TABLES

Table A-1	General Assumptions	A-1
Table A-2	Land Use Summary	A-2
Table A-3	Land Use Assumptions	A-3
Table A-4	Estimated Residential and Employee Population by Land Use Category	A-4

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Table A-1
City of Lodi New Annexation Fiscal Impact Analysis
General Assumptions

Item	Assumption
General Assumptions	
Fiscal Year Development Starts	N/A
Fiscal Year of Analysis and Year Dollars Discounted to	2005-06
Cash Flow Base Year	2005
Inflation (Discount) Rate [1]	3 5%
Legislated Tax Escalation Rate	2 0%
Property Appreciation Rate [2]	4 5%
Property Turnover Rate (% per year)	
Residential - Single-Family	10 0%
Residential - Multifamily	10 0%
Nonresidential	5 0%
General Demographic Characteristics	
San Joaquin County Population - Jan 1, 2005 [3]	653,333
City of Lodi	
Population - Jan 1, 2005 [3]	62,467
Employees - March, 2003 [4]	22,404
Persons Served [5]	68,068

"gen_assumps"

Source California Department of Finance, U S Census Bureau, City of Lodi, and E

[1] The discount rate is the factor used to discount inflated dollars to present value
[2] A real-market appreciation of 1% above the base inflation rate is assumed
[3] Population estimates based on California Department of Finance data
[4] From the U S Census County Business Patterns Data
[5] "Persons Served" is defined as Lodi's population plus 25% of employees

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Table A-2
City of Lodi New Annexation Fiscal Impact Analysis
Land Use Summary

All Annexation Areas

Land Use	Assumptions	Land Use Buildout [1] Acreage	Dwelling Units	Building Square Feet
Residential Land Uses	*Units/Acre*			
Low Density	5	-	1,692	na
Medium Density	8	-	695	na
High Density	22	-	683	na
High Density	50	-	150	na
Total Residential		**465 9**	**3,220**	
Nonresidential Land Uses	*FAR*			
Commercial	0 20	40 0	na	350,000
Office	0 23	20 0	na	200,000
Total Nonresidential		**60 0**	na	**550,000**
Public Land Uses				
School	na	34 0	na	na
Fire Station	na	1 0	na	na
Aquatic Center	na	4 7	na	na
Parks	na	56 4	na	na
Open Space	na	0 5	na	na
Detention Basins	na	5 5	na	na
Total Public	na	**102 1**	na	na
Total All Land Uses		**628 0**	**3,220**	**550,000**

land_use"

Source City of Lodi

[1] Residential acreage for the Westside and Southwest Gateway projects estimated as total site acreage less public facilities and park acres

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Table A-3
City of Lodi New Annexation Fiscal Impact Analysis
Land Use Assumptions (2006$)

Land Use	Units/ Acres	Description	Sq Ft per Acre [1]	Secured Value per Unit/Sq Ft [2]	Unsecured Value per Unit/Sq Ft [2]	Turnover Rate	Persons per DU [3]	Sq Ft per Employee [4]
Residential				*Per Unit [2]*	*Per Unit*			
Low Density	1,692	Dwelling Unit	-	$551,000	$0	10%	2 79	-
Medium Density	695	Dwelling Unit	-	$421,000	$0	10%	2 28	-
High Density	683	Dwelling Unit	-	$157,000	$0	10%	2 03	-
High Density	150	Dwelling Unit	-	$157,000	$0	10%	2 03	-
Nonresidential				*Per Sq Ft [3]*	*Per Sq Ft*			
Commercial	40 0	Square Feet	8,750	$140	$20	5%	-	450
Office	20 0	Square Feet	10,000	$140	$20	5%	-	300

"lu_assumps"

Source California DOF, City of Lodi General Plan 1991, LoopNet, The Gregory Group, and EPS

[1] Assumed FARs Commercial - 0 2, Office - 0 23
[2] 4Q 2005 avg base prices from The Gregory Group for low and medium density residential units
[3] Weighted average prices for selected properties in Lodi from Loopnet, Inc April 6, 2006
[3] Assumptions from 1991 City of Lodi General Plan adjusted to reflect 2005 DOF average persons per household for low density units
[4] EPS assumptions based on data findings for the Sacramento region

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Table A-4
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Residential and Employee Population by Land Use Category

	At Buildout					
	Residential Only			Commercial and Residential		
Land Use	Residents	Employees	Total Pop	Residents	Employees	Total Pop
	a	*b*	*c = a + b*	*d*	*e*	*f = d + e*
Residential Population						
Low Density	4,719	n/a	4,719	4,719	n/a	4,719
Medium Density	1,586	n/a	1,586	1,586	n/a	1,586
High Density	1,385	n/a	1,385	1,385	n/a	1,385
High Density	304	n/a	304	304	n/a	304
Total Residential Population	**7,995**	-	**7,995**	**7,995**	-	**7,995**
Employee Population						
Nonresidential						
Commercial	n/a	-	-	n/a	778	778
Office	n/a	-	-	n/a	667	667
Subtotal Nonresidential		-	-		**1,444**	**1,444**
Total Employee Population	-	-	-	-	**1,444**	**1,444**
Total Residential and Employee Pop	**7,995**	-	**7,995**	**7,995**	**1,444**	**9,439**
Total Persons Served [1]	**7,995**	-	**7,995**	**7,995**	**722**	**8,717**

"empl_pop"

Source EPS

[1] "Total Persons Served" is defined as 100% of residential population and 50% of employees

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Planning Systems
Public Finance
Real Estate Economics
Regional Economics
Land Use Policy

APPENDIX B

REVENUE-ESTIMATING TABLES

Table B-1	Revenue-Estimating Procedures	B-1
Table B-2	Estimated Annual Project Revenues	B-2
Table B-3	Motor Vehicle In-Lieu Fee Revenue Replaced by Property Tax	B-3
Table B-4	Estimated Annual Property Tax Revenues	B-4
Table B-5	Estimated Annual Sales and Use Tax Revenues	B-5
Table B-5A	Estimated Annual Taxable Sales, Hybrid Market Support Method	B-6
Table B-5B	Estimated Annual Taxable Sales, Adjusted Retail Space Method	B-7

Table B-1
City of Lodi New Annexation Fiscal Impact Analysis
Revenue-Estimating Procedures (2006$)

Revenues	Estimating Procedure	Table/ Reference	FY 2005-06 Revenues	Revenue Adjustments [1]	Adj Net FY05-06 Revenues	Population or Persons Served	Revenue Multiplier
GENERAL FUND - Annual General Fund Revenues [2]							
Property Tax	Case Study	Table B-4	$8 063 374		$8,063 374	N/A	N/A
Property Tax in Lieu of Sales Tax [3]	Case Study	Table B-5	N/A		N/A	N/A	N/A
Property Tax in Lieu of VLF [3]	Case Study	Table B-3 & Table B-4	N/A		N/A	N/A	N/A
Real Property Transfer Tax	Avg Rev per Person Served	Table B-2	$240 000		$240,000	73 669	$3 26
Sales Tax	Case Study	Table B-5	$9,038,120		$9 038 120	N/A	N/A
Sales Tax - Prop 172 (Public Safety)	Case Study	Table B-5	$364,000		$364 000	N/A	N/A
Transient Occupancy Tax (TOT)	[4]		$348 480		$348 480	N/A	N/A
Business License Tax	Avg Rev per Person Served	Table B-2	$975,156		$975,156	73,669	$13 24
Franchise Fees	Avg Rev per Capita	Table B-2	$9 244 720		$9,244 720	62 467	$147 99
Licenses	Avg Rev per Employee	Table B-2	$28,710	($28 710)	$0	73 669	$0 00
Permits	[5]		$39 800	($39 800)	$0	N/A	N/A
Fees	Avg Rev per Person Served	Table B-2	$3,135,139	($3 135,139)	$0	73 669	$0 00
Investment/Property	[6]		$168 000	($168 000)	$0	N/A	N/A
Intergovernmental Revenue	Avg Rev per Capita	Table B-2	$512,838		$512 838	62,467	$8 21
Motor Vehicle in-Lieu	Case Study	Table B-2 & Table B-3	$3 706 100		$3,706 100	N/A	N/A
Fines and Forfeitures	Avg Rev per Person Served	Table B-2	$343 237		$343,237	73,669	$4 66
Other Revenue	[6]		$474 850	($395 800)	$79 050	N/A	N/A
Transfers from Other Funds	[6]		$7,141,848	($7,141 848)	$0	N/A	N/A
Subtotal Annual Gen Fund Revenues			**$43,824,372**	**($10,909,297)**	**$32,915,075**		**$177 36**
STREET FUNDS - Annual Street Fund Revenues [2]							
State Gas Tax	Avg Rev per Person Served	Table B-2	$1 242,000		$1,242,000	73,669	$16 86
Development Impact Fees	Avg Rev per Person Served	Table B-2	$945 000	($945 000)	$0	73 669	$0 00
Investment/Property	[6]		$10,000	($10,000)	$0	N/A	N/A
Measure K	[7]		$1 000,000	($1 000 000)	$0	N/A	N/A
Reimb - Measure K	[7]		$4,380,000	($4 380,000)	$0	N/A	N/A
State STIP Reimbursement	[7]		$510,000	($510,000)	$0	N/A	N/A
Subtotal Street Funds Revenues			**$8,087,000**	**($955,000)**	**$1,242,000**		**$16 86**
TOTAL ANNUAL GENERAL AND STREET FUND REVENUES			**$51,911,372**	**($11,864,297)**	**$34,157,075**		**$194 22**

*rev_procedures

Source City of Lodi FY 2005-06 Adopted Budget, California Office of the Controller; California Department of Finance, and EPS

[1] Revenues are adjusted by user fees and cost recovery amounts shown in the City's FY 2005-06 Budget These deductions in ongoing revenues also are deducted from ongoing costs as shown in **Table C-1**
[2] Annual fund revenues reflect City of Lodi budgeted revenues for FY 2005-06
[3] Property Tax in Lieu of Sales Tax and Property Tax in Lieu of Motor Vehicle License Fees are authorized by SB 1096 as amended by AB 2115
[4] This revenue source is not expected to be affected by the Project because the project does not increase available hotel stock
[5] This revenue source is not included in the analysis because it is a one-time revenue generator and is not an ongoing source of revenue
[6] This revenue source is not expected to be affected by the Project and is therefore not evaluated in this analysis
[7] This revenue source is not included in the analysis because it is for capital projects and is not an ongoing source of revenue

Prepared by EPS

15539 fiscal model 1 xls 5/10/2006

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Table B-2
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Project Revenues (2006$)

Revenue	At Buildout		
	Residential Development	Commercial Development	**Total Development**
GENERAL FUND			
Annual General Fund Revenues			
Property Tax	$1,064,345	$60,453	**$1,124,799**
Property Tax in Lieu of Sales Tax	$34,704	$116,166	**$150,870**
Property Tax in Lieu of VLF	$1,231,315	$69,937	**$1,301,252**
Real Property Transfer Tax	$26,045	$2,353	**$28,398**
Sales Tax (Incl Prop 172 - Public Safety)	$88,343	$295,718	**$384,061**
Business License Tax	$105,824	$9,560	**$115,384**
Franchise Fees	$1,183,141	$0	**$1,183,141**
Licenses [1]	$0	$0	**$0**
Fees [1]	$0	$0	**$0**
Intergovernmental Revenue	$65,633	$0	**$65,633**
Motor Vehicle in-Lieu	$69,523	$0	**$69,523**
Fines and Forfeitures	$37,248	$3,365	**$40,613**
Subtotal Annual Gen Fund Revenues	**$3,906,121**	**$557,552**	**$4,463,673**
STREET FUNDS - Annual Street Funds Revenues			
State Gas Tax	$134,782	$12,176	**$146,958**
Subtotal Street Funds Revenues	**$134,782**	**$12,176**	**$146,958**
TOTAL ANNUAL GENERAL AND STREET FUND REVENUES			**$4,610,631**

"rev_summary"

Source City of Lodi and EPS

[1] Adjusted for user fees and cost recovery amounts

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Table B-3
City of Lodi New Annexation Fiscal Impact Analysis
Motor Vehicle in-Lieu Fee (MLVF) Revenue Replaced by Property Tax (2006$)

Item	Formula	Citywide FY 2005-06 Total
Motor Vehicle in-Lieu Fee (MVLF) Revenue		
Motor Vehicle in-Lieu Fee Revenue Multiplier [1]	*a*	$8 70
Project Residents	*b*	7,995
Total MVLF Revenue	***c =a * b***	**$69,523**
Motor Vehicle in-Lieu Fee Revenue Replaced by Property Tax		
Motor Vehicle in-Lieu Fee Revenue (Current State Statutes) [2]	*d*	$4,196,258
Less Motor Vehicle in-Lieu Fee Revenue [2]	*e*	*$422,187*
Total Citywide MVLF Revenue Replaced by Property Tax [3]	***f = d - e***	**$3,774,071**

'VLF_Rev"

Source Senate Constitution Amendment 4 (SCA 4), Senate Bill 1096 as amended by Assembly Bill 2115, California State Controller, City of Rancho Cordova, and EPS

[1] From California State Controller, FY 2005-06 *State of California Shared Revenue Estimates*
[2] From California State Controller, *Vehicle License Fee Adjustment Amounts*, October 14, 2005
[3] Amount used to calculate annual property tax in lieu of VLF revenue as shown on **Table B-4**

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Table B-4
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Property Tax Revenues (2006$)

Land Use	Assump	Formula	At Buildout Residential	Nonresidential	Total
Adjusted Assessed Value (2005$) [1]		a	$1,410,713,557	$80,126,509	$1,490,840 066
Property Tax (1% of Assessed Value)	1 00%	b = a * 1 00%	$14,107,136	$801,265	$14,908,401
Estimated Property Tax Allocation [2]					
Lodi General Fund	7 54%	c = b * 7 54%	$1,064,345	$60,453	$1,124,799
Other Agencies	92 46%	d = b * 92 46%	$13,042,790	$740,812	$13 783,602
Property Tax In-Lieu of MVLF Fee Revenue					
Total Citywide Assessed Value [3]		j	$4,323,941 815	$4,323 941,815	$4 323 941,815
Total Assessed Value of Project		a	$1,410,713 557	$80,126,509	$1,490,840,066
Total Assessed Value		k = j + a	**$5,734,655,372**	**$4,404,068,324**	**$5,814,781,881**
Percent Change in AV		l = k/ j - 1	32 63%	1 85%	34 48%
Property Tax In-Lieu of VLF [4]	**$3,774,071**	m = l $3,774 071	**$1,231,315**	**$69,937**	**$1,301,252**

"prop_tax"

