

**SOUTH COAST WATER DISTRICT ANNEX**

The South Coast Water District (SCWD) is a participant (Member Agency [MA]) in the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan (HMP or Plan). As a participant MA, SCWD representatives were part of the HMP Planning Process and served on the Planning Team responsible for the Plan Update; refer to Section 2 of the Plan. The primary Plan, including the hazard mitigation plan procedural requirements and planning process apply to SCWD.

This Annex supplements information contained in the primary Plan and describes how SCWD’s risks vary from the planning area. The Risk Assessment (Section 3) summarizes the hazards and risks that pose a threat to Orange County. The primary Plan treats the entire County as the planning area and identifies which MAs are subject to a profiled hazard. The purpose of this Annex is to provide additional information specific to SCWD with a focus on the risk assessment and mitigation strategy.

**HAZARD MITIGATION PLAN POINT OF CONTACT AND DEVELOPMENT TEAM**

The following representatives attended the Planning Team meetings on behalf of SCWD and coordinated the hazard mitigation planning efforts with SCWD staff:

**Primary Point of Contact**

Trisha Woolslayer  
 Environmental Health and Safety Manager  
 949-499-4555 ext. 3124  
 twoolslayer@scwd.org

**Alternate Point of Contact**

Rick Shintaku  
 Acting General Manager  
 949-499-4555 ext. 3156  
 rshintaku@scwd.org

In addition to participating on the Planning Team, an internal team was also formed to support Planning Team representatives and provide information for the Plan update. The following staff served as SCWD’s internal hazard mitigation planning development team.

<b>Representative</b>	<b>Title</b>	<b>How Participated</b>
Sara Mathis	Principal Engineer	Attended planning meetings, provided input on all phases of planning (i.e., identification of hazards, system information and detail, etc.), provided comments on draft Hazard Mitigation Plan
Joe McDivitt	Chief Operations Officer (COO)	
Greg Pennington	Assistant COO for O&M	
Steve Dishon	Water Production Manager	
Kyle Gough	Joint Regional Water Supply (JRWSS) Manager	
Ernie Garcia	Wastewater Collections System Supervisor	
Brian Lynn	Water Distribution System Supervisor	
Bryon Black	Information Technology Manager	
Pamela Arends-King	Chief Financial Officer	
Sonja Morgan	Public Information Officer	

**JURISDICTION PROFILE (Service Population: 40,000)**

SCWD was formed in 1932 under the County Water District Act and currently occupies 5,300 acres of land along Orange County's southern coastline. From its inception, the District was an independent "special" district, a form of local government created by the people to provide a "specialized" service. Special districts operate under state law, independent of county government. A Board of Directors, elected by the voters of the District, has the power to establish policies, fix rates, construct and maintain facilities and perform any other act necessary to provide water and sanitation service for present and future consumers. Day-to-day operations are administered by a general manager who is appointed by the Board of Directors.

SCWD has gone through several consolidations and reorganizations to accommodate the needs of the community, as well as to provide the most efficient water and sanitary services possible. SCWD currently serves approximately 12,330 potable water, 17,300 wastewater, and 192 recycled water customer accounts. The area serviced by SCWD has an estimated population of 35,000 residents and over two million visitors a year. The District purchases imported water from Metropolitan through MWDOC. SCWD incorporated local groundwater into its water supply portfolio in 2008 with the construction of the 1-million gallon per day (mgd) Groundwater Recovery Facility (GRF). Water produced at the GRF is pumped from the San Juan Basin.

The District uses secondary effluent received from the Coastal Wastewater Treatment Plant (CTP) and further treats it at the Advanced Wastewater Treatment (AWT) facility and the Aliso Creek Water Reclamation Facility (ACWRF) to Title 22 recycled water standards for landscape irrigation use.

Due to the District's hilly terrain, much of the water must be pumped and stored in reservoirs to maintain constant pressure. The District's total water storage capacity of approximately 22 million gallons (mg) is maintained in 14 reservoirs. An additional 12.5 mg of storage is available in the 48-mg Bradt Reservoir, located along the Joint Transmission Main (JTM) at the south end of the system. Additionally, the District owns 16.6 mg of emergency potable water storage in a regional reservoir, Upper Chiquita Reservoir, located in Rancho Santa Margarita.

Water is moved to upper elevations through approximately 147 miles of local mains using a system of seven pump stations. As an additional safeguard to assure the water supply, SCWD maintains a series of "inter-ties" with neighboring water districts, which can be activated in an emergency.

