



June 4, 2020

TO: LOCSD Board of Directors

FROM: Ron Munds, General Manager

SUBJECT: Agenda Item 6H – 6/4/2020 Board Meeting
Adoption of the County of San Luis Obispo's Multi-Jurisdictional Local Hazard Mitigation Plan.

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DESCRIPTION

In 2018, through the Governor's Office of Emergency Services (Cal OES), the Federal Emergency Management Agency (FEMA) awarded the County of San Luis Obispo (County) grant funding through the Hazard Mitigation Grant Program (HMGP) to fund the development of a multi-jurisdictional Local Hazard Mitigation Plan. LOCSD staff, along with other local governments, have been involved in the development of the updated plan which is now complete. The final step in the process is for each participating agency's governing board to adopt the plan.

STAFF RECOMMENDATION

This item will be approved along with the Consent Calendar unless it is pulled by a Director for separate consideration. If so, Staff recommends that the Board adopt the following motion:

Motion: I move that the Board adopt Resolution No. 2020-09 adopting the County of San Luis Obispo's Multi-Jurisdictional Local Hazard Mitigation Plan Update 2019.

DISCUSSION

State law requires an update to the Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) every five years in order to be eligible for federal and state funding in the event of a local disaster. The purpose of the LHMP is to ensure the region mitigates the impacts of natural hazards (e.g. wildfires, flooding, earthquakes). The County's Department of Planning & Building and the Office of Emergency Services coordinated the LHMP update which involved collaboration and coordination between multiple cities and districts, including LOCSD.

The County's prior plan, approved by FEMA on December 29, 2014, was required to be reviewed and revised every five years to reflect changes in development, progress in local mitigation efforts, and changes in priorities. Through the Governor's Office of Emergency Services (Cal OES), the Federal Emergency Management Agency (FEMA) awarded the County of San Luis Obispo grant funding through the Hazard Mitigation Grant Program (HMGP) to fund the development of this multi-jurisdictional hazard mitigation plan in 2018.

Participating jurisdictions had direct representation on the planning team throughout the planning and development process. There were multiple public workshops and public surveys held during the plan development process, where the public provided input into the development of the plan. This multi-jurisdictional plan built on previous hazard mitigation planning and incorporated updated hazard mapping, risk assessment and threat analysis.

The final step in the process is for the final draft of the LHMP will go before each jurisdiction's governing body for adoption which is the action that staff is seeking as part of this report. Since the LHMP is over 1,400 pages, interested parties can view the entire document at <https://www.slocounty.ca.gov/Departments/Planning-Building/Active-Major-Projects/Elements-Mitigation-Plan-Update.aspx>. Attached to this report is *Annex K: Los Osos Community Services District* which provides an overview of the District and identifies the local hazards and summarizes their impacts.

OTHER AGENCY INVOLVEMENT/IMPACT

County Planning and the County Office of Emergency Services worked closely with all the participating jurisdictions, which included LOCSD and: the cities of Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, San Luis Obispo; and special districts including Avila Beach Community Service District (CSD), Ground Squirrel Hollow CSD, Heritage Ranch CSD, Nipomo CSD, San Miguel CSD, San Simeon CSD, Templeton CSD, Cayucos Sanitary District, San Luis Obispo Flood and Water Conservation District and Port San Luis Harbor District.

Cambria CSD and Oceano CSD had recently developed and adopted their hazard mitigation plans under separate grants prior to this plan update. Oceano CSD desired that their plan be included in the multi-jurisdictional plan, so it was included as an annex.

FINANCIAL CONSIDERATIONS

The development of this plan was 75% grant funded. The remaining 25% was local match funding. The participating jurisdictions, including LOCSD, provided signed match commitment letters for their portion of the local match cost of this project, which was based on a per capita cost formula. The District's prorated share of the plan update is \$2,000.

Attachment – Annex K: Los Osos Community Services District

RESOLUTION NO. 2020-9

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE LOS OSOS COMMUNITY SERVICES DISTRICT
ADOPTING THE COUNTY OF SAN LUIS OBISPO'S MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN UPDATE 2019**

WHEREAS, Los Osos Community Services District (District) recognizes the threat that natural hazards pose to people and property within our community; and

WHEREAS, undertaking hazard mitigation actions will reduce the potential for harm to people and property from future hazard occurrences; and

WHEREAS, an adopted Multi-Jurisdictional Local Hazard Mitigation Plan is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and

WHEREAS, the District fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Jurisdictional Local Hazard Mitigation Plan; and

WHEREAS, the California Office of Emergency Services and Federal Emergency Management Agency, Region IX officials have reviewed the San Luis Obispo County Multi-Jurisdictional Local Hazard Mitigation Plan and approved it contingent upon this official adoption of the participating governing body;

NOW, THEREFORE, IT IS HEREBY RESOLVED by the Board of Directors of the Los Osos Community Services District, as follows:

1. The Board of Directors adopts the San Luis Obispo County Multi-Jurisdictional Local Hazard Mitigation Plan by reference into the District's Codes in accordance with the requirements of AB 2140, and
2. The District will submit this adopted resolution to the California Office of Emergency Services and FEMA Region IX officials to enable the plan's final approval in accordance with the requirements of the Disaster Mitigation Act of 2000 and to establish conformance with the requirements of AB 2140.

On the motion of Director _____, seconded by Director _____,
and on the following roll call vote, to wit:

Ayes: _____

Noes: _____

Abstain: _____

Absent: _____

The foregoing resolution is hereby passed, approved, and adopted by the Board of Directors of the Los Osos Community Services District this 4th day of June 2020.

Charles L. Cesena
President, Board of Directors
Los Osos Community Services District

ATTEST:

APPROVED AS TO FORM:

Ron Munds
General Manager and Secretary to the Board

Jeff A. Minnery
District Legal Counsel



K.1 District Profile

K.1.1 Mitigation Planning History and 2019 Process

This annex was created during the development of the 2019 San Luis Obispo County Hazard Mitigation Plan Update. This Jurisdictional Annex builds upon the previous version of the Local Hazard Mitigation Plan for the Los Osos Community Services District; approved by FEMA in August 2005. That previous mitigation plan was not incorporated into the City’s General Plan or other planning mechanisms; however, this updated mitigation plan will be integrated into those plans.

The General Manager of the Los Osos Community Services District was the representative on the county HMPC and took the lead for developing the plan this annex in coordination with the Los Osos Community Services District Local Planning Team (LPT). The LPT will be responsible for implementation and maintenance of the plan.

Table K.1 Los Osos CSD Hazard Mitigation Plan Planning Team

Department or Stakeholder	Title
Administration	General Manager
Fire	Battalion Chief
Water	Utility Manager