Source State Controller's Office, and EPS

[1] For assumptions and calculation of adjusted assessed value, see **Table D-2**
[2] For assumptions and calculation of the estimated property tax allocation, refer to **Table D-1**
[3] Total secured and unsecured assessed value for the City for 2005-2006, from State Controller's Office
[4] Estimated impact of Senate Bill 1096 (SB 1096), as amended by Assembly Bill 2115 (AB 2115) Motor Vehicle in-Lieu Fee Revenue assumption amount estimated in Table B-3

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Table B-5
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Sales and Use Tax Revenues (2006$)

Item	Source/ Assump	At Buildout Residential	Commercial	Total
Taxable Sales from Market Support and On-Site Retail				
Taxable Sales from Market Support	**Table B-5A**	$13,881 477	$303,333	$14,184,810
Net Taxable Sales Captured from On-Site Retail Development [1]	**Table B-5B**	$0	$46,163 038	$46,163,038
Total Taxable Sales from Market Support and On-Site Retail		**$13,881,477**	**$46,466,371**	**$60,347,848**
Annual Sales Tax Revenue				
Bradley Burns Sales Tax Rate	0 7500%	$104,111	$348,498	
Estimated Countywide and State Pool Sales Tax Factor [2]	0 0977%	$13,562	$45,397	
Estimated Proposition 172 Sales Tax Factor [3]	0 0387%	$5,374	$17,989	
Subtotal Estimated Local Sales Tax Rate	0 8864%	$123,047	$411,884	
Less Property Tax in Lieu of Sales Tax Rate (SB 1096/AB 2115)	*-0 2500%*	($34,704)	($116,166)	
Total Annual Sales Tax Revenue	***0 6364%***	**$88,343**	**$295,718**	**$384,061**
Annual Property Tax in Lieu of Sales Tax (SB 1096/AB 2115) [4]	**0 2500%**	**$34,704**	**$116,166**	**$150,870**

"sales_tax_sum"

Source California State Board of Equalization, and EPS

[1] Net of new resident market support
[2] See **Table D-5** Sales tax generated from unclassified, non-point-of-sale transactions are collected by the California State Board of annually to jurisdictions in San Joaquin County Lodi receives approximately 9 4% of total taxable countywide sales annually
[3] See **Table D-4** Based on the City's FY2005-06 budget, the City receives approximately $0 00194 of the $0 05 tax applied to each dollar of taxable sales
[4] Based on Senate Bill 1096 as amended by Assembly Bill 2115 which states 1/4 of the 1 percent sales tax revenue (0 25 percent) will be exchanged for an equal dollar amount of property tax revenue

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Table B-5A
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Taxable Sales, Hybrid Market Support Method (2006$)

Item	Assumption	At Buildout Residential	Commercial	Total
Annual Taxable Sales from Market Support				
Taxable Sales from New Households				
Average Annual Household Income [1]				
Single-Family Residential	$99 000			
Medium-Density Residential	$78,000			
High-Density Residential	$32,970			
Taxable Retail Expenditures as a % of HH Inc [2]				
Single-Family Residential	27%			
Medium-Density Residential	27%			
High-Density Residential	36%			
Taxable Retail Expenditures per Household				
Single-Family Residential		$26 436		
Medium-Density Residential		$21 214		
High-Density Residential		$11,924		
New Single-Family Residential Households		1,692		
New Medium-Density Residential Households		695		
New High-Density Residential Households		833		
Taxable Sales from New Households [3]				
Tax Sales from New Single-Family Res HH		$44,730,493		**$44,730,493**
Tax Sales from New Medium-Density Res HH		$14,743,797		**$14,743,797**
Tax Sales from New High-Density Res HH		$9,933,095		**$9,933,095**
Subtotal Taxable Sales from New Households		**$69,407,385**		**$69,407,385**
Est Retail Capture in Lodi from New Res [4]	20%			
Total Taxable Sales from New HH in Ceres		**$13,881,477**		**$13,881,477**
Taxable Sales from New Employment				
Average Daily Taxable Sales per New Empl	$7 00			
Work Days per Year	240			
Estimated Capture in Lodi from New Empl	50%			
New Employees		0	1,444	
Taxable Sales from New Employees [5]	**25% of total**	**$0**	**$303,333**	
Total Annual Taxable Sales from Market Support		**$13,881,477**	**$303,333**	**$14,184,810**

sales_tax_a"

Source U S Department of Labor, Bureau of Labor Statistics, and EPS

[1] See **Table D-3** Household income based on mortgage qualification guidelines
[2] Derived from Bureau of Labor Statistics (2003) data
[3] "Taxable Sales from New Households" is calculated by multiplying taxable retail expenditures per household by the cumulative number of new households
[4] Estimated capture rate by EPS based on Google Local searches for large format retailers, auto dealers, and sit-down dining establishments
[5] "Taxable Sales from New Employees" is calculated by multiplying daily sales per new employee by the number of work days per year the estimated capture of sales within Ceres, and the cumulative number of new employees Discounted 75% to avoid double- counting of employees who also are residents

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Table B-5B
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Taxable Sales, Adjusted Retail Space Method (2006$)

Item	Formula	Assump	At Buildout Residential	Commercial	Total
Annual Taxable Sales from On-Site Retail Development					
Total Square Feet Built	*a*	350,000			
Annual Sales per Square Foot [1]					
Commercial	*b*	$210			
Taxable Retail Sales Factor [2]					
Commercial	*c*	65%			
Annual Taxable Sales per Sq Ft (Rounded)					
Commercial	*d = b * c*	$140			
Annual Taxable Sales From On-Site Retail Dev					
Commercial	*e = a * d*		$0	$49,000,000	$49,000,000
Subtotal Taxable Sales from On-Site Retail Dev			**$0**	**$49,000,000**	**$49,000,000**
Market Support from Annexation Area Residential Dev [3]					
Total Taxable Market Support	*f*		$13,881,477	$303,333	$14,184,810
Percent of Tax Market Support Spent On-Site [4]	*g*	20%			
Taxable Market Support Spent On-Site	*h = f * g*		$2,776,295	$60,667	$2,836,962
Net New Taxable Sales from On-Site Retail Dev	*i = e - h*				**$46,163,038**

"sales_tax_b"

Source Urban Land Institute and EPS

[1] Sales per square foot figures shown are an average of shopping centers in the Western U S from Urban Land Institute, *Dollars & Cents of Shopping Centers 2004*
[2] This figure represents the percentage of total sales subject to sales tax These percentages are based on prior EPS studies
[3] Market support subtracted to avoid double-counting on-site retail sales tax revenue See **Table B-5A** for detailed information
[4] Only a portion of total household taxable spending (20% in this study) is estimated to occur in the 350,000 square feet

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APPENDIX C

EXPENDITURE-ESTIMATING TABLES

Table C-1	Expenditure-Estimating Procedure, City of Ceres FY 2005–06 Adopted Budget	C-1
Table C-2	Estimated Annual Annexation Area Expenditures	C-2
Table C-3	Park Expenditures Case Study	C-3

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Table C-1
City of Lodi New Annexation Fiscal Impact Analysis
Expenditure-Estimating Procedure based on City of Lodi FY 2005-06 Budget (2006$)

Category	Estimating Procedure	Table/ Reference	City of Lodi FY 2005-06 Adopted Exp	Offsetting Revenues [1]	Adjusted Net FY 2005-06 Expenditures	1/1/2005 Population or Persons Served	FY 2005-06 Weighted Avg Cost	Adjustment Factor	Cost Multiplier per Resident	Cost Multiplier per Employee
GENERAL FUND										
Annual General Fund Expenditures										
City Attorney	Avg Cost per Person Served	Table C-2	$400,820		$400,820	68 068	$5 89	1 00	$5 89	$2 94
City Manager	Avg Cost per Person Served	Table C-2	$2,421,686		$2 421,686	68 068	$35 58	1 00	$35 58	$17 79
City Clerk	Avg Cost per Person Served	Table C-2	$511,585		$511 585	68 068	$7 52	1 00	$7 52	$3 76
Finance	Avg Cost per Person Served	Table C-2	$2,245,987		$2,245,987	68 068	$33 00	1 00	$33 00	$16 50
Community Events	Avg Cost per Capita	Table C-2	$100 000		$100,000	62 467	$1 60	1 00	$1 60	$0 80
Police	Avg Cost per Person Served	Table C-2	$13,006,961	($1,198,755)	$11,808,206	68,068	$173 48	1 00	$173 48	$86 74
Fire Dept	Avg Cost per Person Served	Table C-2	$8 098 576	($36 000)	$8,062 576	68 068	$118 45	1 00	$118 45	$59 22
Public Works	Avg Cost per Person Served	Table C-2	$6 745 037	($931,095)	$5,813,942	68,068	$85 41	1 00	$85 41	$42 71
Community Center	Avg Cost per Capita	Table C-2	$1,282,700	($697 800)	$584,900	62,467	$9 36	1 00	$9 36	$4 68
Non-Departmental	Avg Cost per Person Served	Table C-2	$5 333 002		$5,333,002	68 068	$78 35	1 00	$78 35	$39 17
Parks & Recreation	Case Study	Table C-3	$3 678 018	($1,359,994)	$2,318,024	62,467	$65 00	1 00	$65 00	$32 50
Subtotal Annual General Fund Exp			**$43,824,372**	**($4,223,644)**	**$39,600,728**		**$613 63**		**$613 63**	**$306 81**
STREET FUNDS										
Annual Street Fund Expenditures (Non General Fund)	Avg Cost per Person Served	Table C-2	**$5,545,036**	**($2,242,000)**	**$3,303,036**	**68,068**	**$48 53**	**1 00**	**$48 53**	**$24 26**
TOTAL ANNUAL GENERAL AND STREET FUNDS			**$49,369,408**	**($6,465,644)**	**$42,903,764**		**$662 16**		**$662 16**	**$331 08**

"exp_procedures"

Source City of Lodi FY 2005-06 Financial Plan and Budget and EPS

[1] Revenues are adjusted by user fees and cost recovery amounts shown in the City's FY 2005-06 Budget These deductions in ongoing expenditures also are deducted from ongoing revenues, as shown in Table B-1

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Table C-2
City of Lodi New Annexation Fiscal Impact Analysis
Estimated Annual Expenditures (2006$)

	At Buildout		
Expenditure Category	Residential	Commercial	**Total**
GENERAL FUND			
Annual General Fund Expenditures			
City Attorney	$47,076	$2,126	**$49,202**
City Manager	$284,425	$12,847	**$297,273**
City Clerk	$60,085	$2,714	**$62,799**
Finance	$263,790	$11,915	**$275,705**
Community Events	$12,798	$578	**$13,376**
Police	$1,386,866	$62,644	**$1,449,510**
Fire Dept	$946,944	$42,773	**$989,717**
Public Works	$682,844	$30,844	**$713,688**
Community Center	$74,856	$3,381	**$78,237**
Non-Departmental	$626,358	$28,292	**$654,650**
Parks & Recreation	$519,645	$23,472	**$543,117**
Subtotal Annual General Fund Exp	**$4,905,687**	**$221,588**	**$5,127,275**
STREET FUND			
Annual Street Fund Expenditures (Non General Fund)	$387,939	$17,523	**$405,463**
TOTAL ANNUAL EXPENDITURES	**$5,293,626**	**$239,112**	**$5,532,738**

"exp_sum"

Source EPS

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Table C-3
City of Lodi New Annexation Fiscal Impact Analysis
Park Expenditures Case Study

Item	Source		Value
Population in Annexation Areas	**Table A-4**	**a**	7,995
Park Acres Required Per 1,000 Population	City of Lodi	b	5
Park Acres Required for Annexation Area		c = (a / 1000) * b	39 97
Park Maintenance Cost per Acre (2006 $s) [1]	City of Lodi	d	$13 000
Total Park Maintenance Costs in Annexation Area (2006 $s)		e = c * d	$519,645
Park Maintenance Costs Per Capita in Annexation Area (2006 $s)		**e / a**	**$65 00**

"park_costs"

Source City of Lodi and EPS

[1] Includes costs of maintaining developed parks Does not include costs of maintaining open space, trail systems, or other such public facilities

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APPENDIX D

SUPPORTING TABLES FOR REVENUE ESTIMATES

Table D-1	Estimate of Post-Annexation Property Tax Allocations	D-1
Table D-2	New Assessed Valuation	D-2
Table D-3	Average Income Calculation for Residential Housing Units	D-3
Table D-4	City of Ceres Proposition 172 Sales Tax Rate Calculation	D-4
Table D-5	Indirect Sales Tax Allocation to Lodi	D-5

Table D-1
City of Lodi New Annexation Fiscal Impact Analysis
Estimate of Post-Annexation Property Tax Allocations

Item / Fund Title	Tax Rate Area (TRA) Property Tax Distribution		Average TRA Distribution	Subject to Prop Tax Sharing Agreement	Tax Exchange on Annexation	
	TRA 099-024	TRA 099-021			City of Lodi	San Joaquin County
Agreement For Property Tax Allocation Upon Annexation					*20 0%*	*80 0%*
Subject to Property Tax Sharing Agreement						
Woodbridge Rural Fire	18 1387%	18 5825%	18 3606%	18 3606%	3 6721%	14 6885%
County General	19 1296%	19 5965%	19 3631%	19 3631%	3 8726%	15 4904%
Subtotal, Subject to Tax Sharing	**37 2683%**	**38 1790%**	**37 7237%**	**37 7237%**	**7 5447%**	**30 1789%**
Unaffected by Property Tax Sharing Agreement						
Road District No 4	3 5514%	3 6382%	3 5948%			
County Library	1 5430%	1 5807%	1 5619%			
Lodi Unified Schools	24 3862%	24 9827%	24 6845%			
S J Delta Comm College	3 4329%	3 5169%	3 4749%			
SJC Office of Education	1 2145%	1 2452%	1 2299%			
SJC Flood Control	0 1505%	0 1542%	0 1524%			
SJC Mosquito Abatement	0 6757%	0 6923%	0 6840%			
Woodbridge Irrigation	1 5352%	-	0 7676%			
ERAF	26 2423%	26 0108%	26 1266%			
Subtotal, Unaffected by Tax Sharing	**62 7317%**	**61 8210%**	**62 2764%**			
Total	**100 0000%**	**100 0000%**	**100 0000%**			

Source City of Lodi, San Joaquin County Auditor-Controller, and EPS

'tra"

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Table D-2
City of Lodi New Annexation Fiscal Impact Analysis
New Assessed Valuation

