

## LODI PLANNING COMMISSION

### Teleconference Meeting

Streaming Link: <https://www.facebook.com/CityofLodi/>

REGULAR SESSION

WEDNESDAY,

AUGUST 26, 2020

@ 7:00 PM

## SPECIAL NOTICE

Effective immediately and while social distancing measures are imposed, Council chambers will be closed to the public during meetings of the Lodi Planning Commission. All Commissioners will appear telephonically or via Zoom.

The following alternatives are available to members of the public to watch Planning Commission meetings and provide comments on agenda and non-agenda items before and during the meetings.

### Viewing:

Members of the public may view and listen to the meeting at: <https://www.facebook.com/CityofLodi/>

or

Please click the link below to join the meeting:

<https://zoom.us/j/93007371362?pwd=M3ZOdXhRZDA5L2lGcFgvZHVzbHN1Zz09>

Password: 150779

Or iPhone one-tap: Us: +16699009128,,93007371362

Or Telephone: Dial: Us: +1 669 900 9128; Webinar ID: 930 0737 1362

### Public Comment:

As always, members of the public can send written comments to the Planning Commission prior to the meeting by emailing [pccomments@lodi.gov](mailto:pccomments@lodi.gov). These emails will be provided to the members of the Planning Commission and will become part of the official record of the meeting.

Members of the public who wish to verbally address the Planning Commission during the meeting should email those comments to [pccomments@lodi.gov](mailto:pccomments@lodi.gov). Comments must be received before the Chair announces that the time for public comment is closed. Staff will read five minutes of each email into the public record. **IMPORTANT:** identify the Agenda Item Number or description in the subject line of your email. Example: Public Comment for Agenda Item Number 4a Senate Bill (SB) 5 and SB 1278 General Plan Safety Element.

Pursuant to the Americans with Disabilities Act (ADA) and Executive Order N-29-20, if you need special assistance to provide public comment in this meeting, please contact the Office of the Community Development Department at (209) 333-6711 or [pccomments@lodi.gov](mailto:pccomments@lodi.gov) at least 48 hours prior to the meeting in order for the City to make reasonable alternative arrangements for you to communicate your comments. If you need special assistance in this meeting for purposes other than providing public comment, please contact the Office of the Community Development Department at (209) 333-6711 or [pccomments@lodi.gov](mailto:pccomments@lodi.gov) at least 48 hours prior to the meeting to enable the City to make reasonable arrangements to ensure accessibility to this meeting (28 CFR 35.160 (b) (1)).

## SPECIAL TELECONFERENCE NOTICE

### Pursuant to Executive Order N-29-20:

The Brown Act, Government Code Section 54953, contains special requirements that apply when members of a legislative body participate in a public meeting by telephone. Certain of these requirements have been suspended by Paragraph 3 of Executive Order N-29-20, executed by the Governor of California on March 17, 2020 to mitigate the spread of the coronavirus known as COVID-19. In particular, the Executive Order suspends that provision of the Brown Act that requires noticing, posting of agendas, and public access to each location where a member will be participating telephonically, as well as provisions that require physical presence of members of the legislative body or the public for purposes of a quorum or to hold a meeting. Executive Order N-29-20 allows an agency to conduct a teleconference meeting that provides members of the public telephonic or other electronic participation in place of making a physical location for the public to observe the meeting and provide public comment, consistent with other provisions of the Brown Act.

For information regarding this agenda please contact:  
**Kari Chadwick @ (209) 333-6711**  
**Community Development Secretary**

1. ROLL CALL
2. MINUTES – None
3. COMMENTS BY THE PUBLIC (NON-AGENDA ITEMS)

*If you wish to address the Commission, please refer to the Special Teleconference Notice at the beginning of this agenda. Individuals are limited to one appearance during this section.*

4. PUBLIC HEARINGS

- a) Request for the Planning Commission of the City of Lodi to recommend that the City Council implement the provisions of Senate Bill (SB) 5 and SB 1278 related to 200-Year Flood Protection by amending the General Plan Safety Element. (CEQA Status: Exempt, Section 15162, Subsequent EIRs and Negative Declarations)
- b) Request for the Planning Commission of the City of Lodi to recommend that the City Council implement the provisions of Senate Bill (SB) 5 and SB 1278 related to 200-Year Flood Protection by repealing and reenacting the following Lodi Municipal Code Chapters and Section: Chapter 15.60 – Flood Damage Prevention; Section 17.14.040 – General Performance Standards; and, Chapter 17.28 – Overlay Zoning Districts; **and, amend the Lodi Zoning Map to establish the -F-200 Overlay District.** (CEQA Status: Exempt, Section 15162, Subsequent EIRs and Negative Declaration)

**NOTE: The above item is a quasi-judicial hearing and requires disclosure of ex parte communications as set forth in Resolution No. 2006-31**

5. PLANNING MATTERS/FOLLOW-UP ITEMS
6. ANNOUNCEMENTS AND CORRESPONDENCE
7. ACTIONS OF THE CITY COUNCIL
8. ACTIONS OF THE SITE PLAN AND ARCHITECTURAL REVIEW COMMITTEE
9. ACTIONS OF THE LODI ARTS COMMISSION
10. COMMENTS BY THE PLANNING COMMISSIONERS & STAFF (NON-AGENDA ITEMS)
11. ADJOURNMENT

Pursuant to Section 54954.2(a) of the Government Code of the State of California, this agenda was posted at least 72 hours in advance of the scheduled meeting at a public place freely accessible to the public 24 hours a day.

**\*\*NOTICE:** Pursuant to Government Code §54954.3(a), public comments may be directed to the legislative body concerning any item contained on the agenda for this meeting before (in the case of a Closed Session item) or during consideration of the item.

**Right to Appeal:**

If you disagree with the decision of the commission, you have a right of appeal. Only persons who participated in the review process by submitting written or oral testimony, or by attending the public hearing, may appeal.

Pursuant to Lodi Municipal Code Section 17.70.050, actions of the Planning Commission may be appealed to the City Council by filing, within ten (10) business days, a written appeal with the City Clerk and payment of \$300.00 appeal fee. The appeal shall be processed in accordance with Chapter 17.70, Appeals, of the Lodi Municipal Code. Contact: City Clerk, City Hall 2<sup>nd</sup> Floor, 221 West Pine Street, Lodi, California 95240 – Phone: (209) 333-6702.

Item 4a.



# CITY OF LODI PLANNING COMMISSION Staff Report

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**MEETING DATE:** August 26, 2020

**APPLICATION NO:** General Plan: 2020-002 Z

**REQUEST:** Request for the Planning Commission of the City of Lodi to recommend that the City Council implement the provisions of Senate Bill (SB) 5 and SB 1278 related to 200-Year Flood Protection by amending the General Plan Safety Element. (CEQA Status: Exempt, Section 15162, Subsequent EIRs and Negative Declarations)

**APPLICANT:** City of Lodi  
221 West Pine Street.  
Lodi, CA 95240

## **RECOMMENDATION:**

Staff recommends that the Planning Commission conduct a public hearing and consider adoption of Resolution No. PC 20-\_\_\_ (Attachment 1) recommending that the Lodi City Council implement the provisions of SB 5 and SB 1278 related to 200-year flood protection by amending the General Plan Safety Element.

## **BACKGROUND:**

California Senate Bill (SB) 5 (Machado) (and follow-on legislation in SB 1278) requires the City to amend its General Plan and Zoning regulations to address flooding that has a 1-in-200 chance of occurring in any given year (i.e., a 200-year storm event). The intent of the legislation is to strengthen the link between flood management and land use.

SB 1278 required that SB 5-related General Plan amendments be adopted by July 2015 and Zoning changes be adopted by July 2016. Based on the very limited portions of the City of Lodi fall within the 200-year flood zone, and that the land within the 200-year flood zone was already developed and therefore generally exempt from 200-year flood zone restrictions, the City of Lodi did not proceed with adopting provisions related to SB 5 and SB 1278.

Based upon more recent analysis, it has been determined that the City is required to adopt general plan and zoning code amendments per these two State laws. Based on this determination, the firm Kjeldsen Sinnock Neudeck (KSN) was retained to delineate the 200-year floodplain in the City of Lodi.

The proposed actions before the Planning Commission would amend the 2010 General Plan Safety Element to apply the findings of KSN's floodplain mapping, implement the requirements of SB 5 related to 200-year flood protection and update provisions of the Safety Element to meet current requirements of the State of California General Plan Guidelines.

The provisions of SB 5 and 200-year flood protection are supplementary to existing flood protection policies implemented by the City. The City will continue to implement existing provisions related to the 100-year floodplain. It is noteworthy that the 200-year floodplain does not have a direct relationship with Federal flood insurance requirements; the insurance requirements apply to the Federally-mapped 100-year floodplain.

#### **ANALYSIS:**

SB 5 required the California Department of Water Resources (DWR) to prepare criteria that local agencies could use to make findings related to urban level of flood protection (State Criteria). As provided in the State Criteria, the provisions of SB 5 apply to urban areas of the Sacramento-San Joaquin Valley (including the City of Lodi) that are either covered in the FEMA 100-year floodplain or are within watersheds of more than 10 square miles and where the potential flood depth is more than three feet.

Under SB 5, affected jurisdictions must determine that an Urban Level of Flood Protection will be achieved prior to approving most types of development within the 200-year floodplain. The term 200-year floodplain refers to areas anticipated to be inundated in a storm that has a 1-in-200 chance of occurring in any given year (200-year storm event). Specific actions requiring a determination of Urban Level of Flood Protection include:

- Entering into a Development Agreement for all types of property development
- Approving a discretionary permit or other discretionary entitlement for all development projects
- Approving a ministerial permit for all projects that would result in construction of a new residence
- Approving a tentative map consistent with the Subdivision Map Act for all subdivisions
- Approving a Parcel Map for which a tentative map is not required consistent with the Subdivision Map Act for all subdivisions

The City Council considered various policy issues related to the 200-year floodplain at its June 4, 2019 Shirt Sleeve session. In addition to providing background on 200-year floodplain requirements, staff requested Council direction on the following points:

- Definition of 200-Year Floodplain. The City is required to define a depth of inundation associated with the 200-year floodplain. SB 5 established that areas inundated to a depth of three feet or more must be considered within the 200-year floodplain. The City Council directed that this standard would be applied in Lodi.
- Building Floor Elevation. For property located within the 200-year floodplain, the City is required to establish a minimum building floor elevation. The City Council directed that building floors in the 200-year floodplain must be at or higher than the anticipated water level of the 200-year flood.
- Consider Planned Improvements. In modeling the 200-year floodplain, the City is allowed to consider planned projects that will provide additional flood protection

(floodwall at Mills & Turner). The Council directed the 200-year floodplain be modeled as currently exists and without the benefit of future improvements.

The above direction was provided to KSN and applied in the modeling and mapping of the 200-year floodplain in the City of Lodi.

### **PROPOSED AMENDMENTS:**

Amendments to the Safety Element of the General Plan (Attachment 2) would address hazards associated with the 200-year storm event, including mapping of the 200-year floodplain. Additionally, State law general plan requirements have been revised since the adoption of the Lodi General Plan and various revisions to the Safety Elements are proposed to achieve consistency with State law. Amendments to the Safety Element include:

- Discussion of 100-year and 200-year floodplains
- Addition of 200-year floodplain map
- Summary of KSN study that defined the 200-year floodplain
- Discussion of Agencies Responsible for Flood Protection
- Statement on Slope Instability/Liquefaction potential
- Discussion of hazards related to Climate Change
- Updated summary of Emergency Management

### **CONSULTATION:**

Under Senate Bill (SB) 18, a city or county is required to consult with Native American tribes prior to amendment of its general plan. On December 30, 2019 the City of Lodi requested that the Native American Heritage Commission (NAHC) identify tribes with traditional lands or cultural places in the City of Lodi. Based upon the NAHC's response, the City notified six tribes of the proposed General Plan amendment. No requests for consultation were received and the City thus concluded its tribal consultation required under SB 18.

Government Code 65302.5 requires that the City provide a copy of the draft Safety Element and any technical studies associated with the draft Safety Element to the California Geologic Survey (CGS) for review and comment prior to adoption of the Safety Element. A draft of the Safety Element was provided to CGS on July 24, 2020 and minor comments and corrections were incorporated in the draft Safety Element. As a follow up communication, the City provided CGS an amended copy of the draft Safety Element and associated background and technical information on July 8, 2020.

### **ENVIRONMENTAL ANALYSIS:**

The California Environmental Quality Act (CEQA) requires analysis of agency approvals of discretionary "projects." A "project," under CEQA, is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The amendment of the General Plan and Municipal Code is a project under CEQA.

Proposed amendments to the Safety Element respond to SB 5 flood risk legislation and address requirements for the General Plan Safety Element as established under the General Plan Guidelines as adopted by the California Office of Planning and Research (OPR). The amendments implement new limits and requirements related to development in the 200-year floodplain.

The General Plan establishes the policy direction for land use development within the City. The General Plan is comprised of nine elements or chapters, including Chapter 8 – Safety. A comprehensive update of the General Plan was adopted in 2010 and the Lodi General Plan Environmental Impact Report (EIR) (SCH No. 2009022075), was certified in 2010.

The proposed amendments to the Safety Element of the General Plan and Municipal Code (proposed amendments) will implement flood management requirements established under SB 5 and SB 1278. Additionally, the proposed amendments will address requirements of the State General Plan Guidelines for Safety Elements that have been adopted by the State of California since the 2010 adoption of the Lodi General Plan.

State CEQA Guidelines Section 15162 (Subsequent EIRs and Negative Declarations) requires that when an EIR has been certified for an adopted project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of the following exists:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

Analysis: The proposed amendments will not result in any increases to the density or intensity of allowed uses allowed under the General Plan or allow any uses not currently allowed under the General Plan. The proposed amendments do not represent a significant change to the General Plan with regard to environmental effects and would not require amendment of the General Plan EIR.

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

Analysis: The policies and programs of the General Plan and the analysis of environmental effects of the General Plan EIR remain valid. No changes in circumstances have occurred since certification of the EIR that would result in new significant environmental effects or an increase in the severity of previously identified significant effects related to the proposed amendments.

3. New information of substantial importance, which was not known and could not have been known with exercise of reasonable diligence at the time of the previous EIR was certified as complete shows any of the following:

- a. The project will have one or more significant impacts not discussed in the previous EIR;
- b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.

Analysis: The proposed General Plan amendment will not result in changes to the physical environment that were not previously analyzed in the General Plan EIR. Therefore, new information identified since certification of the General Plan EIR does not have the potential uncover any new significant impacts or substantial increases in the severity of impacts that would result from adoption of the General Plan amendment.

Based upon the above analysis, the City of Lodi has determined that, consistent with Section 15162 of the CEQA Guidelines, no modifications to the General Plan EIR would be necessary for it to adequately address the impacts of the proposed Project. Therefore, no further CEQA review is required.

**PUBLIC HEARING NOTICE:**

Legal Notice pertaining to the proposed General Plan and Municipal Code amendments was published in the Lodi News Sentinel on August 15, 2020.

**RECOMMENDED MOTIONS:**

Should the Planning Commission agree with staff’s recommendations, the following motion is suggested:

“I move that the Planning Commission adopt a Resolution recommending that the Lodi City Council determine the proposed General Plan amendment is exempt from review under CEQA subject to Section 15162 of the CEQA Guidelines. I further move to recommend that the City Council amend the General Plan Safety Element as provided in Exhibits A of the attached resolution.”

**ALTERNATIVE PLANNING COMMISSION ACTIONS:**

- Approve the request as provided in the attached resolution and amended ordinances
- Deny the request
- Continue the request

Respectfully Submitted,

Concur,

John P. Fukasawa  
Deputy City Attorney

John Della Monica  
Community Development Director

**ATTACHMENTS:**

1. Planning Commission Resolution No. \_\_\_\_\_  
Exhibit A: Amended General Plan Safety Element
2. 2010 General Plan Safety Element

**RESOLUTION NO. P.C. NO. \_\_\_\_\_**

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LODI RECOMMENDING THAT THE LODI CITY COUNCIL IMPLEMENT THE PROVISIONS OF SENATE BILL (SB) 5 AND SB 1278 RELATED TO 200-YEAR FLOOD PROTECTION BY AMENDING THE GENERAL PLAN SAFETY ELEMENT. CEQA STATUS: EXEMPT, SECTION 15162, SUBSEQUENT EIRS AND NEGATIVE DECLARATIONS**

- WHEREAS,** the Planning Commission of the City of Lodi has heretofore held a duly noticed public hearing on August 26, 2020, as required by law, on the requested determination, in accordance with the California Government Code Section 65402.(a); and
- WHEREAS,** the project proponent is City of Lodi, 221 West Pine Street, Lodi, CA 95240; and
- WHEREAS,** in 2007, the State adopted Senate Bill 5 (Machado) (and follow-on legislation in SB 1278), which requires the City to amend its General Plan to address flooding that has a 1-in-200 chance of occurring in any given year (i.e., a 200-year storm); and
- WHEREAS,** the City staff retained the services of Kjeldsen Sinnock Neudeck (KSN) to prepare a hydraulic flood model of the City in keeping with the guidance provided DWR (the State Criteria); and
- WHEREAS,** based upon the results of this modeling and a review of the requirements of SB 5 and SB 1278, staff has identified specific changes necessary to the City's General Plan; and
- WHEREAS,** the City of Lodi General Plan was adopted in April 2010 and various new requirements for the General Plan Safety Element have been under the General Plan Guidelines as adopted by the California Office of Planning and Research since 2010; and
- WHEREAS,** implementation of SB 5 standards and procedures requires amendments to the Lodi General Plan Safety Element to meet the requirements of the General Plan Guidelines; and
- WHEREAS,** the City has provided the General Plan Safety Element to the California Geologic Survey for review and received initial comments on July 23, 2020 that have been incorporated into the draft General Plan Safety Element; and
- WHEREAS,** the City of Lodi requested that the Native American Heritage Commission (NAHC) identify tribes with traditional lands or cultural places in the City of Lodi and on January 10, 2020 notified six tribes as identified by the NAHC of the proposed Lodi General Plan amendment. Upon receiving no requests for consultation the City concluded tribal consultations subject to of SB 18; and
- WHEREAS,** the Lodi General Plan was last updated and adopted in 2010 and the Lodi General Plan Environmental Impact Report (EIR) (SCH No. 2009022075), was certified in 2010; and
- WHEREAS,** no amendment under consideration has the potential to increase the density or intensity of development or allow any uses that were analyzed by the General Plan EIR or currently allowed under the General Plan; and
- WHEREAS,** State CEQA Guidelines section 15162 identifies that when an EIR has been certified for an adopted project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of three stated criteria exists; and
- WHEREAS,** all legal prerequisites to the adoption of this Resolution have occurred.