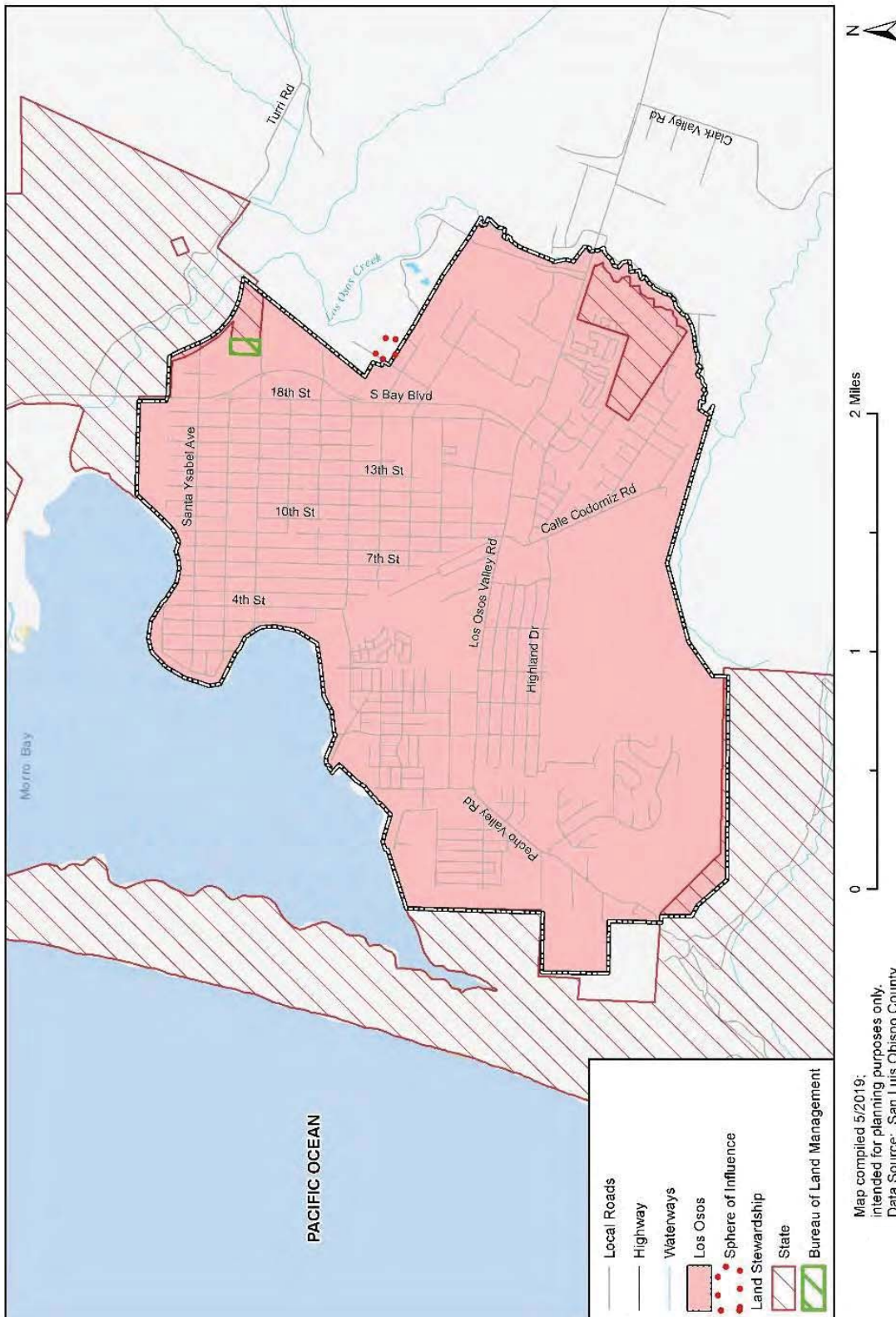
More details on the planning process followed and how the jurisdictions, service districts and stakeholders participated can be found in Section 3 of the Base Plan, as well as how the public was involved during the 2019 update.

Figure K.1 below is a map of the Los Osos planning area.





Figure K.1 Los Osos Community Services District



Map compiled 5/2019;
 intended for planning purposes only.
 Data Source: San Luis Obispo County,
 US Census TIGER Database, CA Open
 Data Portal, BLM/California State Office, LAFCO





K.1.2 District Overview

The Los Osos Community Services District (District) is located south of the City of Morro Bay and west of the City of San Luis Obispo. The District provides multiple services to the unincorporated coastal area including, water, sewer, fire protection services among other services. The Morro Bay Estuary and Morro Bay State Park border the District on the northwest, while the Los Osos Creek is on the eastern border of the District and the prominent topographic feature, Irish Hills, as well as Montano de Oro State Park lies to the south and southwest.

The District was created on November 3, 1998 replacing the old County Service Area 9 with Los Osos' first public agency governed by community residents. District services include fire protection and emergency response, storm water drainage management, solid waste management, water supply for the Baywood area, parks and recreation, street lighting, and wastewater management.

The Los Osos Community Services District is governed by an elected Board of Directors with the authority to make decisions about various public utilities and services. The Board's primary responsibilities are water, sewage, drainage, and emergency services. The Board meets on the first Thursday of each month. All Board Meetings are public meetings and any member of the public can speak to the Board regarding any matter of District authority during the public comment period.

The Los Osos Community Services District has established five committees (Emergency Services Advisory Committee, Environmental, Finance, Water Utilities and Wastewater) to advise the Board on various aspects of its operations. The Board may create standing committees at its discretion.

Community service districts are prohibited by law from engaging in land use planning. Thus, a volunteer group, the Los Osos Community Advisory Council (LOCAC) has been formed to advise the San Luis Obispo County Board of Supervisors on land use planning, parks, transportation, and other issues that affect the community of Los Osos. LOCAC is an advisory council only; it does not have the authority to make decisions.

K.1.3 Development Trends

The U.S. Census Bureau estimated the Los Osos Census Designated Place's (CDP) 2017 population as 15,714, an increase from 14,874 in 2012; this represents an almost 6 percent increase in five years. Table K.2 shows an overview of key social and demographic characteristics of the CDP taken from the U.S. Census Bureau's American Community Survey.

Table K.2 Los Osos CDP Demographic and Social Characteristics, 2012-2017

Los Osos CDP	2012	2017	% Change
Population	14,874	15,714	5.6%
Median Age	45.9	47.4	3.3%
Total Housing Units	6,911	6,800	-1.6%
Housing Occupancy Rate	92.1%	93.6%	1.5%
% of Housing Units with no Vehicles Available	3.1%	3.4%	0.3%
Median Home Value	\$387,100	\$461,100	19.1%
Unemployment	7.5%	5.5%	-2.0%
Mean Travel Time to Work (minutes)	20.3	23.3	14.8%
Median Household Income	\$57,683	\$73,082	26.7%
Per Capita Income	\$31,257	\$38,701	23.8%
% of Individuals Below Poverty Level	8.1%	10.5%	2.4%





Los Osos CDP	2012	2017	% Change
# of Households	6,363	6,367	0.1%
Average Household Size	2.32	2.45	5.6%
% of Population Over 25 with High School Diploma	93.0%	93.2%	0.2%
% of Population Over 25 with Bachelor's Degree or Higher	35.6%	41.9%	6.3%
% with Disability	12.9%	15.0%	2.1%

Source: U.S. Census Bureau American Community Survey 2012-2017 5-Year Estimates, www.census.gov/

Note: Data is for the Los Osos Census Designated Place (CDP) which may not have the same boundaries as the Los Osos Community Service District.

The following table show how the Los Osos CDP's labor force breaks down by occupation and industry estimates from the U.S. Census Bureau's 2017 American Community Survey.

Table K.3 Los Osos CPD Employment by Industry (2017)

Industry	# Employed
Population (2017)	15,714
In Labor Force	7,735
Agriculture, forestry, fishing and hunting, and mining	78
Armed Forces	10
Construction	647
Manufacturing	348
Wholesale trade	96
Retail trade	873
Transportation and warehousing, and utilities	275
Information	179
Finance and insurance, and real estate and rental and leasing	365
Professional, scientific, and management, and administrative and waste management services	984
Educational services, and health care and social assistance	1,870
Arts, entertainment, and recreation, and accommodation and food services	665
Other services, except public administration	463
Public administration	458
Unemployed	424

Source: U.S. Census Bureau American Community Survey 2012-2017 5-Year Estimates, www.census.gov/

Note: Data is for the Los Osos Census Designated Place (CDP) which may not have the same boundaries as the Los Osos Community Service District.

K.1.4 Other Community Planning Efforts

The coordination and synchronization of this plan with other community planning mechanisms and efforts are vital to the success of this plan. To have a thorough evaluation of hazard mitigation practices already in place, appropriate planning procedures should also involve identifying and reviewing existing plans, policies, regulations, codes, tools, and other actions are designed to reduce a community's risk and vulnerability from natural hazards.