Since 2000, the District has operated, maintained, and administered the Joint Regional Water Supply System (JRWSS) that distributes imported drinking water from Metropolitan Water District of Southern California (MWD) throughout south Orange County. The system includes over 30 miles of water transmission mains and two reservoirs in San Clemente that hold a total of 60 mg of water. Bradt Reservoir has a capacity of 48 mg, and Schlegel Reservoir has a capacity of 12 mg. The JRWSS is jointly owned by and provides water to South Coast Water District, Irvine Ranch Water District, El Toro Water District, Moulton Niguel Water District, the City of San Juan Capistrano, the City of San Clemente and three agencies of the San Diego County Water Authority (SDCWA): San Onofre Nuclear Generating Station (SONGS), Camp Pendleton, and San Onofre State Park. As of 2016, SONGS is undergoing the decommissioning process.

Wastewater is moved through the SCWD service area through 136 miles of sewer lines along with 2 miles of force mains and 13 sewer lift stations. The District also manages a unique sewer tunnel and main in South Laguna, which transports an average of 1.2 mgd of wastewater from Dana Point and South Laguna Beach to the CTP.

Since 1982, SCWD has provided recycled water to customers. The current capacity of the recycled water for the District's distribution system is supplied by the ACWRF and AWT facility. The AWT receives influent from the adjacent SOCWA CTP. Recycled water is further refined at the ACWRF for some recycled water customers. The CTP located just outside of the District's northeast boundary in unincorporated County land (Aliso and Wood Canyon Wilderness Park) and is designed to produce 2.61 mgd of recycled water.

## **HAZARDS**

Detailed hazard profiles for the planning area are provided in Section 3. SCWD is located along the coast and is subject to coastal hazards including coastal storms/erosion and tsunamis. The District is also subject to all other hazards identified in for the planning area. Many of these hazards are dispersed and may affect the entire region, including climate change, drought, ground shaking from earthquakes, geologic hazards, and high wind. The northern portion of SCWD is identified as a very high fire hazard zone and area susceptible to landslides. Regarding the hazard of dam/reservoir failure, the District owns and operates one dam: Palisades Bradt Dam/Reservoir, which could result in inundation in the event of failure. There are no hazards that are unique to SCWD.

Based on the risk assessment, the SCWD development team identified the following hazards that affect SCWD and summarized their geographic extent, probability of future occurrence, magnitude/severity and significance; refer to Table P-1.

**Table P-1  
SCWD Hazard Identification**

<b>Hazard</b>	<b>Geographic Extent</b>	<b>Probability of Future Occurrences</b>	<b>Magnitude/Severity</b>	<b>Significance</b>
Climate Change	Limited	Likely	Limited	Medium
Coastal Storms/ Erosion	Limited	Highly Likely	Critical	Medium
Contamination/Salt Water Intrusion	Significant	Highly Likely	Critical	Medium
Dam/Reservoir Failure	Significant	Unlikely	Catastrophic	High
Drought	Significant	Likely	Negligible	Medium
Earthquake Fault Rupture & Seismic Hazards	Extensive	Highly Likely	Catastrophic	High
Flood	Limited	Likely	Limited	Low
Geologic Hazards	Limited	Occasional	Limited	Medium
High Winds/ Santa Ana Winds	Extensive	Highly Likely	Limited	Medium
Landslide/Mudflow	Extensive	Highly Likely	Critical	Medium
Tsunami	Limited	Occasional	Negligible	Low
Wildland/Urban Fire	Extensive	Highly Likely	Catastrophic	High
Human-Caused Hazards	Limited	Occasional	Limited	Medium
Power Outage	Extensive	Highly Likely	Limited	Medium
<b>Geographic Extent</b> Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area  <b>Probability of Future Occurrences</b> 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.		<b>Magnitude/Severity</b> 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.  <b>Significance</b> Low: Minimal potential impact Medium: Moderate potential impact High: Widespread potential impact		

The identification of hazards provided in Table P-1 is highly dependent on the location of facilities within each agencies jurisdiction and takes into consideration the history of the hazard and associated damage (if any), information provided by agencies specializing in a specific hazard (e.g., FEMA, California Geological Survey), and relies upon each agencies' expertise and knowledge.

**Hazard Maps**

The following maps show the location of hazard zones within the jurisdiction relative to either potable water or wastewater systems, as applicable.

