

Water Shortage Contingency Plan

Adopted



CITY OF
FOLSOM
DISTINCTIVE BY NATURE

6/8/2021

Prepared By:



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APPENDICES

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ACRONYMS & ABBREVIATIONS

AFY	Acre-feet per year
AF	Acre-feet
AMI	Advanced Metering Infrastructure
Annual Assessment	Annual water supply and demand assessment
AWSAR	Annual Water Shortage Assessment Report
AWIA	America's Water Infrastructure Act
AWWA	American Water Works Association
City	City of Folsom
CVP	Central Valley Project
CWC	California Water Code
DRA	Drought Risk Assessment
DWR	State of California Department of Water Resources
ERP	Emergency Response Plan
EWR	City of Folsom – Environmental and Water Resources
LHMP	Local Hazard Mitigation Plan
M60	Manual of Water Supply Practices
Reclamation	U.S. Bureau of Reclamation
RRA	Risk and Resiliency Assessment
UWMP	2020 Urban Water Management Plan
WSCP	Water Shortage Contingency Plan

1.0 Introduction

This Water Shortage Contingency Plan (WSCP) is a detailed plan for how the City of Folsom (City) intends to identify and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the supply is reduced to a level that cannot support the normal demand at any given time or if the state mandates a cutback regardless of supplies. The intent of this document is to provide guidance to the City's governing body, its staff, and the public by identifying anticipated water shortages and response actions to allow for efficient management of any water shortage with predictability and accountability.

Good preparation provides the tools to maintain reliable supplies and reduce the impacts of supply interruptions due to extended drought or catastrophic supply interruptions. This document describes the following:

1. **Water Supply Reliability Analysis:** Identifies the key issues that may trigger a shortage condition within the service area.
2. **Annual Water Supply and Demand Assessment Procedures:** Describes the methodology for assessing the system's reliability for the coming year and the steps to formally approve any water shortage levels and response actions.
3. **Six Standard Shortage Stages:** Establishes water shortage levels to clearly identify and prepare for shortages.
4. **Shortage Response Actions:** Describes the response actions that may be implemented or considered for each stage to reduce gaps between supply and demand.
5. **Communication Protocols:** Describes communication protocols to ensure customers, the public, and government agencies are informed of shortage conditions and requirements.
6. **Compliance and Enforcement:** Defines compliance and enforcement actions available to administer demand reductions.
7. **Legal Authority:** Lists the legal authorities available to declare a water shortage and implement and enforce response actions.
8. **Financial Consequences of WSCP Implementation:** Describes the anticipated financial impact of implementing water shortage stages and identifies mitigation strategies.
9. **Monitoring and Reporting:** Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP implementation. Results are used to determine if additional shortage response actions should be activated or whether efforts are successful and response actions should be adjusted.
10. **WSCP Refinement Procedures:** Discusses the factors that may trigger updates to the WSCP as new information becomes available.
11. **Special Water Features Distinctions:** Identifies exemptions for pools and spas.
12. **Plan Adoption, Submittal, and Availability:** Describes the process for the WSCP adoption, submittal, and availability after each revision.

This WSCP was prepared in conjunction with the City's 2020 Urban Water Management Plan (UWMP) (Water Systems Consulting, Inc, 2021) and is a standalone document that can be adapted as new information becomes available. This document is compliant with the California Water Code (CWC) Section 10632 and incorporated guidance from the State of California Department of Water Resources (DWR) Urban Water Management Plan Guidebook 2020 (Department of Water Resources, 2020). The plan is intended to provide guidance, rather than absolute direction, for City action in response to water shortages and provides the City with options to responsibly manage water shortages.

2.0 Water Supply Reliability Analysis

As part of the 2020 UWMP, the City performed a supply reliability analysis for normal, single-dry, and five consecutive dry year conditions. The City expects to meet demands under all water year scenarios with the City's current supply. As described in Chapter 7 of the 2020 UWMP, the City anticipates utilizing between approximately 32,720 to 38,350 AFY from the City's supplies depending on the year type. It is anticipated that this range of volume will be available to meet the City's demands.

The 2020 UWMP also includes a Drought Risk Assessment (DRA) to analyze supply reliability for 2021–2025. Future demand and identified drought supply estimates for the 2021–2025 planning period were used to determine if there are any gaps between supply and demand. This analysis determined there was not a supply shortage and the City will be able to meet its demands.

3.0 Annual Water Supply and Demand Assessment Procedures

As established by CWC Section 10632.1, urban water suppliers must conduct annual water supply and demand assessments and submit an annual water shortage assessment report to DWR with information on anticipated shortages, triggered shortage response actions, and compliance and enforcement actions consistent with the WSCP. Beginning by July 1, 2022, the City must prepare the annual water supply and demand assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report (AWSAR) to DWR. The Annual Water Shortage Assessment Report will be due by July 1 of every year. Per CWC, the Annual Assessment must include:

- A written description of the decision-making process that the City will use each year to determine its water supply reliability.
- The key data inputs and assessment methodology used to evaluate the supplier's water supply reliability for the current year and one dry year¹, including:
 - Current year unconstrained demand.
 - Current year available supply in the current year and one dry year.
 - Existing infrastructure capabilities and plausible constraints.
 - A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
 - A description and quantification of each source of water supply.

3.1 Decision-Making Process

The AWSAR evaluates the system's reliability for the coming year based on recent water use and before any projected response actions are implemented to identify potential shortages and response actions. This approach allows the City's staff to plan and prepare for water shortages to ensure proactive responses are implemented to mitigate impacts to its customers. The City will follow the decision-making process and timeline summarized in Table 3-1.

¹ The City can consider more than one dry year.

Table 3-1. Decision-Making Process and Timeline

TASK	TIMELINE
Environmental and Water Resources (EWR) Director and the Water Treatment Plant Supervisor will perform the annual supply and demand assessment and prepare AWSAR.	Completed by May 15 th
The EWR Director will meet with City Manager to discuss AWSAR and results. City Manager will declare a water shortage when deemed appropriate after considering results from AWSAR.	Completed by May 31 st
EWR Director to finalize AWSAR	Completed by June 30 th
AWSAR Submittal	Submit AWSAR by July 1st
AWSAR Availability	AWSAR to be available no later than 30 days after submittal to DWR

3.2 Annual Water Supply and Demand Assessment Preparation

The following sections describe the procedures to determine projected demands and supply reliability for the current year and one dry year and projected demand. This assessment will be used to determine if water shortage response actions need to be triggered.

3.2.1 Evaluation Criteria

The City's current Municipal Code allows for declaration of water shortages by the City Manager when deemed appropriate after considering factors such as availability of non-potable water, agreements for deliveries or additional water supply, and any variations in the reliability of the water supplies available to the City. When a shortage occurs, the City Manager assesses which of the stages of action should be implemented.

3.2.2 Water Supply

For the City's pre-1914 water supply contracts, the City works with the Sacramento Water Forum and the U.S. Bureau of Reclamation (Reclamation) to forecast water operations from Folsom Reservoir. Each month, from January through May, Reclamation provides forecasted operations, which includes projected releases and reservoir storage levels at Folsom Reservoir, to its water contractors. The projected releases and reservoir storage levels at Folsom Reservoir provided in March or April will be used by the City to develop the Annual Assessment.

For the City's 7,000 AF (acre-feet) Central Valley Project (CVP) repayment contract, Reclamation provides an initial allocation of water made available to its CVP Contractors each year in March. Only this CVP supply falls under Reclamation's Municipal and Industrial Water Shortage Policy and is subject to these water shortage conditions. The City will use the projected allocation from Reclamation to develop the Annual Assessment for the CVP repayment contract supply.

As stated in Chapter 6 of the City's 2020 UWMP, the City assumes the Reclamation's Municipal and Industrial Water Shortage Policy could limit a dry year supply to 75% of the historical average water use. Therefore, the dry year supply will include a reduction of 25% from the CVP water supply contract instead of the full allocation. This reduces the CVP supply from 7,000 AF to 5,250 AF.

3.2.3 Unconstrained Customer Demand

The City will utilize a demand tracking and estimation tool to determine the current year demands. This tool will incorporate anticipated housing growth, business growth, population changes, unit demand factors changes, etc. to determine the current year's demands. For dry years, the City could see up to a 5–10% increase in water usage compared to a previous non-dry year. This is mainly due to outdoor irrigation since outdoor irrigation usually begins sooner in a single dry year.

3.2.4 Infrastructure Considerations

There are no planned infrastructure projects that would increase or decrease City supply.

4.0 Six Standard Shortage Stages

This section was completed pursuant to CWC Section 10632(a)(3) and establishes the six standard water shortage levels for the City.

4.1 Water Shortage Levels

This six-stage water shortage plan is to assist the City with planning for and reducing water demands based on the type of water shortage the City is experiencing. Any water shortage, whether long- or short-term, may trigger a stage of the plan to enable the City to manage its water supply responsibly and provide, at a minimum, for the health and safety of its residents.

Shortage stages evaluate the gap in supply compared to normal year availability. To develop this six-stage water shortage plan, the City updated the previously established five water shortages stages to the six water shortage stages as recommended by DWR. The City's water shortage stages are listed below and summarized in Table 4-1. Any stage listed within the WSCP may be enacted by the City Manager as deemed appropriate based on water shortage condition.

- **Normal Supply Stage** – This stage shall be in effect at all times unless the City Manager determines a more restrictive stage is appropriate. The following restrictions shall be enforced during in the Normal Supply Stage:
 - Water will be used for beneficial uses; all wasteful use of water is prohibited.
 - Water shall be confined to the customer's property and shall not be allowed to run off to adjoining property or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.
 - Washing down impervious surfaces such as driveways and sidewalks is prohibited unless for public health and safety purposes.
 - Free flowing hoses are prohibited for all uses including landscape watering, vehicle and equipment washing, ponds, evaporative coolers, and livestock watering troughs. Automatic shut-off devices shall be installed on any hose or filling apparatus in use.
 - All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and constructed to be leak proof. Pool draining and refilling shall be allowed only to the extent required for health, maintenance, or structural considerations, and must otherwise comply with all applicable federal, state, and local stormwater management requirements, including but not limited to Chapter 8.70, Stormwater Management and Discharge Control.
- **Stage 1 Water Shortage Condition: Water Conservation** – This stage shall achieve a water demand reduction up to 10%.
- **Stage 2 Water Shortage Condition: Water Shortage Watch** – This stage shall achieve a water demand reduction up to 20%.
- **Stage 3 Water Shortage Condition: Water Alert** – This stage shall achieve a water demand reduction up to 30%.
- **Stage 4 Water Shortage Condition: Water Warning** – This stage shall achieve a water demand reduction up to 40%.
- **Stage 5 Water Shortage Condition: Water Crisis** – This stage shall achieve a water demand reduction up to 50%.
- **Stage 6 Water Shortage Condition: Water Emergency** – This stage shall achieve a water demand reduction greater than 50%.

Table 4-1 summarizes the shortage response actions associated with each shortage stage. A detailed breakdown of the shortage response actions for each shortage stage are included in Section 5.0 of this WSCP.

Table 4-1. Shortage Levels

SHORTAGE STAGE	PERCENT SHORTAGE RANGE	SHORTAGE RESPONSE ACTIONS
1	Up to 10%	Stage 1 includes but is not limited to public information campaigns, landscape restrictions, and repairs of breaks or leaks in timely manner.
2	Up to 20%	Stage 2 includes but is not limited to decreased line flushing, additional landscape restrictions, and vehicle washing restrictions.
3	Up to 30%	Stage 3 includes but is not limited to additional landscape restrictions and water feature and pool restrictions.
4	Up to 40%	Stage 4 includes but is not limited to more extensive landscape restrictions and water feature and pool restrictions.
5	Up to 50%	Stage 5 includes restrictions on water use so that water is used for public health and safety purposes only.
6	>50%	Stage 6 includes restrictions on water use so that water is used for public health and safety purposes only. Customer rationing may be implemented.

5.0 Shortage Response Actions

This WSCP identifies various actions to be considered by the City during the water shortage conditions. These shortage response actions include public outreach and education, water conservation assistance, supply augmentation, water use regulations, development approvals, and demand tracking. In the event of a water shortage emergency, the City will evaluate the cause of the emergency to help inform which response actions should be implemented. Depending on the nature of the water shortage, the City can elect to implement one or several response actions to mitigate the shortage and reduce gaps between supply and demand. It should be noted that all actions listed for Stage 1 apply to Stage 2 through 6. Likewise, Stage 2 actions apply to Stages 3 through 6, and so forth. If necessary, the City may adopt additional actions not listed here in extreme circumstances. The Folsom Municipal Code Section 13.26 provides the authorization for water use restrictions and prohibitions to become effective as deemed by the City Manager.

5.1 Supply Augmentation

The City currently relies on surface water as their only source of supply and continues to evaluate opportunities for use of groundwater, transfers, and exchanges to increase supply reliability, as discussed in Chapter 6 of the 2020 UWMP. The City expects to mitigate water shortages through extensive communication and outreach efforts and demand reduction actions.

5.2 Demand Reduction

The goal of demand reduction is to balance supply and demand. The City offers various rebates to encourage conservation (i.e. ultra-low flush toilet replacements, Rachio Smart Controller rebate, etc.). In addition to rebates, the demand reduction actions that will be implemented at each shortage level are shown in Table 5-1.

It should be noted that if a customer has an irrigation controller that uses local weather data and has the capability to adjust the watering “percentage”, these customers may not be limited to the reduced landscape demand reduction action specifics in the current stage. As an example, if Stage 2 allows irrigation up to three days per week with the intent to meet a 20% reduction, a customer with a smart controller that allows that customer to include a 20% reduction directly in the controller programming, could be exempt from the three-day per week irrigation requirement.

Table 5-1. Demand Reduction Actions

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP? ^{1,2}	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
1	Landscape – limit landscape irrigation to specific times	0–5%	Irrigation of lawns or landscaping shall be between the hours of 10:00 a.m. and 10:00 p.m., with the exception of drip irrigation as otherwise authorized, unless a variance is granted by the director.	Yes
1	Other – customers must repair leaks, breaks, and malfunctions in a timely manner	0–1%	Fix leaks or faulty sprinklers promptly/within 5 day(s).	Yes
1	Other	0–1%	Prohibit overfilling of any pool, pond, or fountain which results in water discharging from pool, pond, or fountain.	Yes
1	Landscape – other landscape restriction or prohibition	0–5%	No landscape watering shall occur while it is raining.	Yes
1	Other – Prohibit use of potable water for construction and dust control	0–1%	Use of potable water from the City water system for compaction, dust control, or other construction purposes without first obtaining approval from the director as provided in Section 13.26.090 and a meter from the City is prohibited.	Yes
1	CII – Other CII restriction or prohibition	0–1%	Commercial, industrial, and institutional equipment must be properly maintained and in full working order.	Yes
1	Expand Public Information Campaign	0–1%	Encourage customers to wash only full loads when washing dishes or clothes.	No
1	Expand Public Information Campaign	0–1%	Encourage customers to use pool covers to minimize evaporation.	No
1	CII – Restaurants may only serve water upon request	0–1%	Require restaurants to only serve water to customers on request.	Yes

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Shortage Response Actions

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?^{1,2}	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
2	Decrease Line Flushing	0–1%	Non-essential flushing of mains and fire hydrants shall be prohibited.	Yes
2	Other – Prohibit vehicle washing except at facilities using recycled or recirculating water	15%	Prohibit installing a non-recirculating system in any new automatic car wash or new commercial laundry system or failure to utilize current best management practices for water conservation that are industry standards.	Yes
2	Landscape – Limit landscape irrigation to specific days	5–10%	Up to 3 days per week turf watering, including public and private streetscape landscaping, when using potable water. Plant containers, trees, shrubs, and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
2	Other – Prohibit vehicle washing except at facilities using recycled or recirculating water	0–1%	Car washing is only permitted using a commercial carwash that recirculates water or by high-pressure/low-volume wash systems.	Yes
3	Other – Customers must repair leaks, breaks, and malfunctions in a timely manner	0–1%	Fix leaks or faulty sprinklers within 24 hours of notification by utilities department or service may be discontinued.	Yes
3	Other water feature or swimming pool restriction	0–1%	Water use for ornamental ponds and fountains is prohibited unless required to maintain existing vegetation or to sustain existing fish/animal life.	Yes
3	Landscape – Limit landscape irrigation to specific days	5–15%	Up to two days per week turf watering when using potable water.	Yes
3	Other water feature or swimming pool restriction	0–1%	Existing pools shall not be emptied and refilled using potable water unless required for public health and safety purposes.	Yes

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Shortage Response Actions

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?^{1,2}	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
4	Other water feature or swimming pool restriction	0–1%	No new permits for pools will be issued.	Yes
4	Landscape – Other landscape restriction or prohibition	0–1%	With the exception of landscapes watered with non-potable water, limit the installation of new landscaping to drought-tolerant trees, shrubs, and groundcover. Prohibit installation of new turf or hydro-seed. Customers may apply for a waiver to irrigate during an establishment period for the installation of new turf or hydroseed.	Yes
4	Landscape – Limit landscape irrigation to specific days	5–20%	Up to one day per week turf watering when using potable water.	Yes
5	Landscape – Other landscape restriction or prohibition	0–1%	No new landscape installations or renovations will be permitted.	Yes
5	Other	0–50%	Water use for public health and safety purposes only.	Yes
6	Other	>50%	Water use for public health and safety purposes only. Customer rationing may be implemented.	Yes

Notes:

¹. Reduction in the shortage gap is estimated and can vary significantly.

². Potential reduction estimates were provided by the Regional Water Authority in the WSCP Template 2020 UWMP Water Savings spreadsheet.

5.3 Operational Changes

The City will consider the use of the following operational changes:

- Increasing frequency of notifications and follow-up regarding customer leaks.
- Establishing and communicating emergency rates, if needed.
- Providing irrigation accounts with water use budgets that allow for efficient water use and request voluntary compliance with the established budget.
- Considering hiring temporary staff or consultants to assist with water rationing, water waste patrol, response to water waste reports, enforcement, and outreach.
- Reducing irrigation on all City-owned property.
- Rescinding hydrant and bulk water permits.
- Postponing water main flushing activities.
- In the event of critical and catastrophic shortages, activating emergency notification lists, and coordinating with the California Department of Public Health regarding water quality and public health issues and with law enforcement agencies to address enforcement challenges.
- Restricting accounts exceeding allocation or ration.
- Locking all dedicated irrigation accounts except as needed to sustain trees.

5.4 Additional Mandatory Restrictions

The City has identified a series of restrictions that will be implemented at different shortage levels. These prohibitions are included in the demand reduction actions in Table 5-1.

5.5 Emergency Response Plan

Besides drought, the City may experience a catastrophic interruption of the water supply as a result of natural disasters such as earthquake or flooding, a regional power outage, terrorism, wildfire, or sabotage. The City's Emergency Operations Plan outlines the City's planned responses to emergencies associated with disasters, technological incidents, or other dangerous conditions created either by man or nature (City of Folsom, 2020).

The City is in the process of completing their Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP) in accordance with America's Water Infrastructure Act (AWIA) and J-100 standards. The RRA and ERP will analyze all of the City's critical facilities for a seismic event and address mitigation strategies.

5.6 Seismic Risk Assessment and Mitigation Plan

Water Code Section 10632.5 requires participating agencies to assess seismic risk to water supplies as part of their WSCP. The code also requires a mitigation plan for managing seismic risks.

In lieu of conducting their own seismic risk assessment, which can be a lengthy process, suppliers can comply with the Water Code requirement by submitting the relevant local hazard mitigation plan or multi-hazard mitigation plan.

Sacramento County, the county in which the City serves water, prepared a Local Hazard Mitigation Plan (LHMP) in December 2016. Sacramento County is currently in the process of updating the LHMP; however, it was not available at the time of preparation of this WSCP.

The LHMP contains an annex (Annex C) that details hazard mitigation planning elements specific to the City, including seismic risk assessment and mitigation strategies. Annex C is available in Appendix A.

5.7 Shortage Response Action Effectiveness

Measuring reductions in water use is part of regular procedures, whether during normal or water shortage conditions. Water is produced and introduced into the distribution system in response to customer demand and is tracked monthly as an indicator of overall demand. The potential savings for the shortage response actions are available in Table 5-1.

In 2014 and 2015 during the previous drought, the City achieved 19–21% savings in potable water production while under Stage 2 of the City's former WSCP dated June 2016. Future water savings will be measured in a similar manner as described above.

6.0 Communication Protocols

This section was completed pursuant to CWC Section 10632(a)(5) and describes communication protocols under each stage to ensure customers, the public, and government agencies are informed of shortage conditions and requirements.

6.1 Communication Protocols

This WSCP includes a staged plan to communicate the declaration of a shortage stage, inform restrictions, and provide updates during a water shortage emergency. A summary of actions the City could potentially take during a specific shortage stage is outlined in Table 6-1. As water supply conditions worsen, but before a water shortage is declared, the City increases public outreach on the current water supply conditions, the plans for water shortage response, and importance of water efficiency to stretch current supplies. The City's website includes links to other water conservation announcements and provides a phone number and email to the City Water Conservation Division for any specific questions.