As an unincorporated community, Los Osos and the Los Osos Community Services District are referenced in other County planning documents and regulated by County policies and planning mechanisms. Integrating existing planning efforts, mitigation policies, and action strategies into this annex establishes a credible, comprehensive document that weaves the common threads of a community's values together. The development





of this jurisdictional annex involved a comprehensive review of existing plans, studies, reports, and initiatives from San Luis Obispo County and the Los Osos community that relate to hazards or hazard mitigation, as summarized in the table below. Information on how they informed the update are noted and incorporated where applicable.

Table K.4 Summary of Review of Key Plans, Studies and Reports

Plan, Study, Report Name	How Document Informed the Annex
Los Osos Community Plan (Public Review Draft January 30, 2015)	Incorporated background information on the community and CSD.
Los Osos Community Service District Local Hazard Mitigation Plan (August 2005)	Informed assets at risk, past hazard events, and background information on the District and the community.
Estero Area Plan (2009)	Informed natural assets section on the Sensitive Areas in the Los Osos community

In addition to the development standards within the Los Osos Community Plan, there are County planning mechanisms that regulate future and existing development within the Los Osos CSD planning area. Refer to subsection K.4 Capability Assessment for more information on the plans, policies, regulations and staff that govern the Los Osos planning area.

K.2 Hazard Identification and Summary

The Los Osos CSD planning team identified the hazards that affect the District and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to the Los Osos CSD (see Table K.5). There are no hazards that are unique to Los Osos.





Table K.5 Los Osos CSD Hazard Risk Summary

Hazard	Geographic Area	Probability of Future Occurrence	Magnitude/Severity (Extent)	Overall Significance
Adverse Weather	Significant	Likely	Limited	Medium
Coastal Storm/Coastal Erosion/Sea Level Rise	Limited	Occasional	Limited	Low
Drought	Significant	Likely	Limited	Medium
Earthquake	Extensive	Likely	Critical	High
Wildfire	Significant	Likely	Limited	High
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area 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.		Magnitude/Severity (Extent) 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 Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

K.3 Vulnerability Assessment

The intent of this section is to assess the Los Osos Community Services District’s vulnerability separate from that of the planning area, which has already been assessed in Section 5 Hazard Identification and Risk Assessment in the Base Plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance that may vary from other parts of the planning area.

The information to support the hazard identification and risk assessment for this Annex was collected through a Data Collection Guide, which was distributed to each participating municipality or special district to complete during the planning process. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction. In addition, the Los Osos CSD planning team members were asked to share information on past hazard events that have affected the Community Services District.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5.2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard





risk and vulnerabilities unique to that jurisdiction (See Table K.5). Identifying these differences helps the reader to differentiate the jurisdiction's risk and vulnerabilities from that of the overall County.

Note: The hazard "Significance" reflects overall ranking for each hazard and is based on the Los Osos CSD planning team input from the Data Collection Guide and the risk assessment developed during the planning process (see Section 5 of the Base Plan), which included a more detailed qualitative analysis with best available data.

The hazard summaries in Table K.5 reflect the hazards that could potentially affect the District. Based on this analysis, the priority hazards (High Significance) for mitigation are wildfire and drought. The discussion of vulnerability for each of the following hazards is in subsection K.3.2 Estimating Potential Losses. Those of Medium or High significance for the Los Osos CSD are identified below.

- Adverse Weather
- Drought
- Earthquake
- Wildfire

Other Hazards

The District rated hazardous trees as a high significance hazard. In terms of this plan hazardous trees are considered a cascading hazard for adverse weather, drought and wildfire hazards. Information related to the public concerns about tree mortality in relation to wildfire risk can be found under K.3.2 Estimating Potential Losses and in Section 5 of the Base Plan.

Hazards assigned a significance rating of Low and which do not differ significantly from the County ranking (e.g., Low vs. High) are not addressed further in this plan and are not assessed individually for specific vulnerabilities in this section. In the Los Osos Community Services District, coastal erosion/sea level rise, flooding, landslide and debris flows, land subsidence and tsunamis are hazards ranked as a low significance to the community service district.

Los Osos is not required to participate separately in the National Flood Insurance Program (NFIP), but will continue to support the County's participation in and compliance with the NFIP.

Additionally, the CSD's committee members decided to rate several hazards as Not Applicable (N/A) to the planning area due to a lack of exposure, vulnerability, and no probability of occurrence. The following hazards are considered Not Applicable (N/A) to the Los Osos Community Services District.

- Agricultural Pest Infestation and Disease
- Biological Agents (naturally occurring)
- Dam Incidents
- Liquefaction
- Seiches

K.3.1 Assets at Risk

This section considers the District's assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets, and growth and development trends.

Values at Risk

The following data on property exposure is derived from the San Luis Obispo County 2017 Parcel and Assessor data as well as data that was shared by the Los Osos Planning Team. This data should only be used as a





guideline to overall values in the Community Services District 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 likely low and does not reflect current market value of properties. It is also important to note that 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 K.6 shows the exposure of properties (e.g., the values at risk) broken down by property type for the Los Osos Community Services District.

A more detailed list of the CSD’s assets at risk from the District’s 2012 HMP can be found as an attachment at the end of this Annex.

Table K.6 2019 Property Exposure for the Los Osos CSD by Property Types

Property Type	Property Count	Improved Value	Content Value	Total Value
Agricultural	1	\$7,861	\$7,861	\$15,722
Commercial	116	\$44,306,521	\$44,306,521	\$88,613,042
Government/Utilities	52	\$3,090	--	\$3,090
Other/Exempt/Misc.	47	\$16,614,282	--	\$16,614,282
Residential	4,822	\$937,095,463	\$468,547,732	\$1,405,643,195
Multi-Family Residential	277	\$57,293,267	\$28,646,634	\$85,939,901
Mobile/Manufactured Homes	9	\$9,764,323	\$4,882,162	\$14,646,485
Residential: Other	22	\$4,304,874	\$2,152,437	\$6,457,311
Industrial	3	\$3,870,890	\$5,806,335	\$9,677,225
Vacant	22	\$3,488,140	--	\$3,488,140
Total	5,371	\$1,076,748,711	\$554,349,681	\$1,631,098,392

Source: Wood Plc analysis based on ParcelQuest and San Luis Obispo County Assessor’s Office data 2019

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. See Section 5 of the Base Plan for more details on the definitions and categories of critical facilities.

An inventory of critical facilities in the District based on County GIS data is provided in Table K.7 and illustrated in Figure K.2.

Table K.7 Los Osos CSD’s Critical Facilities

Facility Type	Counts
Day Care Facilities	6
Emergency Medical Service Stations	1
Fire Stations	1
Local Law Enforcement	1
Public Schools	3
Total	12

Source: Wood Plc analysis based on ParcelQuest and San Luis Obispo County Assessor’s Office data 2019