**NOW, THEREFORE, BE IT DETERMINED AND RESOLVED** that the Planning Commission of the City of Lodi hereby recommends that the Lodi City Council determine that the proposed amendments to the Lodi General Plan are exempt from review under the California Environmental Quality Act (CEQA) subject to Section 15162 of the CEQA Guidelines based on the following findings:

1. The proposed amendments will not result in any increases to the density or intensity of allowed uses allowed under the General Plan or allow any uses not currently allowed under the General Plan. The proposed amendments do not represent a significant change to the General Plan with regard to environmental effects and would not require amendment of the General Plan EIR.
2. The policies and programs of the General Plan and the analysis of environmental effects of the General Plan EIR remain valid. No changes in circumstances have occurred since certification of the EIR that would result in new significant environmental effects or an increase in the severity of previously identified significant effects related to the proposed amendments.
3. The proposed General Plan amendment will not result in changes to the physical environment that were not previously analyzed in the General Plan EIR. Therefore, new information identified since certification of the General Plan EIR does not have the potential uncover any new significant impacts or substantial increases in the severity of impacts that would result from adoption of the General Plan amendment.

**AND, BE IT FURTHER DETERMINED AND RESOLVED** that the Planning Commission of the City of Lodi hereby recommends that the Lodi City Council take the following actions: amend the General Plan Safety Element as provided in Exhibit A.

**Dated: August 26, 2020**

I certify that P.C. Resolution No. \_\_\_\_ was passed and adopted by the Planning Commission of the City of Lodi at a regular meeting held on August 26, 2020 by the following vote:

AYES: Commissioners:  
NOES: Commissioners:  
ABSENT: Commissioners:

ATTEST:

\_\_\_\_\_  
Secretary, Planning Commission

# 8

The Safety Element identifies the natural and manmade hazards that exist within the city. It seeks to mitigate their potential impacts, through both preventative and response measures, to ensure the continued health and safety of Lodi community members.

This Element addresses flooding and drainage; potentially hazardous materials and operations; seismic and geologic hazards; fire hazards; and emergency management. Potential health hazards related to air quality are addressed in Chapter 7: Conservation. Storm drain infrastructure related to flooding and drainage is discussed in Chapter 3: Growth Management and Infrastructure.

## 8.1 FLOODING AND DRAINAGE

### Flood Zones

Figure 8-1 shows areas within the 100-year floodplain zones. The map uses Flood Insurance Rate Map (FIRM) 100-year floodplain data produced by Federal Emergency Management Agency (FEMA). The FIRM is the only official mapping for the purposes of National Flood Insurance Program (NFIP) regulations and coverage areas. Additional flood risk data, including 200-year flood data shown in Figure 8-2, described below, is not approved by FEMA for use in relation to the NFIP.

Based on revised flood risk evaluations prepared by ~~the Federal Emergency Management Agency (FEMA)~~ for the City of Lodi and San Joaquin County, effective October 19, 2009, flood hazards are a constraint to development only in two areas of the city: the area immediately adjacent to the Mokelumne River along the city's northern boundary, and the area around the White Slough Water Pollution Control Facility, the City's wastewater treatment facility, in the southwest corner of the Planning Area.

## EXHIBIT A

### Draft General Plan Safety Element

As shown on Figure 8-1, these areas ~~lie within Zone AE, meaning that they~~ are subject to a 1% annual (100-year) flood. Flooding depths in this area are generally greater than three feet. No new development is planned within either of these areas.

Most of the city and the Planning Area lie within areas designated Zone X (500), ~~which describes lands that are~~ subject to the 0.2% annual (500-year) flood zone or that lie within the 100-year flood zone, but with flooding depths less than one foot. This suggests that these areas have a low susceptibility to major flooding, but would be inundated during a 500-year flood event. The remaining portions of the city and Planning Area are classified as Zone X, meaning that they lie outside the 500-year flood zone.

#### 200-Year Floodplain

Figure 8-2 shows areas within the 200-year floodplain which are subject to urban level of flood protection requirements with flood depths of 3–feet or greater. This map identifies areas where higher standards of development and flood protection may be required before issuance of building permits.

Figure 8-2 was developed using data provided by DWR, supplemented by a floodplain study *Mokelumne River Hydraulic Analyses: Summary of Methodology & Results, December 19, 2018* prepared by the firm of Kjeldsen, Sinnock Neudeck, Inc. (KSN). This report provides the technical basis for mapping the extents of the 200-year floodplain within the City of Lodi.

The primary source of potential flooding for Lodi is the Mokelumne River which flows along the City's northern border. The 200-year floodplain resulting from the Mokelumne River within the City was modeled based on several data sources, including a review of the Mokelumne River watershed and a review of existing flood data.

The Mokelumne River is formed by the confluence of the North Fork Mokelumne River and the Middle Fork Mokelumne River in the western slopes of the Sierra Nevada. It flows from this confluence along the Amador and Calaveras County Line down through Pardee and Camanche Reservoirs past Lockeford and Lodi until its eventual discharge into the San Joaquin River near Bouldin Island. The watershed is generally divided into two sub-watersheds: the Upper Mokelumne River and the Lower Mokelumne River with Pardee and Camanche Reservoirs between the two sub-watersheds. The Upper Mokelumne River is primarily federally managed wilderness with some commercial timber land and protected watershed areas managed by the East Bay Municipal Utility District (EBMUD). The Lower Mokelumne River is part of the rich agricultural region of the Central Valley with grapes being the major crop grown in the watershed.

The anticipated 200-year flood event in Lodi is caused by the Mokelumne River rising out of its banks and inundating a wide, flat developed area. Various scenarios were modeled using a combined one-dimensional/two-dimensional hydraulic model. Due to the nature of the flooding anticipated in the Lodi area, the HEC-RAS v.5.0.5 was selected as hydraulic model for the flooding analysis.

Lodi has reliable historical data along four points of the Mokelumne River from past floods- in 1955, 1986, 1997, and 2017. This data was combined with East Bay Municipal Utility District's

hydrologic and stream flow data along the Mokelumne River to calibrate the model for this analysis.

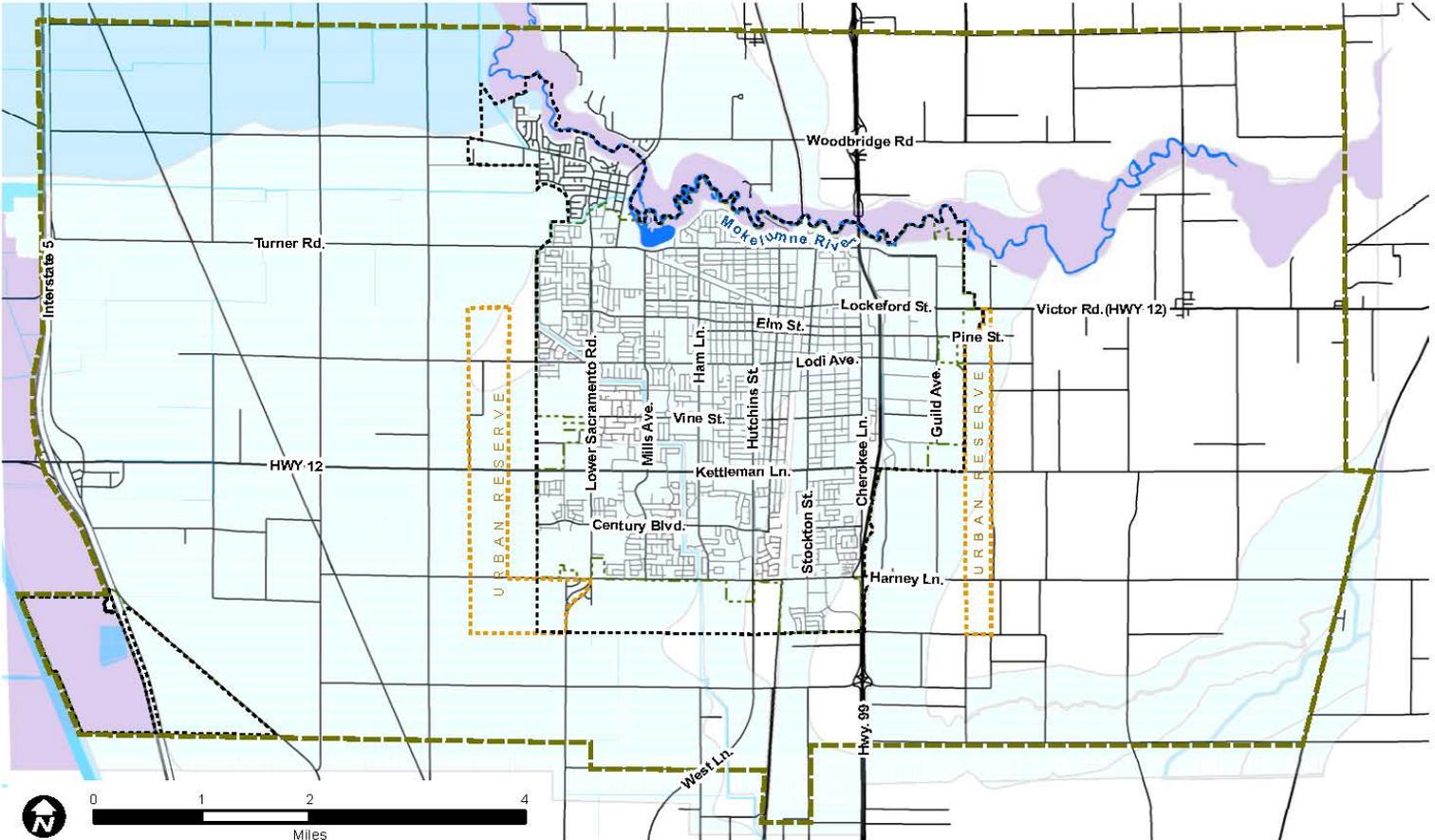
Due to the significantly higher elevations in the high-water mark elevations observed during the 1955 flood event as compared to the three other events, the 1955 flood event was selected as the primary flood to which the hydraulic model was calibrated.

Based upon the analysis described above, and as described in greater detail within the KSN report, areas subject to flooding greater than three feet in depth within the City were mapped as presented in Figure 8.2. Consistent with the requirements of Senate Bill 5 (SB 5), no construction may occur within the delineated 200-year flood plan unless the City finds and determines that urban level of flood protection requirements have been satisfied.

### Dam Inundation

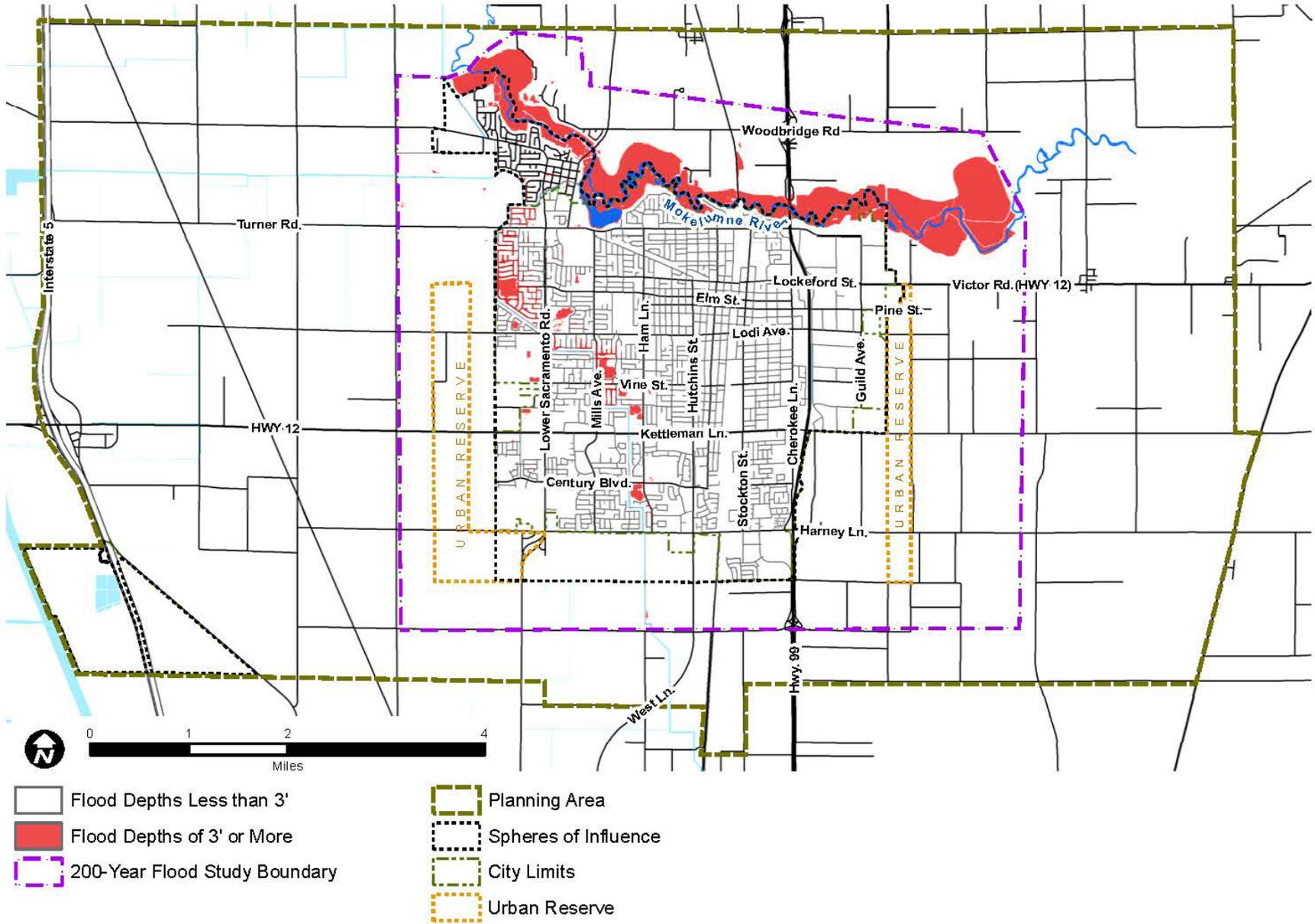
Large quantities of water stored in reservoirs along the Mokelumne, Calaveras, and Stanislaus River systems pose a potential threat to inhabitants of the Planning Area. Flooding could occur as a result of releases from reservoirs upstream of the Planning Area. Partial or complete failure of a dam along any of these rivers, especially the Mokelumne River, could cause inundation in the Planning Area. Dams that pose a direct threat to the Planning Area include Camanche, Camanche South and North Dikes, and Pardee Dam. The entire Planning Area would be inundated in the event of a failure of any of these dams, except for the Camanche North Dikes Dam, whose failure would just flood the Planning Area north of Kettleman Lane.

FIGURE 8-1: 100-YEAR AND 500-YEAR FLOOD ZONES



- Zone A: Area subject to 1% annual chance flood, Base Flood Elevations not determined
- Zone AE: Area subject to 1% annual chance flood, Base Flood Elevations determined
- Zone X (500): Areas of 0.2% annual chance flood; or areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile
- Zone X: Areas determined to be outside of 0.2% annual chance flood.
- Planning Area
- Spheres of Influence
- City Limits
- Urban Reserve

FIGURE 8-2: 200-YEAR FLOOD ZONES



## Flood Protection

Berms along the Mokelumne River were privately built and vary in height. Upstream of SR-99, the adjacent agricultural lands are protected against floods up to the 50-year currents by low discontinuous berms. Berm overtopping here from larger flood events (e.g. the 100-year flood) would not, however, cause inundation in the Planning Area. Berms west of SR-99 are higher and provide protection from flows slightly greater than the 100-year event. Should a major storm event cause berms to be over topped or if a berm or dam fails, flooding would occur. Flooding can also occur when runoff exceeds the capacity of local systems and cannot drain adequately. As long as berms are not over-topped and maintain their structural integrity, flooding is considered to be very unlikely.

San Joaquin County has prepared a Dam Failure Plan that identifies hazards to the county from dams and reservoirs. The Dam Failure Plan also identifies actions that will be taken to respond to flood-related emergencies in the event that flooding occurs. These actions would include implementation of the Standardized Emergency Management System and the County's Multi-Hazard Emergency Plan (see Section 8.5: Emergency Management for details).<sup>1</sup>

Although major flooding is not anticipated, as existing agricultural and open space lands are converted to urban uses, there will be an increase in stormwater runoff from additional impervious surfaces. To minimize those impacts, General Plan policies seek to manage stormwater runoff, through the permitting process, good stormwater management practices (e.g. porous materials, cisterns, bioswales, etc.), and the construction of open spaces and drainage basins (see Chapter 6: Parks, Recreation, and Open Space).

### Agencies Responsible for Flood Protection

#### Federal Emergency Management Agency

FEMA is a federal agency whose mission is to reduce the loss of life and property from natural and human-made disasters through a comprehensive, risk-based emergency management system. One of the agency's responsibilities is to maintain flood zone maps.

#### California Department of Water Resources

DWR implements the California Water Code, regulates activities in California's floodways, encourages preventive flood control maintenance, and operates some flood control projects.

#### Central Valley Flood Protection Board and Plan

The Central Valley Flood Protection Board developed and adopted the CVFPP in 2012 and continues to oversee the plan's implementation. The CVFPP provides conceptual guidance to reduce the risk of flooding for about one million people in California and \$70 billion in infrastructure, homes, and businesses with a goal of providing 200-year flood protection to urban areas.