**VULNERABILITY AND RISK ASSESSMENT**

**Assets Susceptible to Hazard Events**

Table P-2, SCWD Infrastructure and Exposure to Hazards, identifies SCWD’s water and wastewater infrastructure assets that are located within the mapped hazard zones, identified above.

**Table P-2  
SCWD Infrastructure and Exposure to Hazards**

Hazard		Infrastructure Type						
		Interties (#)	Potable Water Pump Stations (#)	Pressure Reducing Stations (#)	Reservoirs (#)	Wastewater Lift Stations	Potable Water Pipeline (miles)	Wastewater Pipeline (miles)
Fire Hazard Zone	Moderate	3	0	0	1	1	1.6	0.7
	High	0	0	0	1	0	2.0	2.0
	Very High	3	6	1	8	0	4.4	4.6
FEMA Flood Zone	100-Year	1	0	0	0	4	0.6	4.3
	500-Year	0	0	0	0	0	0.9	1.8
Alquist-Priolo Rupture Zone		0	0	0	0	0	0	0
Ground Shaking	Moderate	1	2	0	3	0	1.1	0.5
	High	11	7	1	10	0	21.5	23.1
	Extreme	0	0	0	0	0	0	0
Liquefaction	Moderate	0	0	0	0	0	1.2	4.2
	High	0	0	0	0	0	0	0
	Very High	0	0	0	0	0	0	0
	Unknown	3	0	0	0	0	3.4	7.0
Landslide Zone		0	3	0	4	0	1.7	3.1
Tsunami Zone		0	0	0	0	4	0.6	0.7

Several interties, pump stations, reservoirs and potable water and wastewater pipelines are located within areas identified as a very high fire hazard zone. There are also several miles of wastewater pipeline located in an area identified at risk for the 100-year flood. A majority of the District’s service area, including much of its infrastructure, is located within an area identified as having a high risk of ground shaking associated with an earthquake. The District has infrastructure or pipelines in all hazard areas except the Alquist-Priolo rupture zone.

**CAPABILITIES ASSESSMENT**

The capabilities assessment is designed to identify existing local agencies, personnel, planning tools, public policy and programs, technology, and funds that have the capability to support hazard mitigation activities and strategies outlined in this Plan. SCWD’s internal development team revised the capabilities identified in the 2012 plan and collaborated to identify current local capabilities and mechanisms available to the MA for reducing damage from future hazard events. Tables P-3a through L-Pd assess the authorities, policies,

programs, and resources that the jurisdiction has in place that are available to help with the long-term reduction of risk through mitigation. These capabilities include planning and regulatory tools, administrative and technical resources, financial resources, and education and outreach programs. The agency has the ability to create or expand existing policies and programs to implement mitigation programs.

**Table P-3a  
Planning and Regulatory Capabilities Summary**

Ordinance, Plan, Policy, Program	Responsible Agency or Department	Description/Comments
Building Code	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with applicable building codes and works with cities within the District service areas. While there are building codes, SCWD is not responsible for maintaining the city's building codes and ordinances.
Zoning Ordinance	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with applicable zoning codes and works with cities within the District service areas. While there are zoning ordinances, SCWD is not responsible for maintaining the city's ordinances.
Subdivision Ordinance or Regulations	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with subdivision ordinances and regulations, and works with cities within the District service areas. While there are subdivision ordinances or regulations, SCWD is not responsible for maintaining the city's ordinances.
Special Purpose Ordinance	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with special purpose ordinances, and works with cities within the District service areas. While there may be special purpose ordinances, SCWD is not responsible for maintaining the cities' ordinances.
Growth Management Ordinances	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with growth management ordinances, and works with cities within the District service areas.
Site Plan Review Requirements	South Coast Water District	Adhere to South Coast Water District's Site Plan requirements.
General Plan	South Coast Water District	Adhere to South Coast Water District's General Plan.
Capital Improvements Plan	South Coast Water District	Adhere to South Coast Water District's Capital Improvement Plan.
Economic Development Plan	City of Dana Point, City of Laguna Beach, City of San Clemente	SCWD complies with economic development plans, and works with cities within the District service areas. While cities may maintain an economic development plan, the District is not responsible for this item.
Emergency Response Plan	South Coast Water District	As a member of the Orange County Operational Area (OA), SCWD shall coordinate with other OA member organizations, in both response and recovery procedures. This plan builds upon previous efforts to enhance the District's emergency and disaster preparedness, response, and recovery capabilities and includes the critical elements of the Standardized Emergency Management System (SEMS), the NIMS, the National Response Framework (NRF) and the Incident Command System (ICS). The ERP is continually updated as information changes. With comprehensive updates planned every 5 – 7 years.
Water Discharge Requirements	South Coast Water District/ Regional Water Quality Control Board (San Diego Region)	<p>In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.</p> <p>The South Coast Water District maintains and NPDES permit for potable water discharges issued by the State Water Resources Control Board. The District also discharges to the San Juan Creek Ocean Outfall under the NPDES permit held by the South Orange County Wastewater Authority (SOCWA).</p>