Item	At Buildout		
	Residential	Commercial	**Total**
Assessed Value (2006$)			
Residential Assessed Value			
Single-Family Residential	$932,292,000	-	**$932,292,000**
Medium-Density Residential	$292,595,000	-	**$292,595,000**
High-Density Residential	$107,231,000	-	**$107,231,000**
High-Density Residential	$23,550,000	-	**$23,550,000**
Total Residential Assessed Value	**$1,355,668,000**	-	**$1,355,668,000**
Nonresidential Assessed Value			
Commercial	-	$49,000,000	**$49,000,000**
Office	-	$28,000,000	**$28,000,000**
Total Nonresidential Assessed Value	-	**$77,000,000**	**$77,000,000**
Total Assessed Value (2006$)	**$1,355,668,000**	**$77,000,000**	**$1,432,668,000**
Adjusted Assessed Value (Appreciated 2006$) [1			
Residential Assessed Value			
Single-Family Residential	$970,146,794	-	**$970,146,794**
Medium-Density Residential	$304,475,530	-	**$304,475,530**
High-Density Residential	$111,585,009	-	**$111,585,009**
High-Density Residential	$24,506,224	-	**$24,506,224**
Total Residential Assessed Value	**$1,410,713,557**	-	**$1,410,713,557**
Nonresidential Assessed Value			
Commercial	-	$50,989,596	**$50,989,596**
Office	-	$29,136,912	**$29,136,912**
Total Nonresidential Assessed Value	-	**$80,126,509**	**$80,126,509**
Total Nonresidential Assessed Value	-	**$80,126,509**	**$80,126,509**
Total Adjusted Assessed Value (Inflated$)	**$1,410,713,557**	**$80,126,509**	**$1,490,840,066**

"new_av"

Source EPS

[1] Assumes project build out occurs in FY2009-10

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Table D-3
City of Lodi New Annexation Fiscal Impact Analysis
Average Income Calculation for Residential Housing Units (2006$)

Item	Amount
Average Income Calculation for Single-Family Housing Units	
Estimated Average Single-Family Home Value	$551,000
Total Annual Mortgage Payments [1]	$33,000
Approximate Household Income [2]	**$99,000**
Average Income Calculation for Medium Density Housing Units	
Estimated Average Medium Density Home Value	$421,000
Total Annual Mortgage Payments [1]	$26,000
Approximate Household Income [2]	**$78,000**
Average Income Calculation for High Density Housing Units	
Estimated Average High Density Home Value	$157,000
Total Annual Rent Payments [3]	10,990
Approximate Household Income [2]	**$32,970**

"income_calc"

Source EPS

[1] Based on a 6 5 percent, 30 year fixed rate mortgage and a 20 percent down payment
[2] Assumes mortgage lending guidelines allow no more than 33% of income dedicated to payments
[3] Assumes no for-sale units Assumes a property cap rate of 7 percent

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Table D-4
City of Lodi New Annexation Fiscal Impact Analysis
City of Lodi Proposition 172 Sales Tax Rate Calculation

Item	Amount
Estimated Sales Tax Revenues - City of Lodi FY 2005-06	**$9,402,120**
Estimated Actual Taxable Sales (1% Sales Tax Rate)	$940,212,000
Estimated Proposition 172 Public Safety Sales Tax Distribution - FY 2005-06	$364,000
Estimated City of Lodi Proposition 172 - Public Safety Sales Tax Rate	**0 03871%**

"taxable_sales'

Source City of Lodi and EPS

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Table D-5
City of Lodi New Annexation Fiscal Impact Analysis
Indirect Sales Tax Allocation to Lodi

Item	Formula	Value
2004 Taxable Sales [1]		
City of Lodi Direct Allocation	*a*	$813,878,000
San Joaquin County Direct Allocation	*b*	$8,703,241,000
County Indirect Taxable Sales [2]	*c*	$850,287,000
Indirect Allocation to City, estimate	*d = c * a / b*	$79,514,043
City Indirect Allocation as a Percent of Total	*e = d / a*	**9 76977%**

"indirect_sales"

[1] Retail sales subject to sales and use tax
[2] Taxable sales unallocated to specific local jurisdictions

Appendix H

Utilities

- Water Supply Assessment
- Sanitary Sewer Projected Flows

CITY OF LODI

REYNOLD'S RANCH PROJECT

WATER SUPPLY ASSESSMENT

TABLE OF CONTENTS

Introduction 1

Sections 1 through 4: Supply Assessment Process 3

Section 5: Supply and Demand Documentation 5

Section 5: Steps 3 and 4 – Demand 8

Step 4 – Documenting Dry Years Supply 28

Chapter 5: Steps 3 and 4 – Documenting Demand Effects 33

Conclusion and Recommendations 39

Appendix A: Agreement for Purchase of Water

INTRODUCTION

This Reynolds Ranch Project (Project) Water Supply Assessment (WSA) is prepared in compliance with Senate Bill 610, effective January 1, 2002. Much of the data for this WSA has been taken from the adopted 2005 UWMP and is shown herein in italics to ensure the references. The Project meets the criteria as defined in California Water Code 10912 to be classified as a "Project" as follows:

1. It proposes the development of 1084 dwelling units.
2. It proposes a mixed use project as follows:
   a. Development of more than 500 dwelling units.
   b. Development of a shopping center/business center that may have more than 250,000 square feet of floor space.
   c. Development of a project that would demand an amount of water greater than the amount of water required by a 500 dwelling unit project.

A Notice of Preparation (NOP) as defined in CEQA has not been filed with the lead agency, County of San Joaquin, at this time. A conceptual land use plan is shown on Figure 1.

The proposed Reynolds Ranch Project consists of 220 acres of existing agricultural use land to be developed into residential, retail/commercial, office and public facility uses as shown in Table 1.

TABLE 1 REYNOLD'S RANCH PLANNED LAND USES

LAND USE	GROSS ACREAGE
Residential	134.0
Retail/Commercial	40.0
Office	20.0
Public Facilities	11.0
Open Space	15.0
TOTAL	**220.0**

The intended land uses satisfy the criteria of Project and the need for a WSA. This WSA format follows the format in the "Draft Guidebook for Implementation of SB 610 & SB 221 of 2001" prepared by the California DWR.

LAND USE
REYNOLDS RANCH
CITY OF LODI, CALIFORNIA

LAND USE SUMMARY

	LAND USE	ACRES	FIXED COUNT	UNITS
	LOW DENSITY RESIDENTIAL	20.6	5 DU/AC	103
MDR	MEDIUM DENSITY RESIDENTIAL	63.9	10.3 DU/AC	631
HDR	HIGH DENSITY RESIDENTIAL	9.1	22 DU/AC	200
SHDR	HIGH DENSITY RESIDENTIAL- SENIOR	3.0	50 DU/AC	150
C	RETAIL COMMERCIAL	40.5		
OFF	OFFICE	20.1		
MS	MINI STORAGE	5.3		
POP/FIRE	PUBLIC / QUASI PUBLIC	1.0		
S	SCHOOL	14.0		
PARK	NEIGHBORHOOD PARK	5.4		
OS	OPEN SPACE	7.3		
DB	DETENTION BASIN	8.0		
I/OR	INTERCHANGE/ON-RAMP	4.5		
IS	INTERNAL STREETS	14.3		
	TOTAL	217.0		1,084

FIGURE 1
REYNOLDS RANCH
WATER SUPPLY ASSESSMENT

SECTIONS 1 THROUGH 4: SUPPLY ASSESSMENT PROCESS

(Sections 1 through 4 determine preparation of a WSA)

- The Project is subject to SB-610 because it proposes the development of 1084 dwelling units
- The Project is not subject to SB-221 because a subdivision map has not been submitted to the City
- The City of Lodi would be the "water supplier" for the Project
- The Project has not been the subject of a WSA
- The City of Lodi adopted an Urban Water Management Plan (UWMP) in 1990 and updated the Plan in 1995 and in 2005

The Project is in the initial planning stages and no subdivision maps have been prepared for the property. Therefore, the Project is not subject to SB-221.

The City of Lodi provides water service to the existing developed area. The Project is not within the City limits but is contiguous to the City on the south side of Harney Lane so the distance for any extension of service would be very short. Although currently outside the city limits, the project area is within the City's sphere of influence and has been considered in the City's planning and was included within the recently adopted Urban Water Management Plan. See Figure 2 depicting the City General Plan and the Sphere of Influence with relation to the Project.

This WSA addresses the California Water Code pertaining to the preparation of WSA's and is strictly an assessment of the City's ability to provide water service to the Project. This WSA does not constitute an agreement to serve water to the Reynolds Ranch project.

As noted above, the City adopted an Urban Water Management Plan in 1990 and updated the plan in 1995 and in 2005. Much of the information included herein was presented in the 2005 Urban Water Management Plan (UWMP) and is referenced or excerpted throughout this report.

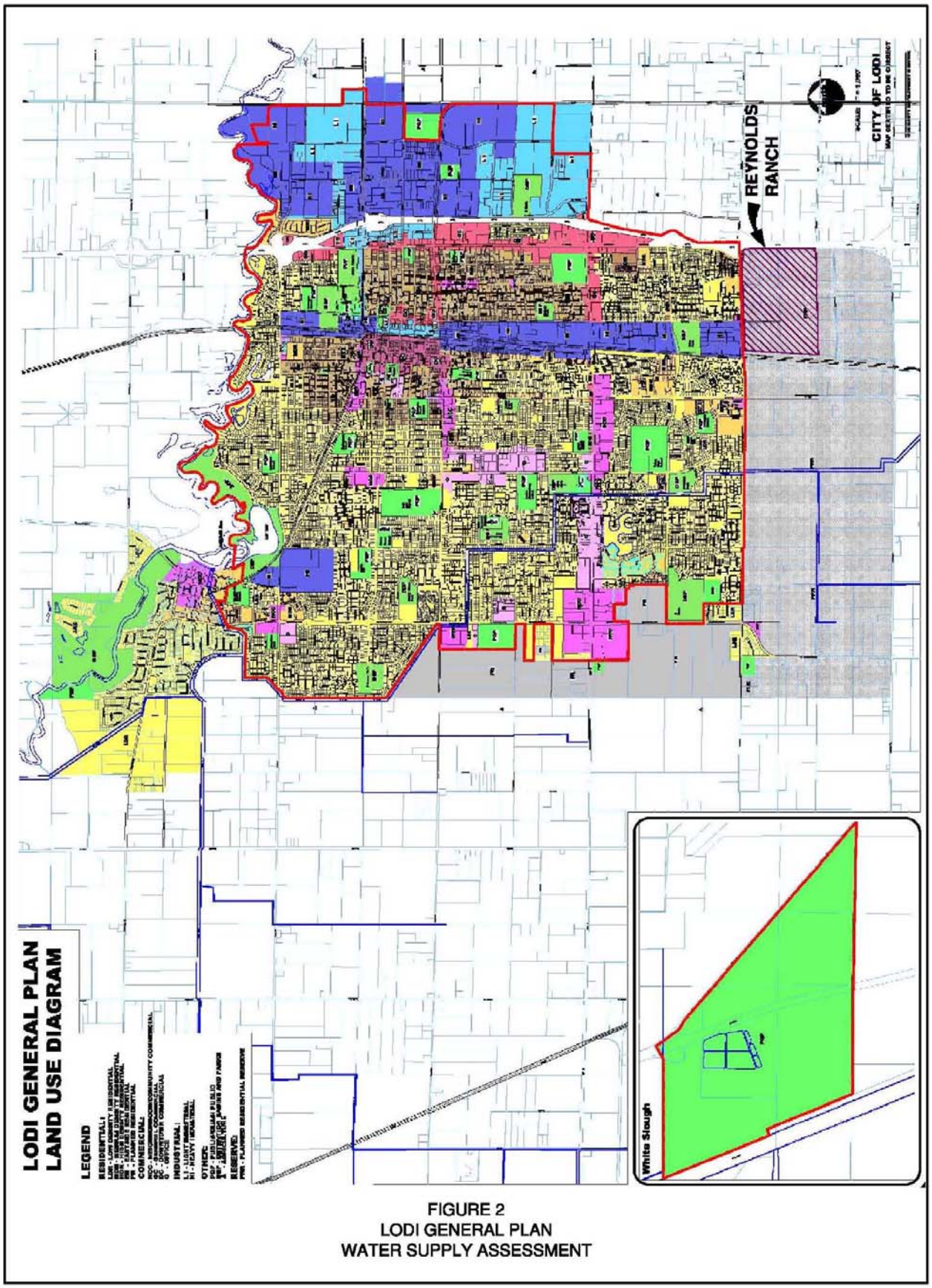


FIGURE 2
LODI GENERAL PLAN
WATER SUPPLY ASSESSMENT

SECTION 5: SUPPLY AND DEMAND DOCUMENTATION

A. WATER SUPPLIES

The City adopted a Master Water Plan in 1987 for a 20-year period. The Plan indicated that the water supply was from groundwater provided at that time by 21 out of 24 wells. At that time, Well 12 was out of service due to potential contamination from gasoline but the problem was not expected to cause replacement of the well. Also Wells 3 and 11 were out of service due to potential contamination by diabromochloropropane (DBCP), a commonly used fumigant and nematocide that had been identified as a potential contaminant in some of the water system wells at the time. The Plan stated that six wells were equipped with standby power and five wells had permanent chlorination equipment.

The 1987 Master Water Plan indicated that the City considered non-treatment and treatment methods to resolve the DBCP condition. Non-treatment alternatives considered were well replacement, well rehabilitation and blending with quality groundwater. Treatment alternatives of air stripping, granular activated carbon absorption, ultraviolet irradiation with ozonation and ultraviolet irradiation with hydrogen peroxide were considered.

Currently the City still uses groundwater as its sole source of supply, however, in 2003 a contract for a surface water supply was executed with the Woodbridge Irrigation District that will be implemented in the near future. As indicated in the 2005 UWMP, the City water utility operates 26 wells. All wells are equipped to provide emergency chlorination and seven wells are equipped with granular activated carbon for removal of DBCP. Standby power has been installed at seven wells and is readily available in the event of a power outage.

Table 2 identifies the type of the City's water source and whether it is by water right or by service contract and if the source of supply has been used.

TABLE 2 ANNUAL POTABLE WATER SUPPLY SOURCES

SUPPLY	QUANTITY (AFY)	WATER SUPPLY TYPE	EVER USED
Groundwater*	Well Capacity**	Right	Yes
WID Surface Water ***	6,000	Contract	No

* The City currently uses groundwater as its sole source of supply. The City overlies a portion of the San Joaquin Valley groundwater basin, which is not currently adjudicated.
** The City/Utility operates 26 groundwater production wells. The 26 wells that currently provide water to the City have a combined capacity of 35,210 gallons per minute (GPM) or 50.7 million gallons per day (MGD).
*** The City recently entered into an agreement with Woodbridge Irrigation District (WID) to purchase 6,000 acre-feet per year (AFY) of surface water for a period of 40 years. (Source: 2005 UWMP)

Table 3 identifies the water sources and water quantities used and planned to be used by the City from each of the sources identified in Table 2 in five-year increments from 2005 to 2030.