**8.2 Potentially Hazardous Materials and Operations**

This section focuses on human-made hazards associated with the exposure to hazardous materials, as well as fire, transportation, and utility corridor hazards. Hazardous wastes generated by both residents and businesses within the Planning Area contribute to environmental and human health hazards that have become an increasing public concern. However, proper waste management and disposal practices can minimize public concern over toxicity and the contamination of soils, water, and the air.

**Hazardous Materials**

As of May 2009, the State Water Resources Control Board reported an inventory of Leaking Underground Storage Tanks (LUST) and other (non-fuel) cleanup sites. The majority of the LUST sites have been remediated, with only nine sites listed as still “open” for remediation, monitoring, or assessment. These sites are described in a table in Appendix C and shown in Figure 8-23.

The California Integrated Waste Management Board (CIWMB) is responsible for managing California’s solid waste stream. The CIWMB works in partnership with local government, industry, and the public to reduce waste disposal and ensure environmentally safe landfills are maintained. Table 8-1 and Figure 8-32 describe solid waste, recycling, and landfills facilities (including closed facilities).

**TABLE 8-1: SOLID WASTE AND/OR RECYCLING FACILITIES AND LANDFILL SITES IN THE PLANNING AREA**

SITE	ADDRESS
Solid Waste and Landfill	
Lodi City Landfill	N of Awani Dr. and Mokelumne River Dr.
Central Valley Waste Services	1333 E. Turner Rd.
Valley Landscaping	1320 East Harney Ln.
Recycling Centers	
Pinos Recycling Co.	741 S Cherokee Ln.
Tokay Recycling Center	60 S Cluff Ave.
Tomra Pacific Inc/Apple Market	1320 W Lockeford St.
Diaz Recycling	845 S Central Ave.
Nexcycle/Save Mart #209	610 W Kettleman Ln.
Tomra Pacific Inc/Food 4 Less	2430 W Kettleman Ln.
Nexcycle/Safeway #1648	2449 W Kettleman Ln.

**FIGURE 8-32: POTENTIAL HAZARDOUS MATERIALS SITES****Potentially Hazardous Operations****Airports and Airstrips**

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g. bird strikes), and tall structures (e.g. traffic control towers). (Note that noise impacts are discussed in Chapter 9: Noise.)

Existing public use airports within or adjacent to the Planning Area include:

- Kingdon Airpark: seven miles southwest of downtown Lodi;
- Lodi Airpark: five miles southwest of downtown Lodi, near the intersection of Armstrong and Lower Sacramento roads (inside the Planning Area); and
- Ten private airstrips within or adjacent to the Planning Area.

The 2009 San Joaquin County Airport Land Use Plan provides information on existing and future operations, potential hazards, and land use compatibility. According to the Plan Kingdon Airpark is planning to extend its runway to permit more flights and aircraft types (i.e. from solely accommodating single-engine planes to allowing business jets and turboprop aircraft). No future improvements are anticipated at the Lodi Airpark. Given the distance of these airports from the city's boundaries, the airports do not present substantial hazards to people or property in Lodi.

The Plan's land use compatibility matrix and compatibility zone map is shown in Figure 8-43. The southeast portion of Lodi, south of Century Boulevard, lies within Zone 8: Airport Influence Area, which does not have any land use restrictions. A portion of the Urban Reserve General Plan area, along the north side of Hogan Lane, lies within Zone 7: Traffic Pattern. This classification prohibits outdoor stadiums and non-residential uses with densities greater than 450 persons per acre, and requires at least 10% open space.

**FIGURE 8-43: AIRPORT COMPATIBILITY ZONES****Railroads**

Potential hazards associated with railroads include collisions and train derailment. Either of these incidents can lead to human injury or death as well as causing various environmental impacts. The Federal Railroad Administration regulates railroad safety and provides oversight to the use of railroads.

Lodi is served by two national rail lines, Union Pacific Railroad and the Burlington Northern Santa Fe. The city is also served by a local railroad, Central California Traction, which runs contiguous to industrial areas. Daily passenger service via Amtrak is available from Lodi to San Francisco, Los Angeles, Sacramento and points between. A more detailed discussion of railroad operations and infrastructure may be found in Chapter 5: Transportation.

### Utility Corridors

One of the primary causes of disruption to underground natural gas pipelines, which are present in the Planning Area, is external force damage that occurs during excavation activities. Such damage can create pipeline leaks or ruptures and lead to hazardous health and safety conditions. However, a national program is in place to prevent accidental pipeline damage caused by excavation. For areas adjacent to an underground utility pipeline, the U.S. Department of Transportation Office of Pipeline Safety requires that individuals contact the state “One-Call” center prior to beginning excavation. Advanced planning, effective use of these one-call systems, accurate locating and marking of underground facilities, and the use of safe-digging practices can all be effective in reducing underground facility damage and potentially hazardous conditions.

## 8.3 SEISMIC AND GEOLOGIC HAZARDS

In general, geologic and seismic hazards do not pose a substantial risk to development in Lodi or to overall public safety. The Central Valley is filled with a thick sequence of sediments eroded from the Sierra Nevada range to the east. The most recent deposits in the region are floodplain deposits, consisting of clay, silt, and some sand.

### Seismicity

The Planning Area is located 65 miles east of the Bay Area and lies within Seismic Risk Zone 3. Earthquakes in Seismic Risk Zone 3 pose a lesser risk than those experienced in Zone 4 (such as the San Francisco Bay Area). The Planning Area may be affected by regionally occurring earthquakes; however, impacts resulting from such an event are not likely to be severe. Figure 8-54 identifies active and potentially active faults in and around the Planning Area.

### Regional Faults

Lodi’s nearest active fault is the Greenville Fault, located approximately 34 miles south of the Planning Area.<sup>2</sup> The Maximum Moment magnitude of the maximum probable earthquake on the Greenville Fault is estimated to be 6.9.<sup>3</sup> Other faults close to the Planning Area exhibiting historic displacement (activity within the last 200 years) are the Concord-Green Valley and Hayward Faults located approximately 45 miles west-northwest and 56 miles west of the Planning Area, respectively. Portions of the Calaveras Fault zone also have been rated as being active within the last 200 years; those portions are located approximately 46 miles southwest of the site. The nearest Quaternary fault (2 million years ago to present) to the Planning Area showing evidence of activity within the past 1.6 million years is the San Joaquin Fault located approximately 24 miles southwest of the Planning Area.<sup>4</sup> The nearest mapped fault trace, the Stockton Fault, is not considered an active fault.

### Seismic Structural Safety

The greatest geologic hazard in Lodi is the structural danger posed by ground shaking from earthquakes originating outside of the area. During a high intensity event, some damage could occur to well-made structures and chimneys; some towers could fall; and poorly constructed or weak structures could be heavily damaged. The susceptibility of a structure to damage from ground shaking is related to the underlying foundation material. A foundation of rock or very firm material can intensify short-period motions, which affect low-rise buildings more than tall,

flexible ones. A deep layer of saturated alluvium can cushion low-rise buildings, but it can also accentuate the motion in tall buildings. Other potentially dangerous conditions include, but are not limited to: building architectural features that are not firmly anchored, such as parapets and cornices; roadways, including column and pile bents and abutments for bridges and overcrossings; and above-ground storage tanks and their mounting devices.

The risk of surface fault rupture is considered low due to the substantial distance from the active Hayward and Calaveras Fault zones and the type of ground shaking expected from those faults. The California Geologic Survey (CGS) prepared mapping that defines hazard levels associated with ground shaking, Earthquake Shaking Potential for California, 2016, and designates Lodi and surrounding lands as having low potential for earthquake-induced ground shaking.

### Other Geologic Hazards

Additional geologic hazards that may exist within the Planning Area include soil erosion and settlement. The Planning Area is primarily flat and thus the risk of unstable soils or landslides is considered relatively low.

#### Soil Erosion

Soil erosion is the process whereby soil materials are worn away and transported to another area either by wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and the general level of human activity. Soil containing high amounts of sand or silt can be easily eroded while clayey soils are less susceptible. The Tokay soils present in the Planning Area have a moderate potential for wind erosion. The Tujunga soils, found in more limited quantities in the Planning Area, have a severe potential for wind erosion if vegetative covering is removed.

### [FIGURE 8-54: REGIONAL FAULTS]

#### Expansive Soils

Expansive soils are largely comprised of clay, which expand in volume when water is absorbed and shrink when dried. Structural damage may result over a long period of time, usually resulting from inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Several of the soil types located within the Planning Area are comprised of potentially expansive materials. However, the majority of the Planning Area either has not been measured for soil shrink-swell or has a low potential for soil shrink-swell.

#### Settlement

Settlement is the consolidation of the underlying soil when a load, such as that of a building or new fill material, is placed upon it. When soil tends to settle at different rates and by varying amounts depending on the load weight, it is referred to as differential settlement. Settlement commonly occurs as a result of building construction or other large projects that require soil stockpiles. Areas of the Planning Area that contain fill material may be susceptible to

settlement. If the fill materials are unconsolidated they have the potential to respond more adversely to additional load weights as compared to adjacent native soils.

### Slope Instability/Liquefaction

Due to the relatively level terrain in and around the City of Lodi, potential for hazards associated with slope instability and/or landslides is very low. A review of CGS records (<https://maps.consewrvation.ca.gov/cgs/informationwarehouse/>) determined that CGS has not yet evaluated risks associated with slope instability or liquefaction in the vicinity of the City of Lodi.

## **8.4 FIRE HAZARDS**

Both urban and wildland fire hazards exist in the Lodi Planning Area, creating the potential for injury, loss of life, and property damage. In the event of a fire, the Fire Department relies on sufficient water supply and pressure. The City's design standard for water transmission facilities is to provide 4,000 gallons per minute of flow at a minimum 45 pounds per square inch of pressure in pipes 8 inches and larger.

### Urban Fire Hazards

Urban fires primarily involve the uncontrolled burning of residential, commercial, and/or industrial structures due to human activities. Factors that exacerbate urban structural fires include substandard building construction, highly flammable materials, delayed response times, and inadequate fire protection services.

### Wildland Fire Hazards

The Planning Area is not characterized by substantial areas of wildlands. The topography of the area is relatively homogenous and steep slopes that could contribute to wildland fires are not common. Data provided by the California Department of Conservation Fire and Resource Assessment Program in 2007 indicate that less than one percent of the Planning Area has "Moderate" fire hazard potential. The remaining areas are classified as urban or non-wildland. No portions of the Planning Area are classified as having a "High" or "Very High" risk.

## **8.5 CLIMATE CHANGE**

As noted in the 2017 San Joaquin County LHMP, climate change is virtually certain to continue without immediate and effective global action. According to NASA, 2016 was on track to be the hottest year on record, and 15 of the 17 hottest years have occurred since 2000. Without significant global action to reduce greenhouse gas emissions, the Intergovernmental Panel on Climate Change (IPCC) concludes in its Fifth Assessment Synthesis Report (2014) that average global temperature increases are likely to exceed 1.5 C by the end of the 21st century, with consequences for people, assets, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, water scarcity, sea level rise and storm surges.

The 2018 Report: Indicators of Climate Change in California, prepared by the California Office of Environmental Health Hazard Assessment documents changing climate indicators and the

potential resulting hazards. The impacts of climate change vary dramatically based upon the location evaluated with diverse impacts such as coastal flooding due to sea level rise, increased wildfire risk due to heat and drought and increased landslide potential due to increasingly severe storms. In general, the City of Lodi is buffered from the more severe increased hazards of climate change due to location, topography and surrounding land uses. The most significant threats to the community and its residents will likely result from increasing sea levels and extreme heat events.

The California Natural Resources Agency in a 2012 report estimated that sea levels along the California coast will rise between 3 and 5 feet by 2100. A combination of increased storm intensity and saltwater intrusion in the Sacramento-San Joaquin Delta resulting from higher sea levels could increase the risk for flood-caused levee failures, increasing flood risk and contaminating freshwater supplies stored and conveyed in the delta.

Climate change has the potential create hazards to the community and its members. Warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California. West Nile Virus currently poses the greatest mosquito-borne disease threat. In 2006, heat-related deaths and illnesses were much higher than any other year because of a prolonged heat wave. While difficult to track, climate change can impact human well-being in many ways, including injuries and fatalities from extreme events, and respiratory stress from poor air quality (Mellilo et al., 2014).

With regard to other hazards associated with climate change, Lodi faces relatively lower threats. The hazards of wildland fires impacting Lodi and its residents are reduced by the overall compact form of the urban community and the cultivated agricultural lands surrounding the City. The steep topography and wooded slopes that have contributed to severe fire events in other parts of the state are not present in and around Lodi. Similarly, the local topography is gently rolling and not subject to landslides or land failure resulting from severe storm events. Reduced water supply resulting from prolonged droughts has the potential to impact Lodi. Water supply and service is discussed in Chapter 3 - Growth Management and Infrastructure, of this General Plan.

## **8.65 EMERGENCY MANAGEMENT**

### **Public Safety Departments**

The Lodi Police and Fire departments manage public safety in Lodi, with the Fire Department leading emergency preparedness and planning.

The Fire Department provides a wide range of emergency and non-emergency services, including fire suppression, emergency medical services, hazardous materials response, technical rescue, fire prevention, public education, and related safety services. The Emergency Operations Center, located at the Police department building, serves as the center of the city's emergency operations. City operations remain in compliance with the National Incident

Management System, a comprehensive national approach to incident management, applicable to federal, state, and local governments and the Standardized Emergency Management System, which provides a strategy and framework to address multi-agency and multi-jurisdictional emergencies in California.

As of ~~2008~~2020, the Fire Department had ~~59-57~~ personnel, including 51 firefighters, company officers, or battalion chiefs. The city of Lodi has an Insurance Services Office (ISO) rating of Class 3. A Class 3 ISO rating indicates that the Fire Department is strategically placed throughout the City, and has adequate personnel, equipment, and expertise to serve the current population. In 2006, the most recent year of data availability, the department met the self-imposed National Fire Protection Association's response time criteria of 6 minutes for 90% of all calls.

The Police Department's basic responsibility is to protect and serve the public and property within Lodi, through crime prevention, investigation, and other services. As of ~~2008~~2020, the Police Department had ~~118-109~~ full-time employees and 120 volunteers, with ~~78-77~~ sworn officers.

## Emergency Planning

~~The City has adopted the~~ San Joaquin County updated its Local Hazard Mitigation Plan in 2017. This document addresses County lands and is not a Multi-Jurisdictional Hazard Mitigation Plan. San Joaquin County has also prepared an Emergency Operations Plan that addresses major hazards such as severe weather, flood and damn failure, drought and water shortage and electrical system de-energization. These plans ~~This plan identifies~~ identify measures to reduce the impacts of natural and manmade hazards and to facilitate the recovery and repair of structures if damage should occur from hazardous events. ~~Adoption of the plan ensures that Lodi is eligible for certain federal and State funds for disaster recovery in case of such an event.~~

### Evacuation Routes and Safety Standards

The City of Lodi benefits from numerous points of access that range from State Highways (Highway 99 and Kettleman Lane/Highway 12) to minor roadways that extend into San Joaquin County lands that surround the City. Numerous roads extend to the north, south, east and west, providing multiple routes of exit in each direction from the City in the event of an emergency or catastrophic event.

The City provides street standards for all street types, thus ensuring appropriate standards for emergency access and evacuation. For example, the standards specify roadway widths of 30 feet (curb-to-curb) for minor residential streets and 52 feet for major collector streets.

## 8.6 POLICIES

### GUIDING POLICIES

S-G1 Ensure a high level of public health and safety.

S-G2 Prevent loss of lives, injury, illness, and property damage due to flooding, hazardous materials, seismic and geological hazards, and fire.

S-G3 Protect the public from disasters and provide guidance and response in the event a disaster or emergency.

S-G4 Minimize vulnerability of infrastructure and water supply and distribution systems.

### **IMPLEMENTING POLICIES**

#### **Flooding and Drainage**

S-P1 Continue to participate in the National Flood Insurance Program and ensure that local regulations are in full compliance with standards adopted by FEMA.

S-P2 Cooperate with appropriate local, State, and federal agencies to address local and regional flood issues and dam failure hazards.

S-P3 Require adequate natural floodway design to assure flood control in areas where stream channels have been modified and to foster stream enhancement, improved water quality, recreational opportunities, and groundwater recharge.

S-P4 Cooperate with and encourage reclamation districts to institute a berm maintenance program to reduce berm failures and shall coordinate with appropriate State, federal, and local flood control agencies in planning efforts to ensure the continued protection of local and regional flood control systems.

S-P5 Continue to ensure, through the development review process, that future developments do not increase peak storm flows and do not cause flooding of downstream facilities and properties. Additionally, the City shall ensure that storm drainage facilities are constructed to serve new development adequate to storm runoff generated by a 100-year storm.

S-P6 Prohibit new development, except for public uses incidental to open space development, within Zone A (100-year flood zone) of the most current FEMA floodplain map (see Figure 8-1 for the most current map).

S-P7 The City will update data on the 200-year floodplain through an annual review. This updated information will be made available and referenced during the development review process for areas within the base case 200-year flood map, as shown in Figure 8.2.

S-P8 The City will not: approve any discretionary permit or other discretionary entitlement; approve any ministerial permit that would result in the construction of a new residence; approve a tentative map, or a parcel map for which a tentative map was not required; or enter into a development agreement for any project located in the 200-year floodplain unless it meets one or more of the flood protection findings established under Section 15.60.130.D of the Lodi Municipal Code.

S-P97 Site critical emergency response facilities—such as hospitals, fire stations, police offices, substations, emergency operations centers and other emergency service facilities and utilities outside of the 200-year floodplain to minimize exposure to flooding and other hazards.

S-P810 Update Zoning Ordinance and development review process as needed to reduce peak-hour stormwater flow and increase groundwater recharge. These may include provisions for:

- Constructing parking areas and parking islands without curbs and gutters, to allow stormwater sheet flow into vegetated areas.
- Grading that lengthens flow paths and increases runoff travel time to reduce the peak flow rate.