Table 6-1. Communication Protocols

WATER SHORTAGE LEVEL	COMMUNICATIONS PROTOCOLS AND PROCESSES
1	<ul style="list-style-type: none"> • Information will be posted on the City’s website • Press releases to local media (online and print newspapers, TV, radio, etc.) • City weekly E-newsletter • Social media posts (Facebook, Twitter, Instagram, and Nextdoor) • Messages through DropCountr or bill inserts
2	<ul style="list-style-type: none"> • Increase information posted on the City’s website • Increased advertising – print, online, radio, TV, streaming, social media, movie theatres, buses, etc. • City weekly E-news letter • Messages through DropCountr or bill inserts
3	<ul style="list-style-type: none"> • Increase information posted on the City’s website • Direct mailings to all customers requesting reduction in water use • City weekly E-newsletter • Messages through DropCountr or bill inserts
4	<ul style="list-style-type: none"> • Direct mailings to all customers requesting reduction in water use • City weekly E-newsletter • Messages through DropCountr or bill inserts • Develop and implement a high-visibility campaign using platforms such as <ul style="list-style-type: none"> – Billboards – Local access television and radio – News conference, preferably with regional partners
5	<ul style="list-style-type: none"> • Direct mailings to all customers requesting reduction in water use • City weekly E-newsletter • Messages through DropCountr or bill inserts • Develop and implement a high-visibility campaign using platforms such as <ul style="list-style-type: none"> – Billboards – Local access television and radio – News conference, preferably with regional partners
6	<ul style="list-style-type: none"> • Direct mailings to all customers requesting reduction in water use • City weekly E-newsletter • Messages through DropCountr or bill inserts • Develop and implement a high-visibility campaign using platforms such as <ul style="list-style-type: none"> – Billboards – Local access television and radio – News conference, preferably with regional partners

7.0 Compliance and Enforcement

The City of Folsom Municipal Code section 13.26 provides the stages of penalties for violators of the water waste regulation. Table 7-1 summarizes the penalties. For the first violation, the City shall issue a personal or written notice of the violation. For a subsequent violation within the 3 months of the first violation, the City shall issue a notice of intent to correct. If a third violation occurs within six months of the first violation an administrative penalty, mandatory water meter, or discontinuation of service may occur. Additionally, any violations that occur during Stages 1-6 and are not corrected within 5 days can have further penalties imposed. These include applying established meter rates to any flat rate service or billing a customer who is already metered at twice the established rate while the violation continues.

Table 7-1. Stages of Penalties

VIOLATION	PENALTY
First	Personal or written notification of the violation
Second (within three months of first violation)	Written notification and issuance of a notice of intent to correct
Third (within six months of the first violation)	Issuance of an administrative penalty, mandatory installation of a water meter, discontinued water service and/or other penalties as provided in the notice of violation and as determined by the EWR Director

7.1 Appeals

There shall be no appeal of the water use restriction identified in Section 13.26.080 in the Folsom Municipal Code and any appeal of administrative penalties shall follow the request for hearing procedures provided in Chapter 1.09. in the Folsom Municipal Code. Any order to install a mandatory water meter, discontinue water service, or any other orders or decisions of the EWR Director shall be appealable to the City Manager pursuant to Section 2.08.060; provided, however, that the City Manager's decision shall be final and there shall be no right of appeal to the City Council.

8.0 Legal Authorities

The City's current Municipal Code 13.26 establishes authority for the City Manager to authorize implementation and enforce whatever conservation measures are deemed necessary to achieve the water reduction requirements of the declared conservation stage.

The current Municipal Code is available at <https://www.folsom.ca.us/government/city-clerk-s-office>.

The City shall coordinate with any city or the Sacramento County for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code (California Emergency Services Act).

9.0 Financial Consequences

When a drought or water shortage occurs, the City's costs will increase due to the additional activities and duties of instituting a stage of action. Not only will there be costs for materials, and time from permanent staff, but additional staff may need to be hired to assist in implementing the WSCP. As conservation measures and requirements increase and the water supply decreases, the City will also likely realize a decrease in revenue. To combat this and help pay for the expenses discussed above, revenue will be provided by the penalties incurred by excessive water users as discussed in Section 7.0. Potential financial consequence mitigation strategies that the City may implement are provided in Table 9-1.

Table 9-1. Financial Consequence Mitigation Strategies

MITIGATION STRATEGIES	POTENTIAL IMPACTS OF MEASURE
Outside Funding – pursue outside funds	<ul style="list-style-type: none"> • Increase funds without impacting customers
Rate Adjustments – increase rates and fees	<ul style="list-style-type: none"> • Increase savings in reserve fund • In normal years, surplus funds available for normal operations • Customer resistance
Use of Accumulated Reserves - adopt and/or maintain fund reserve targets to mitigate current and future risks and promote stable services and fees	<ul style="list-style-type: none"> • Decrease savings in reserve fund • Decrease availability for O&M or capital funds
Decrease Capital Expenditures – temporarily postpone CIP projects	<ul style="list-style-type: none"> • Increase savings in reserve fund • Delay system rehabilitation/reliability
Decrease Operations and Maintenance Expenditures – temporarily decrease O&M expenditures	<ul style="list-style-type: none"> • Increase savings in reserve fund • Less staff available to respond to emergencies • Reduce maintenance frequency of system facilities • Decreased customer service • Decreased shortage response time

10.0 Monitoring and Reporting

Monitoring demands is essential to ensuring that WSCP response actions are adequately meeting reductions and decreasing the supply/demand gap. This will help to analyze the effectiveness of the WSCP or identify the need to activate additional response actions. During a water shortage, the City plans to review monthly water treatment plant production data and compare the month's production to that same month's production from a previous baseline year to determine the water use reduction. Results are used to determine if additional shortage response actions should be activated or if efforts are successful and response actions should be reduced.

The City currently has Advanced Metering Infrastructure (AMI) technology to monitor customer water usage. Meters are read once a month using the City's AMI system. This system sends the meter department error codes, such as leak or tamper, daily. This allows the City to address the issue and continue to gather quality water use data.

The City also intends to provide reporting to the State based on forthcoming regulations for monthly reporting of water production and other water uses, along with associated enforcement metrics.

11.0 Refinement Procedures

The City intends to use this WSCP as an adaptive management plan to identify and respond to foreseeable and unforeseeable water shortages. The WSCP is used to provide guidance to the City's governing body, staff, and the public by identifying response actions to allow for efficient management of any water shortage with predictability and accountability. To maintain a useful and efficient standard of practice in water shortage conditions, the requirements, criteria, and response actions need to be continually evaluated and improved upon to ensure that its shortage risk tolerance is adequate, and the shortage response actions are effective and up to date based on lessons learned from implementing the WSCP. The WSCP will be revised and updated during the UWMP update cycle to incorporate updated and new information. However, if revisions to the WSCP are warranted before the UWMP is updated, the WSCP will be updated outside of the UWMP update cycle.

12.0 Special Water Features Distinction

The City has separate response actions, enforcement actions, and monitoring programs for both decorative water features and pools and spas. These shortage response actions are included in Table 5-1. Decorative water features that are not pools or spas will be defined as artificial ponds, lakes, waterfalls, fountains, or non-pool or non-spa water features.

13.0 Plan Adoption, Submittal, and Availability

This WSCP update has been prepared in tandem with the City's 2020 UWMP. The City held a public hearing to present and review the WSCP on June 8, 2020. A copy of the adopting resolution is included in Appendix B. Prior to the public hearing, notices were published notifying the public of the date of time of the hearing. A copy of the published Notice of Public Hearing is included in Appendix C.

A copy of the adopted the WSCP will be provided to Sacramento County and the California State Library and posted onto the City's website.

References

American Water Works Association (AWWA). 2019. *Manual of Water Supply Practices, Drought Preparedness and Response.* 2019.

City of Folsom. 2020. City of Folsom Emergency Operations Plan. 2020.

Department of Water Resources. 2020. Urban Water Management Plan Guidebook 2020. 2020.

Water Systems Consulting, Inc. City of Folsom 2020 Urban Water Management Plan.

Appendix A Sacramento County Local Hazard Mitigation Plan – Annex C



Annex C City of Folsom

C.1 Introduction

This Annex details the hazard mitigation planning elements specific to the City of Folsom, a previously participating jurisdiction to the Sacramento County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document, but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the City. This Annex provides additional information specific to the City of Folsom, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

C.2 Planning Process

As described above, the City of Folsom followed the planning process detailed in Section 3 of the Base Plan. In addition to providing representation on the Sacramento County Hazard Mitigation Planning Committee (HMPC) and Steering Committee, the City formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table C-1. Additional details on plan participation and City representatives are included in Appendix A.

Table C-1 City of Folsom Planning Team

Name	Position/Title	How Participated
Allan Laca	Senior Civil Engineer – Public Works	Reviewed draft LHMP and provided input. Coordinated review with the City. Attended coordination meeting.
Dave Nugen	Capital Improvements Section Manager – Public Works	Reviewed draft LHMP and provided input.
Ron Phillips	Fire Chief	Reviewed draft LHMP and provided input. Attended coordination and planning team meetings.
Sarah Cheney	Senior Civil Engineer – Public Works	Reviewed draft LHMP and provided input. Coordinated review with the City. Attended coordination and planning team meetings.

C.2.1. Coordination with Other Community Planning Efforts

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This Section provides information on how the City integrated the previously-approved 2011 Plan into existing planning mechanisms and programs. Specifically, the City incorporated into or implemented the 2011 LHMP through other plans and programs shown in Table C-2.

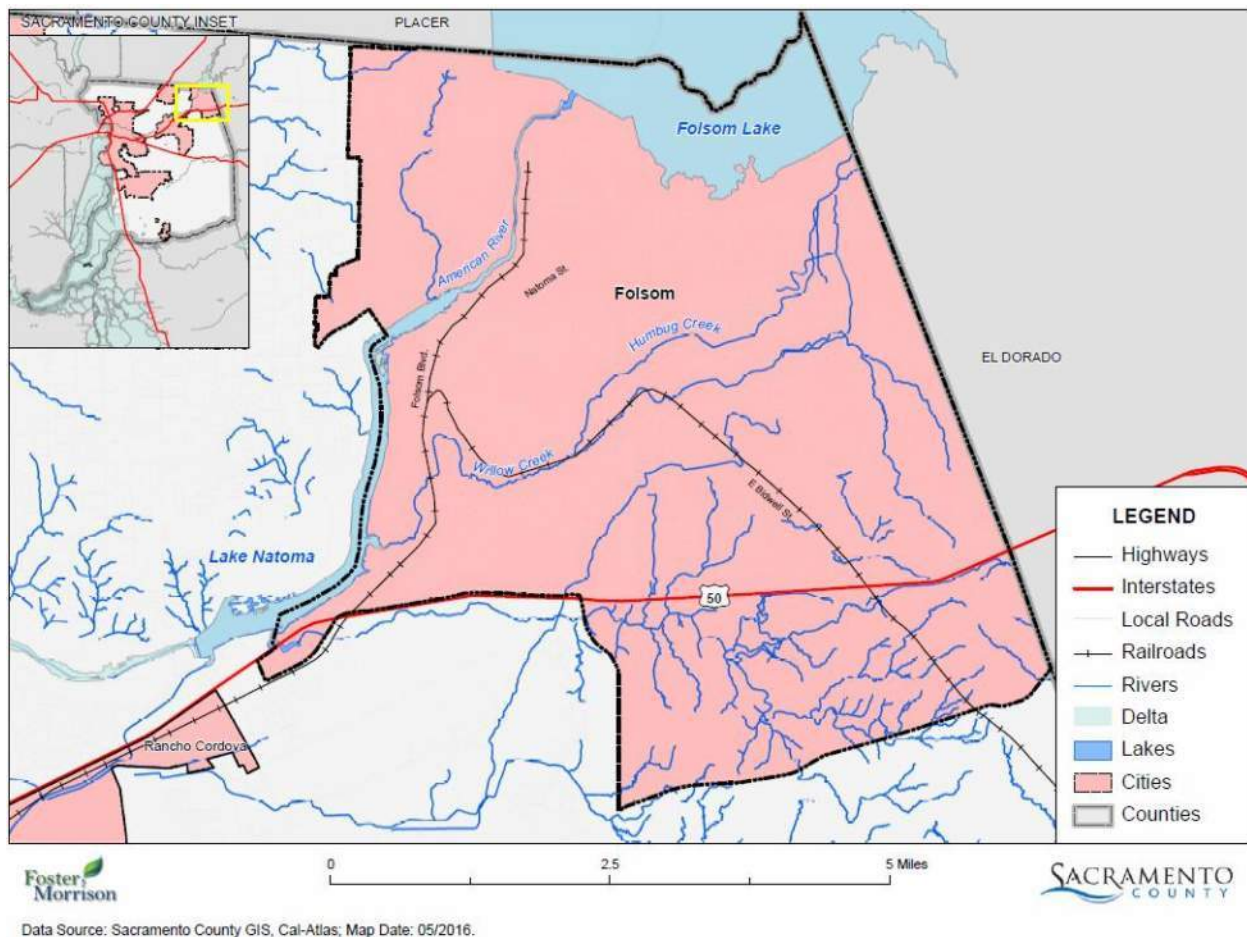
Table C-2 2011 LHMP Incorporation

Planning Mechanism 2011 LHMP Was Incorporated/Implemented In.	Details?
General Plan	The General Plan was adopted in 1988. The Housing Element was updated in 1993. A comprehensive update to the General Plan is being developed and is in draft form. The 2035 General Plan is proposed to be adopted on November of 2017. The Safety Element will be updated to incorporate elements of the Local Hazard Mitigation Plan.
Emergency Operations Plan	Elements of the Local Hazard Mitigation Plan will be implemented in the next update of the Emergency Operations Plan.
Stormwater Basins Project	Rehabilitation of City-maintained Storm Drainage Detention Basins throughout the City of Folsom, to reduce the occurrence of flooding.
Capital Improvement Program	Constructed/implemented several projects identified in last LHMP.

C.3 Community Profile

The community profile for the City of Folsom is detailed in the following sections. Figure C-1 displays a map and the location of the City of Folsom within Sacramento County.

Figure C-1 City of Folsom



Data Source: Sacramento County GIS, Cal-Atlas; Map Date: 05/2016.

C.3.1. Geography and Climate

Folsom is located about 25 miles east of California’s state capitol in Sacramento, 85 miles from Lake Tahoe and 110 miles from San Francisco. Residents have access to Sacramento International Airport and air cargo operations at Mather Field Airport. Folsom has direct access to Highway 50 with three interchanges. Highway 50 connects to Interstate 5 and Interstate 80. The Folsom Lake Crossing, a new bridge across the American River below Folsom Dam, opened in March 2009 helping to relieve local traffic between El Dorado and Placer counties. Public transportation includes light rail service from Folsom to Sacramento. Local bus service connects Folsom’s three light rail stations to major employment centers and other points of interest. Amtrak Rail service is available from downtown Sacramento.

Folsom enjoys mild winters that are cool and moist with some fogs and Mediterranean summers that are clear, hot, and dry. This climate is ideal for temperate fruit and nut crops, as well as some wine grapes and cold hardy citrus. Folsom’s average temperature varies from low temperatures of 37 to 60 degrees to high temperatures of 53 to 94 degrees. Annual rainfall averages 23 inches per year falling primarily from November through March. Elevation is 350 feet.

C.3.2. History

Folsom is famous across the country thanks to a country song about a prison recorded by Johnny Cash in 1956. The City's rich history actually began more than a century earlier with California's great Gold Rush and arrival of the railroad. Gold was first discovered along the south bank of the American River in the area known as Negro Bar. The discovery led to massive gold mining operations, as well as a need for rail service.

In 1847, William Leidesdorff, a successful trader who owned a prosperous shipping business, traveled to Sacramento by steamboat to see the 35,000 acres he had purchased years earlier. His land holdings extended from today's Bradshaw Road along the south side of the American River to the present City of Folsom. That same year, U.S. Army Captain Joseph Folsom's regiment arrived in California. At the conclusion of the Mexican-American War, Folsom remained in the state and became interested in purchasing the land that Leidesdorff had left to his heirs following his death in 1848.

After a long fight to obtain the land, Folsom hired fellow railroad pioneer Theodore Judah to help establish a town site near the Negro Bar mining spot on the American River. Their early plans included shops along Sutter Street and a railroad depot. Folsom named the new town "Granite City." Judah and Folsom planned the town as a railroad terminus before there were railroads in California. Though Folsom didn't live to see it, his dream came true on Feb. 22, 1856 when the first train on the first railroad in the West arrived in Folsom from Sacramento.

Following Folsom's death at the age of 38, his successors renamed the town in his memory. By January 1856, every lot had been sold, and three new hotels were open in the town known as Folsom. Several decades later, construction began on Folsom Prison. Inmates helped construct the facility, which opened in 1880 when the first prisoners were moved to relieve over-crowding at San Quentin.

Following construction of the Folsom Powerhouse, Folsom made history in 1895 with the first long-distance transmission of electricity (22 miles from Folsom to Sacramento). The Powerhouse helped usher in the age of electricity with this notable accomplishment. The City's historic truss bridge was completed in 1893 to transport people, cattle and small vehicles across the American River. In 1917, the Rainbow Bridge opened to accommodate automobiles. It was the only option for crossing the river until the Lake Natoma Crossing opened in 1999.

Following a campaign spearheaded by the Chamber of Commerce in 1946, Folsom became a city. The final vote was 285 in favor of incorporation and 168 opposed. Members of the first City Council were Leland Miller, Harry Patton, Eugene Kerr, Wendell Van Winkle and Norbert Relvas. Hazel McFarland was elected city clerk and Wilma Hoxie was the first treasurer. Council members elected Eugene Kerr as the City's first mayor.

C.3.3. Economy and Tax Base

Folsom has established itself as an important suburb in the Sacramento region with its solid base of small businesses, retail chains, and food service establishments. With an ongoing commitment to providing high-

quality, economical, responsive services to the local community, the City is well-positioned for future commercial redevelopment, neighborhood enhancements, and positive changes.

US Census estimates show economic characteristics for the City of Folsom. These are shown in Table C-3 and Table C-8. Mean household income in the City was \$100,163. Median household income in the City was \$110,870.

Table C-3 City of Folsom Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	85	0.3%
Construction	1,589	4.8%
Manufacturing	4,420	13.5%
Wholesale trade	818	2.5%
Retail trade	3,029	9.2%
Transportation and warehousing, and utilities	945	2.9%
Information	545	1.7%
Finance and insurance, and real estate and rental and leasing	3,605	11.0%
Professional, scientific, and management, and administrative and waste management services	3,992	12.2%
Educational services, and health care and social assistance	6,555	20.0%
Arts, entertainment, and recreation, and accommodation and food services	2,241	6.8%
Other services, except public administration	1,194	3.6%
Public administration	3,747	11.4%

Source: US Census Bureau American Community Survey 2010-2014 Estimates

Table C-4 City of Folsom Income and Benefits

Income Bracket	Population	Percent
>\$10,000	716	2.9%
\$10,000 – \$14,999	543	2.2%
\$15,000 - \$24,999	1,010	4.0%
\$25,000 – \$34,999	1,438	5.7%
\$35,000 – \$49,999	1,905	7.6%
\$50,000 – \$74,999	3,352	13.3%
\$75,000 – \$99,999	3,564	14.2%
\$100,000 – \$149,999	6,379	25.4%
\$150,000 – \$199,999	3,606	14.4%
\$200,000 or more	2,598	10.3%

Source: US Census Bureau, 2010

Major employers include Intel Corporation, Folsom-Cordova Unified School District, Mercy Hospital, Kaiser Permanente, Maximus, Verizon, Costco, Walmart, Folsom State Prison, Home Depot, Target, Lowe's, Trader Joe's, Kohl's, Best Buy, Winco, REI, Sam's Club, Video Products Distributors, Cal-ISO, the City of Folsom, and Micron Technology.

The City has a wide and varied tax base. Tax base information is tracked and maintained by the Sacramento County Assessor's Office. The following tables show the tax base for the City. Table C-5 shows the secured real property value for the City of Folsom. Table C-6 breaks out the City by land use.

Table C-5 City of Folsom – Property Tax Roll Totals

Jurisdiction	2015-16 Value (\$)	2016-17 Value (\$)	Current Year Change	Percent of Current Roll*
Folsom	11,973,366,059	12,576,166,745	5%	9

Source: Sacramento County Assessor's Office

*Percentages rounded to the nearest whole number

Table C-6 City of Folsom – Summary of Property Types

Jurisdiction	Single Family with HEX*	Single Family Without HEX*	Multi-Family Residential	Vacant Land	Commercial	Agricultural	Mobile Homes	Other	Total
Folsom	13,296	7,792	317	1,744	755	17	854	574	25,349

Source: Sacramento County Assessor's Office

*Homeowners' Exemption

C.3.4. Population

The California Department of Finance estimated the January 1, 2015 total population for the City of Folsom was 74,909.

Select demographic information from the 2014 US Census American Community Survey (the most recent data available) is shown in Table C-7.

Table C-7 City of Folsom Demographic Information

Demographic Characteristic	Number	Percent
Race		
White	51,612	70.4%
Black or African American	4,276	5.8%
American Indian or Alaska Native	399	0.5%
Asian	10,374	14.1%
Hawaiian or Pacific Islander	416	0.6%
Two or more races	3,242	4.4%
Households*		

Demographic Characteristic	Number	Percent
Total Households	24,951	–
Average Household Size	2.61	–

Source: US Census Bureau American Community Survey 2010-2014 Estimates; *US Census Bureau, 2010

C.4 Hazard Identification

Folsom’s planning team identified the hazards that affect the City and summarized their geographic extent, probability of future occurrences, potential magnitude/severity, and significance specific to Folsom (see Table C-8).

Table C-8 City of Folsom—Hazard Identification Assessment

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance
Agricultural Hazards	Limited	Unlikely	Negligible	Low
Bird Strike	Limited	Unlikely	Negligible	Low
Climate Change	Significant	Likely	Critical	Low
Dam Failure	Significant	Unlikely	Critical	High
Drought and Water Shortage	Extensive	Occasional	Limited	Medium
Earthquake	Extensive	Unlikely	Catastrophic	Low
Earthquake: Liquefaction	Limited	Unlikely	Limited	Low
Flood: 100/200/500-year	Significant	Occasional/Unlikely	Critical	Medium
Flood: Localized Stormwater Flooding	Limited	Likely	Negligible	Medium
Landslides	Limited	Unlikely	Limited	Low
Levee Failure	N/A	N/A	N/A	N/A
River/Stream/Creek Bank Erosion	Limited	Likely	Limited	Medium
Severe Weather: Extreme Temperatures – Cold/Freeze	Limited	Likely	Negligible	Low
Severe Weather: Extreme Temperatures – Heat	Limited	Likely	Negligible	Low
Severe Weather: Fog	Significant	Likely	Negligible	Low
Severe Weather: Heavy Rains and Storms (Thunderstorms, Hail, and Lightning)	Limited	Likely	Negligible	Medium
Severe Weather: Wind and Tornadoes	Limited	Occasional	Limited	Low
Subsidence	N/A	N/A	N/A	N/A
Volcano	N/A	N/A	N/A	N/A
Wildfire:(Burn Area/Smoke)	Significant	Likely	Critical	Medium
Geographic Extent Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area		Magnitude/Severity Catastrophic— More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical— 25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited— 10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible— Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid		
Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year, or happens every year. Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.		Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

C.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile Folsom’s hazards and assess the City’s vulnerability separate from that of the Planning Area as a whole, which has already been assessed in Sections 4.2 Hazard Profiles and 4.3 Vulnerability Assessment in the main plan. The hazard profiles in the main plan discuss overall impacts to the Planning Area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the City of Folsom is included in this Annex. This vulnerability assessment analyzes the property, population, critical facilities, and other assets at risk to hazards ranked of medium or high significance specific to the City of Folsom and also includes a vulnerability assessment to the three primary hazards to the State of California: earthquake, flood, and wildfire. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

C.5.1. Hazard Profile

Each hazard vulnerability assessment in Section C.5.3, includes a description as to how the hazard affects the City and information on past occurrences. The intent of these section is to provide jurisdictional specific information on hazards and further describe how the hazards and risks differ across the Planning Area.