TABLE 3 CURRENT AND PLANNED WATER SUPPLIES

SOURCE	2005	2010	2015	2020	2025	2030
Groundwater, AFY	17300	15000	15000	15000	15000	15000
WID Contract, AFY	0	6000	6000	6000	6000	6000
TOTALS AFY	**17300**	**21000**	**21000**	**21000**	**21000**	**21000**

Recycled water used for irrigation not included.

As noted in the UWMP, the City has no additional water supply projects planned and has little or no opportunity for transfers or exchanges. The City, however, has executed a contract to purchase surface water with the intent to incorporate 6,000 AFY into the City water supply before 2010.

B. STEP 1. DOCUMENTATION OF WHOLESALE WATER SUPPLIES

As noted above, the City currently uses groundwater supplies solely for its potable water; however, on May 13, 2003 the City executed an agreement with the Woodbridge Irrigation District to purchase 6000 AFY of surface water for a period of 40 years. A copy of the Agreement is enclosed as Appendix A. The City plans to start using this water supply before 2010.

C. STEP 2. DOCUMENTATION OF GROUNDWATER SUPPLIES

The City currently uses groundwater as its sole source of supply. There are currently 26 production wells in operation, which have a capacity of 35,210 gallons per minute or 50.7 million gallons per day (MGD). The city delivered 15.19 MGD in 2004. The average day demand from 1995 to 2004 was 14.94 MGD and the maximum day demand was 28.62 MGD, which provides a ratio of 1.91 as a peaking factor that can be used to scale annual demand projections to maximum day demands.

The City has long pursued a strategy of using wells to meet peak flow and fire flow demands. By doing so, the City has been able to reduce the pipe size of the water distribution system and negate the need for surface water storage. Ratepayers have benefited with reduced infrastructure and maintenance costs. The reliance on ground water for peak flows is likely to remain a standard strategy as the large groundwater basin size and recharge rates are such that the impact of short-term high demands will be negligible.

D. GROUNDWATER SUPPLY PROJECTIONS

1. Groundwater Assessment

Summarized Excerpts from Chapter 3 of the City's 2005 UMWP: 3.2.2 Future Groundwater Supply.

"The continuing decline in observed groundwater levels means the sustainable annual groundwater supply available to the City will likely be lower than current levels. As a member of GBA the City is participating in the development of policies and programs, including groundwater recharge and conjunctive use programs, intended to help eliminate the overdraft condition. Additionally, the City plans to reduce its overall pumping in the future. A safe yield of approximately 15,000 AFY (Treadwell and Rollo 2005) has therefore been estimated on water balance calculations performed using data primarily from the Eastern San Joaquin Groundwater Management Plan (Appendix F). For purposes of this UWMP, 15,000 AFY has therefore been assumed as the amount of groundwater available during all future (post-2005) years. Although rigorous scientific analyses have not been performed, the City projects some recharge of the groundwater basin will occur as the amount of groundwater pumped annually decreases. This result, however, is contingent on the efforts of all groundwater users in the region, including other cities agriculture, and private well owners, to reduce ground-water extraction... The amount of groundwater projected to be pumped over the next 25 years is presented in Table 3-4."

Groundwater Pumping Projection

TABLE 3-4 PROJECTED GROUNDWATER PUMPING (GUIDEBOOK TABLE 7)

SOURCE	2005	2010	2015	2020	2025	2030
Annual Volume, AFY	17300	15000	15000	15000	15000	15000

E. SURFACE WATER SUPPLY PROJECTIONS

3.2.3 Future Surface Water Supply (2005 UWMP excerpt)

As discussed in Section 3.1.4, the City recently entered into a 40-year agreement with WID for 6,000 AFY of surface water from the Mokelumne River. The water will be diverted at Woodbridge Dam. The City plans to build the necessary infrastructure to treat and deliver drinking water from this source before 2010. Therefore, 6,000 AFY of treated surface water is included in the supply projections presented in Table 3-5 below. The City is also considering the possibility of purchasing additional surface water supplies from WID; these supplies are not included in Table 3-5 as they are not considered "firm" supplies. (Note 1: the Agreement with WID is renewable for an additional 40 years, for a total of 80 years. Note 2: The City Council is currently reviewing

groundwater recharge as an option to treated surface water to increase supply.)

F. TOTAL GROUNDWATER AND SURFACE WATER PROJECTION

TABLE 3-5 CURRENT AND PLANNED WATER SUPPLIES (GUIDEBOOK TABLE 4)

WATER SUPPLY SOURCE AFY	2005	2010	2015	2020	2025	2030
Groundwater	17300	15000	15000	15000	15000	15000
WID Surface Water	6000	6000	6000	6000	6000	6000
TOTALS AFY	**23300**	**21000**	**21000**	**21000**	**21000**	**21000**

SECTION 5: STEPS 3 AND 4 - DEMAND

For the 2005 UWMP, records of historical water production were obtained from the City's Public Works Department. The records included both maximum day and annual water production records. Water production is the volume of water measured at the source and includes all water delivered to residential, commercial, and public connections and also includes unaccounted-for water. The records are available from 1970 at the Department of Public Works.

EXCERPTED from the 2005 UWMP to provide the data outlined in Step 3, Detailing Existing and Planned Future Uses, as presented in the Guidebook for Implementation of SB 610, are pages 2-1 to 2-3, pages 3-1 to 3-8, and pages 4-1 to 4-7 with sections entitled:

Chapter 2 Supplier Service Area

2.1 Service Area Description
2.2 Climate Data
2.3 Other Demographic Factors
2.4 Population Projections (Dept. of Finance)

Chapter 3 Water Supply

3.1 Current Water Supply
- 3.1.1 Background
- 3.1.2 Water Supply Facilities
- 3.1.3 Current Groundwater Supply
- 3.1.4 Current Surface Water Supply
- 3.1.5 Current Recycled Water Supply
- 3.1.6 Water Distribution System

3.2 Future Water Supply
- 3.2.1 Constraints on Existing Supplies
- 3.2.2 Future Groundwater Supply

3.2.3 Future Surface Water Supply
3.2.4 Future Recycled Water Supply
3.2.5 Planned Water Supply Projects
3.3 Exchange or Transfer Opportunities
3.4 Desalinated Water
3.5 Wholesale Supplies

Chapter 4 Water Demand
4.1 Past, Current, and Projected Water Demand
4.1.1 Past and Current Demand
4.1.2 Future Water Demand
4.2 Sales to Other Agencies
4.3 Other Demands
4.4 Total Demands

The above noted EXCERPTS are as follows:

CHAPTER 2. SUPPLIER SERVICE AREA

2.1 Service Area Description

The City is located in the Northern San Joaquin Valley in San Joaquin County and borders the Mokelumne River. The bulk of the City's geographical area extends from the Mokelumne River on the north, WID South Main Canal and Lower Sacramento Road on the west, Harney Lane on the south, and portions of Highway 99 and Central California Traction (CCT) Railroad on the east. The City's White Slough Water Pollution Control Facility (WSWPCF) lies approximately six miles to the southwest of the City. The City has an estimated 2005 population of 62,467 (California Department of Finance, 2005).

The City of Lodi Water Utility (Utility) is the sole water purveyor for the City of Lodi. The Utility's service area is contiguous with the City boundaries and covers approximately 12 square miles. There are a few minor connections outside the City. The service area includes a mix of residential, commercial, and industrial land use, and is characterized by essentially flat terrain. All future development being considered for the City is expected to occur within the present service area.

2.2 Climate

The City has cool, humid winters, and hot, dry summers. Temperatures average 60°F annually, ranging from average winter morning lows in the upper 30s to average summer afternoon highs in the upper 80s (Western Regional Climate Center, 2005). Relative humidity ranges from 91% in winter months to 26% in summer months. During summer months, temperatures may exceed 100˚F, impacting water demands significantly. Annual rainfall

averages approximately 18 inches, with most rainfall occurring between November and April. The combination of warmer temperatures and low precipitation during the summer results in peak water demands during that period. Reference evapotranspiration (ETo) values, which serve as indicators of how much water is required to maintain healthy agriculture and landscaping, range from 0.93 inches during December to 8.06 inches in July. Temperature, rainfall and evapotranspiration averages for the City are presented in Table2-1.

TABLE 2-1 SERVICE AREA CLIMATE (GUIDEBOOK TABLE 3)[a]

MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE
Average ET_o[b] (in)	1.24	1.96	3.41	5.10	6.82	7.80
Average Rainfall[c] (in)	3.47	2.95	2.60	1.35	0.49	0.13
Average Temperature[c] (F)	45.65	50.40	54.15	58.90	64.90	70.30

MONTH	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
Avg ET_o[b] (in)	8.06	7.13	5.40	3.72	1.80	0.93	**54.3**
Avg Rainfall[c] (in)	0.04	0.05	0.30	0.93	2.29	3.03	**17.63**
Avg Temp[c] (F)	73.70	72.70	69.95	62.60	52.55	45.65	**60.12**

a. The term "Guidebook X" refers to the table in the Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan by DWR.
b. California Irrigation Management Information System (CIMIS).
c. Western Regional Climate Center.

2.3 Other Demographic Factors

Lodi is built on a strong and broad based agricultural industry with national and industrial markets for its commodities and products. Wines, processed foods, nuts, fruit, and milk are major commodities of the Lodi area and provide the basic material for food processing and packaging. These commodities support the operations of General Mills, and Pacific Coast Producers, three companies in the business of processing local agricultural commodities.

In addition, Lodi has a wide range of small, financially sound businesses. These companies range in size from 10 to 150 employees and produce a wide variety of products, services, and commodities.

Recently, there has been an increase in industrial and residential development within the City. This new development, combined with the growing strength of the wine/grape industry, is a positive economic indicator for Lodi. Recently, several industries moved to Lodi. These industries collectively have created approximately 850 new jobs.

The demographic factors affecting the City's water supply management planning include data on the largest customers, including those listed in Table 2-2 below.

TABLE 2-2 LARGE WATER CUSTOMERS

CUSTOMER	2004 WATER USE, MO	% OF TOTAL SYSTEM
Lodi Unified School District	150,703,608	2.7
Pacific Coast Producers	130,632,769	2.4
City of Lodi (incl. parks)	113,024,617	2.0
General Mills	69,261,284	1.2
Cottage Bakery	35,077,460	0.6
Lodi Memorial Hospital	28,502,316	0.5
Certainteed	7,763,492	0.1
Valley Industries	8,334,291	0.2
Wine & Roses	8,371,534	0.2
Miller Packing Co.	8,442,676	0.2
TOTAL	**560,114,047**	**10.1%**

2.4 Population Projections

Currently, the City's population is approximately 62,467. Based upon the City's assumed annual population growth rate of 1.5 percent, which was presented in the Lodi Wastewater Master Plan (West Yost & Associates, 2001) and reaffirmed during discussions with City staff, population in 2030 is expected to be approximately 90,636. Population projections from 2005 to 2030 are presented in Table 2-3 below. In addition, Table 2-3 presents population projections based on population growth rates of 1% and 2%; the population projections for these growth rates are provided for comparative purposes only.

TABLE 2-3 CURRENT AND PROJECTED POPULATION (GUIDEBOOK TABLE 2)

POPULATION GROWTH RATE[b]	SERVICE AREA POPULATION					
	2005[a]	2010	2015	2020	2025	2030
1.00%	62,467	65,653	69,002	72,522	76,222	80,110
1.50%	62,467	67,295	72,496	78,098	84,134	90,636
2.00%	62,467	68,969	76,147	84,072	92,823	102,484

a. California Department of Finance (DoF).
b. For the purposes of this UWMP, the City has assumed an annual population growth rate of 1.5 percent, used in previous reports (e.g., Wastewater Master Plan) for facilities planning. Growth rates of 1 and 2 percent are shown here for comparative purposes only.

As an additional comparison, the City's existing (1991) General Plan estimated the City's population for 2007 at 71,944 (not including the Planned Residential Reserve area), and 96,589 (including the Planned Residential Reserve area). The higher population estimates presented in the existing General Plan reflect a 1987-2007 growth rate of 2.0%.

CHAPTER 3. WATER SUPPLY

3.1 Current Water Supply

3.1.1 Background

The City currently uses groundwater as its sole source of supply. The City overlies a portion of the San Joaquin Valley groundwater basin, which is not currently adjudicated. The groundwater in the Lodi area exists under unconfined and semi-confined conditions. The Mehrten Formation is the most productive fresh water-bearing unit.

The City is located within the geomorphic province known as the Central Valley, which is divided into the Sacramento Valley and the San Joaquin Valley. The Central Valley is a large, northwestward-trending, asymmetric structural trough that has been filled with several miles of thick sediment (USGS 1986). The City lies within the San Joaquin Hydrologic Basin (DWR, Bulletin 118) that straddles portions of both the Sacramento and San Joaquin Valleys. Sediments of the San Joaquin Valley consist of interlayered gravel, sand, silt, and clay derived from the adjacent mountains and deposited in alluvial-fax, floodplain, flood-basin, lacustrine, and marsh environments. Hydrogeologic units in the San Joaquin Basin include both consolidated rocks and unconsolidated deposits. The consolidated rocks include:

1) *The Victor Formation*
2) *The Laguna Formation*
3) *The Mehrten Formation*

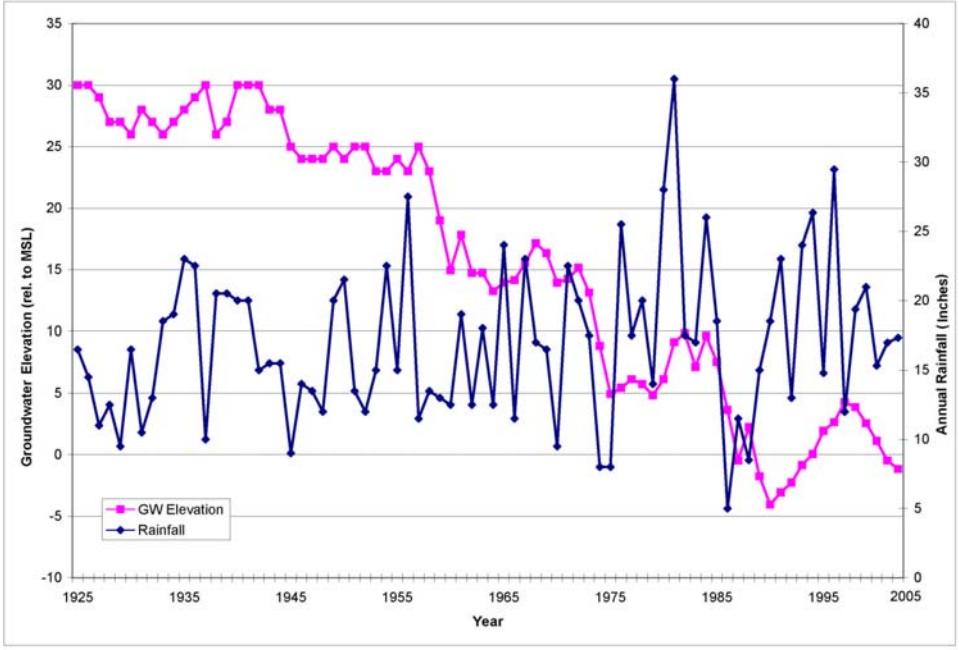
The consolidated rocks generally yield small quantities of water to wells except for the Mehrten Formation, which is an important aquifer (DWR). The unconsolidated deposits include continental deposits, lacustrine and marsh deposits, older alluvium, younger alluvium, and flood-basin deposits. The continental deposits and older alluvium are the main water-yielding units in the unconsolidated deposits.