- Installing cisterns or sub-surface retention facilities to capture rainwater for use in irrigation and non-potable uses.

| S-P~~9~~11 Update City street design standards to allow for expanded stormwater management techniques. These may include:

- Canopy trees to absorb rainwater and slow water flow.
- Directing runoff into or across vegetated areas to help filter runoff and encourage groundwater recharge.
- Disconnecting impervious areas from the storm drain network and maintain natural drainage divides to keep flow paths dispersed.
- Providing naturally vegetated areas in close proximity to parking areas, buildings, and other impervious expanses to slow runoff, filter out pollutants, and facilitate infiltration.
- Directing stormwater into vegetated areas or into water collection devices.
- Using devices such as bioretention cells, vegetated swales, infiltration trenches and dry wells to increase storage volume and facilitate infiltration.

- Diverting water away from storm drains using correctional drainage techniques.

### **Hazardous Materials and Operations**

| S-P~~10-12~~ Require that all fuel and chemical storage tanks are appropriately constructed; include spill containment areas to prevent seismic damage, leakage, fire and explosion; and are structurally or spatially separated from sensitive land uses, such as residential neighborhoods, schools, hospitals and places of public assembly.

| S-P~~11-13~~ Ensure compatibility between hazardous material users and surrounding land use through the development review process. Separate hazardous waste facilities from incompatible uses including, but not limited to, schools, daycares, hospitals, public gathering areas, and high-density residential housing through development standards and the review process.

| S-P~~12-14~~ Consider the potential for the production, use, storage, and transport of hazardous materials in approving new development. Provide for reasonable controls on such hazardous materials. Ensure that the proponents of applicable new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies, as necessary, for each identified site as part of the design phase for each project. Require projects to implement federal or State cleanup standards outlined in the studies during construction.

| S-P~~13-15~~ Regulate the production, use, storage, and transport of hazardous materials to protect the health of Lodi residents. Cooperate with the County and Lodi Fire Department in the identification of hazardous material users, development of an inspection process, and implementation of the City's Hazardous Waste Management and Hazardous Materials Area plans. Require, as appropriate, a hazardous materials inventory for project sites, including an assessment of materials and operations for any development applications, as a component of the development environmental review process or business license review/building permit review.

| S-P~~14-16~~ Work with waste disposal service provider(s) to educate the public as to the types of household hazardous wastes and the proper methods of disposal and shall continue to provide opportunities for residents to conveniently dispose of household hazardous waste.

| S-P~~15-17~~ Continue to follow the County Comprehensive Airport Land Use Plan for guidelines on land use compatibility near airports, land use restrictions, and to ensure public safety.

| S-P~~1618~~ Support grade-separated railroad crossings, where feasible, and other appropriate measures adjacent to railroad tracks to ensure the safety of the community.

| S-P~~1719~~ Continue to mark underground utilities and abide by federal safe-digging practices during construction.

#### **Seismic and Geologic Hazards**

| S-P~~1820~~ Ensure that all public facilities, such as buildings, water tanks, underground utilities, and berms, are structurally sound and able to withstand seismic activity.

| S-P~~1921~~ For buildings identified as seismically unsafe, prohibit a change in use to a higher occupancy or more intensive use until an engineering evaluation of the structure has been conducted and structural deficiencies corrected consistent with City building codes.

| S-P~~20-22~~ Require soils reports for new projects and use the information to determine appropriate permitting requirements, if deemed necessary.

| S-P~~2123~~ Require that geotechnical investigations be prepared for all proposed critical structures (such as police stations, fire stations, emergency equipment, storage buildings, water towers, wastewater lift stations, electrical substations, fuel storage facilities, large public assembly buildings, designated emergency shelters, and buildings three or more stories high) before construction or approval of building permits, if deemed necessary. The investigation shall include estimation of the maximum credible earthquake, maximum ground acceleration, duration, and the potential for ground failure because of liquefaction or differential settling.

| S-P~~2224~~ Require new development to include grading and erosion control plans prepared by a qualified engineer or land surveyor.

#### **Fire Hazards**

| S-P~~2325~~ Maintain a vegetation management program to ensure clearing of dry brush areas. Conduct management activities in a manner consistent with all applicable environmental regulations.

#### **Emergency Management**

| *Policies related to police and fire facilities are addressed in Chapter 3: Growth Management and Infrastructure.*

| S-P~~2426~~ Coordinate with local, State, and Federal agencies to establish, maintain, and test a coordinated emergency response system that addresses a variety of hazardous and threatening situations. Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures. Develop and implement public information programs concerning disaster response and emergency preparedness and develop mutual aid agreements and communication links with surrounding communities for assistance during times of emergency.

| S-P~~2527~~ Maintain and periodically update the City's Emergency Preparedness Plan, including review of County and State emergency response procedures that must be coordinated with City procedures.

| S-P~~2628~~ Ensure that major access and evacuation corridors are available and unobstructed in case of major emergency or disaster. Continue to identify appropriate road standards, including minimum road widths and turnouts to provide adequate emergency access and evacuation routes.

## EXHIBIT A

### Draft General Plan Safety Element

S-P2729 Continue to use the San Joaquin County Hazard Mitigation Plan to reduce hazard risk and coordinate with the County on its update and implementation, consistent with the Federal Emergency Management Agency and the Disaster Act of 2000.

The following definitions should be added to the General Plan Glossary upon adoption of the General Plan Safety Element.

“100-year Floodplain” means areas that have a 1-in-100 chance of flooding in any given year using criteria consistent with, or developed by, the Federal Emergency Management Agency (FEMA). As used in this chapter, the term shall be ascribed to all areas labeled as such on Figure 8-1 of the General Plan Safety Element.

“200-year Floodplain” means areas that have a 1-in-200 chance of flooding in any given year using criteria consistent with, or developed by, the Department of Water Resources. As used in this chapter, the term shall be ascribed to all areas labeled as such on Figure 8-2 of the General Plan Safety Element.

“Ordinary High Water Mark” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

“Urban Level of Flood Protection” means the level of protection that is necessary to withstand flooding that has a 1-in-200 chance of occurring in any given year using criteria consistent with, or developed by, the Department of Water Resources. “Urban level of flood protection” shall not mean shallow flooding (less than three feet in depth) or flooding from local drainage that meets the criteria of the national Federal Emergency Management Agency standard of flood protection.



The Safety Element identifies the natural and manmade hazards that exist within the city. It seeks to mitigate their potential impacts, through both preventative and response measures, to ensure the continued health and safety of Lodi community members.

This Element addresses flooding and drainage; potentially hazardous materials and operations; seismic and geologic hazards; fire hazards; and emergency management. Potential health hazards related to air quality are addressed in Chapter 7: Conservation. Storm drain infrastructure related to flooding and drainage is discussed in Chapter 3: Growth Management and Infrastructure.



Drainage basins (top), Lodi Lake (middle), and the Woodbridge Irrigation Canal (bottom) help to drain stormwater.

## 8.1 FLOODING AND DRAINAGE

### Flood Zones

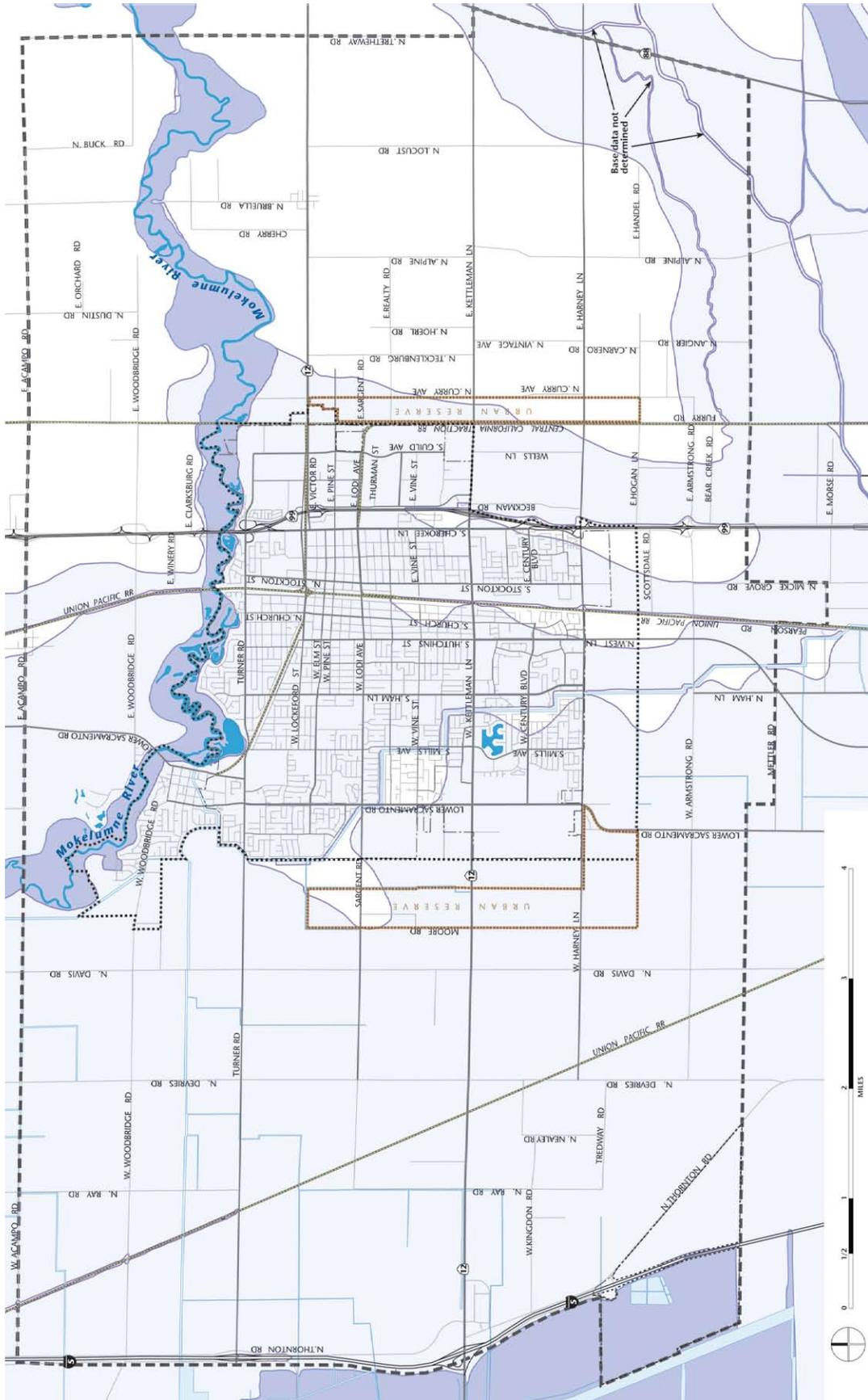
Based on revised flood risk evaluations prepared by the Federal Emergency Management Agency (FEMA) for the City of Lodi and San Joaquin County, effective October 19, 2009, flood hazards are a constraint to development only in two areas of the city: the area immediately adjacent to the Mokelumne River along the city's northern boundary, and the area around the White Slough Water Pollution Control Facility, the City's wastewater treatment facility, in the southwest corner of the Planning Area. As shown on Figure 8-1, these areas lie within Zone AE, meaning that they are subject to a 1% annual (100-year) flood. Flooding depths in this area are generally greater than three feet. No new development is planned within either of these areas.

Most of the city and the Planning Area lie within Zone X, which describes lands subject to the 0.2% annual (500-year) flood zone or that lie within the 100-year flood zone, but with flooding depths less than one foot. This suggests that these areas have a low susceptibility to major flooding, but would be inundated during a 500-year flood event. The remaining portions of the city and Planning Area are classified as Zone X, meaning that they lie outside the 500-year flood zone.

### Dam Inundation

Large quantities of water stored in reservoirs along the Mokelumne, Calaveras, and Stanislaus River systems pose a potential threat to inhabitants of the Planning Area. Flooding could occur as a result of releases from reservoirs upstream of the Planning Area. Partial or complete failure of a dam along any of these rivers, especially the Mokelumne River, could cause inundation in the Planning Area. Dams that pose a direct threat to the Planning Area include Camanche, Camanche South and North Dikes, and Pardee Dam. The entire Planning Area would be inundated in the event of a failure of any of these dams, except for the Camanche North Dikes Dam, whose failure would just flood the Planning Area north of Kettleman Lane.

**FIGURE 8-1: FLOOD ZONES**



- Planning Area
- ..... Sphere of Influence
- City Limits
- Urban Reserve

- Zone AE: Special flood hazard area subject to inundation by the 1% annual chance flood. No base flood elevations determined.
- Zone X (500): Areas of 0.2% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Zone X: Areas determined to be outside the 0.2% annual chance flood.



## Flood Protection

Berms along the Mokelumne River were privately built and vary in height. Upstream of SR-99, the adjacent agricultural lands are protected against floods up to the 50-year currents by low discontinuous berms. Berm overtopping here from larger flood events (e.g. the 100-year flood) would not, however, cause inundation in the Planning Area. Berms west of SR-99 are higher and provide protection from flows slightly greater than the 100-year event. Should a major storm event cause berms to be over topped or if a berm or dam fails, flooding would occur. Flooding can also occur when runoff exceeds the capacity of local systems and cannot drain adequately. As long as berms are not over-topped and maintain their structural integrity, flooding is considered to be very unlikely.

San Joaquin County has prepared a Dam Failure Plan that identifies hazards to the county from dams and reservoirs. The Dam Failure Plan also identifies actions that will be taken to respond to flood-related emergencies in the event that flooding occurs. These actions would include implementation of the Standardized Emergency Management System and the County's Multi-Hazard Emergency Plan (see Section 8.5: Emergency Management for details).<sup>1</sup>

Although major flooding is not anticipated, as existing agricultural and open space lands are converted to urban uses, there will be an increase in stormwater runoff from additional impervious surfaces. To minimize those impacts, General Plan policies seek to manage stormwater runoff, through the permitting process, good stormwater management practices (e.g. porous materials, cisterns, bioswales, etc.), and the construction of open spaces and drainage basins (see Chapter 6: Parks, Recreation, and Open Space).

## 8.2 POTENTIALLY HAZARDOUS MATERIALS AND OPERATIONS

This section focuses on human-made hazards associated with the exposure to hazardous materials, as well as fire, transportation, and utility corridor hazards. Hazardous wastes generated by both residents and businesses within the Planning Area contribute to environmental and human health hazards that have become an increasing public concern. However, proper waste management and disposal practices can minimize public concern over toxicity and the contamination of soils, water, and the air.

### Hazardous Materials

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The California Integrated Waste Management Board (CIWMB) is responsible for managing California's solid waste stream. The CIWMB works in partnership with local government, industry, and the public to reduce waste disposal and ensure environmentally safe landfills are maintained. Table 8-1 and Figure 8-2 describe solid waste, recycling, and landfills facilities (including closed facilities).

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<sup>1</sup> San Joaquin County, 2003.

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SITE	ADDRESS
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Tomra Pacific Inc/Apple Market	1320 W Lockeford St.
Diaz Recycling	845 S Central Ave.
Nexcycle/Save Mart #209	610 W Kettleman Ln.
Tomra Pacific Inc/Food 4 Less	2430 W Kettleman Ln.
Nexcycle/Safeway #1648	2449 W Kettleman Ln.

Source: California Integrated Waste Management Board, 2007.



Plan policies seek to ensure the safe operation of storage tanks and potentially hazardous materials.



Lodi is served by three solid waste facilities and multiple recycling centers.



## Potentially Hazardous Operations

### Airports and Airstrips

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g. bird strikes), and tall structures (e.g. traffic control towers). (Note that noise impacts are discussed in Chapter 9: Noise.)

Existing public use airports within or adjacent to the Planning Area include:

- Kingdon Airpark: seven miles southwest of downtown Lodi;
- Lodi Airpark: five miles southwest of downtown Lodi, near the intersection of Armstrong and Lower Sacramento roads (inside the Planning Area); and
- Ten private airstrips within or adjacent to the Planning Area.

The 2009 San Joaquin County Airport Land Use Plan provides information on existing and future operations, potential hazards, and land use compatibility. According to the Plan Kingdon Airpark is planning to extend its runway to permit more flights and aircraft types (i.e. from solely accommodating single-engine planes to allowing business jets and turboprop aircraft). No future improvements are anticipated at the Lodi Airpark. Given the distance of these airports from the city's boundaries, the airports do not present substantial hazards to people or property in Lodi.

The Plan's land use compatibility matrix and compatibility zone map is shown in Figure 8-3. The southeast portion of Lodi, south of Century Boulevard, lies within Zone 8: Airport Influence Area, which does not have any land use restrictions. A portion of the Urban Reserve General Plan area, along the north side of Hogan Lane, lies within Zone 7: Traffic Pattern. This classification prohibits outdoor stadiums and non-residential uses with densities greater than 450 persons per acre, and requires at least 10% open space.