C.5.2. Vulnerability Assessment and Total Assets at Risk

This section presents the vulnerability assessment for the City and identifies Folsom’s total assets at risk, including values at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the community. This data is not hazard specific, but is representative of total assets at risk within the community.

Values at Risk

The following data from the Sacramento County Assessor’s Office is based on the 2015 Assessor’s data. The methodology used to derive property values is the same as in Section 4.3.1 of the Base Plan. This data should only be used as a guideline to overall values in the County, as the information has some limitations. The most significant limitation is created by Proposition 13. Instead of adjusting property values annually, the values are not adjusted or assessed at fair market value until a property transfer occurs. As a result, overall value information is most likely low and does not reflect current market value of properties within the County. It is also important to note, in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. Table C-9 shows the 2015 Assessor’s values (e.g., the values at risk) broken down by property type for the City of Folsom.

Table C-9 City of Folsom – Total Assets at Risk by Property Use

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Agricultural	17	0	\$56,930,100	\$0	\$56,930,100
Care / Health	33	27	\$30,572,662	\$139,628,498	\$170,201,160

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Church / Welfare	34	30	\$9,231,139	\$50,689,315	\$59,920,454
Industrial	39	34	\$28,569,542	\$97,359,974	\$125,929,516
Miscellaneous	685	1	\$635,638	\$65,000	\$700,638
Office	218	199	\$148,632,665	\$763,788,850	\$912,421,515
Public / Utilities	424	-	\$0	\$0	\$0
Recreational	17	13	\$15,543,139	\$38,863,089	\$54,406,228
Residential	20,433	19,930	\$2,376,060,690	\$5,877,871,359	\$8,253,932,049
Retail / Commercial	362	345	\$289,631,149	\$712,877,748	\$1,002,508,897
Vacant	810	18	\$218,249,715	\$2,499,240	\$220,748,955
No Data	-	-	\$0	\$0	\$0
Total	23,072	20,597	\$3,174,056,439	\$7,683,643,073	\$10,857,699,512

Source: Sacramento County 2016 Parcel/2015 Assessor's Data

Critical Facilities and Infrastructure

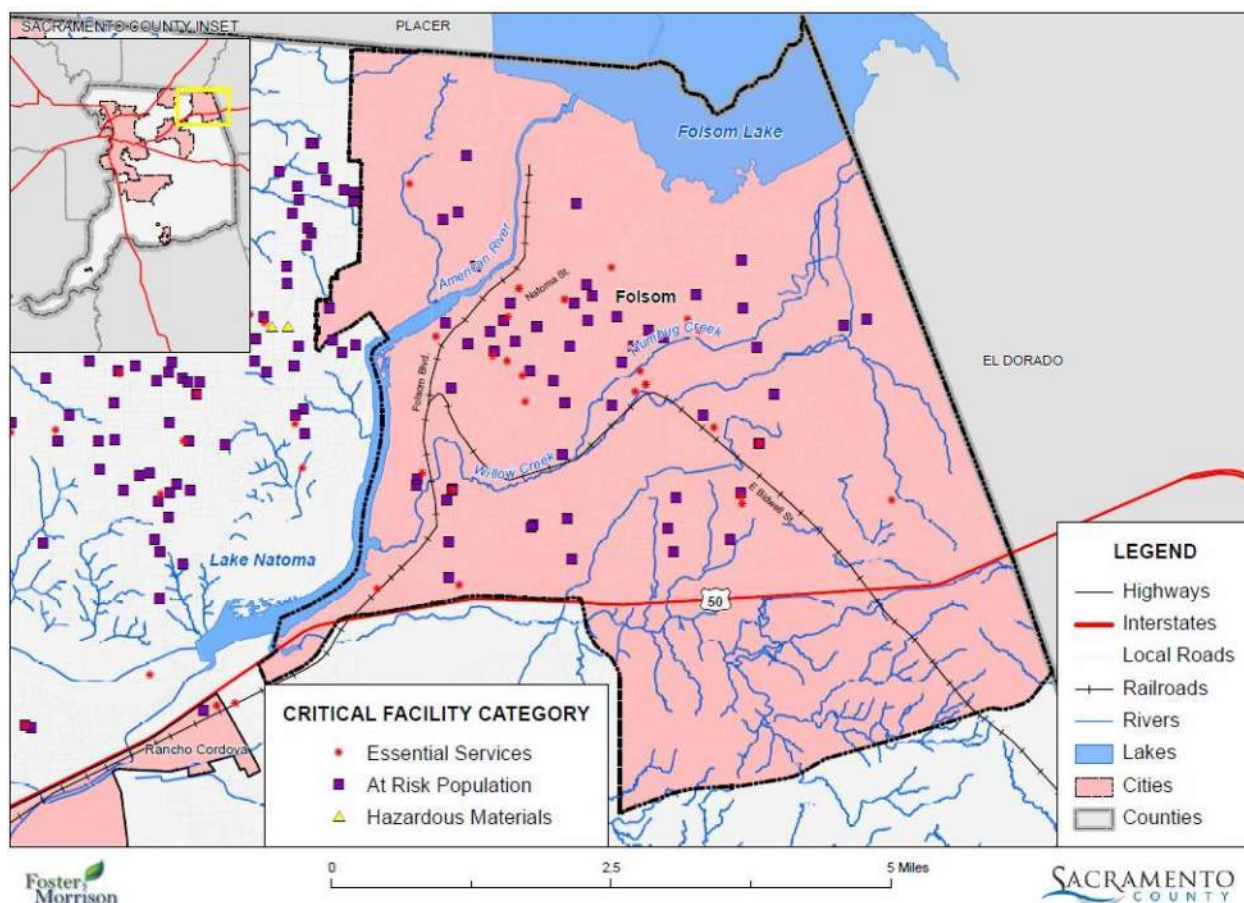
For purposes of this plan, a critical facility is defined as:

Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.

This definition was refined by separating out three classes of critical facilities, that include Essential Services Facilities, At Risk Population Facilities, and Hazardous Materials Facilities, as further described in Section 4.3.1 of the Base Plan.

An inventory of critical facilities in the City of Folsom from Sacramento County GIS is shown on Figure C-2 and detailed in Table C-10. Details of critical facility definition, type, name, address, and jurisdiction by hazard zone are listed in Appendix E.

Figure C-2 City of Folsom – Critical Facilities



Data Source: Sacramento County GIS, Cal-Atlas; Map Date: 05/2016.

Table C-10 City of Folsom – Critical Facilities Inventory

Critical Facility Category	Facility Type	Facility Count
Essential Services Facilities	Emergency Evacuation Shelter	9
	Fire Station	4
	General Acute Care Hospital	2
	Government Facilities	3
	Light Rail Stop	3
	Medical Health Facility	5
	Police	1
	Water Treatment Plant	1
	Total	28
At Risk Population Facilities	Adult Residential	1
	Charter School	1

Critical Facility Category	Facility Type	Facility Count
	College/University	1
	Day Care Center	20
	Hotel	1
	Infant Center	2
	Prison	1
	Private Elementary School	6
	Private High School	1
	Public Continuation High School	1
	Public Elementary School	9
	Public High School	1
	Public Middle School	2
	Residential Care/Elderly	17
	Total	64
Grand Total		92

Source: Sacramento County GIS

Natural Resources

The natural environment of Folsom presents a variety of natural resources. Environmental considerations have been taken into consideration during development protecting hillsides, riparian habitats, vernal pools, local streams and other localized environmentally sensitive areas. Much of these areas have been preserved in open space.

The City of Folsom has a variety of natural resources of value to the community:

Vegetation Communities

The City of Folsom Planning Area includes the following vegetation communities:

- Chamise Chaparral
- Interior Live Oak Woodland
- Blue Oak Woodland and Savanna
- California Annual Grassland
- Cottonwood/Willow Riparian
- Freshwater Marsh
- Seasonal Wetlands
- Vernal Pools
- Lake Shoreline Fluctuation Zone
- Ruderal and Barren Areas

Special Status Animal Species

According to the California Department of Fish and Game, twenty nine special status wildlife species are known or suspected to occur in the Folsom area.

- Valley Elderberry Longhorn Beetle
- California Red-legged Frog
- Foothill Yellow-legged Frog
- Western Spadefoot
- Western Pond Turtle
- California Horned Lizard
- Bald Eagle
- Golden Eagle
- Peregrine Falcon
- Prairie Falcon
- Burrowing Owl
- Osprey
- Northern harrier
- Sharp-shinned hawk
- Cooper's hawk
- Ferruginous hawk
- Merlin (*Falco columbarius*)
- Long-eared owl
- Short-eared owl
- Loggerhead Shrike
- Tricolor blackbird
- Yellow-breasted Chat
- Yellow Warbler
- Greater Sandhill Crane
- Willow Flycatcher
- Purple Martin
- Pallid bat
- Townsends big-eared bat
- California mastiff bat

Special Status Plant Species

A special-status plant species, as defined here, meets one or more of the following criteria:

- Officially listed by the California Department of Fish and Game (CDFG) as rare, threatened, or endangered and/or by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered or proposed for listing.
- A federal or State candidate species for listing as threatened or endangered or State candidate for listing as rare. Such a species may become formally listed during the course of a project.
- Listed under one of the following categories in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994) and/or the Electronic Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994; update 2001):
 - ✓ List 1A – Plants presumed extinct in California.
 - ✓ List 1B – Plants rare, threatened, or endangered in California and elsewhere.

- ✓ List 2 – Plants rare, threatened, or endangered in California but more common elsewhere.

Table C-11 lists the special status plant species in the vicinity of Folsom.

Table C-11 Special-Status Plant Species Occurring in the General Vicinity of Folsom

Species	Status/Federal /State/CNPS ¹	Habitat Requirements ²	Blooming Period
<i>Atriplex joaquiniana</i> San Joaquin spearscale	-/-/1B	Chenopod scrub, alkali meadow, grassland; in seasonal alkali wetlands or alkali sink scrub.	Apr-Oct
<i>Balsamorhiza macrolepis var macrolepis</i> Big-scale balsamroot	-/-/1B	Grassland, cismontane woodland; sometimes on serpentine.	Mar-Jun
<i>Calystegia stebbinsii</i> Stebbin's morning glory	FE/SE/1B	Chaparral, cismontane woodland; in open areas on red clay soils of the Pine Hill formation, or on gabbroic or serpentine soils. (Endemic to Pine Hill formation in El Dorado and Nevada counties.)	Apr-Jul
<i>Ceanothus roderickii</i> Pine Hill ceanothus	FE/SR/1B	Cismontane woodland, chaparral; on gabbroic soils, often in "historically disturbed" areas. (Endemic to the Pine Hill Area in Eldorado County.)	May-Jun
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	-/-/1B	Cismontane woodland, chaparral, lower montane coniferous forest; on serpentine and gabbro substrates; often on "historically disturbed" sites.	May-Jun
<i>Clarkia biloba ssp. Brandegeae</i> Brandegee's clarkia	-/-/1B	Chaparral, cismontane woodland; often on roadcuts.	May-Jul
<i>Cordylanthus mollis ssp. Hispidus</i> Hispid bird's-beak	-/-/1B	Meadows, playas, grassland; in damp alkaline soils, especially in alkali meadows and sinks.	Jun-Sep
<i>Downingia pusilla</i> Dwarf downingia	-/-/2	Mesic grassland, vernal pools; on margins of different types of vernal pools and vernal lakes.	Mar-May
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	-/-/1B	Cismontane woodland, lower montane coniferous forest, vernal pools; on mesic sites.	Jun-Aug
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	FE/SR/1B	Chaparral, cismontane woodland; on rocky ridges, often among rocks and boulders. Endemic to gabbroic and serpentine soils. (Endemic to Eldorado and Nevada Counties.)	Apr-Jul
<i>Fritillaria eastwoodiae</i> Butte County fritillary	-/-/3	Chaparral, cismontane woodland, lower montane coniferous forest; usually on dry slopes in serpentine, red clay, or sandy loam soils; sometimes on mesic sites.	Mar-May
<i>Galium californicum ssp. Sierra</i> El Dorado bedstraw	FE/SR/1B	Cismontane woodland, chaparral, lower montane coniferous forest; on gabbroic soils in mostly oak woodland. (Endemic to El Dorado County.)	May-Jun
<i>Gratiola heterosepala</i> Boggs Lake hedge- hyssop	-/SE/1B	Freshwater marshes and swamps, vernal pools; in clay soils, usually in vernal pools, sometimes on lake margins.	Apr-Aug

Species	Status/Federal /State/CNPS ¹	Habitat Requirements ²	Blooming Period
<i>Helianthemum suffrutescens</i> Bisbee Peak rush rose	-/-/3	Chaparral; in openings, often on serpentine, gabbroic, or Ione formation soils.	Apr-Jun
<i>Juncus leiospermus</i> var. <i>abartii</i> Ahart's dwarf rush	-/-/1B	Vernal pools; restricted to edges of pools.	Mar-May
<i>Juncus leiospermus</i> var. <i>leiospermus</i> Red Bluff dwarf rush	-/-/1B	Chaparral, grassland, cismontane woodland, vernal pools; in vernal mesic sites or at edges of vernal pools.	Mar-May
<i>Lathyrus sulphureus</i> var. <i>argillaceus</i> Dubious pea	-/-/3	Cismontane woodland, lower and upper montane coniferous forest.	Apr
<i>Legenere limosa</i> Legenere	-/-/1B	Vernal pools; in beds of pools. (Many historical occurrences extirpated.)	Apr-Jun
<i>Navarretia myersii</i> ssp. <i>Myersii</i> Pincushion navarretia	-/-/1B	Vernal pools, mesic grassland; on clay soils within non-native grassland.	May
<i>Orcuttia tenuis</i> Slender Orcutt grass	FT/SE/1B	Vernal pools.	May-Oct
<i>Orcuttia viscid</i> Sacramento Orcutt grass	FE/SE/1B	Vernal pools. (Endemic to Sacramento County.)	Apr-Jul
<i>Sagittaria sanfordii</i> Sanford's arrowhead	-/-/1B	Marshes and swamps; in standing or slow-moving, fresh-water ponds and ditches.	May-Oct
<i>Senecio layneae</i> Layne's ragwort	FT/SR/1B	Chaparral, cismontane woodland; on ultramafic soils; occasionally along streams.	Apr-Jul
<i>Wyethia reticulata</i> El Dorado County mule ears	-/-/1B	Chaparral, cismontane woodland, lower montane coniferous forest; in openings on stony red clay and gabbroic soils. (Endemic to El Dorado County.)	May-Jul

Footnotes:

1 Status:

FE - Federally-listed as endangered.

FT - Federally-listed as threatened.

SE - State-listed as endangered.

SR - State-listed as rare.

1B - CNPS (California Native Plant Society): Plants rare, threatened or endangered in California and elsewhere.

2 - CNPS: Plants rare, threatened, or endangered in California but more common elsewhere.

3 - CNPS: Plants about which we need more information – a review list.

4 - CNPS: Plants of limited distribution – a watch list.

2 Sources: CNPS (2001); CNDDB (2002); Hickman (1993) 3 Source: CNDDB (2002)

Historic and Cultural Resources

Table C-12 shows registered historic sites the in the City of Folsom.

Table C-12 Registered Historic Sites in the City of Folsom

Name (Landmark Plaque Number)	National Register	State Landmark	California Register	Point of Interest	Date Listed
Chinese Diggings, Natoma Station Ground Sluice (P712)				X	11/22/1988
Chung Wah Cemetery (N1918)	X				8/21/1995
Cohn House (N1001)	X				1/21/1982
Coloma Road At Nimbus Dam (746)		X			7/5/1960
Folsom Depot (N1035)	X				2/19/1982
Folsom Powerhouse (N258)	X				10/2/1973
Folsom-Overland Pony Express Route In California (702)		X			9/11/1959
Negro Bar (P798)				X	5/31/1994
Old Folsom Powerhouse (633)		X			3/3/1958
Southern Pacific Railroad Superintendent House (N2411)	X				6/13/2008
Terminal Of California's First Passenger Railroad (558)		X			12/31/1956
Yeong Wo Cemetery (P810)				X	5/30/1995

Source: California Office of Historical Preservation

The National Park Service administers two programs that recognize the importance of historic resources, specifically those pertaining to architecture and engineering. While inclusion in these programs does not give these structures any sort of protection, they are valuable historic assets.

The Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) document America's architectural and engineering heritage. Table C-13 lists the HABS and HAER structures in Sacramento County.

Table C-13 City of Folsom HABS and HAER Structures

Area	Historic Building/Structure
Folsom Vicinity	
	Folsom Powerhouse, Adjacent to American River, Folsom vicinity, Sacramento, CA
	Keefe-McDerby Mine Ditch, East of East Bidwell Street between Clarksville Road & Highway 50, Folsom vicinity, Sacramento, CA
	Natomas Ditch System, Blue Ravine Segment, Juncture of Blue Ravine & Green Valley Roads, Folsom vicinity, Sacramento, CA
Folsom	
	Folsom Powerhouse, Adjacent to American River, Folsom vicinity, Sacramento, CA.
	Guiseppe Murer House, 1121 Folsom Boulevard, Folsom, Sacramento, CA
	House, Folsom, Sacramento, CA
	Keefe-McDerby Mine Ditch, East of East Bidwell Street between Clarksville Road & Highway 50, Folsom vicinity, Sacramento, CA
	Methodist Episcopal Church, Folsom, Sacramento, CA
	Natomas Ditch System, Blue Ravine Segment, Juncture of Blue Ravine & Green Valley Roads, Folsom vicinity, Sacramento, CA
	Natomas Ditch System, Rhodes Ditch, West of Bidwell Street, north of U.S. Highway 50, Folsom, Sacramento, CA
	Trinity Episcopal Church, Folsom, Sacramento, CA
	Wells Fargo & Company Building, Folsom, Sacramento, CA

Source: The Library of Congress, American Memory, http://memory.loc.gov/ammem/collections/habs_haer/

It should be noted that these lists may not be complete, as they may not include those currently in the nomination process and not yet listed. Additionally, as defined by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), any property over 50 years of age is considered a historic resource and is potentially eligible for the National Register. Thus, in the event that the property is to be altered, or has been altered, as the result of a major federal action, the property must be evaluated under the guidelines set forth by CEQA and NEPA. Structural mitigation projects are considered alterations for the purpose of this regulation.

In addition to the registered sites, there are several assets within Folsom that define the community and represent the City’s history. Some of the historical sites of importance to Folsom are listed below.

- Gold Creek Bridge (formerly part of Lincoln Highway)
- Hinkle Creek Nature Area (prehistoric archeological site)

Growth and Development Trends

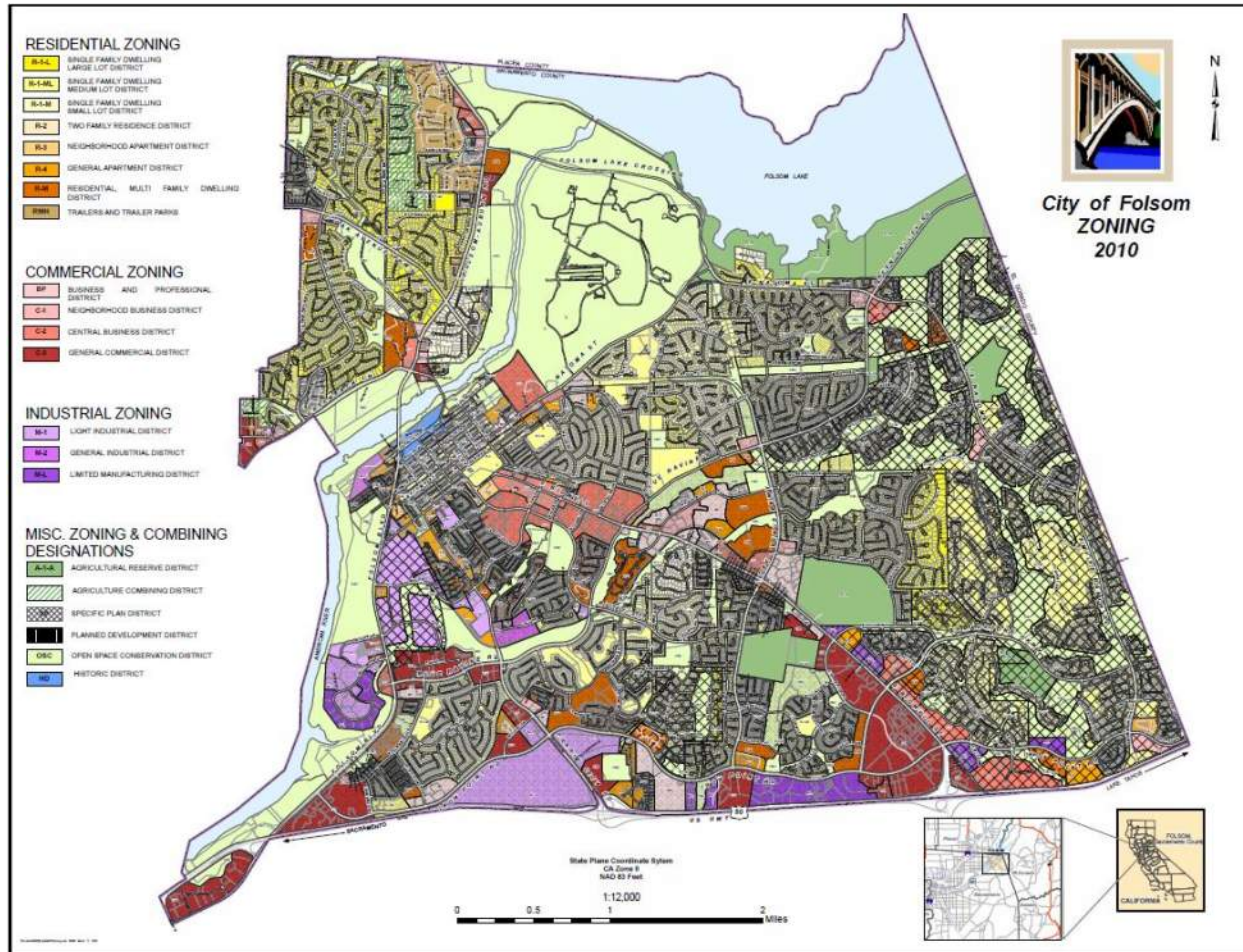
Growth within the City of Folsom has been strong and steady. Past growth is shown in Table C-14. Current zoning for the City is shown on Figure C-3.