**Table P-3b  
Administrative and Technical Capabilities Summary**

<b>Staff/Personnel or Type of Resource</b>	<b>Responsible Agency or Department</b>	<b>Description/Comments</b>
Planner(s) or Engineer(s) with Knowledge of Land Development and Land Management Practices	City of Dana Point, Laguna Beach & San Clemente	While there are city, county, state, federal and private consultant resources for scientists familiar with the hazards of the community, SCWD does not specifically employ any planners or engineers that are tasked with this duty.
Engineer(s) or Professional(s) Trained in Construction Practices Related to Buildings and/or Infrastructure	South Coast Water District	Licensed Civil Engineers and certified building evaluators.
Planners or Engineer(s) with an Understanding of Natural and/or Human - Caused Hazards	Cities, County of Orange, State of CA	While there are city, county, state, federal and private consultant resources for scientists familiar with the hazards of the community, SCWD does not specifically employ any planners or engineers that are tasked with this duty.
Floodplain manager	County of Orange, State of CA	While there are city, county, state, federal and private consultant resources for scientists familiar with the hazards of the community, SCWD does not specifically employ a floodplain manager.
Surveyors	South Coast Water District Engineering	Outsourced as needed.
Staff with Education or Expertise to Assess the Community's Vulnerability to Hazards	Environmental, Health and Safety (EHS) Office	1 EHS Manager familiar with responding to emergencies and assessing the District's vulnerabilities to hazards; 1 Compliance and Emergency Specialist.
Personnel Skilled in GIS and/or HAZUS	South Coast Water District Engineering Department	Agency employs GIS personnel
Emergency Manager	South Coast Water District/ EHS Office	1 EHS Staff dedicated to emergency management and environmental compliance.
Grant Writers	South Coast Water District and Outsourced	
Scientists Familiar with the Hazards of the Community	County of Orange, State of CA	1 EHS Manager familiar with responding to emergencies and assessing the District's vulnerabilities to hazards. Additionally, there are city, county, state, federal and private consultant resources for scientists familiar with the hazards of the community.

**Table P-3c  
Financial Capabilities Summary**

<b>Financial Resources</b>	<b>Agency or Department</b>	<b>Description/Comments</b>
Capital Improvements Project Funding	Finance Department	Annual review of capital requirements and forecasting future cap needs.
Authority to Levy Taxes for Specific Purposes	SCWD/County of Orange	The district typically levies taxes for 1) special assessment tax obligation debt service and 2) general obligation debt service payments.
Fees for Water, Sewer, Gas, or Electric Service	Finance Department	The district, through the Prop 218 process, is able to charge customers fees for water and sewer services.
Incur Debt Through General Obligation Bonds	Finance Department	Through a general election, the district can incur debt through general obligation bonds.
Incur Debt Through Special Tax and Revenue Bonds	Finance	The district may incur special tax or revenue bonds as needed through the appropriate legal process.



**Table P-3d  
Education and Outreach Capability Summary**

Resource/Programs	Agency or Department	Description/Comments
Website	Public Information Office and Emergency Management/ EHS office	The District Website is robust and can be quickly modified to contain an emergency flash screen to point residents to lifesaving information.
Social Media Program (Facebook, Twitter, Instagram, NextDoor, etc.)	Public Information Office	The district has an extensive social media program and may reach thousands of individuals, which allows SCWD to disseminate information quickly and accurately.
AlertOC	Public Information Office	Emergency calling/texting/email service that calls out to alert residents of important/emergency situations
Constant Contact	Public Information Office	An email list-serv that may be used to inform residents or others
Media Outreach	Public Information Office	The District communicates effectively with the media on a regular basis.
Dialog Tech	Customer Service/Information Technology	Reverse customer call list based on billing information.

## MITIGATION STRATEGY

### Mitigation Goals

SCWD adopts the hazard mitigation goals developed by the Planning Team; refer to Section 4.