### Railroads

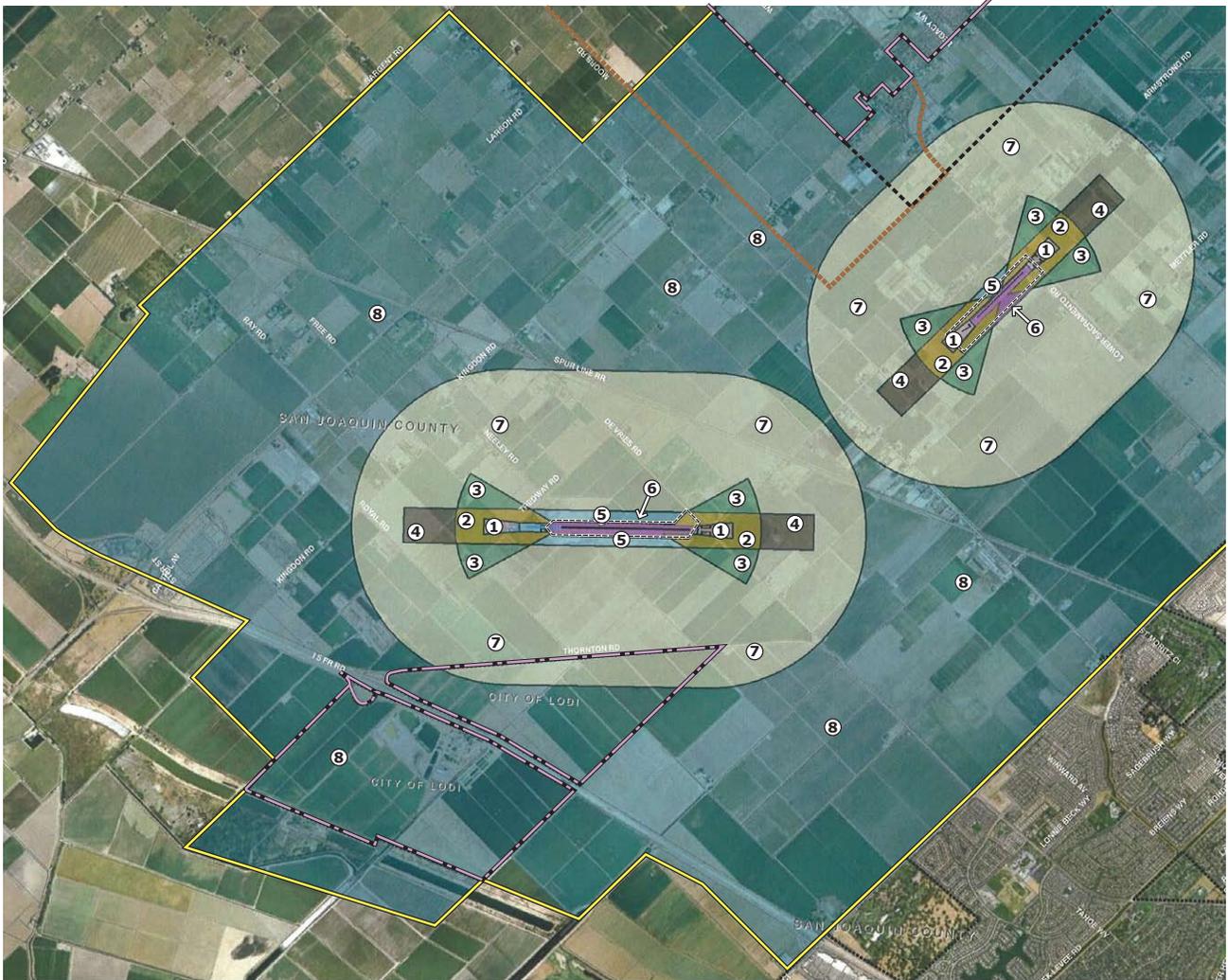
Potential hazards associated with railroads include collisions and train derailment. Either of these incidents can lead to human injury or death as well as causing various environmental impacts. The Federal Railroad Administration regulates railroad safety and provides oversight to the use of railroads.

Lodi is served by two national rail lines, Union Pacific Railroad and the Burlington Northern Santa Fe. The city is also served by a local railroad, Central California Traction, which runs contiguous to industrial areas. Daily passenger service via Amtrak is available from Lodi to San Francisco, Los Angeles, Sacramento and points between. A more detailed discussion of railroad operations and infrastructure may be found in Chapter 5: Transportation.

### Utility Corridors

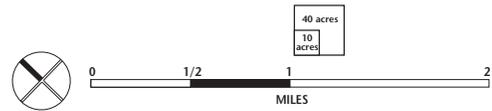
One of the primary causes of disruption to underground natural gas pipelines, which are present in the Planning Area, is external force damage that occurs during excavation activities. Such damage can create pipeline leaks or ruptures and lead to hazardous health and safety conditions. However, a national program is in place to prevent accidental pipeline damage caused by excavation. For areas adjacent to an underground utility pipeline, the U.S. Department of Transportation Office of Pipeline Safety requires that individuals contact the state "One-Call" center prior to beginning excavation. Advanced planning, effective use of these one-call systems, accurate locating and marking of underground facilities, and the use of safe-digging practices can all be effective in reducing underground facility damage and potentially hazardous conditions.

**FIGURE 8-3: AIRPORT COMPATIBILITY ZONES**



- ① Runway Protection Zone
- ② Inner Approach/Departure Zone
- ③ Inner Turning Zone
- ④ Outer Approach/Departure Zone
- ⑤ Sideline Safety Zone
- ⑥ Airport Property
- ⑦ Traffic Pattern Zone
- ⑧ Airport Influence Area

- Urban Reserve
- Sphere of Influence (2008)
- City Limits (2008)



Source: San Joaquin Council of Governments

## 8.3 SEISMIC AND GEOLOGIC HAZARDS

In general, geologic and seismic hazards do not pose a substantial risk to development in Lodi or to overall public safety. The Central Valley is filled with a thick sequence of sediments eroded from the Sierra Nevada range to the east. The most recent deposits in the region are floodplain deposits, consisting of clay, silt, and some sand.

### Seismicity

The Planning Area is located 65 miles east of the Bay Area and lies within Seismic Risk Zone 3. Earthquakes in Seismic Risk Zone 3 pose a lesser risk than those experienced in Zone 4 (such as the San Francisco Bay Area). The Planning Area may be affected by regionally occurring earthquakes; however, impacts resulting from such an event are not likely to be severe. Figure 8-4 identifies active and potentially active faults in and around the Planning Area.

### Regional Faults

Lodi's nearest active fault is the Greenville Fault, located approximately 34 miles south of the Planning Area.<sup>2</sup> The Maximum Moment magnitude of the maximum probable earthquake on the Greenville Fault is estimated to be 6.9.<sup>3</sup> Other faults close to the Planning Area exhibiting historic displacement (activity within the last 200 years) are the Concord-Green Valley and Hayward Faults located approximately 45 miles west-northwest and 56 miles west of the Planning Area, respectively. Portions of the Calaveras Fault zone also have been rated as being active within the last 200 years; those portions are located approximately 46 miles southwest of the site. The nearest Quaternary fault (2 million years ago to present) to the Planning Area showing evidence of activity within the past 1.6 million years is the San Joaquin Fault located approximately 24 miles southwest of the Planning Area.<sup>4</sup> The nearest mapped fault trace, the Stockton Fault, is not considered an active fault.

<sup>2</sup> Jennings, 1994.

<sup>3</sup> Peterson et al. 1996.

<sup>4</sup> Jennings 1994; Bartow 1991.

### Seismic Structural Safety

The greatest geologic hazard in Lodi is the structural danger posed by groundshaking from earthquakes originating outside of the area. During a high intensity event, some damage could occur to well-made structures and chimneys; some towers could fall; and poorly constructed or weak structures could be heavily damaged. The susceptibility of a structure to damage from ground shaking is related to the underlying foundation material. A foundation of rock or very firm material can intensify short-period motions, which affect low-rise buildings more than tall, flexible ones. A deep layer of saturated alluvium can cushion low-rise buildings, but it can also accentuate the motion in tall buildings. Other potentially dangerous conditions include, but are not limited to: building architectural features that are not firmly anchored, such as parapets and cornices; roadways, including column and pile bents and abutments for bridges and overcrossings; and above-ground storage tanks and their mounting devices.

The risk of surface fault rupture is considered low. The probability of soil liquefaction actually taking place in the Planning Area is considered to be a low to moderate hazard, due to the substantial distance from the active Hayward and Calaveras Fault zones and the type of ground shaking expected from those faults.

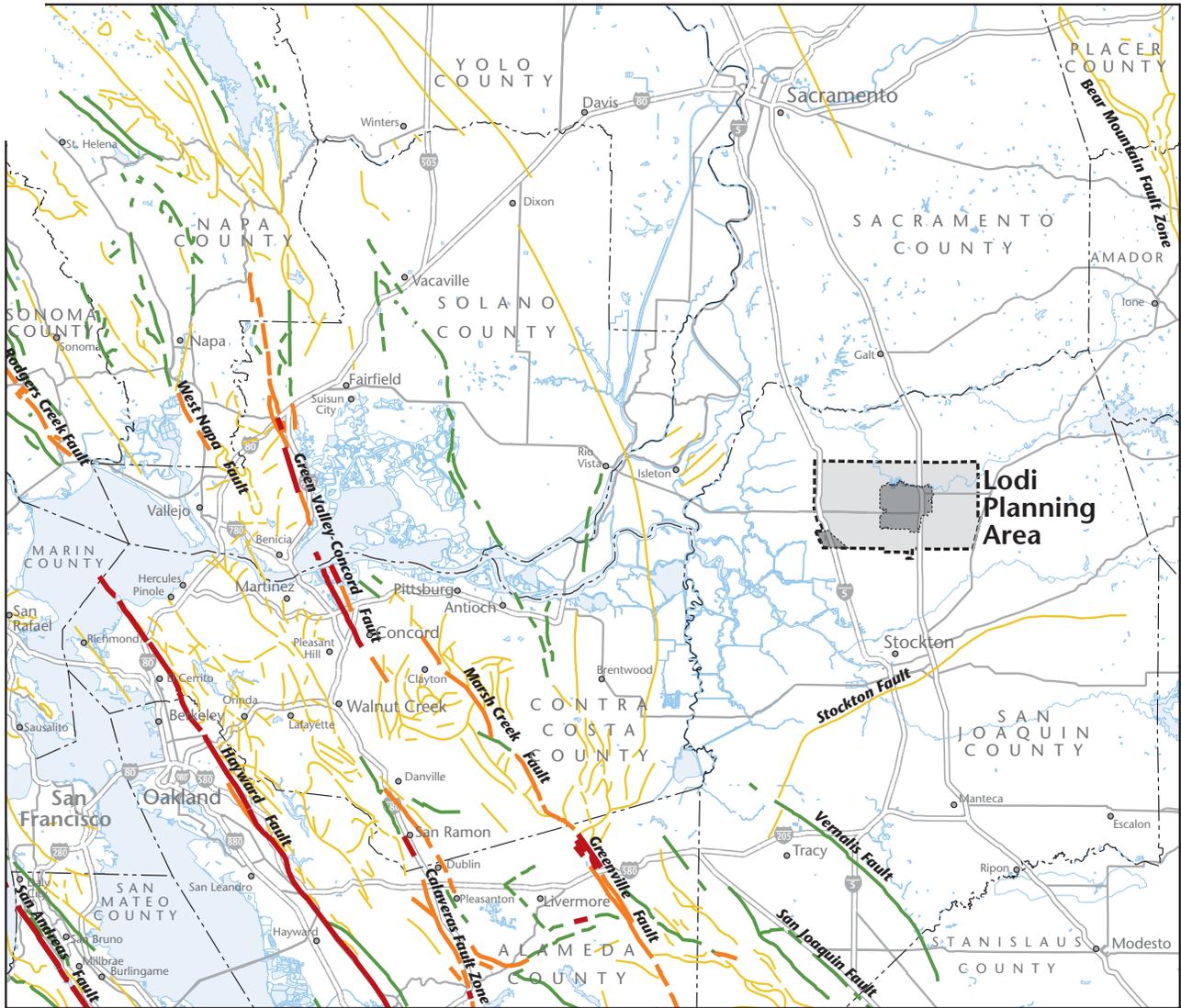
### Other Geologic Hazards

Additional geologic hazards that may exist within the Planning Area include soil erosion and settlement. The Planning Area is primarily flat and thus the risk of unstable soils or landslides is considered relatively low.

### Soil Erosion

Soil erosion is the process whereby soil materials are worn away and transported to another area either by wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and the general level of human activity. Soil containing high amounts of sand or silt can be easily eroded while clayey soils are less susceptible. The Tokay soils present in the Planning Area have a moderate potential for wind erosion. The

**FIGURE 8-4: REGIONAL FAULTS**



- Active Fault (Historic Displacement)
- Active Fault (Holocene Displacement)
- Potentially Active Fault (Quaternary Displacement)
- Inactive Fault (Pre-Quaternary)



Tujunga soils, found in more limited quantities in the Planning Area, have a severe potential for wind erosion if vegetative covering is removed.

### **Expansive Soils**

Expansive soils are largely comprised of clay, which expand in volume when water is absorbed and shrink when dried. Structural damage may result over a long period of time, usually resulting from inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Several of the soil types located within the Planning Area are comprised of potentially expansive materials. However, the majority of the Planning Area either has not been measured for soil shrink-swell or has a low potential for soil shrink-swell.

### **Settlement**

Settlement is the consolidation of the underlying soil when a load, such as that of a building or new fill material, is placed upon it. When soil tends to settle at different rates and by varying amounts depending on the load weight, it is referred to as differential settlement. Settlement commonly occurs as a result of building construction or other large projects that require soil stockpiles. Areas of the Planning Area that contain fill material may be susceptible to settlement. If the fill materials are unconsolidated they have the potential to respond more adversely to additional load weights as compared to adjacent native soils.

## **8.4 FIRE HAZARDS**

Both urban and wildland fire hazards exist in the Lodi Planning Area, creating the potential for injury, loss of life, and property damage. In the event of a fire, the Fire Department relies on sufficient water supply and pressure. The City's design standard for water transmission facilities is to provide 4,000 gallons per minute of flow at a minimum 45 pounds per square inch of pressure in pipes 8 inches and larger.

### **Urban Fire Hazards**

Urban fires primarily involve the uncontrolled burning of residential, commercial, and/or industrial structures due to human activities. Factors that exacerbate urban structural fires include substandard building construction, highly flammable materials, delayed response times, and inadequate fire protection services.

### **Wildland Fire Hazards**

The Planning Area is not characterized by substantial areas of wildlands. The topography of the area is relatively homogenous and steep slopes that could contribute to wildland fires are not common. Data provided by the California Department of Conservation Fire and Resource Assessment Program in 2007 indicate that less than one percent of the Planning Area has "Moderate" fire hazard potential. The remaining areas are classified as urban or non-wildland. No portions of the Planning Area are classified as having a "High" or "Very High" risk.

## 8.5 EMERGENCY MANAGEMENT

### Public Safety Departments

The Lodi Police and Fire departments manage public safety in Lodi, with the Fire Department leading emergency preparedness and planning.

The Fire Department provides a wide range of emergency and non-emergency services, including fire suppression, emergency medical services, hazardous materials response, technical rescue, fire prevention, public education, and related safety services. The Emergency Operations Center, located at the Police department building, serves as the center of the city's emergency operations. City operations remain in compliance with the National Incident Management System, a comprehensive national approach to incident management, applicable to federal, state, and local governments and the Standardized Emergency Management System, which provides a strategy and framework to address multi-agency and multi-jurisdictional emergencies in California.

As of 2008, the Fire Department had 59 personnel, including 51 firefighters, company officers, or battalion chiefs. The city of Lodi has an Insurance Services Office (ISO) rating of Class 3. A Class 3 ISO rating indicates that the Fire Department is strategically placed throughout the City, and has adequate personnel, equipment, and expertise to serve the current population. In 2006, the most recent year of data availability, the department met the self-imposed National Fire Protection Association's response time criteria of 6 minutes for 90% of all calls.

The Police Department's basic responsibility is to protect and serve the public and property within Lodi, through crime prevention, investigation, and other services. As of 2008, the Police Department had 118 full-time employees and 120 volunteers, with 78 sworn officers.

### Emergency Planning

The City has adopted the San Joaquin County Hazard Mitigation Plan. This plan identifies measures to reduce the impacts of natural and manmade hazards and to facilitate the recovery and repair of structures if damage should occur from hazardous events. Adoption of the plan ensures that Lodi is eligible for certain federal and State funds for disaster recovery in case of such an event.

### Evacuation Routes and Safety Standards

The City provides street standards for all street types, thus ensuring appropriate standards for emergency access and evacuation. For example, the standards specify roadway widths of 30 feet (curb-to-curb) for minor residential streets and 52 feet for major collector streets.

## 8.6 POLICIES

### GUIDING POLICIES

- S-G1** Ensure a high level of public health and safety.
- S-G2** Prevent loss of lives, injury, illness, and property damage due to flooding, hazardous materials, seismic and geological hazards, and fire.
- S-G3** Protect the public from disasters and provide guidance and response in the event a disaster or emergency.
- S-G4** Minimize vulnerability of infrastructure and water supply and distribution systems.

### IMPLEMENTING POLICIES

#### Flooding and Drainage

- S-P1** Continue to participate in the National Flood Insurance Program and ensure that local regulations are in full compliance with standards adopted by FEMA.
- S-P2** Cooperate with appropriate local, State, and federal agencies to address local and regional flood issues and dam failure hazards.
- S-P3** Require adequate natural floodway design to assure flood control in areas where stream channels have been modified and to foster stream enhancement, improved water quality, recreational opportunities, and groundwater recharge.
- S-P4** Cooperate with and encourage reclamation districts to institute a berm maintenance program to reduce berm failures and shall coordinate with appropriate State, federal, and local flood control agencies in planning efforts to ensure the continued protection of local and regional flood control systems.
- S-P5** Continue to ensure, through the development review process, that future developments do not increase peak storm flows and do not cause flooding of downstream facilities and properties. Additionally, the City shall ensure that storm drainage facilities are constructed to serve new development adequate to storm runoff generated by a 100-year storm.
- S-P6** Prohibit new development, except for public uses incidental to open space development, within Zone A (100-year flood zone) of the most current FEMA floodplain map (see Figure 8-1 for the most current map).
- S-P7** Site critical emergency response facilities—such as hospitals, fire stations, police offices, substations, emergency operations centers and other emergency service facilities and utilities—to minimize exposure to flooding and other hazards.
- S-P8** Update Zoning Ordinance and development review process as needed to reduce peak-hour stormwater flow and increase groundwater recharge. These may include provisions for:
  - Constructing parking areas and parking islands without curbs and gutters, to allow stormwater sheet flow into vegetated areas.
  - Grading that lengthens flow paths and increases runoff travel time to reduce the peak flow rate.
  - Installing cisterns or sub-surface retention facilities to capture rainwater for use in irrigation and non-potable uses.
- S-P9** Update City street design standards to allow for expanded stormwater management techniques. These may include:
  - Canopy trees to absorb rainwater and slow water flow.
  - Directing runoff into or across vegetated areas to help filter runoff and encourage groundwater recharge.
  - Disconnecting impervious areas from the storm drain network and maintain natural drainage divides to keep flow paths dispersed.
  - Providing naturally vegetated areas in close proximity to parking areas, buildings, and

other impervious expanses to slow runoff, filter out pollutants, and facilitate infiltration.