Table C-14 City of Folsom Population 1990 to 2010

Date	1990	2000	2010
Population	29,802	51,884	72,203

Source: California Department of Finance

Figure C-3 City of Folsom Zoning Map



Source: City of Folsom

Development since 2011 Plan

As shown in Table C-15, Folsom has seen a growth of 3.7% of population between 2010 and January 1, 2015.

Table C-15 City of Folsom Population Changes Since 2011

Year	Population	Change	% Change
2010 ¹	72,203	—	—
2015 ²	74,909	2,706	3.7%

Source: ¹US Census Bureau, ²California Department of Finance

The Folsom Building Department and Planning Department tracked total building permits issued since 2011 for the City. These are tracked by total development, property use type, and hazard risk area. These are shown in Table C-16 and Table C-17. All development in the identified hazard areas, including the 1% annual chance floodplains, areas protected by levees, and high wildfire risk areas, were completed in accordance with all current and applicable development codes and standards and should be adequately protected. Thus, with the exception of more people living in the area potentially exposed to natural hazards, this growth should not cause a significant change in vulnerability of the City to identified priority hazards.

Table C-16 City of Folsom Total Development Since 2011

Property Use	2011	2012	2013	2014	2015
Residential	71	166	332	279	242
Commercial	3	7	3	2	2
Industrial	1	2	0	1	0
Other	0	0	0	0	0
Total	75	175	335	282	244

Source: City of Folsom

Table C-17 City of Folsom Development in Hazard Areas since 2011

Property Use	1% Annual Chance Flood	Area Protected by Levee	Wildfire Risk Area ¹	Other
Residential	1	0	1,090	0
Commercial	1	0	17	0
Industrial	0	0	4	0
Other	0	0	0	0
Total	2	0	1,111	0

Source: City of Folsom

¹Moderate or higher wildfire risk area

Future Development

The Sacramento Council on Governments (SACOG) modeled population projections for the City of Folsom and other areas of the region in 2012 for a Metropolitan Transportation Plan/Sustainable Communities Strategy report. This forecast uses a 2008 base year estimate with projections to 2020 and 2035 for population, housing units, households and employment. SACOG estimated the City population in 2020 and 2035 to be 74,664 and 78,689 respectively.

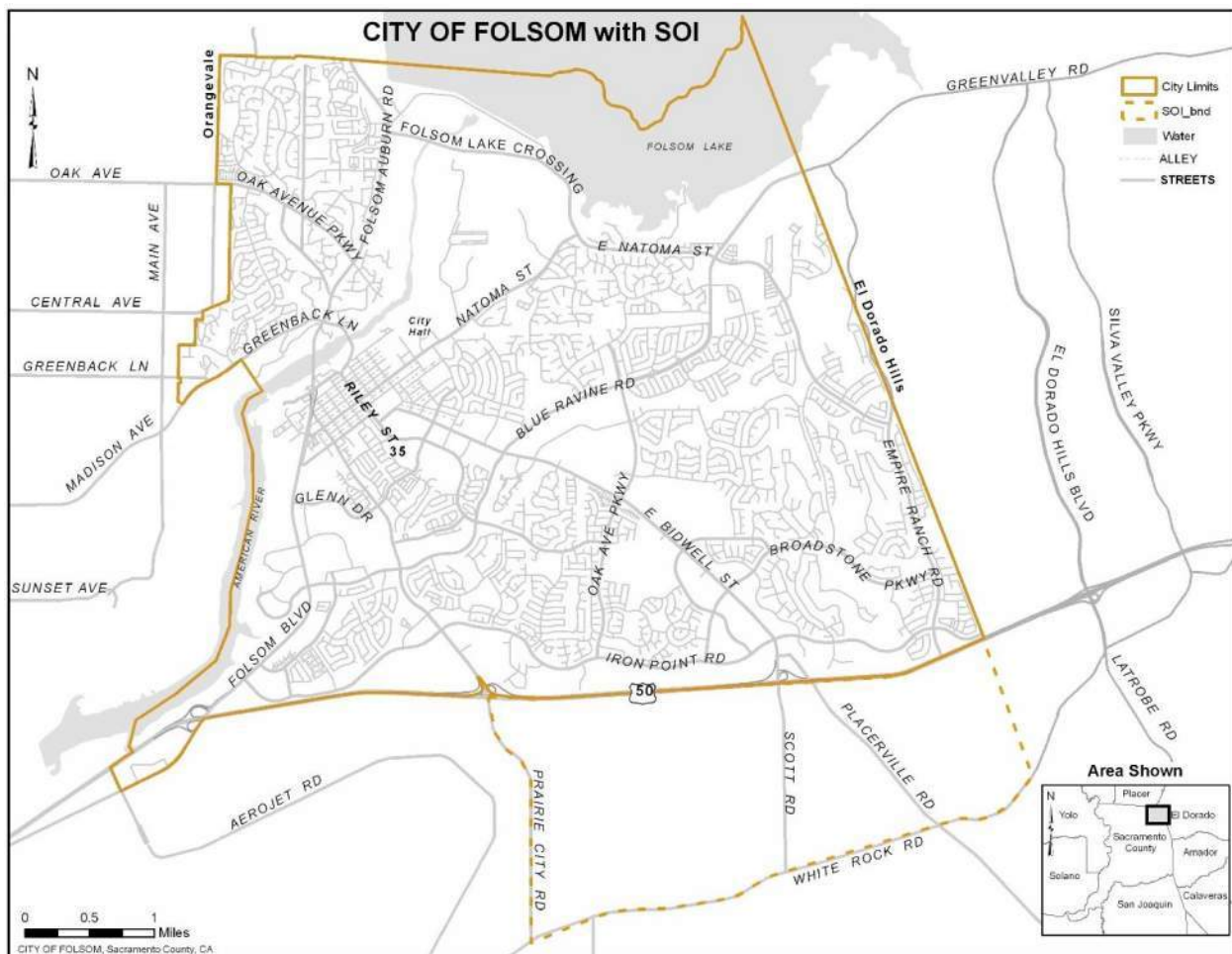
In June 2005, the City Council selected a preferred land use plan for the Folsom Plan Area (FPA), formerly known as the Sphere of Influence (SOI), area located south of Highway 50. and directed staff to prepare the environmental documents required for annexation. The SOI FPA encompasses 3,600 acres bounded by Highway 50, Prairie City Road, White Rock Road and the El Dorado County line. In June 2006, the landowners for the SOI FPA area unveiled their proposed land use plan. The plan includes over 1,000 acres for open space, 130 acres of parks, 500 acres designated for commercial, office, and retail use, and over

1,400 acres set aside for residential use. (see Figure C-4 and Figure C-5). Approximately 30 percent of the area would be maintained as open space to preserve oak woodlands and creek corridors.

Folsom Plan Area Land Uses

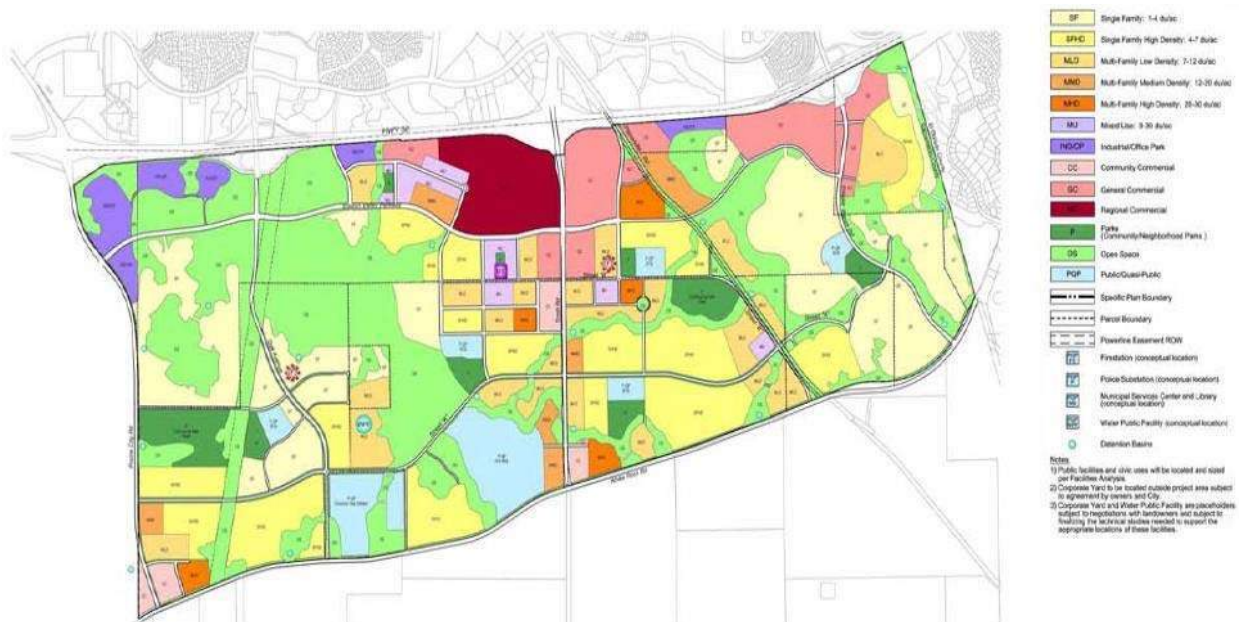
- Residential (units cap) 10,045
- Open Space (acres) 1,046
- Parks (acres) 165
- Schools/Civic Uses (acres) 179
- Commercial/Retail (acres) 340
- Mixed-Use (acres) 41
- Office Park (acres) 106

Figure C-4 City of Folsom Future Development Areas



Source: City of Folsom GIS

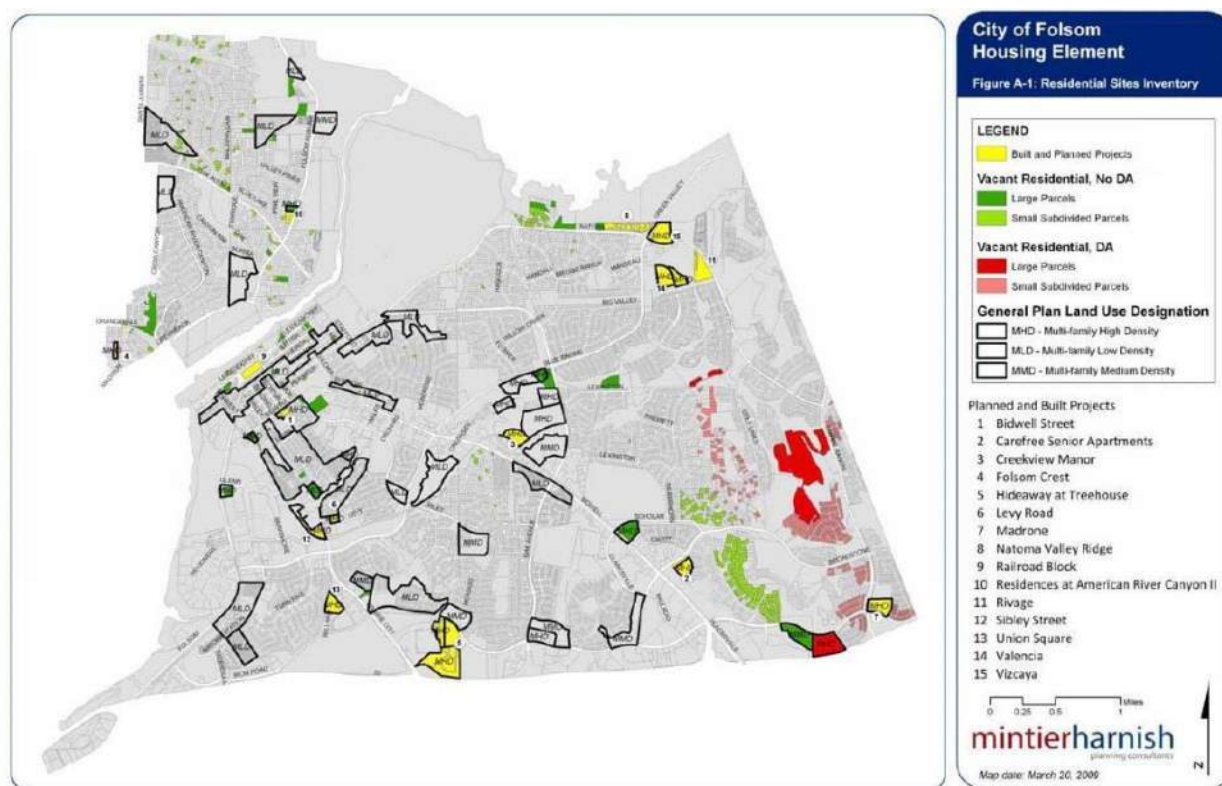
Figure C-5 Folsom Plan Area Land Use Diagram



Source: City of Folsom Housing Element Background Report

During the planning process for the City of Folsom Housing Element, an assessment was conducted of the vacant land suitable for residential development within the City of Folsom. The data was compiled by City staff and mapped. The inventory includes some vacant sites that were in the discussion or pre-application stages in the City of Folsom development project approval process as of the effective date of the inventory (January 1, 2009), but were not included in the inventory of built and planned projects. These locations are shown in Figure C-6.

Figure C-6 City of Folsom Future Growth Areas



Source: City of Folsom Housing Element

C.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table C-8 as high or medium significance hazards and primary hazards to the State of California. Impacts of past events and vulnerability of the City to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the Base Plan for more detailed information about these hazards and their impacts on the Sacramento County Planning Area). Methodologies for calculating loss estimates are the same as those described in Section 4.3 of the Base Plan. In general, the most vulnerable structures are those located within the flood risk areas, wildfire risk areas, unreinforced masonry buildings, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of the City to each identified priority hazard, in addition to the estimate of risk of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.

- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Dam Failure

Likelihood of Future Occurrence—Unlikely

Vulnerability—High

Hazard Profile and Problem Description

Dam failures can result from a number of natural or man-made causes such as earthquakes, erosion of the face or foundation, improper siding, rapidly rising flood waters, structural/design flaws, and deliberate human actions. A dam failure can cause loss of life, damage to property, and other ensuing hazards, as well as the displacement of persons residing in the inundation path. Damage to electric generating facilities and transmission lines could also impact life support systems in communities outside the immediate hazard areas.

A catastrophic dam failure, depending on size of dam and population downstream, could exceed the response capability of local communities. Damage control and disaster relief support would be required from other local governmental and private organizations, and from state and federal governments.

Warning ability is generally determined by the frequency of inspections for structural integrity, the flood wave arrival time (the time it takes for the flood wave to reach its maximum distance of inundation), or the ability to notify persons downstream and their ability to evacuate. The existence and frequency of updating and exercising an evacuation plan that is site-specific assists in warning and evacuation functions.

Folsom Dam, owned by the US Bureau of Reclamation, is the primary dam of concern which has the potential to affect the Sacramento County Planning Area and the local jurisdictions and populations in the inundation areas. Figure 4.75 in Section 4.3.6 in the Base Plan shows the areas of Sacramento County at risk to a dam failure of the Folsom Dam.

Past Occurrences

On the morning of July 17, 1995, spillway gate 3 failed at the Folsom Dam. The failure resulted in an uncontrolled release of nearly 40 percent of Folsom Lake at a peak rate of approximately 40, 000 cubic feet per second. The failure caused no fatalities.

There has been no new occurrence of a dam failure since the 2011 update to the Sacramento County Local Hazard Mitigation Plan.

Vulnerability to Dam Failure

A failure of the Folsom or other high or significant hazard dam can cause significant loss of life, property damage, loss of critical facilities and infrastructure, and displacement of city residents.

Mass evacuation of the inundation area may be essential to save lives, if warning time should permit. Extensive search and rescue operations may be required to assist trapped or injured persons. Emergency medical care, food, and temporary shelter would be required for injured or displaced persons. Identification and burial of many dead persons would pose difficult problems; public health would be a major concern. Many families would be separated, particularly if the failure should occur during working hours, and a personal inquiry or locator system would be essential. These and other emergency operations could be seriously hampered by the loss of communications, damage to transportation routes, and the disruption of public utilities and other essential services.

Governmental assistance could be required and may continue for an extended period. These efforts would be required to remove debris and clear roadways, demolish unsafe structures, assist in re-establishing public services and utilities, and provide continuing care and welfare for the affected population including, as required, temporary housing for displaced persons.

Values at Risk

Sacramento County provided inundation as a GIS layer for the Folsom Dam system, as part of the following breaks:

- Folsom Right Wing
- Folsom Mormon
- Folsom Dike 4
- Folsom Dike 5
- Folsom Dike 6
- Folsom Dike 7
- Folsom Dike 8
- Folsom Dam

GIS was used to determine the possible impacts of dam failure flooding within the City of Folsom. The methodology described in Section 4.3.6 of the Base Plan was followed in determining structures and values at risk in potential dam inundation areas. Table C-18 shows the property use, improved parcel count, improved values, estimated contents, total values and estimated loss of parcels that fall in an inundation zone in the City.

Table C-18 City of Folsom– Count of Parcels and Values in Dam Inundation Zone

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Agricultural	2	0	\$594,274	\$0	\$594,274
Care / Health	32	27	\$30,215,669	\$139,628,498	\$169,844,167
Church / Welfare	33	29	\$8,570,498	\$46,000,192	\$54,570,690

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Industrial	36	32	\$22,437,499	\$87,959,365	\$110,396,864
Miscellaneous	491	0	\$211,523	\$0	\$211,523
Office	207	189	\$113,012,184	\$649,471,037	\$762,483,221
Public / Utilities	349	0	\$0	\$0	\$0
Recreational	12	10	\$6,397,301	\$22,547,552	\$28,944,853
Residential	15,349	15,082	\$1,710,264,456	\$4,148,956,987	\$5,859,221,443
Retail / Commercial	298	285	\$230,937,623	\$565,346,544	\$796,284,167
Vacant	272	7	\$51,750,518	\$210,721	\$51,961,239
No Data	0	0	\$0	\$0	\$0
Total	17,081	15,661	\$2,174,391,545	\$5,660,120,896	\$7,834,512,441

Source: Sacramento County 2016 Parcel/2015 Assessor's Data

Table C-19 shows potential losses from a Folsom Dam failure with loss estimate and loss ratios for the City. The loss ratio is the loss estimate (i.e., total of improved and contents value for all parcels located in the dam inundation zone in the City) divided by the total potential exposure and displayed as a percentage of loss. Due to the varying flood depths that may occur during flooding, the loss estimate uses 3 scenarios: 3-foot flood depth (30% damage), 6-foot flood depth (60% damage to structure and contents), and total loss (all structure and contents are lost). Land values are not included in the loss estimates, as the land itself is usually not a loss. FEMA considers loss ratios greater than 10% to be significant and an indicator that a community may have more difficulties recovering from a dam failure.

Table C-19 City of Folsom – Dam Inundation Loss Estimates

Flood Zone	Improved Parcel Count*	Improved Structure Value	Estimated Contents Value	Total Value	Loss Estimate*	Loss Ratio
Folsom Dam Inundation	15,661	\$5,660,120,896	\$3,629,411,364	\$9,289,532,260	\$2,786,859,678	25.7%
					\$5,573,719,356	51.3%
					\$9,289,532,260	85.6%

Source: Sacramento County GIS, Sacramento County 2016 Parcel/2015 Assessor's Data

*Three values are shown here due to varying flood depths expected – 3 foot, 6 foot, and total loss.

According to the information in Table C-18 and Table C-19, the City of Folsom has 15,626 improved parcels and roughly \$9.3 billion of structure and contents value in the Folsom Dam inundation area. The 3-foot loss ratio of 25.7%, the 6-foot loss ratio of 51.3%, and the total loss ratio of 85.6% indicates that the City has very large amounts of assets at risk to a possible Folsom Dam failure.

Population at Risk

The dam inundation zones were overlaid on the parcel layer using GIS. Those residential parcel centroids that intersect the dam inundation zones were counted and multiplied by the 2010 Census Bureau average household factors for the City. According to this analysis, there is a total population of 40,061 residents of the City at risk to dam inundation. This is shown in Table C-25.