Essential Facilities

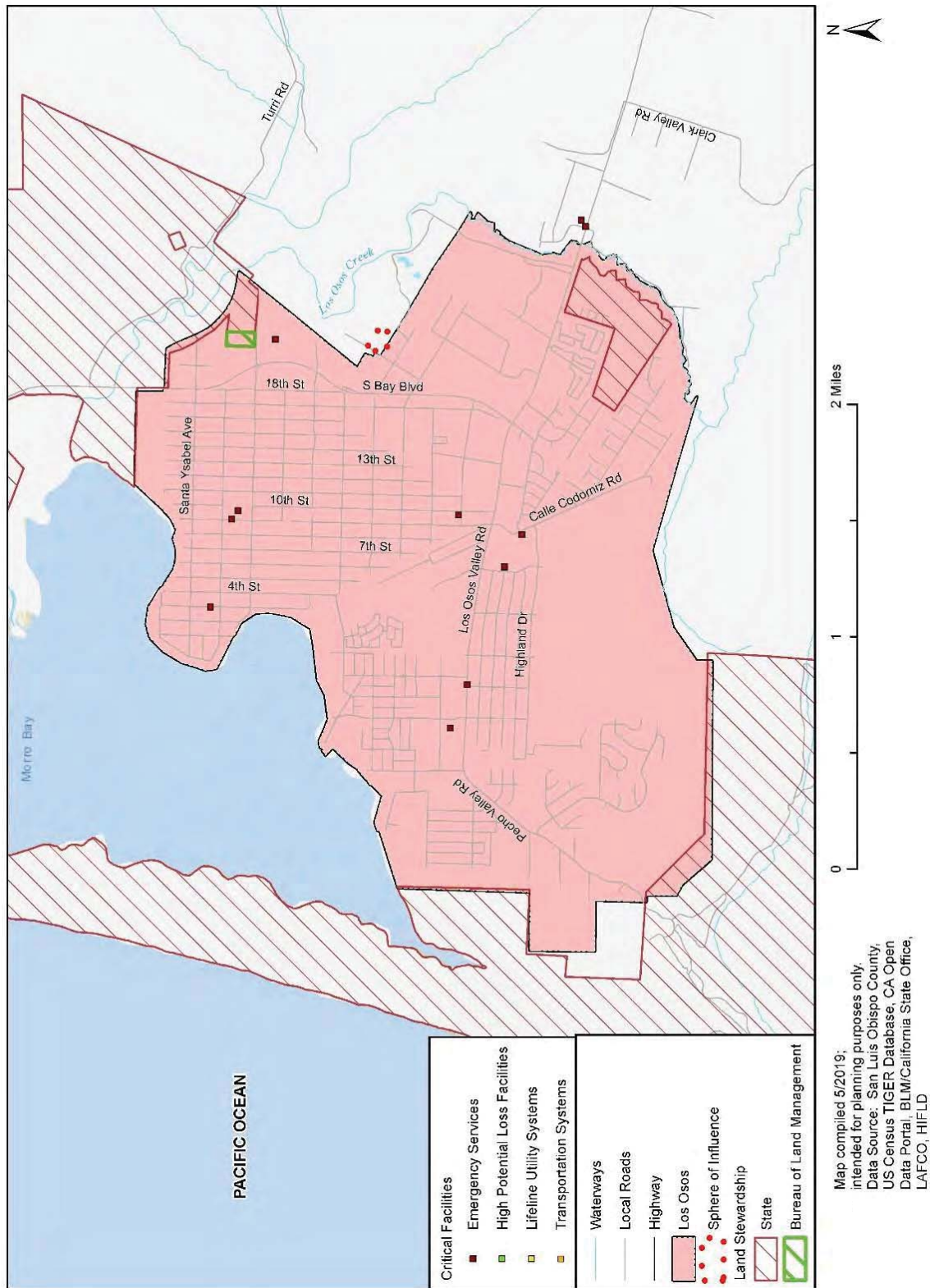
Essential facilities as identified by the Los Osos CSD Planning Team are as follows:

- Sheriff Sub-Station – 2099 10th Street
- South Bay Fire Department – 2315 Bayview Heights
- Water Treatment Facilities
- Water Tanks
- Nitrate Removal equipment





Figure K.2 Los Osos CSD's Critical Facilities



Map compiled 5/2019;
intended for planning purposes only.
Data Source: San Luis Obispo County,
US Census TIGER Database, CA Open
Data Portal, BLM/California State Office,
LAFCO, HIFLD





Transportation and Lifeline Facilities

The Los Osos CSD is situated in proximity to the regional transportation routes of Highway 101 and Highway 1 via Los Osos Valley Road and South Bay Boulevard. These are also the main arterial roads to access the planning area. The lack of alternatives transportation routes during an evacuation was a noted a significant concern for many residents in the Los Osos Community. The District's lifeline facilities include those listed in the essential facilities above.

Historic and Cultural Resources

No historic or cultural resources have been identified in the Los Osos CSD.

Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters. The Los Osos CSD Planning Team identified the following significant natural assets:

- Los Osos Oak State Reserve
- Baywood Park
- Audubon Overlook
- Elfin Forest
- Sweet Springs Nature Preserve
- Montana De Oro State Park
- Los Osos Community Park
- Los Osos School 1872
- Morro Bay Estuary

Some of natural assets listed above are also areas designed in the Estero Area Plan (2009) combining designations for Sensitive Reserve Areas, which apply to the protection of special resources in the Los Osos community and its vicinity:

- Los Osos Oaks State Reserve (SRA) - The Los Osos forest is an 86-acre state park reserve containing outstanding examples of California pygmy oaks--stunted coast live oaks, growing in a stabilized dune area. Other oaks are also present, making this area an outstanding example of an oak woodland. The forest also includes a strip of open space preserved by the developer of Tract 527, but it is not open to public access.
- Los Osos Creek (SRA) - The lower eight miles of the creek are an anadromous fish stream (primarily steelhead), and adjacent riparian areas are rich in wildlife. Environmental concerns include contamination and excessive siltation of both the creek and the bay by development or other adverse uses occurring too close to the creek and its tributaries.
- Eto and Warden Lakes (SRA) - These are two of the few remaining isolated freshwater marshes in the county. Both lie within the Los Osos Creek drainage. The freshwater marshes, along with the associated riparian habitat, are important sites for migratory birds.
- Hazard Canyon and Vicinity (SRA) - The threatened Morro manzanita occurs only in the area between Baywood Park and Hazard Canyon. In addition, two of the six known stands of the endangered Indian Knob mountain balm occur in Hazard Canyon. Many other endemic plant species are found in the dunes near the mouth of the canyon. This area is an excellent example of the successive stages of dune stabilization. Much of this area is within Montaña de Oro State Park.





- Montaña de Oro Grassland (SRA) - The marine terrace between Islay and Coon Creeks is a mosaic of the *Stipa* grassland community and the northern coastal scrub and coastal sage scrub. The terrace also supports numerous wildflowers.
- Coon Creek (SRA). Several natural plant communities occur in this area. The most interesting is the Bishop pine forest located on steep slopes just outside Montaña de Oro State Park. This is a large conifer forest where specimens of the Bishop pine may have been first collected scientifically and used to describe the species. Coast live oak is intermixed with the conifer forest. The county's only native population of *Ceanothus griseus* is found in this area (Source: California Native Plant Society).

Economic Assets

Los Osos is a residential area, and there is very little commercial development.

K.3.2 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high or medium significance, where quantifiable, and/or where (according to HMPC member input) it differs from that of the overall County.

Table K.6 above shows Los Osos' exposure to hazards in terms of number and value of structures. San Luis Obispo County parcel and assessor data was used to calculate the improved value of parcels. The most vulnerable structures are unreinforced masonry buildings, and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below. (See Section 5 of the Base Plan for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole.)

Adverse Weather

Adverse weather in the Los Osos Community Services District includes hail, wind storms, and thunderstorms. Heavy rainfall events affect the District annually and the community's proximity to the Pacific Ocean tends to exaggerate adverse weather compared to inland communities. Combined with soil conditions and the presence of shallow-rooted Eucalyptus trees, heavy rains and moderate winds cause numerous tree-toppling events each year. Downed trees knock down power and communications lines, bringing disruptions lasting from a few hours to days in some locales in the District. Refer to Section 5 of the Base Plan for information on past adverse weather events in San Luis Obispo County.

Drought and Water Shortage

The Los Osos CSD is one of the three water purveyors in the Los Osos community. The District supplies water for domestic service and fire protection. The CSD's service area encompasses 633 acres of predominately residential land uses. The water supply for the Los Osos CSD consist of five active groundwater wells above the Los Osos Groundwater Basin. The District has a daily production capacity of approximately 1580 gallons per minute with all five wells being active.

The Los Osos Groundwater Basin is the only source of water for residential, commercial, institutional and agricultural uses in the Los Osos community. The basin was identified by the State as a high priority groundwater basin, which under Sustainable Groundwater Management Act of 2014 requires a basin plan to be developed and a committee be formed to implement the plan and monitor progress. According to the Los Osos Basin Plan (January 2015) the basin faces two primary challenges that pose a risk to the sustainability of the water supply; water quality degradation of the Upper Aquifer (UA), primarily by nitrate and seawater intrusions into the Lower Aquifer. Currently, Los Osos is under a building moratorium and relies on factors within the Basin Management Plan in order for the moratorium to be lifted.