- Directing stormwater into vegetated areas or into water collection devices.
- Using devices such as bioretention cells, vegetated swales, infiltration trenches and dry wells to increase storage volume and facilitate infiltration.
- Diverting water away from storm drains using correctional drainage techniques.

## Hazardous Materials and Operations

**S-P10** Require that all fuel and chemical storage tanks are appropriately constructed; include spill containment areas to prevent seismic damage, leakage, fire and explosion; and are structurally or spatially separated from sensitive land uses, such as residential neighborhoods, schools, hospitals and places of public assembly.

**S-P11** Ensure compatibility between hazardous material users and surrounding land use through the development review process. Separate hazardous waste facilities from incompatible uses including, but not limited to, schools, daycares, hospitals, public gathering areas, and high-density residential housing through development standards and the review process.

**S-P12** Consider the potential for the production, use, storage, and transport of hazardous materials in approving new development. Provide for reasonable controls on such hazardous materials. Ensure that the proponents of applicable new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies, as necessary, for each identified site as part of the design phase for each project. Require projects to implement federal or State cleanup standards outlined in the studies during construction.

**S-P13** Regulate the production, use, storage, and transport of hazardous materials to protect the health of Lodi residents. Cooperate with the County and Lodi Fire Department in the

identification of hazardous material users, development of an inspection process, and implementation of the City's Hazardous Waste Management and Hazardous Materials Area plans. Require, as appropriate, a hazardous materials inventory for project sites, including an assessment of materials and operations for any development applications, as a component of the development environmental review process or business license review/building permit review.

**S-P14** Work with waste disposal service provider(s) to educate the public as to the types of household hazardous wastes and the proper methods of disposal and shall continue to provide opportunities for residents to conveniently dispose of household hazardous waste.

**S-P15** Continue to follow the County Comprehensive Airport Land Use Plan for guidelines on land use compatibility near airports, land use restrictions, and to ensure public safety.

**S-P16** Support grade-separated railroad crossings, where feasible, and other appropriate measures adjacent to railroad tracks to ensure the safety of the community.

**S-P17** Continue to mark underground utilities and abide by federal safe-digging practices during construction.

## Seismic and Geologic Hazards

**S-P18** Ensure that all public facilities, such as buildings, water tanks, underground utilities, and berms, are structurally sound and able to withstand seismic activity.

**S-P19** For buildings identified as seismically unsafe, prohibit a change in use to a higher occupancy or more intensive use until an engineering evaluation of the structure has been conducted and structural deficiencies corrected consistent with City building codes.

**S-P20** Require soils reports for new projects and use the information to determine

appropriate permitting requirements, if deemed necessary.

- S-P21** Require that geotechnical investigations be prepared for all proposed critical structures (such as police stations, fire stations, emergency equipment, storage buildings, water towers, wastewater lift stations, electrical substations, fuel storage facilities, large public assembly buildings, designated emergency shelters, and buildings three or more stories high) before construction or approval of building permits, if deemed necessary. The investigation shall include estimation of the maximum credible earthquake, maximum ground acceleration, duration, and the potential for ground failure because of liquefaction or differential settling.
- S-P22** Require new development to include grading and erosion control plans prepared by a qualified engineer or land surveyor.

## Fire Hazards

- S-P23** Maintain a vegetation management program to ensure clearing of dry brush areas. Conduct management activities in a manner consistent with all applicable environmental regulations.

## Emergency Management

*Policies related to police and fire facilities are addressed in Chapter 3: Growth Management and Infrastructure.*

- S-P24** Coordinate with local, State, and Federal agencies to establish, maintain, and test a coordinated emergency response system that addresses a variety of hazardous and threatening situations. Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures. Develop and implement public information programs concerning disaster response and emergency preparedness and develop mutual aid agreements and communication links with surrounding communities for assistance during times of emergency.

- S-P25** Maintain and periodically update the City's Emergency Preparedness Plan, including review of County and State emergency response procedures that must be coordinated with City procedures.

- S-P26** Ensure that major access and evacuation corridors are available and unobstructed in case of major emergency or disaster. Continue to identify appropriate road standards, including minimum road widths and turnouts to provide adequate emergency access and evacuation routes.

- S-P27** Continue to use the San Joaquin County Hazard Mitigation Plan to reduce hazard risk and coordinate with the County on its update and implementation, consistent with the Federal Emergency Management Agency and the Disaster Act of 2000.

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Item 4b.



# CITY OF LODI PLANNING COMMISSION Staff Report

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**MEETING DATE:** August 26, 2020

**APPLICATION NO:** Municipal Code: 2020-002 Z

**REQUEST:** Request for the Planning Commission of the City of Lodi to recommend that the City Council implement the provisions of Senate Bill (SB) 5 and SB 1278 related to 200-Year Flood Protection by repealing and reenacting the following Lodi Municipal Code Chapters and Section: Chapter 15.60 – Flood Damage Prevention; Section 17.14.040 – General Performance Standards; and, Chapter 17.28 – Overlay Zoning Districts; and, amend the Lodi Zoning Map to establish the -F-200 Overlay District. CEQA Status: Exempt, Section 15162, Subsequent EIRs and Negative Declarations.

**APPLICANT:** City of Lodi  
221 West Pine Street.  
Lodi, CA 95240

## **RECOMMENDATION:**

Staff recommends that the Planning Commission conduct a public hearing and consider adoption of a Resolution (Attachment 1) recommending that the Lodi City Council implement the provisions of SB 5 and SB 1278 related to 200-year flood protection by repealing and reenacting LMC Chapter 15.60 – Flood Damage Prevention; Section 17.14.040 – General Performance Standards; and, Chapter 17.28 – Overlay Zoning Districts.

## **BACKGROUND:**

California Senate Bill (SB) 5 (Machado) (and follow-on legislation in SB 1278) requires the City to amend its General Plan and Zoning regulations to address flooding that has a 1-in-200 chance of occurring in any given year (i.e., a 200-year storm event). The intent of the legislation is to strengthen the link between flood management and land use.

SB 1278 required that SB5-related General Plan amendments be adopted by July 2015 and the Zoning changes be adopted by July 2016. Based upon analysis demonstrating very limited portions of the City of Lodi fall within the 200-year flood zone, and that the land within the 200-year flood zone was already developed and therefore generally exempt from 200-year flood zone restrictions, the City of Lodi did not proceed with adopting provisions related to SB 5 and SB 1278.

Based upon more recent analysis, it has been determined that the City is required to adopt general plan and zoning code amendments per these two State laws. Based on this determination, the firm Kjeldsen Sinnock Neudeck Inc. (KSN) was retained to delineate the 200-year floodplain in the City of Lodi.

The proposed actions before the Planning Commission would apply the findings of KSN's floodplain mapping, implement the requirements of SB 5 related to 200-year flood protection and update provisions of the Lodi Municipal Code to meet current requirements for the related to the 200-year floodplain.

The provisions of SB 5 and 200-year flood protection are supplementary to existing flood protection policies implemented by the City. The City will continue to implement existing provisions related to the 100-year floodplain. It is noteworthy that the 200-year floodplain does not have a direct relationship with Federal flood insurance requirements; the insurance requirements apply to the Federally-mapped 100-year floodplain.

#### **ANALYSIS:**

SB 5 required the California Department of Water Resources (DWR) to prepare criteria that local agencies could use to make findings related to urban level of flood protection (State Criteria). As provided in the State Criteria, the provisions of SB 5 apply to urban areas of the Sacramento-San Joaquin Valley (including the City of Lodi) that are either covered in the FEMA 100-year floodplain or are within watersheds of more than 10 square miles and where the potential flood depth is more than three feet.

Under SB 5, affected jurisdictions must determine that an Urban Level of Flood Protection will be achieved prior to approving most types of development within the 200-year floodplain. The term 200-year floodplain refers to areas anticipated to be inundated in a storm that has a 1-in-200 chance of occurring in any given year (200-year storm event). Specific actions requiring a determination of Urban Level of Flood Protection include:

- Entering into a Development Agreement for all types of property development
- Approving a discretionary permit or other discretionary entitlement for all development projects
- Approving a ministerial permit for all projects that would result in construction of a new residence
- Approving a tentative map consistent with the Subdivision Map Act for all subdivisions
- Approving a Parcel Map for which a tentative map is not required consistent with the Subdivision Map Act for all subdivisions

The City Council considered various policy issues related to the 200-year floodplain at its June 4, 2019 Shirt Sleeve session. In addition to providing background on 200-year floodplain requirements, staff requested Council direction on the following points:

- Definition of 200-Year Floodplain. The City is required to define a depth of inundation associated with the 200-year floodplain. SB 5 established that areas inundated to a depth of three feet or more must be considered within the 200-year floodplain. The City Council directed that this standard would be applied in Lodi.
- Building Floor Elevation. For property located within the 200-year floodplain, the City is required to establish a minimum building floor elevation. The City Council directed

that building floors in the 200-year floodplain must be at or higher than the anticipated water level of the 200-year flood.

- Consider Planned Improvements. In modeling the 200-year floodplain, the City is allowed to consider planned projects that will provide additional flood protection (floodwall at Mills & Turner). The Council directed the 200-year floodplain be modeled as currently exists and without the benefit of future improvements.

The above direction was provided to KSN and applied in the modeling and mapping of the 200-year floodplain in the City of Lodi.

### **PROPOSED AMENDMENTS:**

The actions proposed for the Planning Commission's consideration include amendments to three chapters/sections of the Municipal Code. Specifically, these amendments include:

- Amendments to Chapter 15.60 – Flood Damage Prevention (Exhibit A) define the 200-year floodplain, note the findings that must be made prior to allowing development in the 200-year floodplain and identify types of construction that are exempt from 200-year floodplain regulations.
- Amendments to Section 17.14.040 – General Performance Standards (Exhibit B) are limited to a new reference that all development shall be in compliance with the provisions of Chapter 15.60 – Flood Damage Prevention.
- Amendments to Chapter 17.28 – Overlay Zoning Districts (Exhibit C) amend Section 17.28.030 – Flood hazard overlay zoning districts, to establish both a 100-year flood zone (F100) and a 200-year flood zone (F200). This section also establishes the applicability of the F200 overlay district as well as exempt projects.
- Mapping amendments to establish the -F-200 Overlay District on the City's Zoning Map (Exhibit D).

### **ENVIRONMENTAL ANALYSIS:**

The California Environmental Quality Act (CEQA) requires analysis of agency approvals of discretionary "projects." A "project," under CEQA, is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The amendment of the General Plan and Municipal Code is a project under CEQA.

The proposed Project includes amendments to the Lodi Municipal Code (Title 15 and Title 17) in response to the requirements of SB 5 flood risk legislation. In total, the amendments implement new limits and requirements related to development in the 200-year floodplain

The General Plan established the policy direction for land uses in the City. The Municipal Code implements and is consistent with the policies and land use designations of the General Plan. A comprehensive update of the General Plan was adopted in 2010 and the Lodi General Plan Environmental Impact Report (EIR) (SCH No. 2009022075), was certified in 2010.

The proposed amendments to the Municipal Code (proposed amendments) will implement flood management requirements established under SB 5 and SB 1278 and will be consistent with the

development assumptions and policy direction as established under the General Plan and as analyzed by the General Plan EIR.

State CEQA Guidelines Section 15162 (Subsequent EIRs and Negative Declarations) establishes that when an EIR has been certified for an adopted project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of the following exists:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

Analysis: Uses allowed under the Municipal Code (Title 17 – Development Code) were analyzed under the General Plan EIR. The proposed amendments will not result in any increases to the density or intensity of uses allowed under the Municipal Code and would not allow any uses not currently allowed under the Municipal Code. The proposed amendments do not represent a significant change to the Municipal Code with regard to environmental effects and would not require amendment of the General Plan EIR.

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

Analysis: The uses allowed under the Municipal Code are consistent with the policies and programs of the General Plan and the analysis of environmental effects of the General Plan EIR remain valid. With regard to the proposed amendments, no changes in circumstances have occurred since certification of the EIR that would result in new significant environmental effects or an increase in the severity of previously identified significant effects related to the proposed amendments.

3. New information of substantial importance, which was not known and could not have been known with exercise of reasonable diligence at the time of the previous EIR was certified as complete shows any of the following:

- a. The project will have one or more significant impacts not discussed in the previous EIR;
- b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.

Analysis: The proposed Municipal Code amendments will not result in changes to the

physical environment that were not previously analyzed in the General Plan EIR. No new information has been identified since certification of the General Plan EIR that has the potential uncover any new significant impacts or substantial increases in the severity of impacts that would result from adoption of the Municipal Code amendments.

Based upon the above analysis, the City of Lodi has determined that, consistent with Section 15162 of the CEQA Guidelines, no modifications to the General Plan EIR would be necessary for it to adequately address the impacts of the proposed Project. Therefore, no further CEQA review is required.

**PUBLIC HEARING NOTICE:**

Legal Notice pertaining to the proposed General Plan and Municipal Code amendments was published in the Lodi News Sentinel on August 15, 2020.

**RECOMMENDED MOTIONS:**

Should the Planning Commission agree with staff’s recommendations, the following motion is suggested:

“I move that the Planning Commission adopt a Resolution recommending that the Lodi City Council determine the proposed Municipal Code amendments are exempt from review under CEQA subject to Section 15162 of the CEQA Guidelines. I further move to recommend that the City Council: amend Title 15 – Building and Construction, of the Lodi Municipal Code by repealing and reenacting Chapter 15.60 – Flood Damage and Prevention; amend Title 17 – Development Code, of the Lodi Municipal Code, by repealing and reenacting Section 17.14.040 – General Performance Standards, and Chapter 17.28 – Overlay Zoning Districts; and amend the Lodi Zoning Map to establish the -F-200 Overlay District as provided in Exhibits A through D of the attached resolution.”

**ALTERNATIVE PLANNING COMMISSION ACTIONS:**

- Approve the request as provided in the attached resolution and amended ordinances
- Deny the request
- Continue the request

Respectfully Submitted,

Concur,

John P. Fukasawa  
Deputy City Attorney

John R. Della Monica Jr.  
Community Development Director

**ATTACHMENTS:**

1. Planning Commission Draft Resolution
  - Exhibit A: Amendments to Chapter 15.60 – Flood Damage Prevention
  - Exhibit B: Amendments to Section 17.14.040 – General Performance Standards
  - Exhibit C: Amendments to Chapter 17.28 – Overlay Zoning Districts
  - Exhibit D: Proposed -F-200 Overlay District, Lodi Zoning Map

RESOLUTION NO. P.C. NO. \_\_\_\_\_

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF LODI RECOMMENDING THAT THE LODI CITY COUNCIL IMPLEMENT THE PROVISIONS OF SENATE BILL (SB) 5 AND SB 1278 RELATED TO 200-YEAR FLOOD PROTECTION BY REPEALING AND REENACTING THE FOLLOWING LODI MUNICIPAL CODE CHAPTERS AND SECTION: CHAPTER 15.60 – FLOOD DAMAGE PREVENTION; SECTION 17.14.40 – GENERAL PROPERTY DEVELOPMENT AND USE STANDARDS; AND, CHAPTER 17.28 – OVERLAY ZONING DISTRICTS; AND, AMEND THE LODI ZONING MAP TO ESTABLISH THE -F-200 OVERLAY DISTRICT. CEQA STATUS: EXEMPT, SECTION 15162, SUBSEQUENT EIRS AND NEGATIVE DECLARATIONS.**

- WHEREAS,** the Planning Commission of the City of Lodi has heretofore held a duly noticed public hearing on August 12, 2020, as required by law, on the requested determination, in accordance with the California Government Code Section 65402.(a); and
- WHEREAS,** the project proponent is City of Lodi, 221 West Pine Street, Lodi, CA 95240; and
- WHEREAS,** in 2007, the State adopted Senate Bill 5 (Machado) (and follow-on legislation in SB 1278), which requires the City to amend its Municipal Code regulations to address flooding that has a 1-in-200 chance of occurring in any given year (i.e., a 200-year storm); and
- WHEREAS,** the City staff retained the services of Kjeldsen Sinnock Neudeck (KSN) to prepare a hydraulic flood model of the City in keeping with the guidance provided DWR (the State Criteria); and
- WHEREAS,** based upon the results of this modeling and a review of the requirements of SB 5 and SB 1278, staff has identified specific changes necessary to the City's Municipal Code; and
- WHEREAS,** implementation of SB 5 standards and procedures requires amendments to the Lodi Municipal Code, Title 15 – Buildings and Construction and Title 17 – Development Code; and
- WHEREAS,** the Lodi General Plan was last updated and adopted in 2010 and the Lodi General Plan Environmental Impact Report (EIR) (SCH No. 2009022075), was certified in 2010; and
- WHEREAS,** State CEQA Guidelines section 15162 identifies that when an EIR has been certified for an adopted project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of three stated criteria exists; and
- WHEREAS,** no amendment under consideration has the potential to increase the density or intensity of development or allow any uses that were analyzed by the General Plan EIR or currently allowed under the General Plan or the Municipal Code; and
- WHEREAS,** all legal prerequisites to the adoption of this Resolution have occurred.

**NOW, THEREFORE, BE IT DETERMINED AND RESOLVED** that the Planning Commission of the City of Lodi hereby recommends that the Lodi City Council determine that the proposed amendments to the Lodi Municipal Code (proposed amendments) are exempt from review under the California Environmental Quality Act (CEQA) subject to Section 15162 of the CEQA Guidelines based on the following findings:

1. Uses allowed under the Municipal Code (Title 17 – Development Code) were analyzed under the

General Plan EIR. The proposed amendments will not result in any increases to the density or intensity of uses allowed under the Municipal Code and would not allow any uses not currently allowed under the Municipal Code. The proposed amendments do not represent a significant change to the Municipal Code with regard to environmental effects and would not require amendment of the General Plan EIR.