Groundwater flow direction is generally toward the south in agreement with the regional groundwater flow gradient but may vary from south-southwest to south-southeast with local gradients likely influenced by pumping form municipal supply wells. Pumping tests on municipal wells indicate that they possess a large capture zone, and thus have a large influence upon

groundwater flow. Pumping of municipal supply wells in the City is performed between 100 and 500 feet below ground surface (Geomatrix, 2006).

DWR has declared that the groundwater basin underlying Eastern San Joaquin County is overdrafted, and groundwater levels in the County and the City are generally decreasing. The groundwater levels also fluctuate over time depending on precipitation, aquifer recharge, and pumping demands. Groundwater elevations relative to mean sea level (MSL), and the corresponding annual precipitation from 1927 through 2004 are shown in Figure 3-1. Overall, the average annual decrease in groundwater levels from 1927 to 2004 has been 0.39 feet per year. Generally, groundwater elevations have decreased with the increase in population and water production. However, annual rainfall also influences groundwater elevation. The groundwater level increase from 1981 to 1984 can be partially attributed to the increase in annual rainfall from 1981 to 1983. Groundwater elevations for the years 1927 to 1961 were obtained from East Bay Municipal Utilities District (EBMUD) for the City's 12 square mile area. Groundwater elevation data from 1962 to the present were obtained from the City's Public Works Department for Well No. 2, one of the oldest production wells in the City.

FIGURE 3-1 HISTORICAL GROUNDWATER ELEVATION

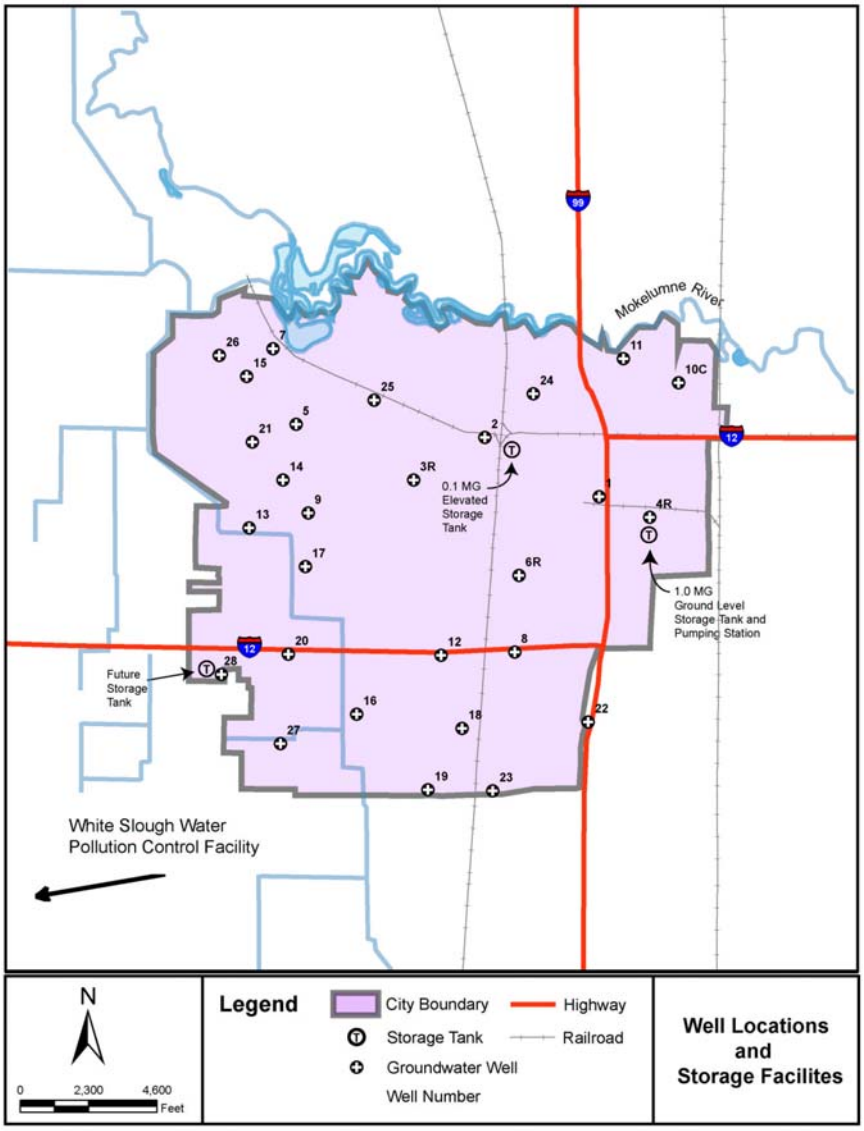


Source: City of Lodi Public Works Department

3.1.2 Water Supply Facilities

The Utility operates 26 groundwater production wells. The locations of the wells are presented in Figure 3-2 and discussed in further detail below.

FIGURE 3-2 WELL LOCATIONS AND STORAGE FACILITIES



3.1.3 Current Groundwater Supply

The 26 wells that currently provide water to the City have a combined capacity of 35,210 gallons per minute (gpm), or 50.7 million gallons per day (mgd). The wells operate automatically on water pressure demand and pump directly into the distribution system. All wells are equipped to provide emergency chlorination as needed. Historically, water has not required

chlorination. Six wells are equipped with granular activated carbon (GAC) for the removal of dibromochloropropane (DBCP). Capacity information for the existing wells is summarized in Table 3-1.

TABLE 3-1 GROUNDWATER WELL CAPACITY

WELL NUMBER	WELL CAPACITY, GPM[b]	WELL CAPACITY, MGD[c]
1R	1,130	1.6
2	820	1.2
3R	820	1.2
4R[a]	1,960	2.8
5	1,180	1.7
6R	1,580	2.3
7	1,160	1.7
8	800	1.2
9	900	1.3
10C	1,300	1.9
11R	1,320	1.9
12	800	1.2
13	1,150	1.7
14	1,670	2.4
15	1,500	2.2
16[a]	1,110	1.6
17	1,800	2.6
18[a]	1,800	2.6
19	1,110	1.6
20[a]	2,070	3.0
21	2,050	3.0
22[a]	1,400	2.0
23[a]	1,410	2.0
24	1,420	2.0
25	1,580	2.3
26	1,370	2.0
TOTAL	**35,210**	**50.7**

a. Wells equipped with GAC
b. gpm = gallons per minute
c. mgd = million gallons per day

Table 3-2 presents the amounts of groundwater extracted by the City between 1970 and 2004.

TABLE 3-2 HISTORICAL GROUNDWATER PRODUCTION (GUIDEBOOK TABLE 5)[a]

YEAR	GROUNDWATER PRODUCTION, AF	PERCENT OF TOTAL WATER SUPPLY
1970	11,462	100%
1971	12,303	100%
1972	11,686	100%
1973	12,204	100%
1974	12,002	100%
1975	12,294	100%
1976	13,607	100%
1977	10,578	100%
1978	11,477	100%
1979	12,349	100%
1980	12,312	100%
1981	12,487	100%
1982	11,560	100%
1983	11,539	100%
1984	13,997	100%
1985	14,813	100%
1986	15,080	100%
1987	15,304	100%
1988	15,359	100%
1989	14,653	100%
1990	15,387	100%
1991	13,313	100%
1992	13,985	100%
1993	14,013	100%
1994	14,301	100%
1995	14,390	100%
1996	15,102	100%
1997	16,330	100%
1998	14,461	100%
1999	16,588	100%
2000	16,724	100%
2001	17,108	100%
2002	16,641	100%
2003	16,185	100%
2004	17,011	100%

a. The term "Guidebook X" refers to the table in the Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan by DWR.

3.1.4 Current Surface Water Supply

In May 2003, the City entered into an agreement with Woodbridge Irrigation District (WID) to purchase 6,000 acre-feet per year (AFY) of surface water for a period of 40 years. However, at the time this UWMP was prepared, the City had not yet begun using water from this supply.

3.1.5 Current Recycled Water Supply

The City's wastewater discharge permit requires an agronomic application rate. According to discussions with City staff, approximately 2,500 AFY of secondary treated recycled water is currently used, primarily for irrigation in the area surrounding WSWPCF. This represents approximately 35 percent of the total treated wastewater produced at WSWPCF. The City discharges the non-irrigation water, treated to Title 22 tertiary standards, to the Delta. The Utility currently lacks the necessary infrastructure to distribute additional recycled water to more of its customers.

For a more detailed discussion of the City's recycled water supply, as well as the processes by which it is treated, refer to Chapter 8.

3.1.6 Water Distribution System

The City of Lodi's distribution system consists of a 100,000 gallon elevated storage tank, a 1 million gallon (MG) storage facility and pumping station, and the piping system. The 1 MG storage tank, located east of Highway 99 on Thurman Street, stores groundwater from an onsite well to meet peak hour demands and fire flows. The 100,000 gallon elevated storage tank is located on North Main Street. The storage facilities and their capacities are presented in Table 3-3. Their locations are shown in Figure 3-2.

TABLE 3-3 WATER STORAGE FACILITIES

STORAGE FACILITY	STORAGE VOLUME, MG
Elevated Storage Tank	0.10
Ground Level Storage Tank	1.00
TOTAL	**1.10**

Distribution mains in the City's piping system range from 14 inches to 2 inches in diameter, and the entire distribution system consists of approximately 225 miles of pipe. The City is in the process of replacing the 2-inch and 3-inch diameter mains as well as other deficient pipes.

A summary of the City's current and planned water supplies is presented in Table 3-5.

3.2 FUTURE WATER SUPPLY

3.2.1 Constraints on Existing Supplies

The City's current water supply system is constrained by 1) the pumping capacity of its currently active wells, and 2) a longer-term reduction in supply due to the overdrafting currently taking place in the City's groundwater basin. Although the declining groundwater basin is a result of groundwater extraction by all groundwater pumpers in the area, including other cities, agriculture, private well owners, and the City itself, the City plans to reduce its groundwater pumping in the long term as part of what will have to be a regional effort to stabilize the groundwater basin. A copy of the GBA Groundwater Management Plan is included in Appendix F.

3.2.2 Future Groundwater Supply

The continuing decline of groundwater levels in the aquifer underlying the City means that the sustainable annual groundwater supply available to the City is something less than what is currently extracted. As a member agency of GBA, the City is participating in the development of policies and programs, including groundwater recharge and conjunctive use programs, intended to help eliminate the eastern San Joaquin County groundwater basin overdraft condition. Additionally, the City plans to reduce its overall groundwater pumping in the future. A safe yield of approximately 15,000 AFY (Treadwell and Rollo, 2005) has been estimated for the aquifer serving Lodi based on water balance calculations (see Appendix G) performed using data primarily from the Eastern San Joaquin Groundwater Management Plan (Appendix F). This safe yield estimate reflects an acreage-based relationship. Therefore, as the City's land area increases, the estimates safe yield of the underlying aquifer will likely increase. The safe yield estimate will be revisited in the 2010 UWMP update. [AMS1] For the purposes of this UWMP, 15,000 AFY has been assumed as the amount of groundwater available during all future (post-2005) years. Although rigorous scientific analyses have not been performed, the City projects that some recharge of the groundwater basin will occur as the amount of groundwater pumped annually decreases. This result, however, is contingent on the cooperative efforts of all groundwater users within the basin, including other cities, agriculture, and private well owners, to reduce groundwater extraction. The City does not expect development of cones of depression, significant changes in direction or amount of groundwater flow, changes in the movement or levels of contaminants, or changes in salinity and/or total dissolved solids (TDS) concentrations. The amount of groundwater that is projected to be pumped over the next 25 years is presented in Table 3-4.

TABLE 3-4 PROJECTED GROUNDWATER PUMPING (GUIDEBOOK TABLE 7)

YEAR	2005	2010	2015	2020	2025	2030
Annual Volume, AF	17300	15000	15000	15000	15000	15000
Total Available Supply, %[a]	57%	52%	51%	50%	49%	48%

a. Refers to the total supplies shown in Table 3-5.

3.2.3 Future Surface Water Supply

As discussed in Section 3.1.4 in May 2003 the City entered into a 40-year agreement with WID for 6,000 AFY of surface water from the Mokelumne River. The diversion point has not yet been determined. The City is considering options for implementing this source before 2010. Therefore, 6,000 AFY of treated surface water is included in the supply projections presented in Table 3-5 below. The City is also considering the possibility of obtaining additional surface water supplies from WID; these supplies are not included in Table 3-5, however, as they are not yet considered "firm" supplies.

3.2.4 Future Recycled Water Supply

As discussed in Section 3.1.5, the City currently treats approximately 7,200 AFY of wastewater at WSWPCF, of which 2,500 AFY is recycled in the vicinity of WSWPCF. WSWPCF has adequate capacity to treat all wastewater flows to Title 22 standards. The City is in the process of developing a Recycled Water Master Plan (RWMP) that will outline additional distribution of this supply to the Utility's customers. For the purposes of this UWMP, all treated wastewater produced at WSWPCF has been treated as recycled water supply and is included in Table 3-5 below. The amount of recycled water available increases with time, because as the City's population increases, the amount of wastewater available for reclamation will also increase. For a more detailed discussion of recycled water supply projections, refer to Section 8.6.

TABLE 3-5 CURRENT AND PLANNED WATER SUPPLIES (GUIDEBOOK TABLE 4)

WATER SUPPLY SOURCE AFY	2005	2010	2015	2020	2025	2030
Groundwater	17300	15000	15000	15000	15000	15000
WID Surface Water	6000	6000	6000	6000	6000	6000
Recycled Water[b], AFY	7200	7700	8300	8940	9630	10380
TOTAL[c], AFY	**30500**	**28700**	**29300**	**29900**	**30600**	**31400**

a. Refer to Section 3.2.2 for more information.
b. Based on the amount of wastewater treated during 2004, according to City staff. Future recycled water supplies are extrapolated from the 2004 amount. Assumes that the permitted capacity of WSWPCF will be increased as necessary.
c. Rounded to nearest hundred.