The CSD has a Water Shortage Contingency Plan to enact during times of severe drought. The Contingency Plan consists of five stages (Stage One, Alert to Stage Five, Critical) each stage has a reduction target, climate trigger and the prohibitions to put in place. On April 2, 2015 the Los Osos CSD Board of Director Declared a Stage Three Emergency, which places the following prohibitions on residents in order to meet the reduction target of 25 percent.

- Penalties up to 2 times the established rate for usage above the allocation
- No leak adjustment credits will be awarded
- No new intent to Serve applications
- No allocations may be transferred to another property

Drought impacts are wide-reaching and may be economic, environmental, and/or societal. The most significant impacts associated with drought in the planning area are those related to water intensive activities such as wildfire protection, jurisdictional usage, commerce, tourism and recreation. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding.

Earthquake

The Los Osos 2012 Local Hazard Mitigation identifies three fault zones (Los Osos, Edna and Indian Knob) that could have potential impacts on the Los Osos Community Services District. The Los Osos fault poses the greatest risk to the CSD and its facilities. The fault is considered active and has the potential to generate a 6.8 magnitude earthquake. The San Simeon earthquake in 2003 which had impacts countywide caused significant damage to the Los Osos Community Services District’s 16th Street North water storage tank. The tank was not anchored and endured what is referred to as “elephant foot” damage. The District repaired the tank with the assistance of FEMA and the California Office of Emergency Services (Cal OES). The improvements to the 16th Street tank secured the tank by anchoring it and repairing the lower shell where major damage had occurred. Other critical infrastructure, including the fire station, suffered damage that was repaired.

Los Osos Community Services District is located in a geologically complex and seismically active region that is subject to earthquakes and potentially strong groundshaking. Portions of the District are located on sand in-fill areas. These areas and those areas underlain by young, poorly consolidated, saturated granular alluvial sediments, would be most susceptible to the effects of liquefaction. These soil conditions are most frequently found in areas underlain by recent river and flood plain deposits, which have increased vulnerability to liquefaction when groundshaking occurs.

The following tables (Table K.8 Table K.9) shows the types of properties at moderate and high risk of liquefaction. Based on this analysis there are 988 properties at moderate risk of liquefaction with a total value of over \$324 million. Residential properties are the most vulnerable property type to liquefaction in Los Osos, with a combined total of 880 properties (including 2 mobile homes) located in an area of moderate liquefaction risk and a total value of nearly \$240 million.

Table K.8 Los Osos CSD’s Liquefaction Risk by Property Type – Moderate Risk

Property Type	Property Count	Improved Value	Content Value	Total Value
Agricultural	1	\$7,861	\$7,861	\$15,722
Commercial	70	\$34,102,286	\$34,102,286	\$68,204,572
Government/Utilities	8	--	--	\$0
Other/Exempt/Misc.	21	\$6,625,714	--	\$6,625,714
Residential	682	\$121,222,661	\$60,611,331	\$181,833,992
Multi-Family Residential	177	\$33,981,650	\$16,990,825	\$50,972,475





Property Type	Property Count	Improved Value	Content Value	Total Value
Mobile/Manufactured Homes	2	\$1,475,614	\$737,807	\$2,213,421
Residential: Other	19	\$2,989,644	\$1,494,822	\$4,484,466
Industrial	3	\$3,870,890	\$5,806,335	\$9,677,225
Vacant	5	\$389,513	--	\$389,513
Total	988	\$204,665,833	\$119,751,267	\$324,417,100

Source: San Luis Obispo County Planning and Building Dept., Assessor's Office, ParcelQuest, Wood Plc Parcel Analysis

Table K.9 Los Osos CSD's Liquefaction Risk by Property Type – High Risk

Property Type	Property Count	Improved Value	Content Value	Total Value
Commercial	13	\$2,261,761	\$2,261,761	\$4,523,522
Government/Utilities	7	\$3,090	--	\$3,090
Other/Exempt/Misc.	6	\$3,437,429	--	\$3,437,429
Residential	451	\$82,857,177	\$41,428,589	\$124,285,766
Multi-Family Residential	14	\$4,126,546	\$2,063,273	\$6,189,819
Residential: Other	2	\$883,505	\$441,753	\$1,325,258
Vacant	5	\$319,410	--	\$319,410
Total	498	\$93,888,918	\$46,195,375	\$140,084,293

Source: San Luis Obispo County Planning and Building Dept., Assessor's Office, ParcelQuest, Wood Plc Parcel Analysis

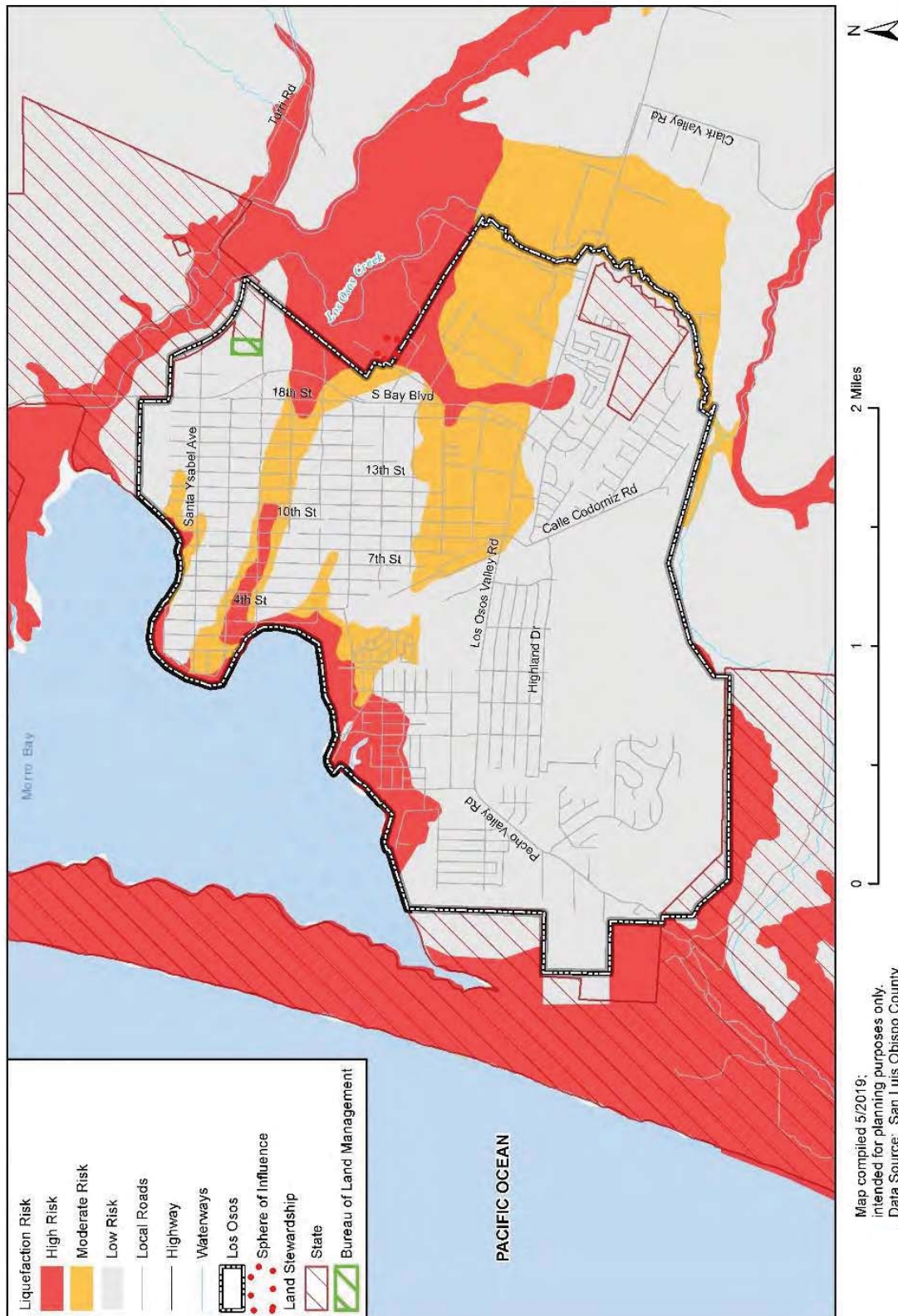
Based on this analysis there are 498 properties at high risk of liquefaction with a total value of over \$140 million. Residential properties are the most vulnerable property type to liquefaction in Los Osos, with 467 residential properties in an area of high liquefaction risk for a total value of over \$131 million.