Table C-20 City of Folsom – Count of Improved Residential Parcels and Population in Dam Inundation Zones

Improved Residential Parcels	Population*
15,082	39,364

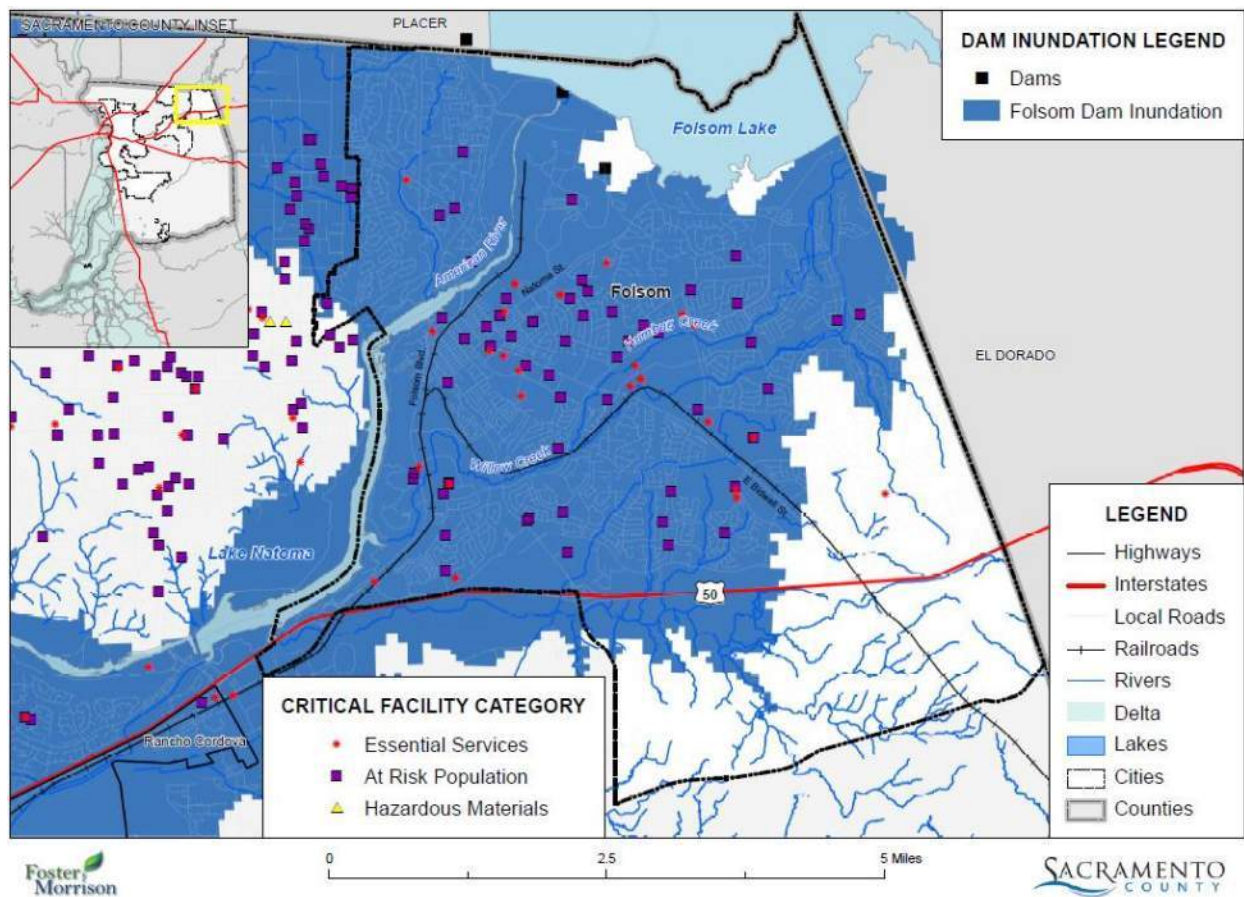
Source: FEMA 4/16/2016 DFIRM, Sacramento County 2016 Parcel/2015 Assessor’s Data, 2010 US Census Bureau

* Average household populations from the 2010 US Census were used: Folsom – 2.61.

Critical Facilities at Risk

An analysis was performed on the critical facility inventory in the City of Folsom in identified Folsom Dam inundation zones. GIS was used to determine whether the facility location intersects the inundation area. Details of critical facilities in the inundation area in the City of Folsom are shown in Figure C-7 and Table C-21. As shown on the table and figure, Folsom has 91 critical facilities located in the Folsom Dam inundation areas. Details of critical facility definition, type, name and address and jurisdiction by flood zone are listed in Appendix E.

Figure C-7 City of Folsom – Critical Facilities in Dam Inundation Zones



Data Source: Sacramento County GIS, Cal-Atlas, National Inventory of Dams; Map Date: 05/2016.

Table C-21 City of Folsom – Critical Facilities in Dam Inundation Zones

Critical Facility Category	Facility Type	Facility Count
Essential Services Facilities	Emergency Evacuation Shelter	8
	Fire Station	4
	General Acute Care Hospital	2
	Government Facilities	3
	Light Rail Stop	3
	Medical Health Facility	5
	Police	1
	Water Treatment Plant	1
	Total	27
At Risk Population Facilities	Adult Residential	1
	Charter School	1
	College/University	1
	Day Care Center	20
	Hotel	1
	Infant Center	2
	Prison	1
	Private Elementary School	6
	Private High School	1
	Public Continuation High School	1
	Public Elementary School	9
	Public High School	1
	Public Middle School	2
	Residential Care/Elderly	17
Total	64	
Total		91

Source: Sacramento County GIS

Future Development

There is future development within the Folsom Dam inundation zone.

Drought

Likelihood of Future Occurrence—Occasional

Vulnerability—Medium

Hazard Profile and Problem Description

Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue and is critical for manufacturing, tourism, recreation, and commercial and domestic use. As the population in the area continues to grow, so will the demand for water.

Past Occurrences

From 2012 to 2015, the City of Folsom experienced a drought, which affected water supply. During that period, water agencies implemented conservation efforts and Folsom Lake reached record low water levels.

Vulnerability to Drought

Based on historical information, the occurrence of drought in California, including the City of Folsom, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts is often extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. The vulnerability of the City of Folsom to drought is City-wide, but impacts may vary and include reduction in water supply and an increase in dry fuels.

Future Development

The City of Folsom has the capacity in their water rights appropriations to supply water to the Folsom Plan Area. Conservation efforts were put in place to account for the projected increase in water demand due to the development.

As the population in the area continues to grow, so will the demand for water. Water shortages in the future may be worsened by drought, as the City relies on surface water for its water source. Increased planning will be needed to account for population growth and increased water demands.

Flood: 100/200/500-year

Likelihood of Future Occurrence—Unlikely

Vulnerability—Medium

Hazard Profile and Problem Description

The City of Folsom is traversed by several stream systems and is at risk to both riverine flooding and localized stormwater flooding. As previously described in Section 4.2.10 of the Base Plan, the Sacramento

County Planning Area and the City of Folsom have been subject to previous occurrences of flooding. In the City of Folsom, much of the flood damage occurs in the floodplains of the American River, Willow Creek, and Humbug Creek.

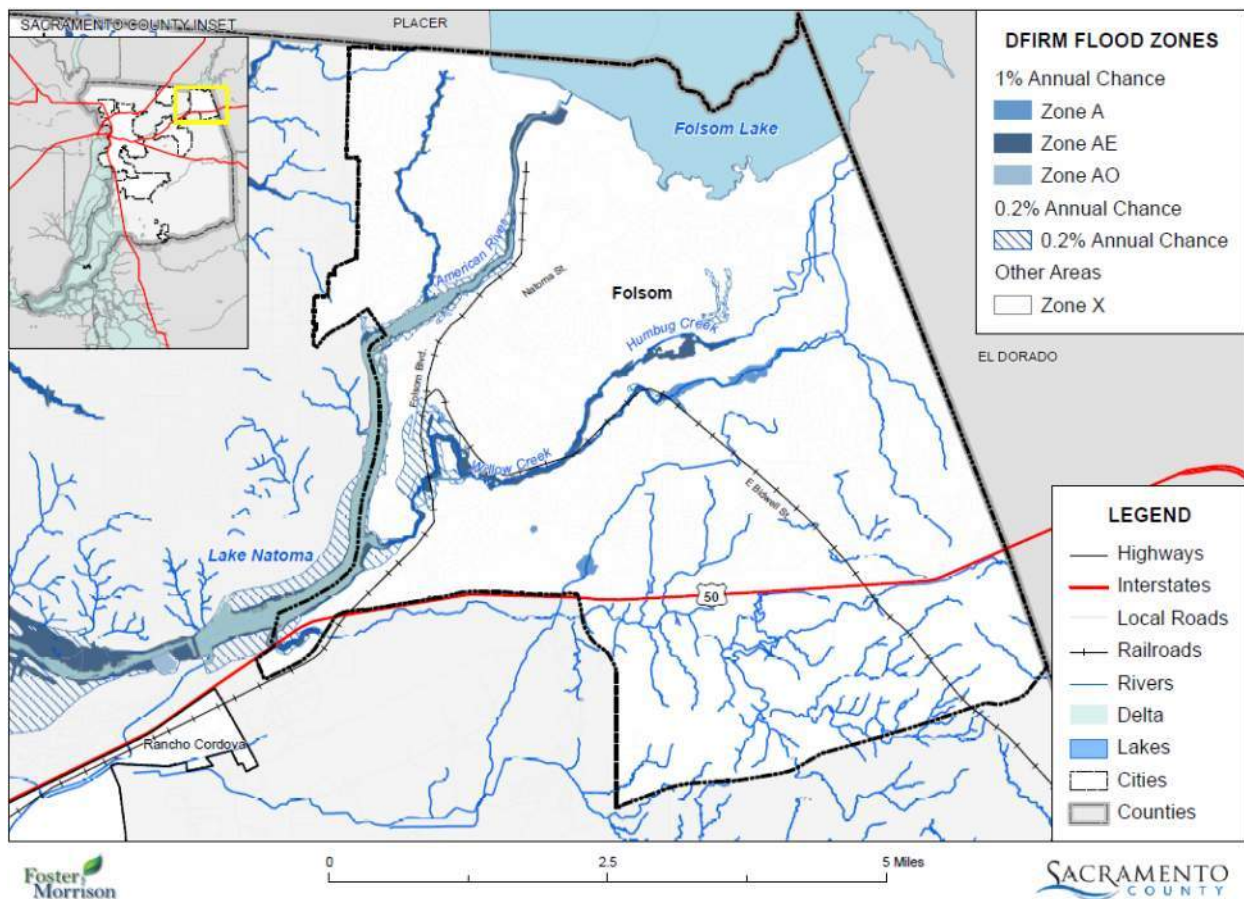
Past Occurrences

There have been no new flooding due to the 100-, 200-, 500-year storm events since the 2011 update to the Sacramento County Hazard Mitigation Plan.

Flood Zones

A small portion of the City is located inside of the 100 year flood zone as defined by the Federal Emergency Management Agency (FEMA). This is seen in Figure C-8.

Figure C-8 City of Folsom – FEMA DFIRM Flood Zones



Data Source: Sacramento County GIS, Cal-Atlas, FEMA NFHL 04/16/2016; Map Date: 05/2016.

Vulnerability to Flood

Values at Risk

GIS was used to determine the possible impacts of flooding within the City of Folsom. The methodology described in Section 4.3.10 of the Base Plan was followed in determining structures and values at risk to the 1% (100-year) and 0.2% (500-year) annual chance flood event. Table C-22 shows the property use, improved parcel count, improved values, estimated contents, total values and estimated loss of parcels that fall in a floodplain in the City.

Table C-22 City of Folsom – Count and Improved Value by Property Use and Detailed Flood Zone

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Zone A						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	1	0	\$1,784,965	\$0	\$1,784,965	\$3,569,930
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	2	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	2	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	5	0	\$1,784,965	\$0	\$1,784,965	\$3,569,930
Zone AE						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	5	0	\$39	\$0	\$39	\$78
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	1	1	\$185,000	\$385,000	\$185,000	\$755,000

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Public / Utilities	9	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	7	7	\$585,406	\$1,972,379	\$292,703	\$2,850,488
Retail / Commercial	1	0	\$1,100,000	\$0	\$1,100,000	\$2,200,000
Vacant	3	0	\$6,602	\$0	\$0	\$6,602
Total	26	8	\$1,877,047	\$2,357,379	\$1,577,742	\$5,812,168
Zone AH						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone AO						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone A99						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Total 1%						
	31	8	\$3,662,012	\$2,357,379	\$1,371,190	\$7,390,581
0.2% Annual Chance Flood Zone*						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	1	1	\$261,369	\$699,873	\$261,369	\$1,222,611
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	2	2	\$4,162,241	\$31,692,307	\$6,243,362	\$42,097,910
Miscellaneous	22	0	\$1,598	\$0	\$1,598	\$3,196
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	32	29	\$20,862,785	\$77,933,202	\$20,862,785	\$119,658,772
Public / Utilities	16	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	99	76	\$12,631,115	\$22,656,437	\$6,315,558	\$41,603,110
Retail / Commercial	14	14	\$14,066,273	\$20,143,632	\$14,066,273	\$48,276,178

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Vacant	8	0	\$5,084,060	\$0	\$0	\$5,084,060
Total	194	122	\$57,069,441	\$153,125,451	\$47,750,944	\$257,945,836
X Protected by Levee Zone						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone X						
Agricultural	17	0	\$56,930,100	\$0	\$56,930,100	\$113,860,200
Care / Health	31	26	\$28,526,328	\$138,928,625	\$28,526,328	\$195,981,281
Church / Welfare	34	30	\$9,231,139	\$50,689,315	\$9,231,139	\$69,151,593
Industrial	37	32	\$24,407,301	\$65,667,667	\$36,610,952	\$126,685,920
Miscellaneous	656	1	\$634,001	\$65,000	\$634,001	\$1,333,002
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	185	169	\$127,584,880	\$685,470,648	\$127,584,880	\$940,640,408
Public / Utilities	397	0	\$0	\$0	\$0	\$0
Recreational	17	13	\$15,543,139	\$38,863,089	\$15,543,139	\$69,949,367
Residential	20,327	19,847	\$2,362,844,169	\$5,853,242,543	\$1,181,422,085	\$9,397,508,797
Retail / Commercial	347	331	\$274,464,876	\$692,734,116	\$274,464,876	\$1,241,663,868
Vacant	799	18	\$213,159,053	\$2,499,240	\$0	\$215,658,293
Total	22,847	20,467	\$3,113,324,986	\$7,528,160,243	\$1,730,947,499	\$12,372,432,728

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Table C-23 summarizes Table C-22 above and shows City of Folsom loss estimates and shows improved values at risk by FEMA 1% and 0.2% annual chance flood zones.

Table C-23 City of Folsom – Flood Loss Summary

Flood Zone	Improved Parcel Count	Total Improved Value	Estimated Contents Value	Total Improved/Contents Value	Loss Estimate	Loss Ratio
1% Annual Change	8	\$2,357,379	\$1,371,190	\$3,728,569	\$745,713.80	0.0004%
0.2% Annual Chance*	122	\$153,125,451	\$157,643,386	\$310,768,837	\$62,153,767.40	3.97%

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

According to Table C-22 and Table C-23, the City of Folsom has 8 improved parcels and \$3,728,569 of structure and contents value in the 1% annual chance floodplain. These values can be refined a step further. Applying the 20 percent damage factor as previously described in Section 4.3.10 of the Base Plan, there is a 1% chance in any given year of a flood event causing roughly \$745,713.80 in damage in the City of Folsom. The City of Folsom has 122 improved parcels and \$310,768,837 of structure and contents value in the 0.2% annual chance floodplain. Applying the 20 percent damage factor as previously described in, there is a 0.2% chance in any given year of a flood event causing roughly \$62.2 million in damage in the City of Folsom. A loss ratio of 0.004% indicates that losses in Folsom to a 1% chance flood would be relatively minor; however, a loss ratio of 3.97% indicates losses in Folsom to a 0.2% annual chance flood would be more significant.

Flooded Acres

Also of interest is the land area affected by the various flood zones. The following is an analysis of flooded acres in the City in comparison to total area within the City limits. The same methodology, as discussed in Section 4.3.10 of the Base Plan, was used for the City of Folsom as well as for the County as a whole. Table C-24 represents a detailed and summary analysis of total acres for each FEMA DFIRM flood zone in the City.

Table C-24 City of Folsom – Flooded Acres

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
A	Agricultural	0	0	0.00%
	Care / Health	1.24	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0.34	0	0.00%
	No Data	0	0	0.00%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Office	0	0	0.00%
	Public / Utilities	32.05	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	33.63	0	0.00%
AE	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	21.29	0	0.00%
	No Data	0	0	0.00%
	Office	0.09	0.09	4.01%
	Public / Utilities	37.28	0	0.00%
	Recreational	0	0	0.00%
	Residential	2.15	2.15	95.99%
	Retail / Commercial	1.02	0	0.00%
	Vacant	14.75	0	0.00%
	Total	76.58	2.24	100.00%
AH	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
AO	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
A99	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
Total	0	0	0.00%	
	Total 1%	110.21	2.24	100.00%
Shaded X (0.2% Annual Chance)*	Agricultural	0	0	0.00%
	Care / Health	1.16	1.16	1.26%
	Church / Welfare	0	0	0.00%
	Industrial	19.01	19.01	20.51%
	Miscellaneous	7.88	0	0.00%
	No Data	0	0	0.00%
	Office	46.36	41.76	45.07%
	Public / Utilities	61.21	0	0.00%
	Residential	13.55	12.25	13.22%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Retail / Commercial	18.48	18.48	19.94%
	Vacant	9.49	0	0.00%
	Total	177.15	92.67	100.00%
X Protected by Levee	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
Zone X	Agricultural	1,603.51	0	0.00%
	Care / Health	81.07	76.25	1.30%
	Church / Welfare	75.64	74.68	1.27%
	Industrial	93.49	90.03	1.53%
	Miscellaneous	1,034.27	1.71	0.03%
	No Data	0	0	0.00%
	Office	458.82	421.89	7.18%
	Public / Utilities	2,953.47	0	0.00%
	Recreational	231.15	118.39	2.01%
	Residential	4,871.63	4,536.14	77.17%
	Retail / Commercial	599.81	550.14	9.36%
	Vacant	1,929.84	8.95	0.15%
	Total	13,932.70	5,878.17	100.00%

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Population at Risk

The DFIRM flood zones were overlaid on the parcel layer. Those residential parcel centroids that intersect the flood zones were counted and multiplied by the 2010 Census Bureau average household factors for

Folsom. According to this analysis, there is a total population of 216 residents of the City at risk to flooding, 18 in the 1% annual chance and 198 in the 0.2% floodplain. This is shown in Table C-25.

Table C-25 City of Folsom – Count of Improved Residential Parcels and Population by Flood Zone

Flood Zone	Improved Residential Parcels	Population*
1% Annual Chance	7	18
0.2% Annual Chance*	76	198
Total	83	216

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor’s Data, US Census Bureau

* Average household populations from the 2010 US Census were used: Folsom– 2.61.

**This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Critical Facilities at Risk

An analysis was performed on the critical facility inventory in Folsom in identified FEMA DFIRMs. GIS was used to determine whether the facility locations intersects a DFIRM flood hazard areas, and if so, which zone it intersects. Details of critical facilities in the floodplain in the City of Folsom are shown in Figure C-9 and Table C-26. As shown on the table and figure, Folsom has 0 critical facilities located in 1% annual chance and 5 critical facilities in the 0.2% annual chance DFIRM flood zones. Details of critical facility definition, type, name and address and jurisdiction by flood zone are listed in Appendix E.

Figure C-9 City of Folsom – Critical Facilities and Flood Zones

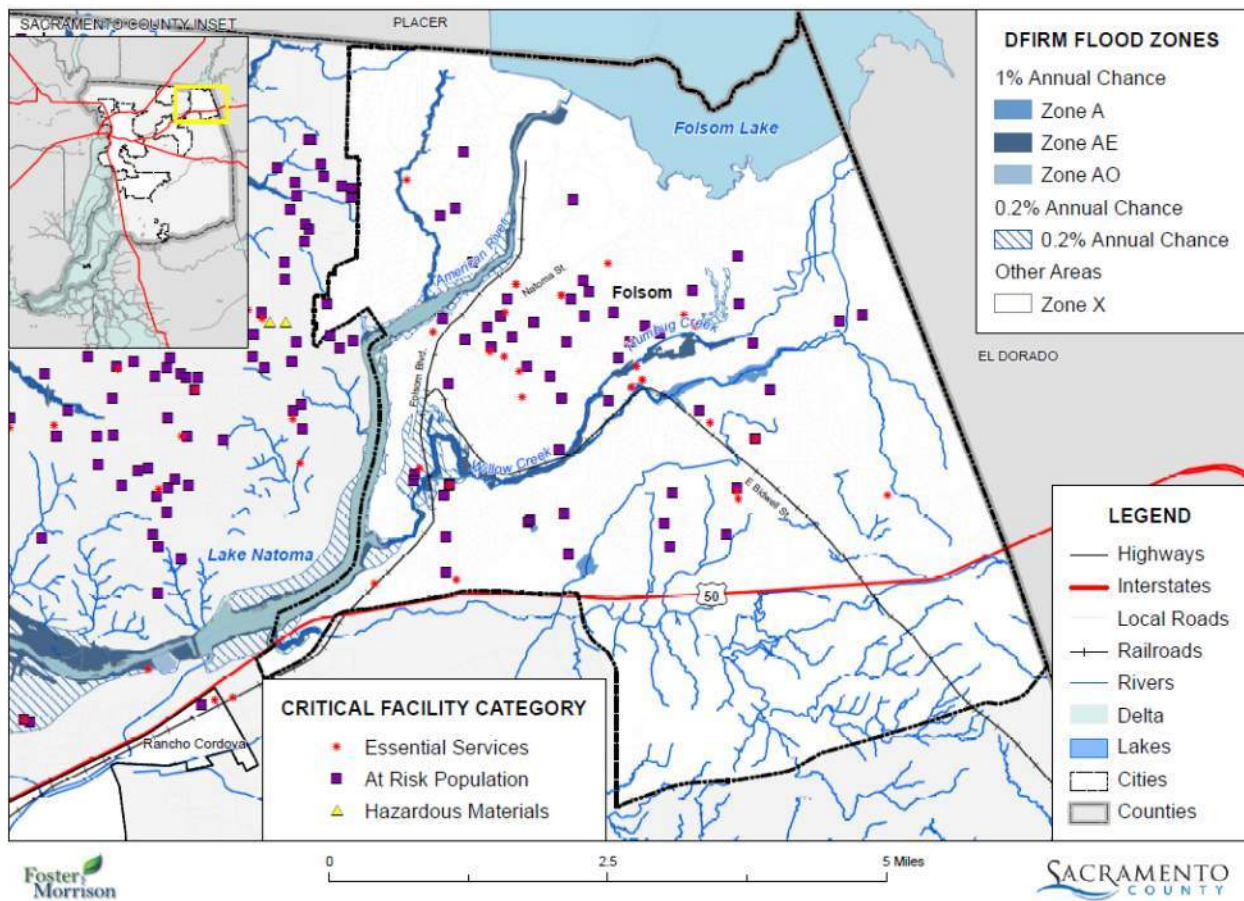


Table C-26 City of Folsom – Critical Facilities and Flood Zones

Critical Facility Category	Facility Type	Facility Count
0.2% Annual Chance		
Essential Services Facilities	Light Rail Stop	1
	Medical Health Facility	1
	Total	2
At Risk Population Facilities	Day Care Center	1
	Hotel	1
	Private Elementary School	1
	Total	3
0.2% Annual Chance Total*		5
Zone X		
Essential Services Facilities	Emergency Evacuation Shelter	9
	Fire Station	4

Critical Facility Category	Facility Type	Facility Count
	General Acute Care Hospital	2
	Government Facilities	3
	Light Rail Stop	2
	Medical Health Facility	4
	Police	1
	Water Treatment Plant	1
	Total	26
At Risk Population Facilities	Adult Residential	1
	Charter School	1
	College/University	1
	Day Care Center	19
	Infant Center	2
	Prison	1
	Private Elementary School	5
	Private High School	1
	Public Continuation High School	1
	Public Elementary School	9
	Public High School	1
	Public Middle School	2
	Residential Care/Elderly	17
	Total	61
Zone X Total	87	
Grand Total		92

Source: FEMA 6/16/2015 DFIRM, Sacramento County GIS

*This count only includes those critical facilities in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all critical facilities in the 1% annual chance floodplain.