2. The uses allowed under the Municipal Code are consistent with the policies and programs of the General Plan and the analysis of environmental effects of the General Plan EIR remain valid. With regard to the proposed amendments, no changes in circumstances have occurred since certification of the EIR that would result in new significant environmental effects or an increase in the severity of previously identified significant effects related to the proposed amendments.
3. The proposed Municipal Code amendments will not result in changes to the physical environment that were not previously analyzed in the General Plan EIR. No new information has been identified since certification of the General Plan EIR that has the potential uncover any new significant impacts or substantial increases in the severity of impacts that would result from adoption of the Municipal Code amendments.

**AND, BE IT FURTHER DETERMINED AND RESOLVED** that the Planning Commission of the City of Lodi hereby recommends that the Lodi City Council take the following actions: repeal and reenact Chapter 15.60 – Flood Damage Prevention of the Lodi Municipal Code as provided in Exhibit A; repeal and reenact Section 17.14.040 – General Performance Standards as provided in Exhibit B; repeal and reenact Chapter 17.28 – Overlay Zoning Districts as provided in Exhibit C; and amend the Lodi Zoning Map to establish the -F-200 Overlay District as provided in Exhibit D.

**Dated: August 26, 2020**

I certify that P.C. Resolution No. \_\_\_\_\_ was passed and adopted by the Planning Commission of the City of Lodi at a regular meeting held on August 26, 2020 by the following vote:

AYES:                      Commissioners:  
NOES:                      Commissioners:  
ABSENT:                    Commissioners:

ATTEST:

\_\_\_\_\_  
Secretary, Planning Commission

## Chapter 15.60 - FLOOD DAMAGE PREVENTION

## Article I. - General Provisions

## 15.60.010 - Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council of the city of Lodi does hereby adopt the following floodplain management regulations.

(Ord. No. 1829, § 1, 3-17-2010)

## 15.60.020 - Findings of fact.

- A. The flood hazard areas of the city of Lodi are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare; and
- B. These flood losses are caused by uses that are inadequately elevated, flood-proofed, or protected from flood damage. The cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities also contributes to flood losses.

(Ord. No. 1829, § 1, 3-17-2010)

## 15.60.030 - Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately-owned land within flood prone, mudslide [i.e. mudflow], or flood related erosion areas. These regulations are designed to:

1. Protect human life and health;
2. Minimize expenditure of public money for costly flood control projects;
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. Minimize prolonged business interruptions;
5. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;
6. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;
7. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
8. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

(Ord. No. 1829, § 1, 3-17-2010) 15.60.040 - Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes regulations to:

1. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
4. Control filling, grading, dredging, and other development which may increase flood damage;
5. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

6. Restrict or prohibit new development in areas identified as within the 200-year floodplain.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.050 - Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

- A. "A zone" See "Special flood hazard area."
- B. "Accessory structure" means a structure that is either:
  1. Solely for the parking of no more than two cars; or
  2. A small, low-cost shed for limited storage, less than one hundred twenty square feet.
- C. "Accessory use" means a use which is incidental and subordinate to the principal use of the parcel of land on which it is located.
- D. "Alluvial fan" means a geomorphologic feature characterized by a cone or fan-shaped deposit of boulders, gravel, and fine sediments that have been eroded from mountain slopes, transported by flood flows, and then deposited on the valley floors, and which is subject to flash flooding, high velocity flows, debris flows, erosion, sediment movement and deposition, and channel migration.
- E. "Apex" means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.
- F. "Appeal" means a request for a review of the floodplain administrator's interpretation of any provision of this chapter.
- G. "Area of shallow flooding" means a designated AO or AH Zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

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### Chapter 15.60 – Flood Damage Prevention

- H. "Area of special flood hazard" See "Special flood hazard area."
- I. "Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood").
- J. "Base flood elevation" (BFE) means the elevation shown on the flood insurance rate map for Zones AE, AH, A1-30, VE and V1-V30 that indicates the water surface elevation resulting from a flood that has a one percent or greater chance of being equaled or exceeded in any given year.
- K. "Basement" means any area of the building having its floor subgrade - i.e., below ground level - on all sides.
- L. "Building" See "Structure."
- M. "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations or storage of equipment or materials.
- N. "Encroachment" means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures, or development into a floodplain which may impede or alter the flow capacity of a floodplain.
- O. "Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before March 1, 1978.
- P. "Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
- Q. "Flood, flooding, or flood water" means:
  - 1. A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; and/or mudslides (i.e., mudflows); and
  - 2. The condition resulting from flood-related erosion.
  - 3. See definition EEE for additional description of flooding in the 200-year floodplain.
- R. "Flood boundary and floodway map (FBFM)" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the floodway.
- S. "Flood insurance rate map (FIRM)" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- T. "Flood insurance study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood insurance rate map, the flood boundary and floodway map, and the water surface elevation of the base flood.

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- U. "Floodplain or floodprone area" means any land area susceptible to being inundated by water from any source —See "Flooding."
- V. "Floodplain administrator" is the community official designated by title to administer and enforce the floodplain management regulations.
- W. "Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.
- X. "Floodplain management regulations" means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of police power which control development in floodprone areas. This term describes federal, state, or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.
- Y. "Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. For guidelines on dry and wet floodproofing, see FEMA Technical Bulletins TB 1-93, TB 3-93, and TB 7-93.
- Z. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as "regulatory floodway."
- AA. "Floodway fringe" is that area of the floodplain on either side of the "regulatory floodway" where encroachment may be permitted.
- BB. "Fraud and victimization" as related to Section 15.60.240 and Section 15.60.250 of this chapter, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, the city of Lodi will consider the fact that every newly constructed building adds to government responsibilities and remains a part of the community for fifty to one-hundred years. Buildings that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages bring. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.
- CC. "Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long-term storage or related manufacturing facilities.
- DD. "Governing body" is the local governing unit, i.e. county or municipality that is empowered to adopt and implement regulations to provide for the public health, safety, and general welfare of its citizenry.
- EE. "Hardship" as related to Section 15.60.240 of this chapter means the exceptional hardship that would result from a failure to grant the requested variance. The city of Lodi requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps,

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personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

- FF. "Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- GG. "Historic structure" means any structure that is:
1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
  2. Certified or preliminarily determined by the secretary of the interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district;
  3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the secretary of interior; or
  4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the secretary of the interior or directly by the secretary of the interior in states without approved programs.
- HH. "Levee" means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.
- II. "Levee system" means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accord with sound engineering practices.
- JJ. "Lowest floor" means the lowest floor of the lowest enclosed area, including basement (see "Basement" definition).
1. An unfinished or flood resistant enclosure below the lowest floor that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, is not considered a building's lowest floor provided it conforms to applicable non-elevation design requirements, including, but not limited to:
    - a. The flood openings standard in Section 15.60.180(C)(3);
    - b. The anchoring standards in Section 15.60.180(A);
    - c. The construction materials and methods standards in Section 15.60.180(B);
    - d. The standards for utilities in Section 15.60.190.
- KK. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

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- LL. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
- MM. "Market value" is defined in the city of Lodi substantial damage/improvement procedures. See Section 15.60.130(B)(1).
- NN. "Mean sea level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.
- OO. "New construction," for floodplain management purposes, means structures for which the "start of construction" commenced on or after April 16, 2010, and includes any subsequent improvements to such structures.
- PP. "New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after March 1, 1978.
- QQ. "Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation, or other material in, along, across, or projecting into any watercourse which may alter, impede, retard, or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.
- RR. "One-hundred-year flood" or "100-year flood." See "Base flood."
- SS. "Program deficiency" means a defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management regulations.
- TT. "Public safety and nuisance" as related to Section 15.60.240 and Section 15.60.250 of this chapter, means that the granting of a variance must not result in anything which is injurious to safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.
- UU. "Recreational vehicle" means a vehicle which is:
1. Built on a single chassis;
  2. Four hundred square feet or less when measured at the largest horizontal projection;
  3. Designed to be self-propelled or permanently towable by a light-duty truck; and
  4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
- VV. "Regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

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- WW. "Remedy a violation" means to bring the structure or other development into compliance with state or local floodplain management regulations, or if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damage, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing state or federal financial exposure with regard to the structure or other development.
- XX. "Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.
- YY. "Sheet flow area." See "Area of shallow flooding."
- ZZ. "Special flood hazard area (SFHA)" means an area in the floodplain subject to a one percent or greater chance of flooding in any given year. It is shown on an FHBM or FIRM as Zone A, AO, A1-A30, AE, A99, or, AH.
- AAA. "Start of construction" includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within one hundred eighty days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
- BBB. "Structure" means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.
- CCC. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.
- DDD. "Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:
- Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

E.E. "Two Hundred (200) Year Floodplain" means areas that have a 1-in-200 chance of flooding (water

depths of three feet or more) in any given year using criteria consistent with, or developed by, the Department of Water Resources. As used in this chapter, the term shall be ascribed to all areas labeled as such on Figure 2 of the General Plan Safety Element.

FFF. "Urban Level of Flood Protection" means the level of protection that is necessary to withstand flooding that has a 1-in-200 chance of occurring in any given year using criteria consistent with, or developed by, the Department of Water Resources.

GGG. "Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

FFFHHH. "Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this chapter is presumed to be in violation until such time as that documentation is provided.

GGGIII. "Water surface elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

HHHJJJ. "Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.060 - Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of city of Lodi.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.070 - Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the "Flood Insurance Study (FIS) for San Joaquin County, California, and Incorporated Areas" dated October 16, 2009, with accompanying flood insurance rate maps (FIRM's) and flood boundary and floodway maps (FBFM's), dated October 16, 2009, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the city of Lodi by the floodplain administrator. The study, FIRM's and FBFM's are on file at the city of Lodi Public Works Department, 221 West Pine Street, Lodi, California, 95240.

Areas designated as within the 200-year floodplain were identified in the December 19, 2018 study "Mokelumne River Hydraulic Analyses: Summary of Methodology and Results", prepared by Kjeldsen Sinnock Nuedeck (KSN Inc.). The study and supporting analysis are on file at the city of Lodi Public Works Department, 221 West Pine Street, Lodi, California, 95240.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.080 - Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards) shall constitute a misdemeanor. Nothing herein shall prevent the city of Lodi from taking such lawful action as is necessary to prevent or remedy any violation.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.090 - Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.100 - Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- A. Considered as minimum requirements;
- B. Liberally construed in a manner most protective of property and human health and safety; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.110 - Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of city of Lodi, any officer or employee thereof, the State of California, or the Federal Emergency Management Agency, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. No. 1829, § 1, 3-17-2010)

Article II. - Administration

15.60.120 - Designation of the floodplain administrator.

The public works director is hereby appointed to administer, implement, and enforce this chapter by granting or denying development permits in accord with its provisions.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.130 - Duties and responsibilities of the floodplain administrator.

The duties and responsibilities of the floodplain administrator shall include, but not be limited to the following:

- A. Permit Review. Review all development permits to determine:
  - 1. Permit requirements of this chapter have been satisfied, including determination of substantial improvement and substantial damage of existing structures;
  - 2. All other required state and federal permits have been obtained;
  - 3. The site is reasonably safe from flooding;
  - 4. The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. This means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the city of Lodi;
  - 5. All letters of map revision (LOMR's) for flood control projects are approved prior to the issuance of building permits. Building permits must not be issued based on conditional letters of map revision (CLOMR's). Approved CLOMR's allow construction of the proposed flood control project and land preparation as specified in the "start of construction" definition.
- B. Development of Substantial Improvement and Substantial Damage Procedures.
  - 1. Using FEMA publication FEMA 213, "Answers to Questions About Substantially Damaged Buildings," develop detailed procedures for identifying and administering requirements for substantial improvement and substantial damage, to include defining "market value."
  - 2. Assure procedures are coordinated with other departments/divisions and implemented by city staff.
- C. Review, Use, and Development of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 15.60.070, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer Article III, Provisions for Flood Hazard Reduction.

NOTE: A base flood elevation may be obtained using one of two methods from the FEMA publication, FEMA 265, "Managing Floodplain Development in Approximate Zone A Areas - A Guide for Obtaining and Developing Base (100-year) Flood Elevations" dated July 1995.

- D. 200-year Flood Zone Determination. Review development applications to determine whether a proposed project is within the 200-year floodplain. No development or physical changes requiring a development permit required by this Title shall be allowed within the 200-year floodplain unless it has first met one or more of the followings findings; these findings shall be made by the Floodplain Administrator.

1. The project has an Urban Level of Flood Protection from flood management facilities that is not reflected in the most recent map of the 200-year floodplain;
  2. Conditions imposed on the project will provide for an Urban Level of Flood Protection;
  3. Adequate progress has been made toward construction of a flood protection system to provide an Urban Level of Flood Protection for the project, as indicated by the Central Valley Flood Protection Board for State projects, or by the Floodplain Administrator for local projects; or
  4. The project is a site improvement that would not result in the development of a new habitable structure and would not increase risk of damage to neighboring development or alter the conveyance area of a watercourse in the case of a flood.
- E. Allowable Land Uses, -F200 overlay district. Nothing in this subsection is intended to authorize a use not otherwise allowed in the primary zoning district with which the -F200 overlay district is combined.
- F. Exempt Projects, -F200 overlay district. Site improvements that would not result in the development of a new habitable structure and would not increase risk of damage to neighboring development or alter the conveyance area of a watercourse in the case of a flood are exempt from the restrictions of the -F200 overlay district. Improvements that qualify for this exemption include, but are not limited to, the replacement or repair of a damaged or destroyed habitable structure with substantially the same building footprint area; interior repairs or remodels to existing structures; additions to existing residential dwellings; new non-habitable structures or repairs or remodels to non-habitable structures including but not limited to landscape features, detached garages, and pools and spas.

GD. Notification of Other Agencies.

1. Alteration or relocation of a watercourse:
  - a. Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
  - b. Submit evidence of such notification to the Federal Emergency Management Agency;
  - c. Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.
2. Base flood elevation changes due to physical alterations:
  - a. Within six months of information becoming available or project completion, whichever comes first, the floodplain administrator shall submit or assure that the permit applicant submits technical or scientific data to FEMA for a letter of map revision (LOMR).
  - b. All LOMR's for flood control projects are approved prior to the issuance of building permits. Building permits must not be issued based on conditional letters of map revision (CLOMR's). Approved CLOMR's allow construction of the proposed flood

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control project and land preparation as specified in the "start of construction" definition.

- c. Such submissions are necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements are based on current data.

3. Changes in corporate boundaries:

Notify FEMA in writing whenever the corporate boundaries have been modified by annexation or other means and include a copy of a map of the community clearly delineating the new corporate limits.

**HE.** Documentation of Floodplain Development. Obtain and maintain for public inspection and make available as needed the following:

1. Certification required by Section 15.60.180(C)(1) and Section 15.60.210 (lowest floor elevations);
2. Certification required by Section 15.60.180(C)(2) (elevation or floodproofing of nonresidential structures);
3. Certification required by Section 15.60.180(C)(3) (wet floodproofing standard);
4. Certification of elevation required by Section 15.60.200(A)(3) (subdivisions and other proposed development standards);
5. Certification required by Section 15.60.230(B) (floodway encroachments); and
6. Maintain a record of all variance actions, including justification for their issuance, and report such variances issued in its biennial report submitted to the Federal Emergency Management Agency.

**IF.** Map Determination. Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazard, where there appears to be a conflict between a mapped boundary and actual field conditions. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 15.60.260.

**JG.** Remedial Action. Take action to remedy violations of this chapter as specified in Section 15.60.080.

**KH.** Biennial Report. Complete and submit biennial report to FEMA.

**LT.** Planning. Assure community's general plan is consistent with floodplain management objectives herein.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.140 - Development permit - ~~-F100 overlay district.~~

No structure or land shall, after the effective date of the ordinance codified in this chapter, be located, extended, converted or altered within ~~the -F100FP (floodplain)-zoned lands~~ overlay district without full compliance with the terms of this chapter, and without having first received a development

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### Chapter 15.60 – Flood Damage Prevention

or construction permit in accordance with the provisions of this title and, for developments requiring use permits, with the provisions of this code Sections 17.72.040 through 17.72.110. Development permit applications shall be reviewed by the community development director and the requirements of this chapter enforced in accordance with this code Sections 17.87.060 through 17.87.090.

A development permit shall be obtained before any construction or other development, including manufactured homes, within any area of special flood hazard established in Section 15.60.070. Application for a development permit shall be made on forms furnished by the city of Lodi. The applicant shall provide the following minimum information:

- A. Plans in duplicate, drawn to scale, showing:
  1. Location, dimensions, and elevation of the area in question, existing or proposed structures, storage of materials and equipment and their location;
  2. Proposed locations of water supply, sanitary sewer, and other utilities;
  3. Grading information showing existing and proposed contours, any proposed fill, and drainage facilities;
  4. Location of the regulatory floodway when applicable;
  5. Base flood elevation information as specified in Section 15.60.070 or Section 15.60.130(C);
  6. Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; and
  7. Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed, as required in Section 15.60.180(C)(2) of this chapter and detailed in FEMA Technical Bulletin TB 3-93.
- B. Certification from a registered civil engineer or architect that the nonresidential floodproofed building meets the floodproofing criteria in Section 15.60.180(C)(2).
- C. For a crawl-space foundation, location and total net area of foundation openings as required in Section 15.60.180(C)(3) of this chapter and detailed in FEMA Technical Bulletins 1-93 and 7-93.
- D. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- E. All appropriate certifications listed in Section 15.60.130(E) of this chapter.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.150 - Permitted uses—Generally.

The following uses are permitted in the -F100 overlay district without a use permit where modification or removal of native vegetation, including trees, is not required:

- A. Agriculture;
- B. Open space agricultural uses not requiring a closed building such as cropland, orchards, and livestock feeding and grazing;

- C. The storage of farm machinery which is readily removable from the area within the time available after a flood warning;
- D. Recreational; firmly anchored recreational floating docks;
- E. Modification of native vegetation: Where modification or removal of native vegetation is required, such modification or removal may be permitted after obtaining a development permit consisting of written approval from the community development director; provided, that such proposed modifications in the floodplain have been found to be consistent with the open space conservation element of the general plan.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.160 - Permitted uses, -F100 overlay district—Use permit and state approvals.