### Mitigation Actions

The internal development team reviewed the mitigation actions identified in the 2012 plan and the updated risk assessment to determine if the mitigation actions were completed, require modification, should be removed because they are no longer relevant, and/or should remain in the Plan Update. New mitigation actions to address the updated risk assessment and capabilities identified above were also considered and added. Table P-4, SCWD Mitigation Actions, identifies the mitigation actions, including the priority, hazard addressed, risk, timeframe, and potential funding sources.

**Table P-4  
SCWD Mitigation Actions**

Priority (High, Medium, or Low)	Action/Task/Project Description	Location/ Facility	Risk (High, Medium, or Low)	Cost	Timeframe (Immediate, Short Term, or Long Term)	Possible Funding Sources	Status/ Progress (New, Existing, Modified)	Status Rationale
<b>Multi-Hazard</b>								
Medium	Upgrade old high pressure domestic water mains to increase reliability (remove and replace asbestos cement pipe)	Throughout Dana Point and Laguna Beach	Medium	28.5 million	Long Term	Capital Budget or Grant	New	Improve water distribution reliability.
Medium	LS2 Force Main Repair/ Replace	Lift Station 2	Medium	10.5 million	Short Term	Capital Budget or Grant	New	Construction in Fiscal Year 2018-2019.
Low	Increase capacity of Lift Stations 8 and 12	Lift Stations 8 and 12	Low	1 million	Short Term	Capital Budget or Grant	New	
High	Desalination	Vicinity of Dohney Beach Park, Dana Point, CA	High	50 million	Long Term	Grant, Capital Budget, possible P3	New	Reduce the current +80% dependency on imported water after an earthquake or any other natural disaster.
Medium	Backup Generator for the Groundwater Recovery Facility (GRF)	Dana Point at the GRF	High	750,000	Short Term	Capital Budget or Grant	New	Allow the District to continue to supply water from the only locally available source during a disaster.
Medium	Collect GIS data for all JRWSS pipe.	Between CM10 and San Clemente	Medium	\$500,000	Long Term		New	Cannot fix it if you do not know where it is; ability to make emergency maps of impacted areas.
Low	Assessment and R&R of Coast Highway Transmission Main (Coast Supply Line).	Laguna Beach	Medium	\$5.25 million	Short Term	Budget	New	A secondary connection to imported water supply.
Low	Implement dual force mains where applicable.	Lift Station 6	Medium	\$1,600,000	Long	Budget	Existing	To mitigate sewer overflow to Waters of the U.S.
Medium	Palisades Dam Seismic Evaluation.	JRWSS - Palisades Dam/ Bradt Reservoir	Medium	400,000	Short Term		New	
High	Construct roof over chemical storage area at Aliso Creek Water Reclamation Facility	Laguna Beach	High	\$75,000	Short Term	Capital Improvement Budget	New	Required by code. Assists with containing or minimizing spills that may occur during earthquake, heavy rain, or flooding (facility adjacent to Aliso Creek).

**Table P-4 [continued]  
SCWD Mitigation Actions**

Priority (High, Medium, or Low)	Action/Task/Project Description	Location/Facility	Risk (High, Medium, or Low)	Cost	Timeframe (Immediate, Short Term, or Long Term)	Possible Funding Sources	Status/Progress (New, Existing, Modified)	Status Rationale
High	Improve reliability of communication throughout the district by installation of truck radios.	District Wide	Medium	\$75,000	Short	Capital Improvement Budget (FY17 & FY18)	Modified	Continue to improve District communications capabilities during emergency events.
High	Relocation of approximately 4000 linear feet of 60" JTM pipeline that was found distressed through internal inspection.	JRWSS	High	\$10,800,000	Long	Budget	Existing	Portions of the pipeline were relocated out of environmental sensitive wet lands. Portions of this project have been completed and other linear footage will be repaired not replaced. This project would mitigate a risk of water supply disruption.
High	Tunnel stabilization.	Interceptor Tunnel	High	\$45,000,000	Long	Budget/G rant/ Bonds	Modified	The Sewer Interceptor Tunnel is located along the bluffs above the Pacific Ocean in Laguna Beach. The project rationale is: to mitigate sewer overflow from entering Waters of the U.S. in case of a disaster (landslide, earthquake, etc...) As of March 2018, Phase 1 of this 4-phase project will be complete. The project is expected to last approximately 5 years and be completed in 2023.