The following map depicts the areas of the Los Osos CSD that are at risk of liquefaction. The areas along the coastline to the District's east and north are at high risk of liquefaction, while the eastern portion of the District's boundaries are designated as moderate risk of liquefaction, including Los Osos Valley Road, the only major road out of the Los Osos CSD limits.





Figure K.3 Areas of Potential Liquefaction Risk





Wildfire

The climate in Los Osos Community Services District planning area is generally referred to as Mediterranean with warm dry summers and relatively cool, moderately wet winters. Rainfall throughout the District occurs primarily between November and April, and ranges between 20-25 inches per year. Because summers are generally warm and dry, the risk of wildfires is highest in late summer and early fall. Fog and cool weather that are common in the coastal regions help to maintain moisture levels in vegetation along the coast, which helps to minimize fire risk. Other factors such as wind, topography and overgrown vegetation may counteract the fog and cool weather climate in the planning area and increase in the risk of ignition. The District is a residential development that has occurred in the foothill areas around Los Osos and Montana De Oro State Park. The residential development is intermixed with native vegetation which results in a high-value, high-risk area.

One of the questions asked in the Public Survey for the County HMP was: *Do you have information on specific hazard issues/problems areas that you would like the planning committee to consider?* Several of the responses to this question came from residents of the Los Osos community (21% of the responses stated they lived in the Los Osos area). Residents expressed concern with the high density of eucalyptus trees in Los Osos and proximity to Montana de Oro State Park as a threat to their community. The limited number of evacuation routes out of the Los Osos was also identified as an area of concern for their community.

Several areas of the Los Osos community are within the high to very high severity wildfire hazard zones. Analysis using GIS was used to create the following tables, which quantify the potential losses by wildfire severity zones and property type. Based on the analysis there are 891 properties located in the high to very high severity zones. Of those properties 852 are residential properties (including 6 mobile/manufactured homes) with a combined value of \$381,329,349. In addition to the residential properties there is also a public school, Monarch Grove Elementary, located in the high wildfire hazard zone.

Table K.10 Los Osos CSD’s Wildfire Risk by Property Type – High Severity SRA Zone

Property Type	Property Count	Improved Value	Content Value	Total Value	Loss Estimate
Government/Utilities	5	--	--	\$0	\$0
Other/Exempt/Misc.	1	\$1,517,084	--	\$1,517,084	\$1,517,084
Residential	114	\$31,039,882	\$15,519,941	\$46,559,823	\$46,559,823
Multi-Family Residential	2	\$212,084	\$106,042	\$318,126	\$318,126
Vacant	3	\$1,068,033	--	\$1,068,033	\$1,068,033
Total	125	\$33,837,083	\$15,625,983	\$49,463,066	\$49,463,066

Source: San Luis Obispo County Planning and Building Dept., Assessor’s Office, ParcelQuest, Wood Plc Parcel Analysis





Table K.11 Los Osos CSD's Wildfire Risk by Property – Very High Severity SRA Zone

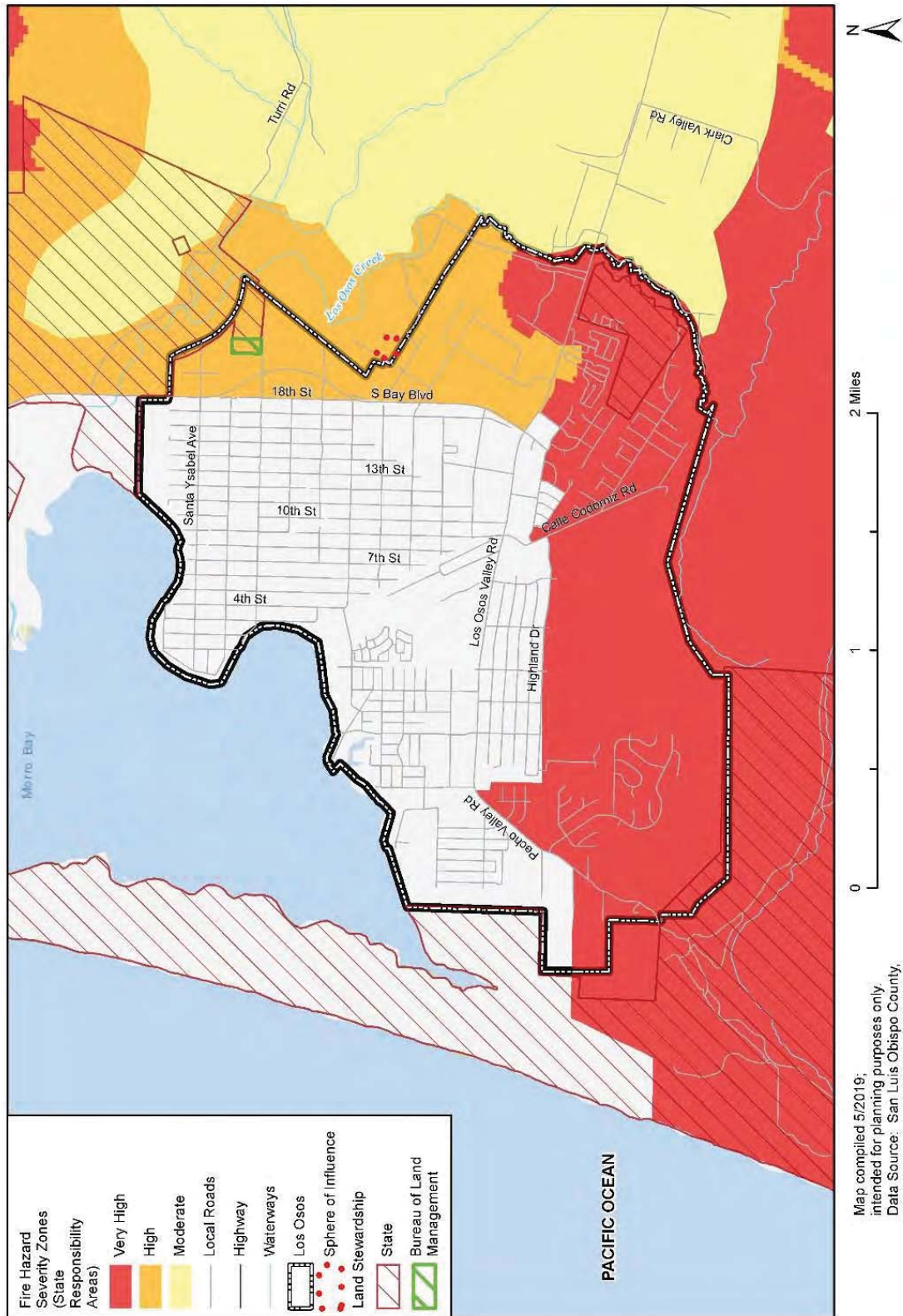
Property Type	Property Count	Improved Value	Content Value	Total Value	Loss Estimate
Agricultural	1	\$7,861	\$7,861	\$15,722	\$15,722
Government/Utilities	21	--	--	\$0	\$0
Other/Exempt/Misc.	2	--	--	\$0	\$0
Residential	729	\$214,837,365	\$107,418,683	\$322,256,048	\$322,256,048
Multi-Family Residential	1	\$21,525	\$10,763	\$32,288	\$32,288
Mobile/Manufactured Homes	6	\$8,108,709	\$4,054,355	\$12,163,064	\$12,163,064
Vacant	6	\$1,331,327	--	\$1,331,327	\$1,331,327
Total	766	\$224,306,787	\$111,491,661	\$335,798,448	\$335,798,448