Insurance Coverage, Claims Paid, and Repetitive Losses

The City of Folsom joined the National Flood Insurance Program (NFIP) on January 6, 1982. The City does not participate in the CRS program.

NFIP data indicates that as of February 16, 2016, there were 293 flood insurance policies in force in the City with \$94,778,400 of coverage. Of the 293 policies, 286 were residential (single-family homes) and 7 were nonresidential; 13 of the policies were in A zones (the remaining 280 were in B, C, and X zones). The GIS parcel analysis detailed above identified 7 parcels in the 100-year flood zone. 13 policies for 7 parcels in the 100-year floodplain (A zones) equates to insurance coverage of 100 percent.

There have been 14 historical claims for flood losses totaling \$403,345.45. 11 of these were for pre-FIRM structures; 3 were for post-FIRM structures. There has been one substantial damage claim since 1978.

NFIP data further indicates that there are 3 repetitive loss (RL) buildings, with 0 RL buildings being insured. There has been a total of 7 RL losses, with total payments of \$348,648.23. This represents the majority of claim costs in the City of Folsom. None of the insured RL buildings has incurred 4 or more losses. All of the properties are located outside of the 100- and 500-year floodplain in the B, C, or X zones. The RL properties are located in an older, built-out residential neighborhood with older infrastructure. Recent drainage improvements in the area may have alleviated some of the flooding issues to these RL structures.

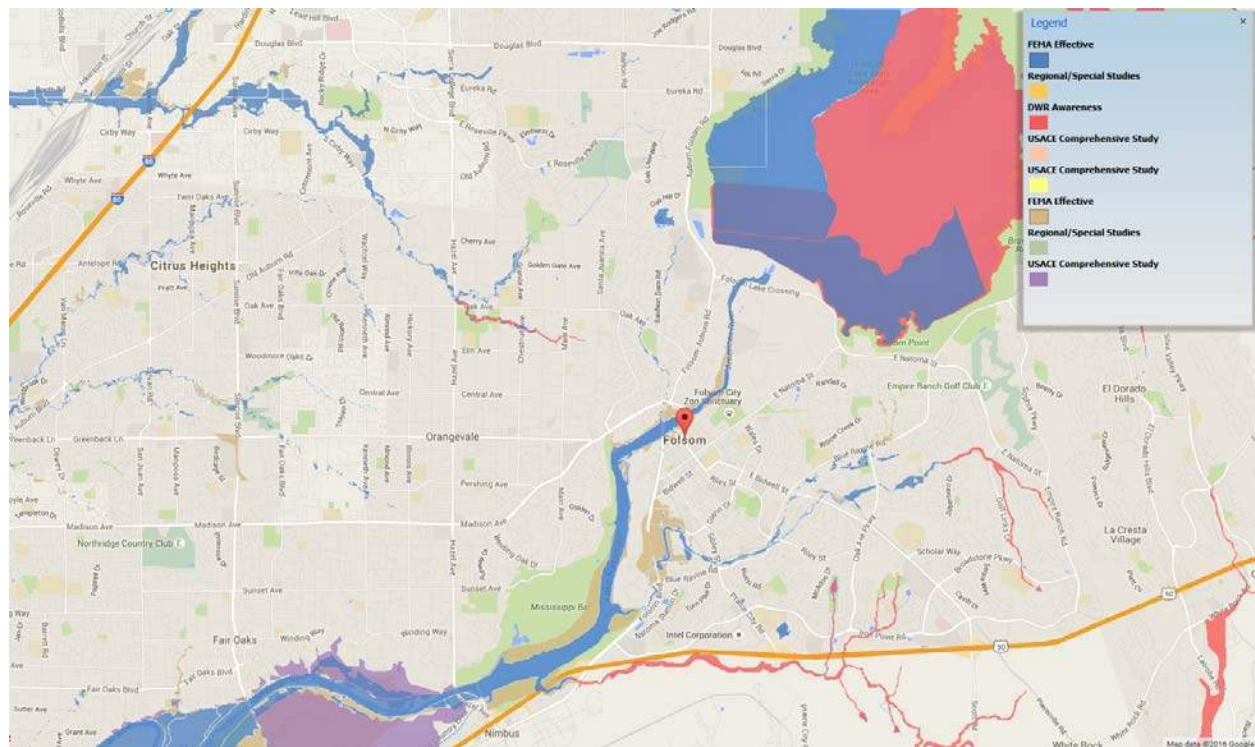
California Department of Water Resources Best Available Maps (BAM)

The FEMA regulatory maps provide just one perspective on flood risks in Sacramento County. Senate Bill 5 (SB 5), enacted in 2007, authorized the California DWR to develop the Best Available Maps (BAM) displaying 100- and 200-year floodplains for areas located within the Sacramento-San Joaquin (SAC-SJ) Valley watershed. SB 5 requires that these maps contain the best available information on flood hazards and be provided to cities and counties in the SAC-SJ Valley watershed. This effort was completed by DWR in 2008. DWR has expanded the BAM to cover all counties in the State and to include 500-year floodplains.

Different than the FEMA DFIRMs which have been prepared to support the NFIP and reflect only the 100-year event risk, the BAMs are provided for informational purposes and are intended to reflect current 100-, 200-, and 500-year event risks using the best available data. The 100-year floodplain limits on the BAM are a composite of multiple 100-year floodplain mapping sources. It is intended to show all currently identified areas at risk for a 100-year flood event, including FEMA's 100-year floodplains. The BAM are comprised of different engineering studies performed by FEMA, Corps, and DWR for assessment of potential 100-, 200-, and 500-year floodplain areas. These studies are used for different planning and/or regulatory applications. They are for the same flood frequency, however, they may use varied analytical and quality control criteria depending on the study type requirements.

The value in the BAMs is that they provide a bigger picture view of potential flood risk to the City than that provided in the FEMA DFIRMs. This provides the community and residents with an additional tool for understanding potential flood hazards not currently mapped as a regulated floodplain. Improved awareness of flood risk can reduce exposure to flooding for new structures and promote increased protection for existing development. Informed land use planning will also assist in identifying levee maintenance needs and levels of protection. By including the FEMA 100-year floodplain, it also supports identification of the need and requirement for flood insurance. The BAM map for Folsom is shown in Figure C-10.

Figure C-10 City of Folsom Best Available Map



Source: California DWR

Legend explanation: Blue - FEMA 100-Year, Orange – Local 100-Year (developed from local agencies), Red – DWR 100-year (Awareness floodplains identify the 100-year flood hazard areas using approximate assessment procedures.), Pink – USACE 100-Year (2002 Sac and San Joaquin River Basins Comp Study), Yellow – USACE 200-Year (2002 Sac and San Joaquin River Basins Comp Study), Tan – FEMA 500-Year, Grey – Local 500-Year (developed from local agencies), Purple – USACE 500-Year (2002 Sac and San Joaquin River Basins Comp Study).

Natural Resources at Risk

Various natural resources (i.e. vegetation communities, special status animal species, special status plant species) would be at risk during a flood. Flooding conditions may wash out the above natural resources.

Historic and Cultural Resources at Risk

Two historic sites are located with the 100- and 200-year floodplain; Coloma Road at Nimbus Dam and the old Folsom Powerhouse.

Future Development

The City enforces the floodplain ordinance. If any development is to occur in the floodplain, it would have to conform to the elevation standards of the floodplain ordinance. No development is expected in the floodplain in the future.

Alder Creek is located in the Folsom Plan Area development. The City of Folsom is currently developing the 100-year floodplain for this portion of Alder Creek. Structures within the new development will not

encroach within the floodplain. Development that affects the floodplain boundaries will provide Conditional Letter of Map Revision (CLOMR) and/or Letter of Map Revision (LOMR) reports.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

Hazard Profile and Problem Description

Flooding and other issues caused by severe weather events, primarily heavy rains and thunderstorms, can often pose a risk to the community. Primary concerns include impacts to infrastructure that provides a means of ingress and egress throughout the community.

Past Occurrences

There are areas of localized flooding within the City. Most have been addressed with capital improvement projects and adjustments in maintenance activities.

Vulnerability to Localized Flooding

Table C-27 identifies known and past occurrences of such areas and the associated problems encountered. This list is an initial inventory of key problem areas and is not intended to be a complete inventory of all problems and locations associated with severe weather events and localized flooding in the City of Folsom.

Table C-27 City of Folsom’s Road List of Localized Flooding Problem Areas

Road Name	Flooding	High Water/Creek Crossing	Flooded by Runoff from Neighboring Property	Damaged/ Insufficient Storm Drain System
Blue Ravine/Folsom Blvd.	X			X
Humbug Creek Drive		X		
Orchard Terrace Court			X	
N. American River Canyon Drive	X			X
Bayline Circle			X	
Pinegrove Way	X			X
Ruth Court	X		X	
Ballard Court		X		
Parkshore	X			X
Hollyann & Handford				X
Berma Road	X	X		
Bittercreek	X		X	X
Redevelopment Area				

Road Name	Flooding	High Water/Creek Crossing	Flooded by Runoff from Neighboring Property	Damaged/ Insufficient Storm Drain System
Rumsey Way	X			X
Duchow	X			X
Price	X			X
Coloma	X			X
Sibley Street	X			X
Wool Street	X			X
Glenn Drive & Lembi Drive	X		X	
Morman Street	X			X

Source: City of Folsom

Future Development

Future development in the City will add more impervious surfaces and need to drain those waters. The City’s design standards will ensure future development transportation and drainage facilities are designed to prevent local flooding. The risk of localized flooding to future development can also be minimized by accurate recordkeeping of repetitive localized storm activity. Mitigating the root causes of the localized stormwater flooding will reduce future risks of losses.

Severe Weather: Heavy Rain and Storms

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

Hazard Profile and Problem Description

According to historical hazard data, severe weather is an annual occurrence in the City of Folsom. Damage and disaster declarations related to severe weather have occurred and will continue to occur in the future. Heavy rain and thunderstorms are the most frequent type of severe weather occurrence in the area. Wind and lightning often accompany these storms and have caused damage in the past.

Past Occurrences

The storms in February 1986 caused the Folsom dam to exceed its design capacity. Heavy rains affected Sacramento County and the other areas of the American River drainage basin. Rainfalls of up to 29” fell between February 11 and 20. The Folsom Dam did not fail, but Folsom Lake was 1.56 ft into surcharge storage, holding 18,200 acre-feet more than design capability. Dam improvements since 1986 have and will increase capacity of the dam.

Vulnerability to Severe Weather: Heavy Rain and Storms

Problems associated with the primary effects of severe weather include flooding, pavement deterioration, washouts, high water crossings, landslide/mudslides, debris flows, and downed trees. Table C-27 presented above in the discussion of the flood hazard details those areas within the City that are most often affected during these heavy storm events. Heavy rains and storms can cause flooding from dam failure. Record heavy rains, in addition to causing localized flooding, could cause the dam to overtop as well, inundating Folsom.

Future Development

New critical facilities such as communications towers should be built to withstand hail damage, lightning, and heavy rains.

Wildfire

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile and Problem Description

Major fires are generally categorized as either a conflagration or wildland/forestland. A conflagration may involve residential or commercial areas and spreads across both natural and constructed barriers. Wildland is associated with open range grasslands and into the foothills of a particular area. Because of development in rural areas adjacent to and within the Folsom community, the Wildland Urban Interface (WUI) fire is of increasing concern. The WUI fire can burn along the urban/rural interface resulting in major losses of property and structures.

A number of factors affect the behavior of wildland and interface fires, including terrain, weather, wind, fuels and seasons. It is well known that fire travels faster uphill than down and is more difficult to fight on steep slopes than on level ground. When weather is hot and the humidity is low, wildland fires can explode with intensity of rapid combustion. Even in the absence of strong winds, a fast-moving fire can generate its own updrafts, particularly in canyons, causing burning brands to be carried high in the air and drop a long distance ahead. This results in spot fires over a wide radius as the wind changes its direction.

The City of Folsom is not immune to numerous types of grass and brush fires and any one of them may accelerate into a large urban interface wildfire. Such a situation could lead to evacuation of large portions of the population and the potential for significant loss of personal property, structures and rangeland. The natural fuels available in the City vary greatly in the rate and intensity of burning. Fires in heavy brush and stands of trees burn with great intensity but more slowly than in dry grass and leaves. Dense fuels will propagate fire better than sparse fuels. The local fire season generally extends from June through late September or early October.

During extremely windy conditions, both small and large-scale fires will generate enough smoke to necessitate the closing of key transportation routes, including US Route 50. It may be necessary to close streets and/or re-route traffic to maintain traffic lanes and access for firefighting apparatus. Large parking

areas may be cordoned off for the staging of various types of resources needed during large-scale emergencies.

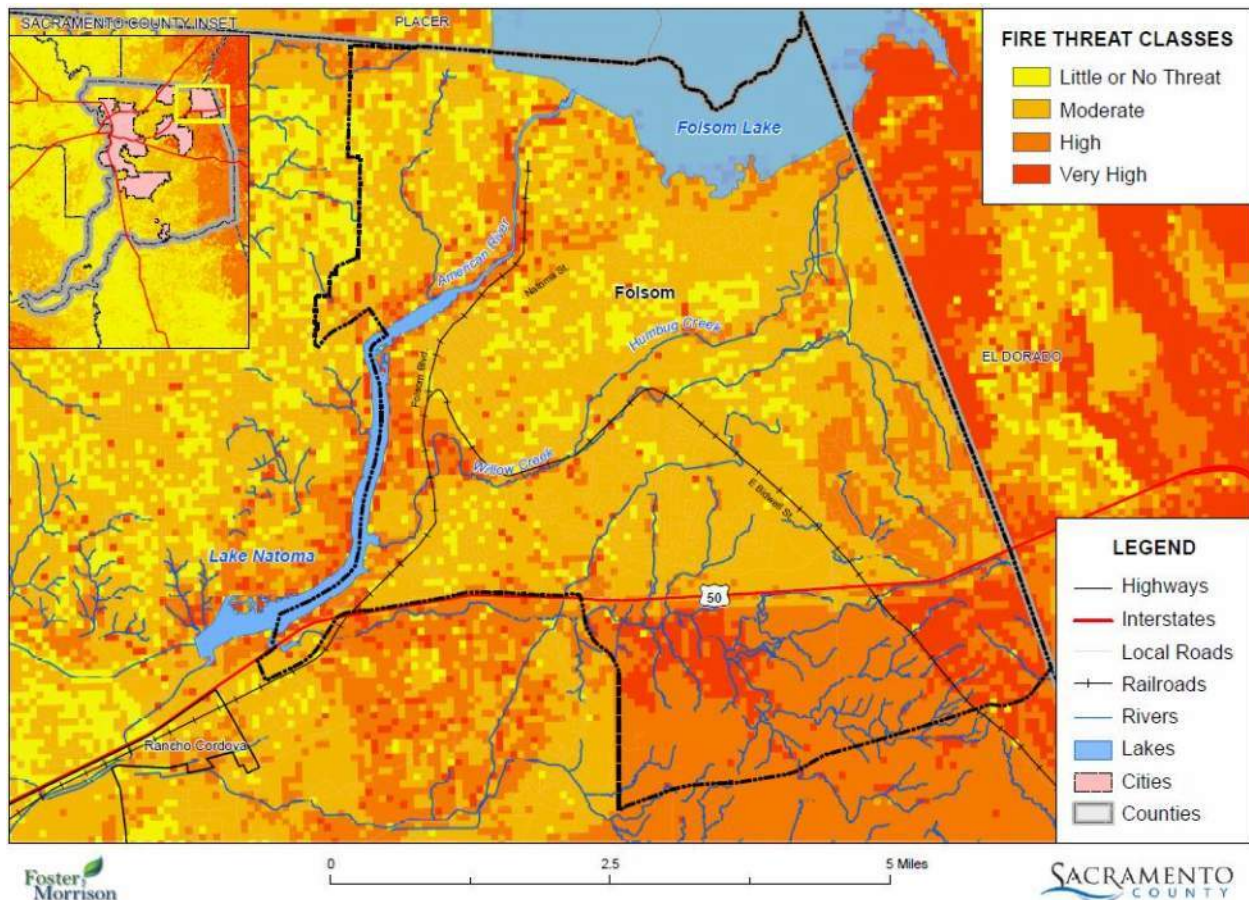
Past Occurrences

There is no history of wildfires near the City of Folsom. The closest occurrence being the King Fire in the City of Pollock Pines located in the neighboring El Dorado County

Vulnerability to Wildfire

Following the methodology described in Section 4.3.2 Vulnerability of Sacramento County to specific hazards, a wildfire map for the City of Folsom was created (see Figure C-11). Wildfire threat within the City ranges from moderate to very high.

Figure C-11 City of Folsom's Fire Threat Zones



Data Source: Sacramento County GIS, Cal-Atlas, Cal-Fire 2004 Fire Threat Data; Map Date: 05/2016.

The City has many areas that are susceptible to small fires that could grow into some form and size of urban interface fire. These areas can be divided into four main areas: the American River/Lake Natoma corridor, the various parkways and easements, natural areas involving wetlands and dredger tailings, and open fields and rangelands.

American River/Lake Natoma Corridor

The American River flows from the base of Folsom Dam into the Lake Natoma Recreation area. The property adjacent to the river is owned by the State of California, maintained by the State of California Parks and Recreation Department. The area is mostly natural habitat accessed through limited roadways, a bicycle/horse trail and numerous footpaths. These means of ingress provide access to remote areas in which fires can begin and access for fire equipment is difficult.

The area upstream from the Rainbow Bridge is mostly rough and steep terrain with very limited access. This creates an opportunity for fires to grow at a rapid rate and gain momentum while continuing to burn towards the residential structures that are scattered about the edge of the beltway. The natural growth, type of construction, and roofing materials provide ample opportunity for fire to spread into residential areas. Negro Bar, Folsom Powerhouse, and Willow Creek Recreation areas are downstream of the bridge. At the west end of Negro Bar are bluffs that are 300 feet high in some locations.

Adjacent to the Negro Bar area is the bluff area on Greenback Lane and an area known as the Orangevale cut. Both of these locations have very steep terrain with dry, flashy, rapid burning fuels. They directly interface with residential and multi-family structures with wood shake roofs. These areas have occasional fires throughout the fire season and require continuous monitoring and aggressive fire suppression activities to prevent a catastrophic event from occurring.

Parkways & Easements

Throughout the City, there exist numerous un-maintained alleyways, easements, and rights-of-way. In many locations, these provide easy access to residential structures or other types of vegetation, which could increase the likelihood that a fire may rapidly spread beyond the capabilities of responding units. Areas of concern include the Hinkle Creek, Willow Creek, Humbug Creek and Blue Ravine Parkway beltways.

Natural Areas, Wetlands, and Dredger Tailings

Continuous development of the City has created many landlocked areas, mandatory wetland areas and the preservation of pre-existing dredger tailings. Areas of this nature tend to be surrounded by residential developments and are difficult to access. Their proximity to development provides an opportunity for ideal fire conditions to spread fire via flying brands and consumption of small stands of trees.

Open Fields and Rangelands

The east areas of Folsom provide the greatest opportunity for a large-scale fire to start and spread uncontrollably into developed areas or into the foothills of El Dorado Hills. This undeveloped area is considered a Local Response Area (LRA) because it is within the city limits. The land south of U.S. 50 is within the State Response Area (SRA) and a fire in this area, pushed by a southerly or westerly wind, could severely impact the City of Folsom. This LRA is also classified as a Mutual Threat Zone by the California Department of Forestry and Fire Protection, thereby requiring their fire response due to the potential of a major fire. The hilly, rocky terrain with its numerous rock outcroppings around developed areas and along the Sacramento/El Dorado County line makes it very difficult to contain a fire before it rapidly grows and threatens structures. This portion of the City is also where numerous transmission towers and repeater

antennas are located on the ridge tops. They can be both a source of ignition for a wildland fire and an exposure from a fire starting in lowlands.

Values at Risk

Analysis results for Folsom are shown in Table C-28, which summarizes total and improved parcel counts and their land and structure values by property use.