**Table P-4 [continued]  
SCWD Mitigation Actions**

Priority (High, Medium, or Low)	Action/Task/Project Description	Location/ Facility	Risk (High, Medium, or Low)	Cost	Timeframe (Immediate, Short Term, or Long Term)	Possible Funding Sources	Status/ Progress (New, Existing, Modified)	Status Rationale
On hold	Complete Ground Water Recovery Facility well expansion.	Zone 391	Medium	\$2,700,000	Long	Budget	Modified	This project included adding the additional Well #2 at the Ground Water Recovery Facility. The well has been drilled, but given the current drought-impacted San Juan Basin, the project is on hold to complete connection to facility and draw water from Well #2. The well expansion was intended to ensure the availability of local water in case of emergency disruption.
<b>Wildfire</b>								
Medium	Water main upgrades to increase fire flow in critical locations	Throughout Dana Point and Laguna Beach	Medium	1 million	Long Term	Capital Budget or Grant	New	Reduce the risk of damage during a Wildfire
High	Fire Alarm Upgrade	Laguna Beach and Dana Point	High	\$200,000	Short Term	Capital Improvement Budget	New	
<b>Climate Change</b>								
Medium	Fortify or relocate LS-13	Dana Point	Medium	\$1.5 million	Long Term	Capital Budget or Grant	Modified	Beach erosion at Doheny State Beach – Pending findings of State’s Erosion Control Study
High	Fortify 1,100-ft gravity sewer and manholes in Laguna Beach below Lagunita to Blue Lagoon	Laguna Beach between Lagunita to Blue Lagoon	Medium	\$1.0 million	Short Term	Capital Budget or Grant	New	Beach erosion at Laguna Beach – Pending findings of Sea Level Rise Study
<b>Human-Caused</b>								
---	Continue with improvement of site fencing and barriers.	Water reservoir sites 2C, 5A and 5B	Medium	\$20,000	Complete for facilities listed	Budget	Complete for facilities listed	Continue fencing improvements for security of water reservoir sites.
Medium	Evaluate and test the ability to implement security systems including video security technology.	District Wide	Low	\$100,000	Short	Budget	Modified	Continue to improve District security measures.

**Table P-4 [continued]  
SCWD Mitigation Actions**

Priority (High, Medium, or Low)	Action/Task/Project Description	Location/Facility	Risk (High, Medium, or Low)	Cost	Timeframe (Immediate, Short Term, or Long Term)	Possible Funding Sources	Status/Progress (New, Existing, Modified)	Status Rationale
High	SCADA Security Improvement	Throughout SCWD Service Area	High	\$550,000	Short Term	Capital Improvement or Grant	New	Improve resilience and fortify SCADA against potential cyber attacks
High	Establish Security Policies and Procedures Manual.	District Wide	Medium	\$40,000	Short	Grant	Existing	Will be finished when time funding allows.
<b>Earthquake</b>								
Medium	Complete seismic evaluation and implement seismic retrofits and improvements of district reservoirs.	Reservoirs 1A, 2C,	High	\$2,500,000	Short	Budget	Existing	To mitigate a risk of water supply disruption during earthquakes. Reservoirs 2B and 3B have been deleted from the project because they are small reservoirs that serve a small number (< 25) of customers. In the case of a seismic event, the District will be able to provide water to these customer with the Emergency Drinking Water Trailer or other sources.
Medium	Seismic Retrofit for all other critical infrastructure (water/wastewater).	throughout SCWD Service Area	Medium	\$2.0 million	Long Term		New	

Notes:  
Timeframe to Completion of Project: "Immediate" is up to 1 year; "Short Term" is 1 to 3 years; "Long Term" is 3 years or longer.  
Status: "New" refers to a mitigation initiative newly created as part of the plan update process; "Existing" refers to an unfinished initiative that is carried over from the 2012 plan; "Modified" refers to an existing initiative that carried over from the previous plan, but has changed to limit or expand its scope of activities.  
Status Rationale: A statement of justification as to why the project is currently in the status it is in.

**Completed or Removed Mitigation Initiatives**

The following mitigation actions from the 2012 plan have been completed or are in progress and therefore are removed from the Plan update.

Mitigation: Continue with the implementation of the wireless SCADA project by completing phase 2.

Status: Complete.

Mitigation: Place protective measures in rivers, creeks, flow control and beaches.

Status: SCWD is a 20% partner with Santa Margarita Water District in the San Juan Basin Optimization Project.

SCWD's Capital Improvement Project Budget and 2017 Water and Wastewater Master Plan, are used to implement mitigation initiatives identified in this annex. After adoption of the HMP, the District will continue to integrate mitigation priorities into these documents.