3.2.5 Planned Water Supply Projects

At the present time the City does not have approved plans for any additional water supply projects. The City has participated in the Mokelumne River Regional Water Storage and Conjunctive Use (MORE WATER) Feasibility Analysis. The MORE WATER project, if approved, would capture unappropriated flows from the Mokelumne River for storage and beneficial use.

3.3 EXCHANGE OR TRANSFER OPPORTUNITIES

The City does not currently have any approved plans to pursue exchange or transfer opportunities.

3.4 DESALINATED WATER

At the present time the City does not foresee any opportunities for the use of desalinated water, which includes ocean water, brackish ocean water, and brackish groundwater, as long-term supplies.

3.5 WHOLESALE SUPPLIES

Since surface water will be purchased from WID, WID is considered a wholesale water supplier by DWR. As such, the City has provided demand projections to WID for the next 25 years. Similarly, the City has received availability projections from WID for the same time period. These demand and availability projections are presented in Table 3.6 and Table 3-7 below. As discussed previously, the City has not yet begun to use this water supply. As stated in the City's contract with WID, any water not taken by the City during the first three years of the contract (May 2003 to May 2006) may be "banked" and delivered to the City in subsequent years, provided WID has sufficient water available. The banked supply may not exceed 18,000 AF. To date, over 16,000 AF of water has been banked. The City has not made any formal plans at this time to use any of its banked supply, in addition to the normal 6,000 AFY, for any of the years shown in the tables below. However, the projected supplies and demands shown below may increase if and when the City decides to use its banked supply. The magnitude and availability of banked supply to be delivered will be discussed with WID at an appropriate time(s) in the future.

TABLE 3-6 DEMAND PROJECTIONS FOR WHOLESALE SUPPLY

WHOLESALE SUPPLY	PROJECTED DEMAND[a]					
	2005[a]	2010	2015	2020	2025	2030
WID Surface Water, AFY	0	6000	6000	6000	6000	6000

a. Subject to change with WID and City approval. Although the City may take water deliveries in excess of 6,000 AFY from its "banked" supply, no formal plans to do so have been developed at this time.

TABLE 3-7 AVAILABILITY PROJECTIONS FROM WHOLESALE SUPPLIER

WHOLESALE SUPPLY	PROJECTED AVAILABILITY[a]					
	2005[a]	2010	2015	2020	2025	2030
WID Surface Water, AFY	0	6000	6000	6000	6000	6000

a. Subject to change with WID and City approval. Although the City may take water deliveries in excess of 6,000 AFY from its "banked" supply, no formal plans to do so have been developed at this time.
b. Reliability of WID supply is indicated in the City's contract with WID in Appendix D.

Wholesale supply reliability is presented in Chapter 6. Although changes in deliverable volumes of water for future hydrologic scenarios have not been formally predicted at this time, Chapter 6 presents the most restrictive possible cases for the future.

CHAPTER 4. WATER DEMAND

4.1 Past, Current, and Projected Water Demand

Water demand projections provide the basis for sizing and staging future water supply facilities. Water use and production records, combined with projections of population and urban development, provide the basis for estimating future water requirements. This chapter presents a summary of available demographic and water use data and the resulting projections of future water needs for the City.

4.1.1 Past and Current Water Demand

Records of historical water production were obtained from the City's Public Works Department. These data include both maximum day and annual water production. Water production is the volume of water measured at the source, which includes all water delivered to residential, commercial, and public authority connections, as well as unaccounted-for water.

Annual Water Production *- Groundwater production from 1970 to 2004 is presented in Table 3-2. Total water production in 2004 was 17,011 acre-feet (AF). Water use by customer class can only be estimated, as most of the Utility's customers are not currently metered.*

Maximum Day Demand *- Daily demand fluctuates throughout the year, due primarily to seasonal climate changes. Water demands are significantly higher in the summer than the winter. System production facilities must be sized to meet the demand on the maximum day of the year, not just the average. Water systems are sized to meet the greater of 1) the maximum day demands plus fire flow, or 2) peak hour demand. Fire flow and peak hour demand are not addressed in this UWMP.*

The average day and maximum day demands for years 1977 through 2004 are presented in Table 4-1. The maximum day demand in 2004 was 19,014 gpm, in comparison with the total well production capacity of 35,210 gpm.

The ratio between average and maximum day demands provides a maximum day peaking factor that can be used to scale annual demand projections to maximum day levels. The average maximum day peaking factor from 1995 to 2004 is 1.91.

TABLE 4-1 MAXIMUM DAY DEMAND AND PEAKING FACTORS

ANNUAL AVERAGE				MAXIMUM DAY		
YEAR	AFY	MGD	GPM	MGD	GPM	PEAKING FACTOR[b]
1977	10,578	9.44	6,556	19.28	13,389	2.04
1978	11,478	10.25	7,118	--[a]	--	--[a]
1979	12,349	11.02	7,653	22.50	15,625	2.04
1980	12,312	10.99	7,632	24.00	16,667	2.18
1981	12,487	11.15	7,743	22.34	15,514	2.00
1982	11,560	10.32	7,167	21.30	14,792	2.06
1983	11,539	10.30	7,153	21.67	15,049	2.10
1984	13,997	12.50	8,681	26.20	18,194	2.10
1985	14,814	13.22	9,181	--[a]	--	--[a]
1986	15,081	13.46	9,347	26.91	18,688	2.00
1987	15,305	13.66	9,486	27.00	18,750	1.98
1988	15,360	13.71	9,521	28.40	19,722	2.07
1989	14,654	13.08	9,083	28.50	19,792	2.18
1990	15,387	13.74	9,542	24.29	16,868	1.77
1991	13,313	11.88	8,250	21.55	14,965	1.81
1992	13,985	12.48	8,667	24.00	16,667	1.92
1993	14,013	12.51	8,688	24.10	16,736	1.93
1994	14,301	12.77	8,868	22.94	15,931	1.80
1995	14,390	12.85	8,924	24.64	17,111	1.92
1996	15,102	13.48	9,361	27.93	19,396	2.07
1997	16,330	14.58	10,125	28.68	19,917	1.97
1998	14,461	12.91	8,965	29.66	20,597	2.30
1999	16,587	14.81	10,285	28.32	19,667	1.91
2000	16,724	14.93	10,368	29.48	20,472	1.97
2001	17,108	15.27	10,606	30.10	20,903	1.97
2002	16,641	14.86	10,317	28.70	19,931	1.93
2003	16,185	14.45	10,034	26.68	18,530	1.85
2004	17,011	15.19	10,546	27.38	19,014	1.80
Average 1977 – 2004		**13.48**	**9,364**	**27.45**	**19,063**	**1.93**
Average 1995 – 2004		**14.94**	**10,374**	**28.62**	**19,873**	**1.91**

a. Data unavailable *Source:City of Lodi Public Works Department*
b. Maximum day peaking factor = maximum day demand/annual average day demand

Unaccounted-for Water - *Unaccounted-for water use is unmetered water use, such as water use for fire protection and training, system and hydrant flushing, sewer cleaning, system leaks, and unauthorized connections. Unaccounted-for water can also result from meter inaccuracies. Since the City's system is not completely metered, data are unavailable for determining the percentage of unaccounted-for water. Unaccounted-for water is generally assumed to equal approximately 10% of total water production.*

Unit Water Use - *Recent historical unit water use, expressed as gallons per capita per day (gpcd), is shown in Table 4-2. These unit demands include commercial usage, industrial usage, and unaccounted-for water.*

TABLE 4.2 RECENT HISTORICAL UNIT WATER USE

YEAR	POPULATION	UNIT WATER USE[a], GPCD
1999	56,926	260
2000	57,763	258
2001	58,600	261
2002	59,431	250
2003	60,521	239
2004	61,325	248

a. Based on total municipal water production provided by City of Lodi staff.

4.1.2 Future Water Demand

Future water demands are estimated based on 1) a constant 1.5% annual increase in the City's demand, 2) a constant 1.5% annual increase in the number of service connections, 3) the assumption that the City will install and begin reading water meters at a rate of approximately 950 per year, starting in 2006 or 2007, and 4) the assumption that as existing service connections become metered they will exhibit slightly lower unit demand factors than existing service connections without meters. It has been assumed that a residential service connection will exhibit a demand reduction of approximately 15%[1] once billing has commenced at commodity rates. Demands were projected based on actual water use in 2004. These projections are shown in Table 4-5 and illustrated in Figure 4-1. By 2030, average annual water demands[2] are expected to have increased from current demands by approximately 20%, from about 19,800 AFY (17.7 mgd) in 2005 to 23,800 AFY (21.2 mgd) in 2030. Demand projections by water use sector are presented in Table 4-3.

The projections in Table 4-3 (UWMP Table 4-5) represent normal (average) conditions, as actual use varies based on a number of factors. For this reason, it can be expected that there will be variations in the City's future

water usage. The values predicted in these tables have been used in this UWMP, as they are assumed to represent average conditions of water demand.

[1] Based upon 1) information from the California Urban Water Council (CUWC, 2005) and 2) judgment from the City of Lodi staff
[2] Including 2,500 AFY currently being recycled in the vicinity of WSWPCF.

TABLE 4-3 PAST, CURRENT, AND PROJECTED WATER USE BY CUSTOMER CLASS (GUIDEBOOK TABLE 12)[a]

YEAR	CUSTOMER CLASS	UNMETERED CONNECTIONS[e]	UNMETERED DELIVERIES[fg] AFY	METERED CONNECTIONS[eh]	METERED DELIVERIES[cfg], AFY	TOTAL NUMBER OF CONNECTIONS	TOTAL MUNICIPAL DELIVERIES[d], AFY
2001	SFR	15,410	10,071	0	0	15,410	10,071
	MFR	577	2,828	0	0	577	2,828
	Commercial/Institutional	310	569	950	1,744	1,260	2,313
	Industrial	0	0	53	1,632	53	1,632
	Landscape	8	73	21	191	29	264
	TOTAL [b]	**16,300**	**13,500**	**1,000**	**3,600**	**17,300**	**17,100**
2005	SFR	16,537	9,955	0	0	16,537	9,955
	MFR	639	2,882	0	0	639	2,882
	Commercial/Institutional	310	750	1,018	2,462	1,328	3,211
	Industrial	0	0	56	945	56	945
	Landscape	8	76	23	219	31	295
	TOTAL [b]	**17,500**	**13,700**	**1,100**	**3,600**	**18,600**	**17,300**
2010	SFR	13,205	7,949	4,610	2,775	17,815	10,725
	MFR	509	2,294	180	811	688	3,105
	Commercial/Institutional	249	602	1,182	2,858	1,431	3,459
	Industrial	0	0	60	1,018	60	1,018
	Landscape	0	-2	34	320	33	318
	TOTAL [b]	**14,000**	**10,800**	**6,100**	**7,800**	**20,000**	**18,600**
2015	SFR	8,730	5,255	10,462	6,298	19,192	11,554
	MFR	334	1,504	408	1,840	742	3,345
	Commercial/Institutional	159	384	1,382	3,343	1,541	3,727
	Industrial	0	0	65	1,094	65	1,094
	Landscape	0	0	36	345	36	345
	TOTAL [b]	**9,200**	**7,100**	**12,400**	**12,900**	**21,600**	**20,100**
2020	SFR	4,255	2,561	16,420	9,885	20,675	12,446
	MFR	158	715	640	2,888	799	3,603
	Commercial/Institutional	69	167	1,591	3,848	1,660	4,015
	Industrial	0	0	70	1,178	70	1,178
	Landscape	0	0	39	372	39	372
	TOTAL [b]	**4,500**	**3,400**	**18,800**	**18,200**	**23,200**	**21,600**

(Continued on next page)

TABLE 4-3 (Continued from previous page)

YEAR	CUSTOMER CLASS	UNMETERED CONNECTIONS[e]	UNMETERED DELIVERIES[fg], AFY	METERED CONNECTIONS[eh]	METERED DELIVERIES[cfg], AFY	TOTAL NUMBER OF CONNECTIONS	TOTAL MUNICIPAL DELIVERIES[d], AFY
2025	SFR	0	0	22,273	13,409	22,273	13,409
	MFR	0	0	861	3,884	861	3,884
	Commercial/Institutional	0	0	1,788	4,324	1,789	4,324
	Industrial	0	0	75	1,269	75	1,269
	Landscape	0	0	42	401	42	401
	TOTAL [b]	**0**	**0**	**25,000**	**23,300**	**25,000**	**23,300**
2030	SFR	0	0	23,994	14,445	23,994	14,445
	MFR	0	0	927	4,181	927	4,181
	Commercial/Institutional	0	0	1,927	4,659	1,927	4,659
	Industrial	0	0	81	1,371	81	1,371
	Landscape	0	0	45	428	45	428
	TOTAL [b]	**0**	**0**	**27,000**	**25,100**	**27,000**	**25,100**

a. The term "Guidebook X" refers to the table in the Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan by DWR.
b. Rounded to the nearest hundred.
c. Does not reflect demand reductions as a result of meter implementation. Refer to Table 4-5 for water savings as a result of meter implementation.
d. Does not include 2,500 AFY currently being recycled in the vicinity of WSWPCF.
e. Assumes 10 dwelling units per MFR connection.
f. Assumes 75% of total water deliveries go to SFR and MFR connections. This assumption is based on recent water usage statistics for the City, and is consistent with historical per capita water usage.
g. Assumes that the per-dwelling-unit demand factor for MFR connections is 75% of the unit demand factor for SFR connections.
h. Assumes that approximately 950 existing connections are retrofitted with meters every year between 2006 and 2025. The actual rate at which meters are installed/retrofitted may be greater.

4.2 Sales to Other Agencies

At the present time, the City does not foresee any opportunities for sales to other agencies.

4.3 Other Demands

Other water uses and losses in the City's service area are presented in Table 4-4 below. The 2,500 AFY shown for recycled water includes the amount of water currently used to irrigate land in the vicinity of WSWPCF. Although the land is irrigated with non-potable secondary treated wastewater, the 2,500 AFY must be subtracted from the total amount of wastewater available to the City for reclamation and reuse in municipal applications. For the purposes of this UWMP, therefore, the 2,500 AFY is considered a demand.