Table C-28 City of Folsom – Count and Value of Parcels by Property Use and Fire Threat Zone

Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Structure Value	Total Value
Little or No Threat					
Care / Health	3	\$3,020,797	3	\$1,606,330	\$4,627,127
Church / Welfare	3	\$212,908	2	\$493,333	\$706,241
Industrial	4	\$1,997,118	4	\$3,270,741	\$5,267,859
Miscellaneous	70	\$61,745	0	\$0	\$61,745
Office	12	\$4,606,007	11	\$9,587,141	\$14,193,148
Public / Utilities	58	\$0	0	\$0	\$0
Recreational	1	\$12,364	1	\$21,597	\$33,961
Residential	3,038	\$320,096,776	3,000	\$730,584,313	\$1,050,681,089
Retail / Commercial	22	\$10,893,723	19	\$22,121,160	\$33,014,883
Vacant	27	\$5,003,878	1	\$884	\$5,004,762
Total	3,238	\$345,905,316	3,041	\$767,685,499	\$1,113,590,815
Moderate					
Agricultural	2	\$594,274	-	\$0	\$594,274
Care / Health	27	\$24,190,163	23	\$79,998,459	\$104,188,622
Church / Welfare	29	\$7,463,346	26	\$43,580,327	\$51,043,673
Industrial	30	\$20,258,959	26	\$56,321,087	\$76,580,046
Miscellaneous	478	\$559,290	1	\$65,000	\$624,290
Office	168	\$119,882,386	154	\$651,873,404	\$771,755,790
Public / Utilities	278	\$0	0	\$0	\$0
Recreational	15	\$15,190,775	11	\$37,181,492	\$52,372,267
Residential	15,278	\$1,774,490,202	14,991	\$4,396,363,782	\$6,170,853,984
Retail / Commercial	326	\$269,962,341	312	\$673,781,110	\$943,743,451
Vacant	429	\$103,430,629	13	\$1,717,809	\$105,148,438
Total	17,060	\$2,336,022,365	15,557	\$5,940,882,470	\$8,276,904,835
High					

Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Structure Value	Total Value
Agricultural	12	\$47,685,790	0	\$0	\$47,685,790
Care / Health	3	\$3,361,702	1	\$58,023,709	\$61,385,411
Church / Welfare	1	\$451,353	1	\$877,638	\$1,328,991
Industrial	5	\$6,313,465	4	\$37,768,146	\$44,081,611
Miscellaneous	114	\$13,525	0	\$0	\$13,525
Office	38	\$24,144,272	34	\$102,328,305	\$126,472,577
Public / Utilities	66	\$0	0	\$0	\$0
Recreational	1	\$340,000	1	\$1,660,000	\$2,000,000
Residential	1,755	\$238,711,540	1,594	\$648,601,933	\$887,313,473
Retail / Commercial	9	\$6,526,215	9	\$11,428,613	\$17,954,828
Vacant	344	\$97,530,881	4	\$780,547	\$98,311,428
Total	2,348	\$425,078,743	1,648	\$861,468,891	\$1,286,547,634
Very High					
Agricultural	3	\$8,650,036	0	\$0	\$8,650,036
Church / Welfare	1	\$1,103,532	1	\$5,738,017	\$6,841,549
Miscellaneous	23	\$1,078	0	\$0	\$1,078
Public / Utilities	22	\$0	0	\$0	\$0
Residential	362	\$42,762,172	345	\$102,321,331	\$145,083,503
Retail / Commercial	5	\$2,248,870	5	\$5,546,865	\$7,795,735
Vacant	10	\$12,284,327	0	\$0	\$12,284,327
Total	426	\$67,050,015	351	\$113,606,213	\$180,656,228
Grand Total					
Grand Total	23,072	\$3,174,056,439	20,597	\$7,683,643,073	\$10,857,699,512

Source: Sacramento County 2016 Parcel/2015 Assessor's Data, CAL FIRE

Population at Risk

The Fire Threat dataset was overlaid on the parcel layer. Those residential parcel centroids that intersect the threat zones were counted and multiplied by the 2010 Census Bureau average household factors for each jurisdiction and unincorporated area. Results were tabulated by jurisdiction. According to this analysis, there is a total population of 44,187 residents of Folsom at risk to moderate or higher wildfire risk. This is shown in Table C-29.

Table C-29 City of Folsom – Count of Improved Residential Parcels and Population by Fire Threat Zone

Fire Threat Zone	Improved Residential Parcels	Population*
Little or No Threat	3,000	7,830
Moderate	14,991	39,127
High	1,594	4,160
Very High	345	900
Total	19,930	52,017

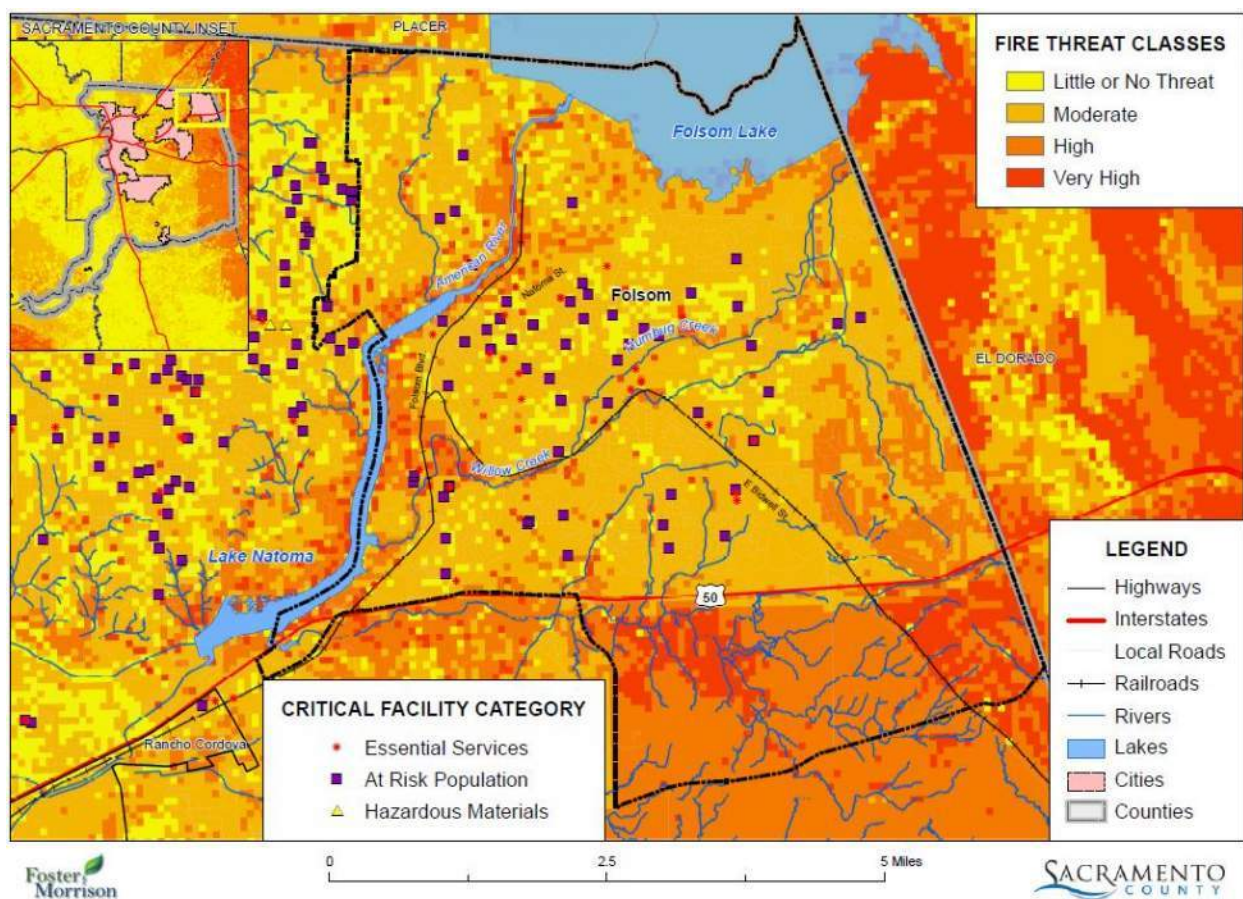
Source: Sacramento County 2015 Parcel/Assessor's Data, CAL FIRE

* Average household populations for Folsom (2.61) from the 2010 US Census were used

Critical Facilities at Risk

Wildfire analysis was performed on the critical facility inventory in Sacramento County and all jurisdictions. GIS was used to determine whether the facility locations intersect a fire threat zone provided by CAL FIRE, and if so, which zone it intersects. There are seven facilities in the moderate or higher fire threat zone in the City. These are shown in Figure C-12 and detailed in Table C-30. Details of critical facility definition, type, name and address and jurisdiction by fire threat zone are listed in Appendix E.

Figure C-12 City of Folsom – Critical Facilities in the Fire Threat Zone



Data Source: Sacramento County GIS, Cal-Atlas, Cal-Fire 2004 Fire Threat Data; Map Date: 05/2016.

Table C-30 City of Folsom – Critical Facilities in the Fire Threat Zone

Critical Facility Category	Facility Type	Facility Count
Little or No Threat		
Essential Services Facilities	Emergency Evacuation Shelter	1
	Government Facilities	1
	Light Rail Stop	2
	Police	1
	Total	5
At Risk Population Facilities	Adult Residential	1
	Day Care Center	2
	Hotel	1
	Public Continuation High School	1
	Public Elementary School	4
	Public Middle School	2

Critical Facility Category	Facility Type	Facility Count
	Residential Care/Elderly	3
	Total	14
Little or No Threat Total		19
Moderate		
Essential Services Facilities Total	Emergency Evacuation Shelter	7
	Fire Station	4
	General Acute Care Hospital	1
	Government Facilities	2
	Light Rail Stop	1
	Medical Health Facility	4
	Water Treatment Plant	1
	Total	20
At Risk Population Facilities	Charter School	1
	College/University	1
	Day Care Center	18
	Infant Center	2
	Prison	1
	Private Elementary School	6
	Private High School	1
	Public Elementary School	5
	Residential Care/Elderly	13
	Total	48
Moderate Total		68
High		
Essential Services Facilities	General Acute Care Hospital	1
	Medical Health Facility	1
	Total	2
At Risk Population Facilities	Public High School	1
	Total	1
High Total		3
Very High		
Essential Services Facilities	Emergency Evacuation Shelter	1
	Total	1
At Risk Population Facilities	Residential Care/Elderly	1
	Total	1
Very High	Total	2

Critical Facility Category	Facility Type	Facility Count
Grand Total		92

Source: CAL FIRE, Sacramento County GIS

Natural Resources at Risk

The American River/Lake Natoma corridor, and the City’s parkways, easements, natural areas, wetlands, and dredger tailings areas contains various types of vegetation, plant, and animal species that would be susceptible to wildfire risk.

Historic and Cultural Resources at Risk

Along the American River/Lake Natoma Corridor are multiple historic resources that are susceptible to wildfire. These include: Chung Wah Cemetery, Young Wo Cemetery, Coloma Road at Nimbus Dam, Folsom Powerhouse, and Negro Bar.

The Chinese Diggings site is located in a natural area with some areas of dredger tailings. Due to the amount of vegetation, the site is susceptible to wildfires.

Future Development

Development may occur in the moderate or higher wildfire threat areas; however, City ordinances for building in these areas are enforced. As population increases, specifically in the Folsom Plan Area, the vulnerability to wildfire will increase due to the presence of parkways and easements. Also, the Folsom Plan Area will be surrounded by open fields and rangelands.

C.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

C.6.1. Regulatory Mitigation Capabilities

Table C-31 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the City of Folsom.

Table C-31 City of Folsom’s Regulatory Mitigation Capabilities

Plans	Y/N Year	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Y 1998	General Plan map is available on the City’s website. The General Plan document is available for viewing or purchase at the City’s Planning Department. Economic Development and Transportation is addressed in the General Plan.
Capital Improvements Plan	Y	The fiscal Operating Budget and Capital Improvement Plan is available on the City’s website.
Economic Development Plan	Y	
Local Emergency Operations Plan	Y	
Continuity of Operations Plan		
Transportation Plan		
Stormwater Management Plan/Program	Y	
Engineering Studies for Streams		
Community Wildfire Protection Plan	N	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Y	Open Space Mitigation Plan – Covers the Folsom Plan Area and include Oak Tree Mitigation Plan and Wildfire Protection Plan.
Building Code, Permitting, and Inspections	Y/N	Are codes adequately enforced?
Building Code	Y	Version/Year: 2013
Building Code Effectiveness Grading Schedule (BCEGS) Score	Y	Score: 2
Fire department ISO rating:	Y	Rating: 3
Site plan review requirements	Y	
Land Use Planning and Ordinances	Y/N	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Y	
Subdivision ordinance	Y	
Floodplain ordinance	Y	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Y	Weed/Brush Hazard Abatement/Fuel Modification (FMC 8.36 and 8.37) Stormwater Management and Discharge Control Ordinance (FMC 8.70) Hillside Development Standards Ordinance (FMC 14.33)
Flood insurance rate maps	Y	
Elevation Certificates	Y	
Acquisition of land for open space and public recreation uses		

Erosion or sediment control program	Y
Other	
How can these capabilities be expanded and improved to reduce risk?	

Source: City of Folsom

General Plan

Folsom’s General Plan is a long term policy guide for the physical, economic, and environmental growth of the City. It is comprised of goals, policies, and implementation programs which are based on an assessment of current and future needs and available resources.

Folsom’s General Plan is strongly oriented toward physical development of land uses, a circulation network, and supporting facilities and services. Because of this, the General Plan document is the principle tool for City use in evaluating public and private building projects and municipal service improvements.

Emergency Operations Plan

The City of Folsom Emergency Operations Plan (EOP) addresses the planned response for the City of Folsom to emergencies associated with disasters, technological incidents, or other dangerous conditions created by either man or nature. It provides an overview of operational concepts, identifies components of the City emergency management organization, and describes the overall responsibilities of local, state, and federal entities.

Ordinances

The City of Folsom has ordinances related to mitigation. Specific ordinances directly related to mitigation from the City of Folsom municipal code are:

Zoning Code (Title 17)

There is adopted a zoning enabling plan for the City, which constitutes a precise plan based upon the adopted master plan of the City. The plan is adopted to provide reasonable protective regulations designed to promote and protect the health, safety, peace, morals, comfort, convenience and general welfare, and:

- To protect the established character and the social and economic stability of agricultural, residential, commercial, industrial and other types of improved areas; and
- To assist in providing a definite comprehensive plan for sound and orderly development, and to guide and regulate such development in accordance with the master plan and the objectives and standards set forth therein

The zoning plan consists of the establishment of various districts within some, all, or none of which shall it be lawful, and within some, all or none of which it shall be unlawful to erect, construct, alter, move, locate or maintain certain buildings or to carry on certain trades or occupations or conduct certain uses of land or of buildings; within which the height and bulk of future buildings shall be limited; within which certain open spaces shall be required about future buildings and consisting further of appropriate additional

regulations to be enforced in such districts. The zoning plan is intended to apply to all private, public, quasi-public, institutional, and public utility properties and all other lands, buildings and structures within the incorporated area of the City.

Subdivision Ordinance (Title 16)

It is the purpose of this title to regulate and control the division of land within the City and to supplement the provisions of the Subdivision Map Act concerning the design, improvement and survey data of subdivisions, the form and content of all required maps provided by the Subdivision Map Act, and the procedure to be followed in securing the official approval of the City regarding the maps. To accomplish this purpose, the regulations contained in this title are determined to be necessary to preserve the public health, safety and general welfare; to promote orderly growth and development and to promote open space, conservation, protection and proper use of land; and to ensure provision for adequate traffic circulation, utilities and other services in the City.

Building Code (Chapter 14.02)

The chief building official of the City is designated to be the authority having jurisdiction of the Folsom construction codes. The California Building Code, 2010 Edition, based on the 2009 International Building Code, including Appendix Chapters H, J, and K, published as Parts 1 and 2, Title 24, C.C.R., published by the International Code Council, is adopted and made part of this title as though fully set forth herein to provide technical requirements and the procedures for administration and enforcement of the provisions of the Folsom construction codes. The purpose of the Folsom Building Code is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, installation, quality of materials, use and occupancy, location and maintenance of all buildings and structures within this jurisdiction, and certain equipment specifically regulated herein, and to provide procedures for administration and enforcement of the provisions of the Folsom construction codes and to adopt and enforce rules and regulations supplemental to this code as may be deemed necessary to clarify the application of the provisions of this code.

Floodplain Ordinance (Chapter 14.323)

The flood hazard areas of the City are subject to periodic inundation which may result in losses 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. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities and, when inadequately anchored, damage uses in other areas. Uses that are inadequately flood proofed, elevated, or otherwise protected from flood damage also contribute to the flood loss. 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 provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood-control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- Insure that potential buyers are notified that property is in an area of special flood hazard; and
- Insure that those who occupy the areas of special flood hazard assume responsibility for their actions.

In order to accomplish its purposes, this chapter includes methods and provisions for:

- Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- Controlling filling, grading, dredging, and other development which may increase flood damage; and
- Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas

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

- Anchoring.
 - ✓ All new construction and substantial improvements 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.
 - ✓ All manufactured homes shall meet the anchoring standards of Section 14.32.050(D).
- Construction Materials and Methods. All new construction and substantial improvements shall be constructed:
 - ✓ With materials and utility equipment resistant to flood damage;
 - ✓ Using methods and practices that minimize flood damage;
 - ✓ With electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
 - ✓ For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit to floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: A minimum of 2 openings having total net area of not less than 1 square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one 1 foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- Elevation and flood proofing.
 - ✓ Residential construction, new or substantial improvement, shall have the lowest floor, including basement, elevated at least 2 feet above the base flood elevation as determined by this community.

Upon completion of the structure, the elevation of the lowest floor including basement shall be certified by a California registered professional engineer or land surveyor and verified by the chief building official for the City to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

- ✓ Nonresidential construction, new or substantial improvements, shall either meet the standards in subsection (A)(3)(a) of this section or together with attendant utility and sanitary facilities:
 - Be floodproofed below the elevation recommended in subsection (A)(3)(a) of this section so that the structure is watertight with walls substantially impermeable to the passage of water;
 - Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - Be certified by a California registered professional engineer or architect that standards of this subsection (A)(3)(b) are satisfied. Such certification shall be provided to the floodplain administrator.
 - ✓ All new construction and substantial improvement with fully enclosed areas below the lowest flow (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 flood-water. Designs for meeting this requirement must meet or exceed the following minimum criteria:
 - Be certified by a California registered professional engineer or architect; or
 - Have a minimum of 2 openings having a total net area of not less than 1 square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than 1 foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.
 - ✓ Manufactured homes shall meet the above standards and also the standards for manufactured home parks or subdivisions. (See subsection D of this section).
- Standards For Utilities.
- ✓ All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from systems into floodwaters;
 - ✓ On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- Standards For Subdivisions.
- ✓ All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.
 - ✓ All final subdivision plans will provide the elevation of proposed structure(s) and pad(s). If the site is filled above the base flood, the final pad elevation shall be certified by a California registered professional engineer or land surveyor and provided to the floodplain administrator.
 - ✓ All subdivision proposals shall be consistent with the need to minimize flood damage.
 - ✓ All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
 - ✓ All subdivisions shall provide adequate drainage to reduce exposure to flood damage.
- Standards for Manufactured Homes.

- ✓ All manufactured homes that are placed or substantially improved, within Zones A and A1-A30 on the community's flood insurance rate maps, on sites located outside of a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision or in an existing manufactured home park or subdivision on a site upon which a manufactured home has incurred "substantial damage" as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated 2 feet above the base flood elevation and securely fastened to an adequately anchored foundation system to resist flotation collapse and lateral movement.
 - ✓ All manufactured homes that are placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A or A1-A30 on the communities flood insurance rate maps that are not subject to provisions of Section 14.32.050(D)(1) will be securely fastened to an adequately anchored foundation system to resist flotation collapse, and lateral movement and be elevated so that either the lower floor of the manufactured home is 2 feet above the base flood elevation or the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade.
- Standards for Recreational Vehicles. All recreational vehicles placed on sites within Zones A or A1-30 on the communities flood insurance rate maps will either be on the site for fewer than 180 consecutive days, and 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 meets the permit requirements of Section 14.32.040 of this chapter and the elevation and anchoring requirements for manufactured homes in Section 14.32.050(D)(1) of this chapter.
 - Floodways. Located within areas of special flood hazard established in subsection B of Section 14.32.030 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
 - ✓ Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge;
 - ✓ If subsection (F)(1) of this section is satisfied, all new construction, substantial improvement and other proposed new development shall comply with all other applicable flood hazard reduction provisions of Section 14.32.050, Provisions for flood hazard reduction;
 - ✓ If no floodway is identified, then a setback of 20 feet from the bank(s) of the watercourse will be established, where encroachment will be prohibited.

Fire Code (Section 8.36)

This chapter adopts the 2009 Edition of the International Fire Code with amendments adopted by the California Building Standards Commission and published as the 2010 Edition of the California Fire Code, together with Appendices B, C, H, I, J and K, and all other chapters, supplements and errata with the express purpose of prescribing regulations governing the safeguarding of life and property from fire and explosion

hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises.

Grading and Erosion Control (Chapter 14.29)

This chapter establishes standards for the preparation of sites and construction activities to protect the health, safety and general welfare of those working or living on or near the site by protecting against unwarranted or unsafe grading, drainage works or other aspects of site development as follows:

- To establish standards and procedures for grading and excavation so as to minimize hazards to life and limb, protect against erosion, maintain the natural environment, and protect the safety, use and stability of public rights-of-way and drain-age channels;
- To assure that projects approved under this chapter will be free from harmful effects of runoff, including inundation and erosion, and that neighboring and downstream properties will be protected from drainage problems resulting from new development;
- To assure proper restoration of vegetation and soil systems disturbed by grading or fill activities authorized under this chapter. It is intended through this chapter to maintain an attractive and healthy landscape and to control against dust and erosion and their consequent effects on soil structure and water quality.

C.6.2. Administrative/Technical Mitigation Capabilities

Table C-32 identifies the City department(s) responsible for activities related to mitigation and loss prevention in Folsom.

Table C-32 City of Folsom’s Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	Y	
Mitigation Planning Committee		
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Y	There are various maintenance programs in place to reduce risks.
Mutual aid agreements	Y	California Master Mutual Aid Agreement, Law Enforcement Mutual Aid Agreement, Fire and Rescue Mutual Aid Agreement, Public Works Mutual Aid Agreement, County of Sacramento Operational Area Council, U.S. Army Corps of Engineers Rehabilitation Inspection PL84-99 Program, NFIP, County of Sacramento OES, County of Sacramento EMD.
Other		
Staff	Y/N FT/PT	Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.