Source: San Luis Obispo County Planning and Building Dept., Assessor's Office, ParcelQuest, Wood Plc Parcel Analysis





Figure K.4 Los Osos CSD Wildfire Risk



Map compiled 5/2019;
intended for planning purposes only
Data Source: San Luis Obispo County,
US Census TIGER Database, CA Open
Data Portal, BLM/California State Office,
LAFCO, CalFire



Coastal Storm/Coastal Erosion/Sea Level Rise

As part of the 2019 HMP planning effort, a sea level rise risk assessment was completed to determine how sea level rise may affect coastal jurisdictions and critical facilities and how coastal flooding might be exacerbated in the future. Table K.12 and Table K.13 summarize the properties at risk of inundation by sea level rise and sea level rise combined with a FEMA 1% annual chance flood. The area of inundation by sea level rise and sea level rise combined with the 1% flood are shown in Figure K.5 and Figure K.6, respectively. No critical facilities were determined to be at risk in the sea-level rise scenarios. See subsection 5.3.7 Coastal Storm/Coastal Erosion/Sea Level Rise in the base plan for more details on the scenarios and data sources used for this analysis.

Table K.12 Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

Property Type	25-cm SLR	75-cm SLR	300-cm SLR	25-cm SLR w/ 1% Flood	75-cm SLR w/ 1% Flood	300-cm SLR w/ 1% Flood
Commercial	--	2	12	3	5	15
Government/Utilities	--	--	1	--	1	1
Other/Exempt/Misc.	--	--	1	1	1	1
Residential	--	14	222	28	71	294
Multi-Family Residential	--	--	4	--	--	10
Mobile/Manufactured Homes	--	--	1	--	--	1
Residential: Other	1	1	3	3	3	3
Vacant	--	--	2	1	2	2
Total	1	17	246	36	86	327

Source: Wood analysis with USGS CoSMoS 3.1 data

Table K.13 Improved Values of Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

Property Type	25-cm SLR	75-cm SLR	300-cm SLR	25-cm SLR w/ 1% Flood	75-cm SLR w/ 1% Flood	300-cm SLR w/ 1% Flood
Commercial	--	\$546,320	\$2,243,469	\$744,960	\$883,510	\$2,544,092
Government/Utilities	--	--	--	--	--	--
Other/Exempt/Misc.	--	--	\$420,000	\$420,000	\$420,000	\$420,000
Residential	--	\$2,323,098	\$41,957,596	\$4,462,878	\$12,338,675	\$55,511,993
Multi-Family Residential	--	--	\$1,264,339	--	--	\$3,120,843
Mobile/Manufactured Homes	--	--	\$62,149	--	--	\$62,149
Residential: Other	\$75,059	\$75,059	\$2,084,548	\$2,084,548	\$2,084,548	\$2,084,548
Vacant	--	--	\$21,225	\$10,404	\$21,225	\$21,225
Total	\$75,059	\$2,944,477	\$48,053,326	\$7,722,790	\$15,747,958	\$63,764,850

Source: Wood analysis with USGS CoSMoS 3.1 data





Figure K.5 Los Osos Sea Level Rise Scenario Analysis: Tidal Inundation Only

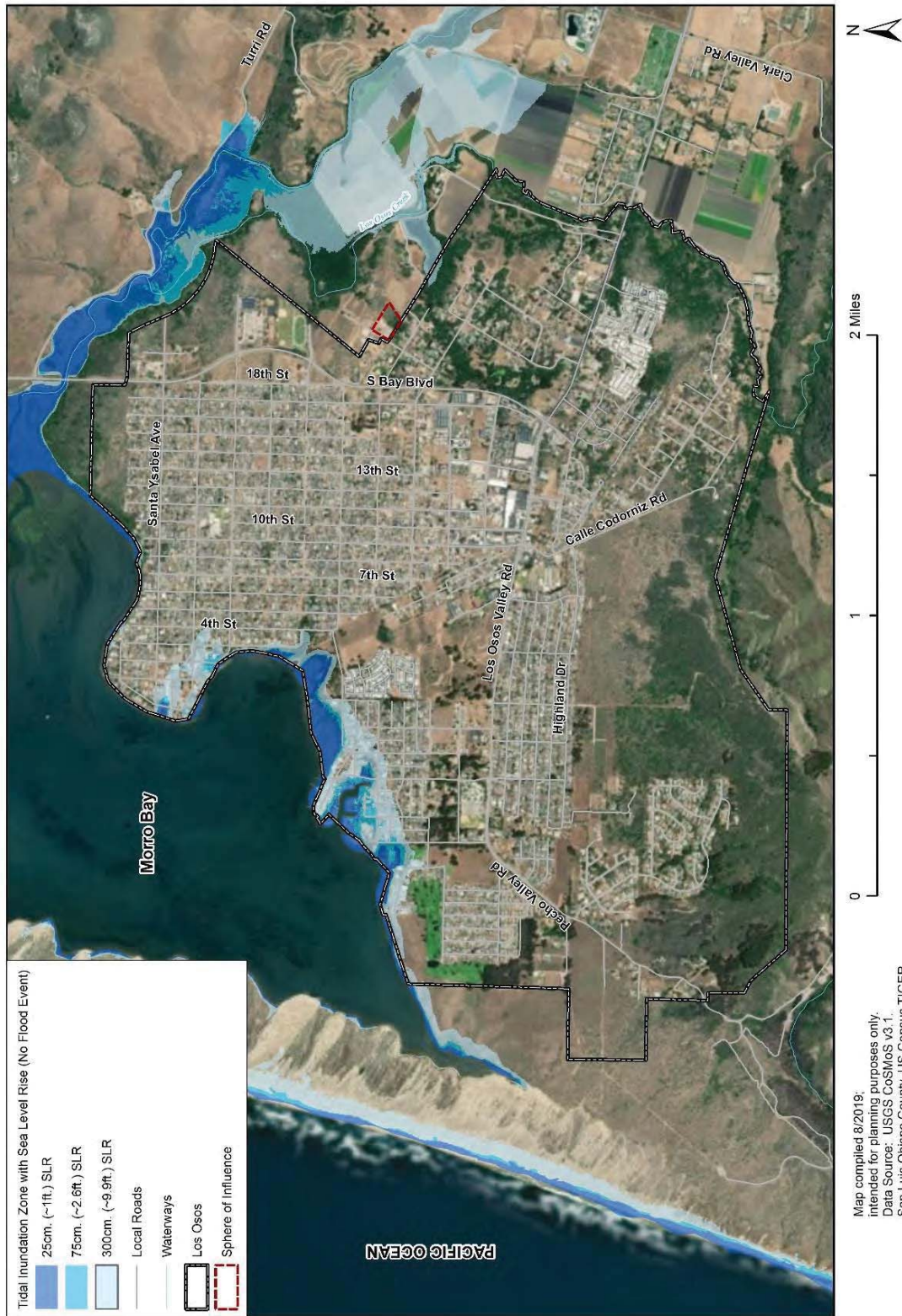




Figure K.6 Los Osos Sea Level Rise Scenario Analysis: Tidal Inundation and 1% Annual Chance Flood





K.4 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 capability assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and Wood consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. In summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The Los Osos CSD capabilities are summarized below.

K.4.1 Regulatory Mitigation Capabilities

Table K.14 identifies existing regulatory capabilities the District has in place to help with future mitigation efforts. Note, many of the regulatory capabilities that can be used for the District are within the County’s jurisdiction. Refer to Section 6 of the Base Plan for specific information related to the County’s mitigation capabilities.