TABLE 4-4 ADDITIONAL WATER USES AND LOSSES (GUIDEBOOK TABLE 14)

WATER USE	2000	2005	2010	2015	2020	2025	2030
Recycled Water[a]	2500	2500	2500	2500	2500	2500	2500
Unaccounted-for System Losses[b]	1672	1727	1774	1801	1837	1883	2029
TOTAL	**4172**	**4227**	**4274**	**4301**	**4337**	**4383**	**4529**

a. Reflects the amount of recycled water currently recycled in the vicinity of WSWPCF. Does not include 1 mgd promised by the City in a "will serve" letter to Northern California Power Agency, as the power plant that would utilize this water is only potential at this time.
b. Unaccounted-for system losses are generally assumed to be approximately 10 percent of total water production. Because water usage is measured at the City's wells, unaccounted-for water is "accounted for" in the City's total demand projections in Table 4-5 (i.e., it should not be added to the demands in Table 4-5).

4.4 Total Demands

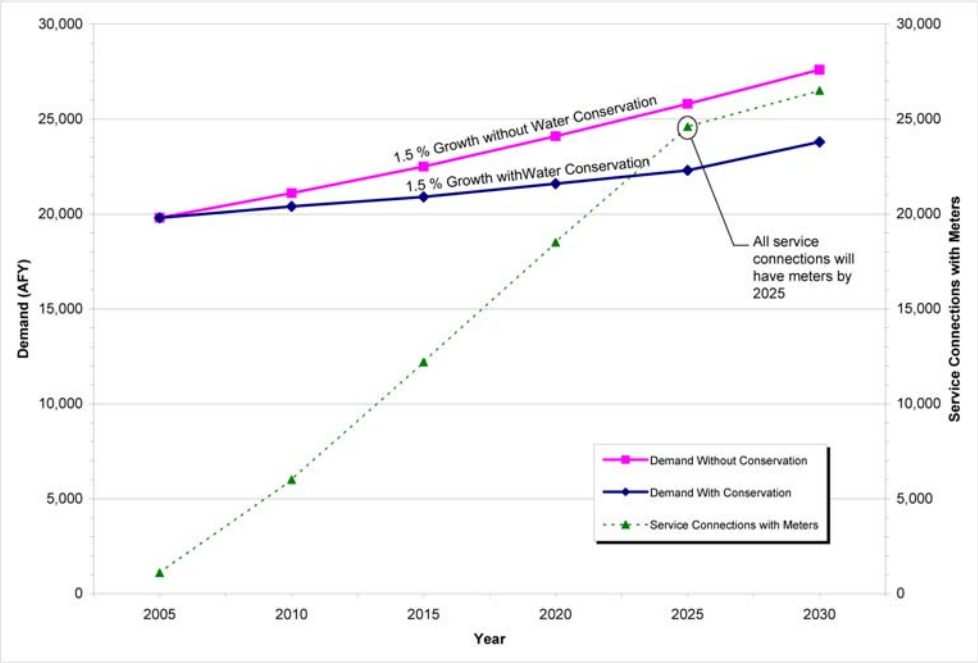
The City's total average annual demands are presented in Table 4-5 and Figure 4-1. For the purposes of this UWMP, only the projected future demands with conservation are considered in subsequent analyses. It should be noted that while Table 4-3 *(UWMP Table 4-3) includes projections for municipal demands only, Table 4-5 includes a demand of 2,500 AFY for non-municipal recycling (refer to previous section).*

TABLE 4-5 TOTAL DEMANDS (GUIDEBOOK TABLE 15)

YEAR		2005	2010	2015	2020	2025	2030
Demand AFY	Without Conservation[a]	19800	21100	22500	24100	25800	27600
	With Conservation[ab]	19800	20400	20900	21600	22300	23800

a. Includes 2,500 AFY of recycled water currently recycled in the vicinity of WSWPCF. Table 4-3 includes municipal demands only, and therefore does not match this table.
b. Assumes a 15 percent reduction in demand for metered residential service connections.

FIGURE 4-1 PROJECTED WATER DEMAND



STEP 4 - DOCUMENTING DRY YEARS SUPPLY

Also EXCERPTED from the 2005 UWMP to provide the data outlined in Step 4 of the Guidelines for Implementation of SB 610 are pages 6-1 to 6-4 with sections entitled as follows:

Chapter 6 Water Supply Reliability

6.1 Climate
- 6.1.1 Reliability and Vulnerability of Water Supply to Seasonal or Climatic Changes

6.2 Projected Normal Water Year Supply
6.3 Projected Single Dry Year Supply
6.4 Projected Multiple Dry Year Supply
- 6.4.1 Minimum Supply Volumes for Next Three Years
- 6.4.2 Basis for Normal, Single Dry and Multiple Dry Year Water Data

6.5 Supply Inconsistencies

The Excerpts noted above are as follows:

CHAPTER 6. WATER SUPPLY RELIABILITY

This section provides a description of the potential variability in the City's water supplies caused by environmental, legal, and climatic factors, as well as the steps being taken by the City to address these potential concerns.

6.1 Climate

In California, climate can significantly affect the reliability of water supplies in certain regions. This section analyzes the vulnerability of the City's water supplies to climatic effects.

6.1.1 Reliability and Vulnerability of Water Supply to Seasonal or Climatic Changes

Groundwater *- Although the City's groundwater basin is replenished in part by the Mokelumne River, the annual quantity of groundwater available does not vary significantly due to seasonal or climatic changes. Additionally, seasonal or climatic changes are not expected to impair the City's ability to extract groundwater, as seven of the City's wells are equipped with emergency generators.*

Surface Water *- The reliability of the City's surface water supply may be affected by drought. The City's contract for surface water delivery from WID, which diverts water from the Mokelumne River, is subject to curtailments of up to fifty percent during dry years. WID is required by the contract to annually provide the City, on or about May 1, with a preliminary estimate of whether or not the City's deliveries will be curtailed in a given year. Final estimates of any curtailment in a given year must be provided to the City on or about July 1.*

Recycled Water *- The amount of recycled water available to the City comes primarily from indoor water use within the City's limits and is not expected to fluctuate significantly due to seasonal or climatic changes.*

6.2 Projected Normal Water Year Supply

During normal water years, no curtailments or other reductions in supply are expected for any of the City's supplies. The projected normal water year supplies from 2010 to 2030 are shown in Table 6-1.

TABLE 6-1 WATER SUPPLY RELIABILITY (GUIDEBOOK TABLE 8)[a]

WATER YEAR TYPE	SUPPLY TYPE	2010	2015	2020	2025	2030
Normal	Groundwater, AFY	15000	15000	15000	15000	15000
	Surface Water, SFY	6000	6000	6000	6000	6000
	Recycled Water[b], AFY	7700	8300	8940	9630	10380
	TOTAL[c], AFY	**28700**	**29300**	**29900**	**30600**	**31400**

a. The term "Guidebook X" refers to the table in the Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan by DWR.
b. Extrapolated from the amount of wastewater treated in 2004. Assumes that the permitted capacity of WSWPCF will be increased as necessary.
c. Rounded to the nearest hundred

6.3 Projected Single Dry Year Supply

During single dry water years, there may be up to a 10.5% reduction[3] in the City's normal combined water supplies, reflecting a 50-percent curtailment in the City's surface water supply by WID. No reductions are assumed for the City's recycled water or groundwater supplies. The projected single dry water year supplies from 2010 to 2030 are shown in Table 6-2.

6.4 Projected Multiple Dry Year Supply

Because the City's surface water supply is the only supply that is considered to be susceptible to dry water years, and because 50% is the maximum annual curtailment allowed under the City's contract with WID, supplies available during multiple dry water years are assumed to be no different than supplies available during single dry water years. The projected multiple dry water year supplies from 2010 to 2030 are shown in Table 6-2.

TABLE 6-2 SINGLE DRY AND MULTIPLE DRY WATER YEAR SUPPLY PROJECTIONS

WATER YEAR TYPE	SUPPLY TYPE	2010	2015	2020	2025	2030
Single Dry	Groundwater, AFY	15000	15000	15000	15000	15000
	Surface Water, SFY	3000	3000	3000	3000	3000
	Recycled Water[b], AFY	7700	8300	8940	9630	10380
	TOTAL[c], AFY	**25700**	**26300**	**26900**	**27600**	**28400**
Multiple Dry	Groundwater, AFY	15000	15000	15000	15000	15000
	Surface Water, SFY	3000	3000	3000	3000	3000
	Recycled Water[b], AFY	7700	8300	8940	9630	10380
	TOTAL[c], AFY	**25700**	**26300**	**26900**	**27600**	**28400**
Summary	Single Dry Water Year, AFY	25700	26300	26940	27630	28380
	Percent of Normal	**90%**	**90%**	**90%**	**90%**	**90%**
	Multiple Dry Water Year(s), AFY	25700	26300	26940	27630	28380
	Percent of Normal	**90%**	**90%**	**90%**	**90%**	**90%**

a. Extrapolated from the amount of wastewater treated in 2004. Assumes that the permitted capacity of WSWPCF will be increased as necessary.
b. Rounded to the nearest hundred

3 Assuming that the amount of available recycled water increased over time, the maximum percent reduction projected will decrease from 10.5% in 2010 to 9.6% in 2030.

The future supply volumes presented in Sections 6.2 to 6.4 represent the water to which the City has the legal rights to use. This should not be confused with water that can readily be distributed to the Utility's customers,

as additional infrastructure must be constructed before the total volumes presented in the tables above can be distributed to the City. In order to provide the City with surface water, for example, intake facilities, a surface water treatment plant, and additional distribution pipeline could be required.

6.4.1 Minimum Supply Volumes for the Next Three Years

Under agreements with the East Bay Municipal Utilities District (EBMUD), WID obtains water stored in Pardee and Comanche reservoirs. Since both of these reservoirs are currently full, supply volumes for the City of Lodi for the next three years are expected to be "normal." However, the minimum supply volumes for 2006 through 2008, or the supplies available if the City's contract with WID faced maximum curtailments, are presented in Table 6-3.

TABLE 6-3 MINIMUM SUPPLY VOLUMES FOR 2006-2008 (GUIDEBOOK TABLE 24)

SUPPLY TYPE	2006	2007	2008
Groundwater, AFY	15000	15000	15000
Surface Water, AFY	3000	3000	3000
Recycled Water, AFY	7200	7300	7400
TOTAL, AFY	**25200**	**25300**	**25400**

a. Reflects the total amount of wastewater available to the City for reclamation and reuse

6.4.2 Basis for Normal, Single Dry, and Multiple Dry Year Water Data

The data presented in Sections 6.2 through 6.4 were developed based on 1) the assumptions that the City's groundwater and recycled water supplies are not susceptible to short term drought conditions, and 2) the City's contract with WID. Since the City's contract with WID is relatively new, there have been no historical curtailments in the City's surface water supply upon which to base future dry water year projections. Hence, the maximum allowable curtailment has been assumed for these circumstances. The base year for all water year data is 2005.

TABLE 6-4 BASIS OF WATER YEAR DATA (GUIDEBOOK TABLE 9)

WATER YEAR TYPE	BASE YEAR
Normal	2005
Single Dry	2005
Multiple Dry	2005

6.5 Supply Inconsistencies

Water supply from the City's only wholesale supplier, WID, is susceptible primarily to drought conditions, when diversions from the Mokelumne River may be reduced by WID. Due to the infancy of this contract, there are no historical reductions upon which to base assumptions. Even in the most severe drought conditions, however, WID may only reduce the City's supply by 50%. Supply reliability projections for this source are presented in Table 3-7.

Water supply from the City's groundwater wells is considered to be very consistent. Historical fluctuations in groundwater levels due to changes in climatic conditions have been minor, and have not significantly impacted well production capacity. Additionally, six of the City's wells are equipped with granular activated carbon (GAC), and provide added insurance against inconsistencies caused by the presence of contaminants in the City's aquifer. Finally, the availability of seven emergency generators at various well locations ensures the City's ability to extract groundwater during extended power outages.

As discussed previously, the groundwater basin underlying the City is in overdraft, and groundwater levels are decreasing by approximately 0.39 ft/yr. From an extraction standpoint, however, this is a relatively slow process, and the City does not anticipate that overdrafting conditions will significantly impact its ability to extract groundwater in the short term. However, the City remains committed to eliminating the overdraft condition in the long term and has been an active participant in actions to accomplish this task. As a member of GBA, the City has participated in the development of regional groundwater recharge and conjunctive use programs intended to replenish Eastern San Joaquin County's groundwater basin and promote sustainability for the future. A copy of the GBA Groundwater Management Plan is included in Appendix F.

Recycled water supply for the City is considered to be very consistent. Indoor water consumption by the City's customers, which does not significantly fluctuate with climatic conditions like outdoor water use, is the source of the City's recycled water supply. As such, the amount of recycled water available to the City is not expected to fluctuate in the future; indeed, as the number of water and sewer connections increase, so too will the City's recycled water supply.

As a result of the relative consistency of the City's water supplies, there are no plans at this time to replace any of the City's supply sources with alternative sources. The City is part of a group of Eastern San Joaquin County water users negotiating a conjunctive use project with EBMUD. Recently, however, negotiations surrounding this project have stagnated. Although this

project bears the possibility of increasing the City's future water supplies, for the purposes of this UWMP this potential supply is not reflected in Table 3-5.

CHAPTER 5: STEPS 3 AND 4 - DOCUMENTING DEMAND EFFECTS OF THE PROJECT

Background

From City records, the total water deliveries in 2004 were 17,011 AFY or 15.18 MGD and the population for the City was 61,325. The population growth rate has been estimated at 1.5% from 2004 to 2030. Also in 2004, water use per capita was 248 gpcd in comparison to 285 gpcd estimated in 1987. This is a city-wide average that includes commercial, industrial, and public water use.

The Reynolds Ranch Project area currently consists of 220 acres of agricultural land and residences. The existing water source for the land within the Project area is primarily groundwater wells. The State of California has determined that the regional average on-farm unit applied water use for irrigation in the San Joaquin region is 3.2 acre feet per acre.[1] The current agricultural irrigation practice within the project area is either fallow or a drip system, so actual water use is significantly less than the county average.

[1]*California Department of Water Resources, California Water Plan Update 2005 Volume 3 – Regional Reports, Chapter 7, San Joaquin River Hydrologic Region at pp. 7-14*

Water Supply Considerations

The City has accepted 15,000 AF as the demand that the groundwater basin can accept without experiencing significant draw down, based upon the City's current land area.

The 2005 UWMP states that as water meters are installed, it is expected that water use by those customers will decline by about 15% upon completion of the meter installation program. In addition, other conservation methods are being pursued by the City. For planning purposes, the reduction in annual demand of the existing customers will be approximately 2500 AFY.

Table 5-1 shows the projected population, unit demand, and projected deliveries in five-year increments, 2005 to 2030.