Floodplain Administrator	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.
Emergency Manager	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.
Community Planner (Community Development/Public Works Director)	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.
Civil Engineer	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.
GIS Coordinator	Y FT	Staff is adequate to enforce regulations. Staff is trained on hazards and mitigations. There is coordination between agencies and staff and it is effective.
Other		
Technical		Comments
Warning systems/services (Reverse 911, outdoor warning signals)	Y	Reverse 911/City-owned AM station/SMS messaging (Nixle)
Hazard data and information		
Grant writing	Y	
Hazus analysis		
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: City of Folsom

C.6.3. Fiscal Mitigation Capabilities

Table C-33 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table C-33 City of Folsom's Fiscal Mitigation Capabilities

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	There are funding resources that have been used in the past and can be used in the future.
Authority to levy taxes for specific purposes	Y	There are funding resources that have been used in the past and can be used in the future.
Fees for water, sewer, gas, or electric services	Y	There are funding resources that have been used in the past and can be used in the future.
Impact fees for new development	Y	There are funding resources that have been used in the past and can be used in the future.

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Storm water utility fee	N	
Incur debt through general obligation bonds and/or special tax bonds	Y	
Incur debt through private activities	Y	
Community Development Block Grant	Y	There are funding resources that have been used in the past and can be used in the future.
Other federal funding programs	Y	FEMA, U.S. Army Corps of Engineers Rehabilitation Inspection PL84-99 Program
State funding programs	Y	Cal OES
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: City of Folsom

C.6.4. Mitigation Education, Outreach, and Partnerships

Table C-34 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information. More information can be found below the table.

Table C-34 City of Folsom’s Mitigation Education, Outreach, and Partnerships

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Y	City of Folsom Community Emergency Response Team.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	Ongoing public outreach material regarding water conservation, household hazardous waste pickup, emergency preparedness, fire safety,
Natural disaster or safety related school programs	Y	
StormReady certification	N	
Firewise Communities certification	N	
Public-private partnership initiatives addressing disaster-related issues	Y	Frequent training with regional partners such as SMUD, PG&E, County of Operational Emergency Services, Sacramento County Water Agency, and Department of Homeland Security.
Other		

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
How can these capabilities be expanded and improved to reduce risk?		

C.6.5. Other Mitigation Efforts

The City of Folsom maintains many annual programs to mitigate against natural hazards:

- Fuel modification program (fire management for open space)
- Annual weed hazard abatement program
- Creek/outfall vegetation maintenance
- Public education/outreach for extreme weather
- Routine storm drain operations and maintenance
- Wildfire prevention outreach
- Wildfire Hazard Identification
- Detention Basin Maintenance and Operation
- Stream and Creek Routine Maintenance Agreement with California Department of Fish and Wildlife

C.7 Mitigation Strategy

C.7.1. Mitigation Goals and Objectives

The City of Folsom adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

C.7.2. NFIP Mitigation Strategy

As a participant in the Regular Phase of the National Flood Insurance Program (NFIP), the City of Folsom has administered floodplain management regulations that meet the minimum requirements of the NFIP. In our compliance with the NFIP, the City’s management program objective is to protect people and property within the City of Folsom. The City of Folsom will continue to comply with the requirements of the NFIP in the future.

The City’s regulatory activities apply to existing and new development areas of the City; implementing flood protection measures for existing structures and maintaining drainage systems. The goal of our program is to enhance public safety, and reduce impacts and losses while protecting the environment.

The City of Folsom Community Development Department provides public outreach activities which include map information services, public awareness, public hazard disclosure, and flood protection information. This information is readily available to the public and consists of current and accurate flood mapping. Information about our stormwater management program and up-to-date information related to the maintenance of our drainage system may be found through our Public Works Department.

The National Flood Insurance Program’s (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS which are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. The City of Folsom will evaluate the benefits that joining the CRS may have on our community.

More information about the floodplain administration in the City of Folsom can be found in Table C-35.

Table C-35 City of Folsom Compliance with NFIP

NFIP Topic	Comments
Insurance Summary	
How many NFIP policies are in the community? What is the total premium and coverage?	293 \$119,594 \$94,778,400
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	14 \$403,345.45 1
How many structures are exposed to flood risk within the community?	8 (1%) 122 (0.2%)
Describe any areas of flood risk with limited NFIP policy coverage	None
Staff Resources	
Is the Community Floodplain Administrator or NFIP Coordinator certified?	No
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Permit review, GIS, education or outreach, inspections, engineering capability, Storm Drainage and Flood Control Management Program
What are the barriers to running an effective NFIP program in the community, if any?	None
Compliance History	
Is the community in good standing with the NFIP?	Yes
Are there any outstanding compliance issues (i.e., current violations)?	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	
Is a CAV or CAC scheduled or needed?	
Regulation	
When did the community enter the NFIP?	January 6, 1982
Are the FIRMs digital or paper?	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Yes, General Plan and Floodplain Policy strongly discourages building in the floodplain, unless it can be mitigated

NFIP Topic	Comments
Provide an explanation of the permitting process.	Plans are reviewed to determine flood zone information
Community Rating System	
Does the community participate in CRS?	No
What is the community's CRS Class Ranking?	N/A
What categories and activities provide CRS points and how can the class be improved?	N/A
Does the plan include CRS planning requirements?	N/A

C.7.3. Mitigation Actions

The planning team for the City of Folsom identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included.

Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

Hazards Addressed: All hazards

Goals Addressed: 1, 2, 3, 4

Issue/Background: Local jurisdictional reimbursement for mitigation projects and cost recovery after a disaster is guided by Government Code Section 8685.9 (AB 2140). Specifically, this section requires that each jurisdiction adopt a local hazard mitigation plan (LHMP) in accordance with the federal Disaster Mitigation Act of 2000 as part of the Safety Element of its General Plan. Adoption of the LHMP into the Safety Element of the General Plan may be by reference or incorporation.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Safety Element of General Plan

Responsible Office: City of Folsom Planning Department

Priority (H, M, L): High

Cost Estimate: Jurisdictional board/staff time

Potential Funding: Local budgets

Benefits (avoided Losses): Incorporation of an adopted LHMP into the Safety Element of the General Plan will help jurisdictions maximize the cost recovery potential following a disaster.

Schedule: As soon as possible

Action 2. Stormwater Basin Maintenance and Operation Project

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: The detention basins within the City have significant natural growth, causing the design capacities to decrease. A regular maintenance and operational schedule was necessary to ensure the field conditions of each detention basin is consistent with the design capacities.

Project Description: Rehabilitation of 22 City-maintained storm drainage detention basins throughout the City of Folsom.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Public Works Department

Responsible Office/Partners: Public Works Department

Project Priority: Medium

Cost Estimate: \$1.05 Million

Benefits (Losses Avoided): Potential losses avoided including residential, commercial, and public infrastructures.

Potential Funding: Fund is provided by the General Fund until a stormwater utility fee is adopted.

Timeline: Ongoing – funding constrained.

Action 3. Alder Creek Watershed Council

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: In 2010 the City of Folsom and the Alder Creek Watershed Stakeholders completed the Alder Creek Watershed Management Action Plan. A recommended action item within the Plan is to establish a watershed stewardship group and coordinator position. Currently the majority of the watershed is undeveloped with development plans underway. A regional watershed council is needed to bring together resources for comprehensive planning and decision making to ensure implementation of the Plan. Funding is needed to establish the Watershed Council and Coordinator position.

Project Description: A regional watershed council for comprehensive planning and decision making to ensure implementation of the Alder Creek Watershed Management Action Plan.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office/Partners: City of Folsom/Public Works and Sacramento County

Project Priority: Medium

Cost Estimate: \$100,000

Benefits (Losses Avoided): Life safety; reduction of property loss, improved planning

Potential Funding: Grants, local government, landowners

Timeline: Ongoing

Action 4. Drainage System Maintenance Tax Assessment

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: The City of Folsom does not have a dedicated stormwater utility to fund operation and maintenance of the storm drainage system or implementation of its Stormwater Quality Program. Funds are needed for maintenance of the drainage system including, pipes, structures, detention basins and creeks/streams and water quality protection. Due to current California Law a ballot measure is required to assess taxes for a stormwater utility. In 2006 the City completed a Funding Feasibility Study; next steps include an opinion research and survey, fee development, ballot measure development and fee implementation.

Project Description: Implementation of a dedicated stormwater utility to fund operation and maintenance of the storm drainage system.

Other Alternatives: Continue an underfunded program and/or reduce services.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Public Works Department Administration.

Responsible Office/Partners: Folsom Public Works/Utilities Department

Project Priority: High

Cost Estimate: \$100,000

Benefits (Losses Avoided): Improved maintenance, increase reliability, reduction of property loss

Potential Funding: City of Folsom budget

Timeline: Ongoing

Action 5. Floodplain Mapping

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: Current floodplain maps for the Humbug and Willow Creek watersheds do not reflect as built conditions for structures built within the floodplain. As built surveys are needed to accurately define the base flood elevations and map the limits of the current floodplain within each watershed.

Project Description: Complete as built surveys for structures built within the floodplain such as creek crossings. Update floodplain maps for the Humbug/Willow Creek Watersheds. Develop new floodplain maps for the Alder Creek and Hinkle Creek Watersheds.

Other Alternatives: Utilize the current FEMA mapping effort.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Continuation of floodplain mapping project that was suspended a few years ago due to funding issues.

Responsible Office/Partners: Folsom Community Development Department

Project Priority: High

Cost Estimate: \$200,000

Benefits (Losses Avoided): Life Safety; Reduction of Property Loss, Improved Planning

Potential Funding: City of Folsom budget, grants

Timeline: Ongoing

Action 6. Redevelopment Area Drainage Improvements

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: In 2005 the City completed a Drainage Master Plan for its Redevelopment Area. The plan identifies nine drainage CIP's. The City has constructed one of the CIP's; funding is needed to construct the remaining eight drainage improvement projects.

Project Description: Capital Improvement Drainage Projects.

Other Alternatives: Establish an assessment district to obtain funding.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Public Works CIP Program.

Responsible Office/Partners: Folsom Public Works Department

Project Priority: Medium

Cost Estimate: \$8,000,000

Benefits (Losses Avoided): Life Safety; Reduction of Property Loss

Potential Funding: Redevelopment Agency, pending status. Establish an assessment district.

Timeline: Ongoing

Action 7. Stormwater Basin Maintenance and Operation Project

Hazards Addressed: Flooding

Goals Addressed: 1, 2, 3, 4

Issue/Background: The detention basins within the City have significant natural growth, causing the design capacities to decrease. A regular maintenance and operational schedule was necessary to ensure the field conditions of each detention basin is consistent with the design capacities.

Project Description: Rehabilitation of 22 City-maintained storm drainage detention basins throughout the City of Folsom.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Public Works Department

Responsible Office/Partners: Public Works Department

Project Priority: Medium

Cost Estimate: \$1.05 Million

Benefits (Losses Avoided): Potential losses avoided including residential, commercial, and public infrastructures.

Potential Funding: Fund is provided by the General Fund until a stormwater utility fee is adopted.

Timeline: Ongoing – funding constrained.

Action 8. Heating and Cooling Centers

Hazards Addressed: Life safety to vulnerable populations caused by severe weather, and temperature extremes.

Goals Addressed: 1, 2, 3

Issue/Background: Older adults and special needs populations are particularly vulnerable to extremes of temperature that are common throughout the Sacramento Valley. Extreme temperatures stress existing utility infrastructure causing outages that impact those populations to a higher degree.

Project Description: This project would focus on identifying locations that could be used for heating and cooling centers during severe weather. These locations would require backup power supplies in order to function during outages.

Other Alternatives: No local City provided facilities and would rely on non-governmental support or defer to County.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office/Partners: Folsom Fire Department

Project Priority: High

Cost Estimate: No cost to approximately \$200,000 per identified location if an existing building requires the installation of emergency generator(s)

Benefits (Losses Avoided): Reduction of the life hazard to populations at risk during extreme weather events, which includes the very young, very old, medically fragile, cognitively-impaired, physically-impaired, and other special needs groups.

Potential Funding: Fund-raising, grant funds, public/private donations

Timeline: Ongoing

Action 9. Public Education/Outreach Extreme Weather

Hazards Addressed: Life safety to vulnerable populations caused by severe weather, and temperature extremes.

Goals Addressed: 1, 2, 3

Issue/Background: Older adults and special needs populations are particularly vulnerable to extremes of temperature that are common throughout the Sacramento Valley. Extreme temperatures stress existing utility infrastructure causing outages that impact those populations to a higher degree.

Project Description: This project would focus on preparedness and notification actions to reach out to those groups prior to and during extreme weather events.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

Responsible Office/Partners: Folsom Fire Department

Project Priority: Medium

Cost Estimate: \$15,000/yr for materials and technology for notification

Benefits (Losses Avoided): Reduction of the life hazard to populations at risk during extreme weather events, which includes the very young, very old, medically fragile, cognitively-impaired, physically-impaired, and other special needs groups.

Potential Funding: Fund-raising, grant funds, public/private donations

Timeline: Ongoing

Action 10. Weed Abatement Program

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3

Issue/Background: The primary function of this program is to reduce the danger of fires within the City by proactively establishing defensible space and to reduce / remove combustible materials on properties.

Project Description: The City of Folsom requires property owners to clear their property of all dry grass, weeds, dead trees, and noxious vegetation or rubbish that may constitute a fire hazard. The Fire Department is authorized to abate any potential fire hazard that has not been addressed by June 1, 2016 at the owner's expense. The Fire Department will conduct a second survey of your property to ensure the fire hazard has been abated on or after June 1, 2016.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: City of Folsom Fire Department

Responsible Office/Partners: City of Folsom Fire Department

Project Priority: Medium

Cost Estimate: \$2.2 Million

Benefits (Losses Avoided): Potential losses avoided including residential, commercial, and public infrastructures.

Potential Funding: Fund is provided by the General Fund with some sources from programming revenue, and State and Federal grants.

Timeline: Ongoing

Action 11. Arson Prevention and Control Outreach

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4

Issue/Background: Many areas within the City of Folsom lie within a wildland-urban interface exposing them to a high risk of wildfire. Implementing an aggressive arson awareness, prevention, and control program can mitigate much of the wildfire risk.

Project Description: Arson prevention and control program aimed at mitigating wildfire hazards and reducing or preventing exposure of citizens, public agencies, private property owners and businesses to natural hazards.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: The Fire and Police Departments will form a joint task force to prevent and control the risk of arson-caused wildfire.

Responsible Office/Partners: Folsom Fire Department

Project Priority: Medium

Cost Estimate: Dependent on scope of project: \$10,000 to \$50,000/yr

Benefits (Losses Avoided): Life safety, reduction of property loss

Potential Funding: City of Folsom budget, private donation, grants

Timeline: Ongoing

Action 12. Fuel Reduction and Modification

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4

Issue/Background: The expense of removing and/or modifying materials which create a wildfire hazard can often be cost prohibitive for both private and public property owners. Encouraging joint efforts such as

volunteer cleanup days and chipper programs can reduce the cost to anyone stakeholder and facilitate mitigation efforts

Project Description: Remove and/or modify materials which create a wildfire hazard.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Community Wildfire Protection Plan through the Fire Safe Council.

Responsible Office/Partners: Folsom Fire Department and Fire Safe Council

Project Priority: High

Cost Estimate: Up to \$75,000 per year

Benefits (Losses Avoided): Life safety, reduction of property loss

Potential Funding: Fund raising, private donation, grant funding

Timeline: Ongoing

Action 13. Wildfire Hazard Identification

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4

Issue/Background: Land ownership and maintenance responsibilities in the City of Folsom are complicated due in part to the presence of multiple public agencies including the US Bureau of Reclamation, US Bureau of Land Management, California State Parks, and California Department of Corrections. Mitigation projects, even by private land owners, often require the review and approval of one if not all of these entities often resulting in the delay if not cancellation of the project.

Project Description: Increase communication, coordination and collaboration between private property owners and city, state, and federal agencies to address the wildfire risks and existing mitigation measures.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: The Fire Department and Folsom Fire Safe Council

Responsible Office/Partners: Folsom Fire Department, Community Development

Project Priority: Medium

Cost Estimate: Staff time

Benefits (Losses Avoided): Life safety, reduction of property loss

Potential Funding: Existing budget

Timeline: Ongoing

Action 14. Ignition Resistant Building Construction Upgrades

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4

Issue/Background: The expense of retrofitting existing building with ignition resistant construction in order to mitigate the effects of ember storms or direct flame impingement during a wildfire can often be cost prohibitive for private property owners. Developing a plan to identify buildings and risk and working with property owners find funding sources can reduce facilitate mitigation efforts.

Project Description: Facilitate private and public agency partnerships to upgrade/retrofit buildings in high fire hazard areas using ignition resistant building construction methods.

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: City of Folsom Community Development Dept.

Responsible Office/Partners: City of Folsom Community Development Dept.

Project Priority: Medium

Cost Estimate: \$500,000 to \$2,000,000 (materials & labor)

Benefits (Losses Avoided): Life safety, reduction of property loss

Potential Funding: Fund raising, private donation, grant funding

Timeline: Ongoing

Action 15. Wildfire Prevention Outreach

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4

Issue/Background: Many areas within the City of Folsom lie within a wildland-urban interface exposing them to a high risk of wildfire. Educating the public as to the risk and methods of reducing the exposure is a prime component in any mitigation efforts.

Project Description: Public education

Other Alternatives: No action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: The Fire Department and Folsom Fire Safe Council currently conduct home evaluations and education programs.

Responsible Office/Partners: Folsom Fire Department

Project Priority: High

Cost Estimate: Cost of purchase and reproduction of printed materials; up to \$15,000/year.

Benefits (Losses Avoided): Life Safety, Reduction of Property Loss

Potential Funding: Fire Department budget, private donation, grants

Timeline: Ongoing

Appendix B City of Folsom WSCP Adoption Resolution

RESOLUTION NO. 10643

A RESOLUTION ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN AND AUTHORIZING THE CITY MANAGER TO SUBMIT THE PLANS TO THE CALIFORNIA DEPARTMENT OF WATER RESOURCES AND TO THE CALIFORNIA STATE LIBRARY

WHEREAS, the Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes to more than 3,000 customers to adopt and submit a Urban Water Management Plan to the California Department of Water Resources and the California State Library every five years; and

WHEREAS, the City of Folsom wishes to comply with California Water Code (CWC) Section 10610 regarding the preparation of an Urban Water Management Plan; and

WHEREAS, the CWC Section 10620(a) requires an urban water supplier to adopt an Urban Water Management Plan consistent with CWC 10640; and

WHEREAS, the CWC Section 10320(a) requires an urban water supplier to adopt a Water Shortage Contingency Plan consistent with CWC 10640; and

WHEREAS, the City of Folsom is in compliance with Senate Bill X7-7, also known as the Water Conservation Bill of 2009, by reducing per capita water use by 20% by 2020; and

WHEREAS, an adopted Urban Water Management Plan is required for an urban water supplier to be eligible for grants administered by the Department of Water Resources; and

WHEREAS, the City of Folsom has prepared the required plans, published a Notice of Public Hearing pursuant to California Government Code 6066, published May 20 and 27, 2021, and held the appropriate Public Hearing.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Folsom that the 2020 Urban Water Management Plan and Water Shortage Contingency Plan are hereby adopted, subject to minor and typographical edits as deemed necessary by the City Manager.

BE IT FURTHER RESOLVED that the City Manager is hereby authorized to Submit the Plans to the California Department of Water Resources and the California State Library.


PASSED AND ADOPTED this 8th day of June 2021, by the following roll-call vote:

AYES:	Councilmember(s):	Rodriguez, Aquino, Chalamcherla, Howell, Kozlowski
NOES:	Councilmember(s):	None
ABSENT:	Councilmember(s):	None
ABSTAIN:	Councilmember(s):	None



Michael D. Kozlowski, MAYOR

ATTEST:



Christa Freemantle, CITY CLERK

Appendix C Notice of Public Hearing

NOTICE OF PUBLIC HEARING

77304

**CITY OF FOLSOM
NOTICE OF PUBLIC HEARING
LEGAL NOTICE**

Notice is given herewith that the City of Folsom City Council, at its regular council meeting on Tuesday, June 8, 2021, at 6:30 pm, in the City Council Chambers, 50 Natoma Street, Folsom, California, will hold a public hearing in accordance with Section 6066 of the California Government Code to consider adoption of the City of Folsom's 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP).

The purpose of this UWMP is to document the City's water supply planning strategies for the existing municipal jurisdiction. The Urban Water Management Plan, as required by Urban Water Management Act and the Water Conservation Bill of 2009, contains an assessment of current and projected supplies, an evaluation of the reliability of these supplies given a range of hydrologic conditions, an assessment of demands by customer type, and an explanation of water management strategies designed to integrate supply and demand conditions.

The Water Shortage Contingency Plan (WSCP) is a detailed plan for how the City intends to identify and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the supply is reduced to a level that cannot support the normal demand at any given time or if the state mandates a cutback regardless of supplies.

Copies of the Draft Urban Water Management Plan and Water Shortage Contingency Plan are on file and available for public review at the Environmental and Water Resources Department on the first floor of City Hall at 50 Natoma Street, at the City Clerk's office and online at www.folsom.ca.us. Interested persons are invited to express their opinion. If you challenge the action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice or written correspondence delivered to the City Council at, or prior to, the public hearing.

City of Folsom
Christa Freemantle
City Clerk

PUBLISHED IN THE FOLSOM TELEGRAPH: MAY 20, 27, 2021

The above space is reserved for Court/County Filed Date Stamp

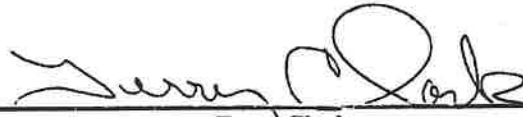
**PROOF OF PUBLICATION
(2015.5 C.C.P.)**

**STATE OF CALIFORNIA
County of Sacramento**

I am a citizen of the United States and employed by a publication in the County aforesaid. I am over the age of eighteen years, and not a party to the mentioned matter. I am the principal clerk of **The Folsom Telegraph**, a newspaper of general circulation, in the **City of Folsom**, which is printed and published in the **County of Placer**. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the **County of Sacramento**, on the date of April 1, 1952, (Case Number 89429). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

MAY 20, 27

I certify, under penalty of perjury, that the foregoing is true and correct.



Terry Clark

Dated in Folsom, California

MAY 27, 2021

**PROOF OF PUBLICATION
THE FOLSOM TELEGRAPH
921 Sutter Street
Folsom, CA 95630**