Table K.14 Los Osos CSD Regulatory Mitigation Capabilities

Regulatory Tool	Yes/No	Comments
General plan	Yes	County, Estero Area Plan
Zoning ordinance	Yes	County
Subdivision ordinance	Yes	
Growth management ordinance	Yes	County
Floodplain ordinance	Yes	County
Other special purpose ordinance (stormwater, water conservation, wildfire)	Yes	County
Building code	Yes	County
Fire department ISO rating	Yes	County
Erosion or sediment control program	Yes	County
Stormwater management program	Yes	County
Site plan review requirements	Yes	County
Capital improvements plan	Yes	County
Economic development plan	Yes	County
Local emergency operations plan	Yes	County
Other special plans	No	
Flood Insurance Study or other engineering study for streams	Yes	County
Elevation certificates (for floodplain development)	No	

Source: Wood Data Collection Guide, 2019





K.4.2 Administrative/Technical Mitigation Capabilities

Table K.15 identifies the personnel responsible for activities related to mitigation and loss prevention in the Los Osos Community Services District.

Table K.15 Los Osos CSD Administrative/Technical Mitigation Capabilities

Personnel Resources	Yes/No	Department/Position
Planner/engineer with knowledge of land development/land management practices	Yes	County Planning and District Engineer
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	County Planning and District Engineer
Planner/engineer/scientist with an understanding of natural hazards	Yes	County
Personnel skilled in GIS	Yes	County
Full time building official	Yes	County
Floodplain manager	NA	County
Emergency manager	Yes	County
Grant writer	Yes	Los Osos CSD
Other personnel	Yes	Emergency Services Advisory Committee, County; South Bay Fire Department
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	County
Warning systems/services (Reverse 9-11, outdoor warning signals)	Yes	County Sheriff's Office

Source: Wood Data Collection Guide, 2019

K.4.3 Fiscal Mitigation Capabilities

Table K.16 identifies financial tools or resources that the CSD could potentially use to help fund mitigation activities.

Table K.16 Los Osos CSD Fiscal Mitigation Capabilities

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	No
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

K.4.4 Mitigation Outreach and Partnerships

The Los Osos CSD has ongoing public education and information programs related to general emergency preparedness, water conservation, and wildfire mitigation practices for homeowners. In partnership with the Cal FIRE, the SLO County Fire Department provides Community Emergency Response Team (CERT) classes to Los





Osos residents. Cal FIRE and the community's Fire Safe Council are also working with the District and the community on a fire prevention specific to the Los Osos community. The District plans to continue to implement planned greenbelts and fuel breaks; Los Osos CSD passed a Hazardous Vegetation Abatement Ordinance to assist the South Bay Fire Department in aggressively managing the defensible space around homes and vacant properties in the community. The District's website has valuable information related to various hazards including wildfire and information on defensible spaces and residential fire sprinklers and tsunami inundation maps and evacuation information specific to Los Osos.

The Los Osos CSD Emergency Services Advisory Committee was established in 2008 to assist the District's Board of Directors in providing emergency services to the District. Advisory Committee meetings are a public forum with the ability for the public to review and provide input on issues.

K.4.5 Opportunities for Enhancement

Based on the capabilities assessment, the Los Osos Community Service District has several existing mechanisms in place that already help to mitigate hazards. There are also opportunities for the District to expand or improve on these policies and programs to further protect the community. This planning process will help to inform the District's current efforts in the development of a community wide emergency preparedness program. Other future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform District staff, the Emergency Services Advisory Committee and District Board members on how best to integrate hazard information and mitigation projects into the District policies and ongoing duties of the District. Continuing to train District staff on mitigation and the hazards that pose a risk to the Los Osos Community Service District will lead to more informed staff members who can better communicate this information to the public.

K.5 Mitigation Strategy

K.5.1 Mitigation Goals and Objectives

The Los Osos CSD adopts the hazard mitigation goals and objectives developed by the HMPC and described in Section 7 Mitigation Strategy.

K.5.2 Completed 2012 Mitigation Actions

During the 2019 planning process the Los Osos Community Services District Planning Team reviewed all the mitigation actions from the 2012 plan. Actions were prioritized using the process described in subsection 7.2.1 of the Base Plan. During the 2019 planning process the Planning Team identified that of their eleven mitigation actions from 2012, three of the actions have been completed, demonstrating progress and building the community's resiliency to disasters; see Table K.17 below. Table K.18: Los Osos Community Services District's Mitigation Action Plan describes all the in progress actions as well as new mitigation action from the Planning Team.





Table K.17 Los Osos CSD Mitigation Action Completed from 2012 Plan

ID	Corresponding Hazard(s)	Mitigation Action	Lead Agency	Priority	Actions Status Notes
1	Wildfire	Inside the District – implement planned greenbelts and fuel breaks, and continue hazard abatement program	Los Osos Focus Group, Cal Fire, LOCSD	High	We have an abatement program - complete. Green belt and fuel breaks in constant progress.
3	Earthquake, Water Tank Failures	Public education, flexible connections at tanks, tank retro-fitting	LOCSD	High	Project completed 2007
4	Hazardous Materials	Monitoring equipment, public awareness	SLO County Environmental Health	Medium	Project Complete

K.5.3 Mitigation Actions

The planning team for the Los Osos Community Service District identified and prioritized the following mitigation actions based on the risk assessment. Actions were prioritized using the process described in subsection 7.2.1 of the Base Plan. 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.





Table K.18 Los Osos Community Services District's Mitigation Action Plan

ID	Hazard(s) Mitigated	Description/ Background/ Benefits	Lead Agency and Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status/ Implementation Notes
LO.1	Flood	Improve drainage, public education on construction management, evacuation routes and vegetation management	LOCSO, SLO County	\$10,000 to \$50,000	FEMA HMA	High	3-5 yrs.	In progress. All drainage areas have been improved/upgraded. Vegetation management is in progress
LO.2	Drought, Earthquake	Engineer and install a SCADA system to improve water efficiencies and mitigate water loss if system is compromised during an earthquake.	LOCSO	\$10,000 to \$50,000	District Budget	High	1 yr.	This is a 2019/2020 scheduled project
LO.3	Wildfire	Educate the public to take precautions to prevent potentially harmful fires and be educated about surviving them. The District is encouraging local organizations to involve the residents of Los Osos and is helping coordinate town hall meetings, Community Emergency Response Team training and sending social media blasts regarding fire safety. There are many local organizations that residents can join in order to be better prepared in case of a fire; Fire Safe Council, Fire Wise Cabrillo, and the Emergency Services Advisory Committee to the Los Osos Board of Directors. Benefits: With an involved community we hope to reduce risks of wildland fires to a minimum. In case of a wildfire, we hope that the community will be prepared in order to avoid human and property loss.	Los Osos CSD / South Bay Fire Dept	Little to no cost	District Budget	High	Other	Annual Implementation



K.6 Implementation and Maintenance

Moving forward, the Los Osos Community Service District will use the mitigation action table in the previous section to track progress on implementation of each project. Implementation of the plan overall is discussed in Section 8 in the Base Plan.

K.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment and the Mitigation Strategy, will be used by the Community Service District to help inform updates of the Los Osos Community Plan and in the development of additional local plans, programs and policies. Understanding the hazard that pose a risk and the specific vulnerabilities to the jurisdiction will help in future capital improvement planning for the District. The County Planning and Building Department may utilize the hazard information when reviewing a site plan or other type of development applications with the boundaries of the Los Osos Community Service District area. As noted in Section 8 Plan Implementation and Monitoring, the HMPC representatives from the Los Osos Community Services District will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

K.6.2 Monitoring, Evaluation and Updating the Plan

The Los Osos Community Service District will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The District will continue to involve the public in mitigation, as described in subsection 8.3 of the Base Plan. The CSD General Manager will be responsible for representing the Community Services District in the County HMPC, and for coordination with County staff and departments during plan updates. The Los Osos Community Services District realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.