TABLE 5-1 DEMAND PROJECTION USING 2004 AS THE BASE YEAR

YEAR	POPULATION	UNIT DEMAND GPCD	TOTAL MGD	DELIVERIES AFY
2004	61210	248	15.18	17011
2010	66930	244	16.33	18300
2015	72100	240	17.30	19390
2020	77670	236	18.33	20540
2023	**81220**	**234**	**19.01**	**21300**
2025	83670	233	19.50	21850
2030	90136	230	20.73	23230

Source: UWMP

City records provide a Vacant Land Inventory based on the City's General Plan shown in Figure 2 on page 4. The Vacant Land Inventory indicates 1033.82 acres are vacant and that 3,237 dwelling units could be developed. Using the general plan population factors, development of the vacant land would result in a population growth of about 8,154 persons. The required Water supply to serve this new development would amount to 2265 AFY and it does not include the Planned Residential Reserve Area. The water supply required to serve this is part of the projected water demand presented in Figure 4-1.

The City has accepted that 15,000 AF is the safe yield the groundwater basin can provide without experiencing significant drawdown of the water table, based on the City's current developed land area. The Reynolds Ranch Project will expand the size of the City, increasing its ability to draw on the basin as agricultural uses are disbanded and the City's total acreage is increased. Based on the expansion of the acreage within the incorporated City limits, the safe yield would increase by 430 acre-feet.

Increase safe yield = project area * safe yield/current area of the City
= 220 acres * 15,000 acre feet/ 7,680 acres
= 429.68 acre feet

With annexation, the City of Lodi's safe yield of the groundwater basin will increase to 15,430 acre-feet. Even though the current City needs exceeds this amount, the basin has not yet demonstrated significant degradation and is still able to meet the City's needs in the short term. Regardless, the proposed project would contribute to this overdraft.

With the firm supply of 21,000 AFY shown in the 2005 UWMP plus an additional 430 AFY from the expansion of the City. The following table 5-2 illustrates the projected water supply for the City with the project.

TABLE 5-2 WATER BALANCE CALCULATION (ALL NUMBERS ARE IN AFY)

Existing Water Demand	17,011
Less Metered Reduction of 15% (per UWMP)	2,500
Reynold's Ranch Water Demand*	510
Vacant Land Water Demand	2,265
TOTAL WATER DEMAND	**17,286**
Available Groundwater Supply (with annexation)	15,430
Available Surface Water Supply	6,000
TOTAL WATER SUPPLY	**21,430**
Available Reserve**	4,144

* See Table 5-3 for details
** Total Water Supply less Total Water Demand

The ongoing water metering program and implementation of a surface supply by the City will provide sufficient water to meet the projected needs of the City.

If development of vacant land is considered to occur over the planning period, the water supply for development of the vacant land would be included in the overall supply and demand calculations. As indicated in Table 5-1, demand would catch up to the supply by after 2023. The City would, therefore, need to plan to provide additional firm water supplies to serve growth beyond 2022.

Other Water Supply Considerations

The above scenarios are based on a static available supply, which is not practical for two reasons. First, as noted in the 2005 UWMP, the City is already considering obtaining additional surface water supplies from Woodbridge Irrigation District. The City also retained Schlumberger Water Services to prepare a "Surface Water Supply Options" study in 2004 to determine how best to utilize the newly acquired surface water. Second, the calculation of safe yield for groundwater extraction of 15, 000 AFY contained in the Urban Water Management Plan and accepted by the City was based upon Lodi's current usage less its proportion (based upon area) of the overall basin overdraft. Therefore, as the City's land area increases through annexations, the estimated safe yield of the aquifer will also increase. The safe yield is approximately 1.95 acre feet per acre per year.

The current contract with WID for 6,000 AFY also provides for carry over or banking of water not taken over the first seven years of the agreement not to exceed 18,000 acre feet. The City may take delivery of the banked water over the forty-year term of the agreement. When the WID surface water supplies

and banked water are added to the groundwater supplies, water supplies will be available for the projected planning period of 2005 to 2030 and beyond.

The improvements to implement the use of the surface water are included in the City's planning as well as consideration of other appropriations discussed in the Schlumberger report. While all routes to obtain new water sources need to be studied, they are not relevant to this Water Supply Assessment as the Contract with WID provides a firm water supply that the City has committed to utilize and will be available to provide supplemental water to meet project and other future demands through 2030.

The City has developed a comprehensive approach to address the groundwater overdraft problem; the City's 2005 Urban Water Management Plan identifies the following five strategies that are being implemented to resolve this shortcoming:

1. Establishment of a Water Conversation Program—The City has already established a Water Conservation Ordinance and a Water Conservation Rebate program that has shown reductions in demand. Continued implementations of these programs will reduce the current overdraft condition and will eventually develop surplus capacity that could be used to meet the needs of the project.
2. Establishment of a Recycle Water System—The City has developed a water reuse program and is treating water for reuse at the Wastewater treatment plant. Currently, this water is being distributed to area farmers, thereby reducing their groundwater and surface water demands and improving the overall regional water balance. Expansion of this program is being planned and the incorporation of recycled water for landscape areas and other acceptable uses will further reduce demand on the groundwater basin.
3. Development of Groundwater Recharge systems—The City is looking into groundwater recharge systems. Such systems are not currently considered for the Reynolds Ranch project, although other developments around the City are including such systems to provide additional groundwater recharging, improving the city's water balance.
4. Development of Surface Water Treatment—The City has acquired an additional 6,000 AF of water rights from the Woodbridge Irrigation District. The City is considering developing a water treatment plant to provide additional supply for the City consumers. This surface water could also be used as groundwater recharge supply as an alternative as outlined above.
5. Development of Additional Water Wells—Wells provide an efficient means of providing for peak day and peak hour water demands by providing a

distributed water source system. Adding additional wells do not necessarily increase ground water usage, especially if those wells are used primarily to meet peak day, peak hour or emergency water demands.

Phase I of the proposed project is anticipated to be developed before 2010, which is when the 6,000 AF of purchased water rights from WID is expected to be available for use. As such, prior to 2010 Phase I would rely on the groundwater basin for water supply. As described above, Phase I of the proposed project is projected to use 137 AF of water per year, and the entire Reynolds Ranch Project is anticipated to require about 510 acre-feet (AF) of water annually.

Given that two of the City's programs to reduce demand (conservation and recycled water use)The only recycling that occurs in the City is land application of wastewater at the treatment plant. are already on line and are showing signs of success and that the other programs are being developed and expanded to reduce groundwater demands, it is reasonable to determine that the ground water supply capabilities of the basin will meet the needs of the City and of the project in the short term. Through metering, the City's Water Conservation Program alone is projected to save 3,800 AF of water annually by the year 2030 (City of Lodi Urban Water Management Plan, 2005).

After 2010, full utilization of the water purchased from WID will reduce the City's draw on the groundwater basin to within safe yield levels, including the project's ultimate annual demand of 510 AF.

Effect of the Reynolds Ranch Project

Based upon the planned land uses for the Reynolds Ranch Project shown in Table 1, on page 1, the estimated project demand was calculated using Standard demand rates as outlined in the Water Distribution Systems Handbook, by Larry W. Mays, McGraw-Hill 2000. Expected demand increase for the project has been calculated as 510 acre-feet per year.

TABLE 5-3 ESTIMATED WATER DEMAND – REYNOLD'S RANCH PROJECT

LAND USE TYPE	LAND USE AREA (ACRES)	LAND USE GALLONS PER DAY	AVERAGE DAILY DEMAND (GPD)
Commercial (A-1)			
Commercial (A-1)	40	2,040	81,600
Subtotal	**40**		**81,600**
Office (A-2)			
Office (A-2)	20	2,030	40,600
Subtotal	**20**		**40,600**
Residential			
LDR (B-8)	57	1,670	95,190
LDR (B-10)	18.5	1,670	30,895
MDR (B-12)	27.5	2,610	71,775
MDR (B-1)	8.	2,610	20,880
MDR (B-5)	12.	2,610	31,320
HDR (B-2)	8.	4,160	33,280
HDR (B-4)	3.	4,160	12,480
Subtotal	**134**		**295,820**
Parks/Open Space			
Community Park (B-11)	6	2,020	12,120
Neighborhood Park (-7)	3	2,020	6,060
Open Space (B-3)	0.5	0	0
Subtotal	**9.5**		**18,180**
Public Facility			
Fire Station (B-6)	1	1,700	1,700
Subtotal	**1**		**1,700**
Public Facility			
School (B-9)	10	1,700	17,000
Subtotal	**10**		**17,000**
Detention Basins			
NE Location (A-3)	1	0	0
SW Location (B-13)	4.5	0	0
Subtotal	**5.5**		**0**
TOTAL	**220**		**454,900**
		ESTIMATED TOTAL	**510 AFY**

The Reynolds Ranch Project would have little effect on the City's water supply system. As shown above, based on the proposed land uses for the Project that includes commercial uses, the estimated Project demand would be an increase of 3% of the current water deliveries.

The safe yield for groundwater extraction outlined in the Urban Water Management Plan and accepted by the City is 15,000 AFY. Adding the Reynolds Ranch Project annexation may ultimately increase the safe yield to 15,430 AFY but the designated water supply for the project is surface water purchased from WID. Reynolds Ranch Project water demand will initially begin at zero and gradually increase to 510 AFY as the project is developed. The phased increase in demand will allow for the City to implement a program to use the surface water.

CONCLUSION AND RECOMMENDATIONS

The current water supply of the City of Lodi is consistent, reliable, and meets all EPA quality requirements. The quantity is adequate for the projected growth as presented in the 2005 UWMP.

Water supplies are available to serve the Reynolds Ranch Project in accordance with the requirements included in SB 610. The total available supply of 21430 AFY exceeds the projected demand of 17286 AFY.

The Reynolds Ranch project will utilize ground water for interim supply by continuing to install wells to meet project demands. Long term, Reynolds Ranch water demands will be met using surface water purchased from WID.

Surface water is available under the WID contract and will be developed independently by the City on the City's schedule.

Continue the program to install water meters and to encourage water conservation.

Reynolds Ranch Development
(Sanitary Sewer Projected Flows)

Land Use Type	Applicable Building Area (sf)	Land Use Area (acres)	Current S.S. Production (cfs)	Development Density	Multiplier	Development S.S Production (cfs)
Commercial (A-1)				**(acre land use area)**		
Commercial (A-1)	350,000	40.0	0	40	0.00387	0.155
Subtotal	**350,000**	**40.0**	**0**	**40**		**0.155**
Office (A-2)				**(acre land use area)**		
Office (A-2)	200,000	20.0	0	20	0.00387	0.077
Subtotal	**200,000**	**20.0**	**0**	**20**		**0.077**
Residential				**(units per acre)**		
LDR (B-8)	N/A	57.0	0	5	0.00213	0.12
LDR (B-10)	N/A	18.5	0	5	0.00213	0.04
MDR (B-12)	N/A	27.5	0	8	0.00213	0.06
MDR (B-1)	N/A	8.0	0	8	0.00213	0.02
MDR (B-5)	N/A	12.0	0	8	0.00418	0.05
HDR (B-2)	N/A	8.0	0	22	0.00743	0.06
HDR (B-4)	N/A	3.0	0	50	0.00743	0.02
Subtotal	**N/A**	**134.0**	**0**	**106**		**0.37**
Parks/Open Space				**(total acreage area)**		
Community Park (B-11)	N/A	6.0	0	6	0.0003	0.002
Neighborhood Park (-7)	N/A	3.0	0	3	0.0003	0.001
Open Space (B-3)	N/A	0.5	0	0	0.0003	0.000
Subtotal	**N/A**	**9.5**	**0**	**9**		**0.003**
Public Facility				**(attendants)**		
Fire Station (B-6)		1.0	0	20	0.000039	0.001
Subtotal		**1.0**	**0**	**29**		**0.001**
Public Facility				**(students)**		
School (B-9)		10.0	0	1,000	0.000039	0.039
Subtotal		**10.0**	**0**	**1,049**		**0.039**
Detention Basins				**(total acreage area)**		
NE Location (A-3)	N/A	1.0	0	1	0.0003	0.000
SW Location (B-13)	N/A	4.5	0	5	0.0003	0.001
Subtotal	**N/A**	**5.5**	**0**	**6**		**0.002**
TOTAL		**219.0**	**0**			**0.64**

Reynolds Ranch Preliminary Sanitary Sewer Study (southern portion of Lodi area)

Area 'A1' (Reynolds Development)

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Residential	61	134	0.002	0.120
Commercial	27	60	0.00387	0.058
Parks/Open Space/Detention Basins	7	15	0.00003	0.000
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	11	0.0021	0.462
TOTAL	**100**	**220**		**0.64**

Area 'A2'

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Residential	61	142	0.002	0.284
Commercial	27	63	0.00387	0.243
Parks/Open Space/Detention Basins	7	16	0.00003	0.000
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	12	0.0021	0.024
TOTAL	**100**	**233**		**0.55**

Area 'A3'

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Residential	61	42	0.002	0.084
Commercial	27	19	0.00387	0.072
Parks/Open Space/Detention Basins	7	5	0.00003	0.000
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	3	0.0021	0.007
TOTAL	**100**	**69**		**0.16**

Area 'A4'

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Residential	61	38	0.002	0.077
Commercial	27	17	0.00387	0.066
Parks/Open Space/Detention Basins	7	4	0.00003	0.000
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	3	0.0021	0.007
TOTAL	**100**	**63**		**0.15**

Area 'A5'

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Residential	61	814	0.002	1.629
Commercial	27	360	0.00387	1.395
Parks/Open Space/Detention Basins	7	93	0.00003	0.003
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	67	0.0021	0.140
TOTAL	**100**	**1,335**		**3.17**

Area 'B'

Land Use Type	Development Area (%)	Land Use Area (acres)	Multiplier	Developed Area 'B' Sanitary Sewer Production (cfs)
Commercial/Industrial	65	597	0.002	1.195
Residential	20	184	0.00387	0.711
Parks/Open Space/Detention Basins	10	92	0.00003	0.003
Public Facilities (Schools, Fire Stations, Police Stations, etc.)	5	46	0.0021	0.096
TOTAL	**100**	**919**		**2.01**

1992 Harney Lane L.S. Service Area

Land Use Type		Land Use Area (acres)	Multiplier	Developed Area 'A' Sanitary Sewer Production (cfs)
Predominately Residential		244	0.0025	0.610
TOTAL		**244**		**0.61**

A' Areas, Area 'B', and 1992 Harney Lane L.S. Service Area

Areas Analyzed	Land Use Area (acres)	A' Areas, Area 'B', and 1992 Harney Lane L.S. Service Area Sanitary Sewer Production (cfs)
A' Areas, Area 'B', and 1992 Harney Lane L.S. Service Area	3,083	7.29

5/23/2006 D.D.