The following uses may be permitted in the -F100 overlay district after approval of a conditional use permit by the city and after approval by the state department of fish and game and the reclamation board of the state; provided, that as determined by said reclamation board, a combination of such uses within the floodplain does not materially increase the flood height of the intermediate regional floodplain; and provided further, that as determined by the state department of fish and game, full mitigation measures will be used to protect and enhance the trees, native plant materials and wildlife in the floodplain, in accordance with good fish and game practices and in accordance with the general standards listed under Article III "Provisions for Flood Hazard Reduction" of this chapter:

- A. Residential dwellings on existing undeveloped lots in subdivisions approved before January 1, 1977;
- B. Outdoor recreational facilities:
  - Campgrounds
  - Boating facilities
  - Parks
  - Golf courses or driving ranges
  - Athletic fields
  - Shooting ranges
- C. Fences, fills, walls, excavations, or other appurtenances which do not constitute an obstruction or debris-catching obstacle to the passage of floodwaters and which are consistent with the open space-conservation element policies;
- D. Private drives, bridges, and public utility wires and pipelines for transmission and distribution;
- E. Improvements in stream channel alignment, cross-section and capacity, including modification of riverbank and flood protection levees;
- F. Structures that are designed to have a minimum effect upon the flow of water and are firmly anchored to prevent the structure from flotation (excepting floating docks); provided, that no structures for human habitation is permitted;

G. Other similar uses of a type not appreciably damaged by floodwaters.

(Ord. No. 1829, § 1, 3-17-2010)

15.60.170 - Prohibited uses, -F100 Overlay District.

In the areas of special flood hazard for residential structures, all subgrade enclosed areas are prohibited as they are considered to be basements (see "basement" definition). This prohibition includes below-grade garages and storage areas.

(Ord. No. 1829, § 1, 3-17-2010)

Article III. - Provisions for Flood Hazard Reduction

15.60.180 - Standards of construction.

In all areas of special flood hazards the following standards are required:

- A. Anchoring. All new construction and substantial improvements of structures, including manufactured homes, shall be adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- B. Construction Materials and Methods. All new construction and substantial improvements of structures, including manufactured homes, shall be constructed:
  - 1. With flood resistant materials, and utility equipment resistant to flood damage for areas below the base flood elevation;
  - 2. Using methods and practices that minimize flood damage;
  - 3. With electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and
  - 4. Within Zones AH or AO, so that there are adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures.
- C. Elevation and Floodproofing.
  - 1. Residential Construction. All new construction or substantial improvements of residential structures shall have the lowest floor, including basement:
    - a. In AE, AH, A1-30 Zones, elevated to eighteen inches or more above the base flood elevation.
    - b. In an AO Zone, elevated above the highest adjacent grade to a height equal to or exceeding the depth number specified in feet on the FIRM, or elevated at least two feet above the highest adjacent grade if no depth number is specified.
    - c. In an A Zone, without BFE's specified on the FIRM [unnumbered A Zone], elevated to eighteen inches or more above the base flood elevation; as determined under Section 15.60.130(C).

d. In the -F200 overlay zone, finished floor shall be at or above the elevation of the 200-year flood.

Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered civil engineer or licensed land surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

2. Nonresidential Construction. All new construction or substantial improvements of nonresidential structures shall either be elevated to conform with Subsection (C)(1) of this section or:
  - a. Be floodproofed, together with attendant utility and sanitary facilities, below the elevation recommended under Subsection (C)(1) of this section, so that the structure is watertight with walls substantially impermeable to the passage of water;
  - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
  - c. Be certified by a registered civil engineer or architect that the standards of Subsection (C)(2)(a) and (b) of this section are satisfied. Such certification shall be provided to the floodplain administrator.
3. Flood Openings. All new construction and substantial improvements of structures with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must meet the following minimum criteria:
  - a. For non-engineered openings:
    - i. Have a minimum of two openings on different sides having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
    - ii. The bottom of all openings shall be no higher than one foot above grade;
    - iii. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater; and
    - iv. Buildings with more than one enclosed area must have openings on exterior walls for each area to allow flood water to directly enter; or
  - b. Be certified by a registered civil engineer or architect.
4. Manufactured Homes. See Section 15.60.210.
5. Garages and Low Cost Accessory Structures.
  - a. Attached Garages.
    - i. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry of flood waters. See Subsection (C)(3) of this section. Areas of the garage below the BFE must be constructed with flood resistant materials. See Subsection (B) of this section.

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- ii. A garage attached to a nonresidential structure must meet the above requirements or be dry floodproofed. For guidance on below grade parking areas, see FEMA Technical Bulletin TB-6.
- b. Detached garages and accessory structures.
  1. "Accessory structures" used solely for parking (2 car detached garages or smaller) or limited storage (small, low-cost sheds), as defined in Section 15.60.050, may be constructed such that its floor is below the base flood elevation (BFE), provided the structure is designed and constructed in accordance with the following requirements:
    - i. Use of the accessory structure must be limited to parking or limited storage;
    - ii. The portions of the accessory structure located below the BFE must be built using flood-resistant materials;
    - iii. The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;
    - iv. Any mechanical and utility equipment in the accessory structure must be elevated or floodproofed to eighteen inches or more above the BFE;
    - v. The accessory structure must comply with floodplain encroachment provisions in Section 15.60.230; and
    - vi. The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with Subsection (C)(3) of this section.
  2. Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in this section.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.190 - Standards for utilities.

- A. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:
  1. Infiltration of flood waters into the systems;
  2. Discharge from the systems into flood waters.
- B. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.200 - Standards for subdivisions and other proposed development.

- A. All new subdivisions proposals and other proposed development, including proposals for manufactured home parks and subdivisions, greater than fifty lots or five acres, whichever is the lesser, shall:

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1. Identify the special flood hazard areas (SFHA) and base flood elevations (BFE).
2. Identify the elevations of lowest floors of all proposed structures and pads on the final plans.
3. If the site is filled above the base flood elevation, the following as-built information for each structure shall be certified by a registered civil engineer or licensed land surveyor and provided as part of an application for a letter of map revision based on fill (LOMR-F) to the floodplain administrator:
  - a. Lowest floor elevation.
  - b. Pad elevation.
  - c. Lowest adjacent grade.
- B. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
- C. All subdivision proposals and other proposed development shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- D. All subdivisions and other proposed development shall provide adequate drainage to reduce exposure to flood hazards.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.210 - Standards for manufactured homes.

- A. All manufactured homes that are placed or substantially improved, on sites located: (1) outside of a manufactured home park or subdivision; (2) in a new manufactured home park or subdivision; (3) in an expansion to an existing manufactured home park or subdivision; or (4) in an existing manufactured home park or subdivision upon which a manufactured home has incurred "substantial damage" as the result of a flood, shall:
  1. Within Zones A1-30, AH, and AE on the community's flood insurance rate map, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to eighteen inches or more above the base flood elevation and be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- B. All manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE on the community's flood insurance rate map that are not subject to the provisions of Subsection (A) of this section will be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement, and be elevated so that either the:
  1. Lowest floor of the manufactured home is at eighteen inches or more above the base flood elevation; or
  2. Manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches in height above grade.

Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered civil engineer or licensed land surveyor, and verified by the community building

inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.220 - Standards for recreational vehicles.

- A. All recreational vehicles placed in Zones A1-30, AH, and AE will either:
1. Be on the site for fewer than one hundred eighty consecutive days; or
  2. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
  3. Meet the permit requirements of Section 15.60.140 of this chapter and the elevation and anchoring requirements for manufactured homes in Section 15.60.210 (A).

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.230 - Floodways.

Since floodways are an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- A. Until a regulatory floodway is adopted, no new construction, substantial development, or other development (including fill) shall be permitted within Zones A1-30 and AE, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other development, will not increase the water surface elevation of the base flood more than one foot at any point within the city of Lodi.
- B. Within an adopted regulatory floodway, the city of Lodi shall prohibit encroachments, including fill, new construction, substantial improvements, and other development, unless certification by a registered civil engineer is provided demonstrating that the proposed encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- C. If Subsections (A) and (B) of this section are satisfied, all new construction, substantial improvement, and other proposed new development shall comply with all other applicable flood hazard reduction provisions of Article III of this chapter.

(Ord. No. 1829, § 1, 3-17-2010)

#### Article IV. - Variance Procedure

#### 15.60.240 - Nature of variances.

The issuance of a variance is for floodplain management purposes only. Insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance.

The variance criteria set forth in this section are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The need to protect citizens from flooding is so compelling and the implications of the cost of insuring a structure built below flood level are so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this chapter are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

Variances may not be granted that would permit fraud and victimization of the public or that would present a threat to public safety or create a nuisance.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.250 - Conditions for variances.

- A. Generally, variances may be issued for new construction, substantial improvement, and other proposed new development to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing that the procedures of Sections 15.60.120—15.60.170, and Sections 15.60.180—15.60.230 of this chapter have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
- B. Variances may be issued for the repair or rehabilitation of "historic structures" (as defined in Section 15.60.050 of this chapter) upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- C. Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.
- D. Variances shall only be issued upon a determination that the variance is the "minimum necessary" considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of variances to an elevation requirement, this means the city of Lodi need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which the city of Lodi believes will both provide relief and preserve the integrity of the local ordinance.
- E. Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

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1. The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars for one hundred dollars of insurance coverage, and
  2. Such construction below the base flood level increases risks to life and property. It is recommended that a copy of the notice shall be recorded by the floodplain administrator in the Office of the San Joaquin County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.
- F. The floodplain administrator will maintain a record of all variance actions, including justification for their issuance, and report such variances issued in its biennial report submitted to the Federal Emergency Management Agency.

(Ord. No. 1829, § 1, 3-17-2010)

#### 15.60.260 - Appeals.

The city council of the city of Lodi shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made the floodplain administrator in the enforcement or administration of this chapter.

(Ord. No. 1829, § 1, 3-17-2010)

## Chapter 17.14 - GENERAL PROPERTY DEVELOPMENT AND USE STANDARDS

## 17.14.040 - General performance standards.

All land uses activities, and processes shall be operated and maintained so as to not be injurious to public health, safety or welfare, and to comply with the following standards:

- A. Air Emissions. No visible dust, gasses, or smoke shall be emitted, except as necessary for the heating or cooling of structures, and the operation of motor vehicles on the site.
- B. Combustibles and Explosives. The use, handling, storage, and transportation of combustibles and explosives shall comply with the Uniform Fire Code.
- C. Ground Vibration. No ground vibration shall be generated that is perceptible without instruments by a reasonable person at the property lines of the site, except for motor vehicle operations.
- D. Light and Glare. See Section 17.14.070 (Lighting).
- E. Liquid Waste. No liquid shall be discharged into a public or private body of water, sewage system, watercourse, or into the ground, except in compliance with applicable regulations of the California Regional Water Quality Control Board.
- F. Noise. No use, activity, or process shall exceed the maximum allowable noise standards identified by the general plan.
- G. Odor. No obnoxious odor or fumes shall be emitted that are perceptible without instruments by a reasonable person at the property line of the site.
- H. Radioactivity, Electrical Disturbance or Electromagnetic Interference. None of the following shall be emitted:
  - 1. Radioactivity, in a manner that does not comply with all applicable state and federal regulations; or
  - 2. Electrical disturbance or electromagnetic interference that interferes with normal radio or television reception, or with the function of other electronic equipment beyond the property line of the site; or that does not comply with all applicable Federal Communications Commission (FCC) and other applicable state and federal regulations.

I. Flooding. All development shall be in compliance with the provisions of Chapter 15.60 (Flood Damage Prevention).

(Ord. No. 1869, § 2, 2-20-2013)

**CHAPTER 17.28 - OVERLAY ZONING DISTRICTS**

17.28.030 - Flood hazard (~~-F100 and -F200~~) overlay zoning districts.

A. Purpose. The ~~-F100 and -F200~~ overlay districts ~~are-is~~ intended to protect people and property from flood hazard risks by appropriately regulating development and land uses within areas subject to flooding. Special regulation is necessary for the protection of the public health, safety and general welfare, and of property and improvements from hazards and damage resulting from floodwaters and to promote the open space conservation element policies of the general plan.

B. Applicability, ~~-F100 overlay district~~.

1. Application to Property. The ~~-F100~~ overlay district is applied to areas within the city prone to flood hazard risks ~~from the 100-year storm event~~, combined with any primary zoning district as shown on the zoning map and by Section 17.10.020 (Zoning Districts Established).
2. Floodplain Boundaries. The Mokelumne River floodplain is defined as those areas of special flood hazard identified by the Federal Insurance Administration through a scientific and engineering report entitled "The Flood Insurance Study for the City of Lodi," dated ~~June, 1987~~October 2009, with accompanying flood insurance rate maps and any revision thereto, which are adopted by reference and declared to be a part of this section. Maps and data which reflect this delineation are on file ~~in the office of the director of community development at City Hall~~.

~~C.~~ Applicability, -F200 overlay district.

1. Application to Property. The -F200 overlay district is applied to areas within the city prone to flood hazard risks from the 200-year storm event, combined with any primary zoning district as shown on the zoning map and as established by Section 17.10.020 (Zoning Districts Established).
2. Floodplain Boundaries. The 200-year floodplain is identified on Figure 8.2, 200-Year Flood Zones, of the City of Lodi General Plan Safety Element.

~~C.D.~~ Permit Requirements, -F100 overlay district. No structure or land shall, after the effective date of the ordinance codified in this chapter, be located, extended, converted or altered within the ~~-F100~~ overlay zoning district without full compliance with the terms of this chapter, and without having first received a development or construction permit in accordance with the provisions of this title and, for developments requiring use permits, with the provisions of Section 17.12.030.

~~D.E.~~ Allowable Land Uses, -F100 overlay district. Nothing in this subsection is intended to authorize a use not otherwise allowed in the primary zoning district with which the -F overlay district is combined.

1. Permitted Uses Generally, ~~-F100 overlay district~~. Unless otherwise prohibited or subject to a use permit in the primary zoning district, the following uses are permitted

without a use permit where modification or removal of native vegetation, including trees, is not required:

- a. Agriculture;
  - b. Open space agricultural uses not requiring a closed building such as, orchards, and livestock feeding and grazing;
  - c. The storage of farm machinery which is readily removable from the area within the time available after flood warning;
  - d. Recreational: Firmly anchored recreational floating docks; and
  - e. Modification of Native Vegetation: Where modification or removal native vegetation is required, such modification or removal may be after obtaining a development permit consisting of written approval from the community development director; provided, that such modifications in the floodplain have been found to be consistent with the general plan.
2. Permitted Uses, -F100 overlay district—Use Permit and State Approval. Unless otherwise prohibited in the primary zoning district, the following uses may be permitted after approval of a conditional use permit by the city and after approval by the State Department of Fish and Game and the reclamation board of the state; provided, that as determined by said reclamation board, a combination of such uses within the floodplain does not materially increase the flood height of the intermediate regional floodplain; and provided further, that as determined by the State Department of Fish and Game, full mitigation measures will be used to protect and enhance the trees, native plant materials and wildlife in the floodplain, in accordance with good fish and game practices and in accordance with the following:
- a. Residential dwellings on existing undeveloped lots in subdivisions approved before January 1, 1977;
  - b. Outdoor recreational facilities:
    - i. Campgrounds;
    - ii. Boating facilities;
    - iii. Parks;
    - iv. Golf courses or driving ranges;
    - v. Athletic fields; and
    - vi. Shooting ranges;
  - c. Fences, fills, walls, excavations or other appurtenances which do not constitute an obstruction or debris-catching obstacle to the passage of floodwaters and which are consistent with the open space-conservation element policies;
  - d. Private drives, bridges, and public utility wires and pipelines for transmission and distribution;

- e. Improvements in stream channel alignment, cross-section and capacity, including modification of riverbank and flood protection levees;
- f. Structures that are designed to have a minimum effect upon the flow of water and are firmly anchored to prevent the structure from flotation (excepting floating docks); provided, that no structures for human habitation is permitted;
- g. Other similar uses of a type not appreciably damaged by floodwaters.

- 3. Prohibited Uses—Storage or Processing. The storage or processing of materials that are in time of flooding buoyant, flammable or explosive, or could be injurious to human, animal or plant life, is prohibited.

E.F. Development Standards, -F100 overlay district. In all areas zoned in the -F100 overlay district, the provisions set out in subsections 1 through 6 are required.

- 1. Elevation of Lowest Floor. The lowest floor of any residential structure, including garages and accessory buildings, shall be elevated eighteen inches or more above the level of the base flood elevation.
- 2. Anchorage. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- 3. Construction Practices and Materials. All new construction or substantial improvements shall be constructed with materials and utility equipment resistant to flood damage using methods and practices that minimize flood damage.
- 4. Water and sewer systems. New and replacement water and sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- 5. Nonresidential Structures. New nonresidential structures shall be floodproofed or elevated eighteen inches or more above the level of the base flood.
- 6. Floodproofing. All structures requiring floodproofing shall be so designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads with effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this section are satisfied and a copy of such certification shall be provided to the director of public works and the chief building inspector.

G. Flood Zone Determination – 200-Year Floodplain.

- 1. No development or physical changes requiring a development permit required by this Title shall be allowed within the 200-year floodplain unless it has first met one or more of the findings established under Section 15.60.130.D of the Lodi Municipal Code.
- 2. Allowable Land Uses, -F200 overlay district. Nothing in this subsection is intended to authorize a use not otherwise allowed in the primary zoning district with which the -F200 overlay district is combined.
- 3. Exempt Projects, -F200 overlay district. Site improvements that would not result in the development of a new habitable structure and would not increase risk of damage to

neighboring development or alter the conveyance area of a watercourse in the case of a flood are exempt from the restrictions of the -F200 overlay district. Improvements that qualify for this exemption include, but are not limited to, the replacement or repair of a damaged or destroyed habitable structure with substantially the same building footprint area; interior repairs or remodels to existing structures; additions to existing residential dwellings; new non-habitable structures or repairs or remodels to non-habitable structures including but not limited to landscape features, detached garages, and pools and spas.

H.

Warning—Liability Denied. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city or by any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made under this chapter.

# Proposed F-200 Overlay District

## Legend

 City Limits

 F-200 Overlay District

