

CITY OF NEWPORT BEACH ANNEX

The City of Newport Beach (Newport Beach) 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, Newport Beach 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 Newport Beach.

This Annex supplements information contained in the primary Plan and describes how Newport Beach’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 Newport Beach 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 Newport Beach and coordinated the hazard mitigation planning efforts with Newport Beach staff:

Primary Point of Contact

Casey Parks
Acting Utilities Manager
cparks@newportbeachca.gov
949-718-3422

Alternate Point of Contact

Steffen Catron
Acting MOD Director - Utilities
scatron@newportbeachca.gov
949-718-3402

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 Newport Beach’s internal hazard mitigation planning development team.

Representative	Title	How Participated
Jim Auger	Utilities Manager	Plan Review
Toan Van	Water Quality Coordinator	Plan Review

JURISDICTION PROFILE (Service Population: 66,883)

The City of Newport Beach (Newport Beach) is a charter city established in 1906 and governed by a Council/Manager form of government. The City’s current population consists of approximately 88,125 permanent residents, which can peak at approximately 100,000 seasonally. The Utilities Division of the City’s Municipal Operations Department is responsible for providing water service, wastewater collection, oil and gas production, storm drain and catch basin services, and street lights to 66,883 citizens of Newport Beach. All City rates for services are set by Municipal Ordinance.

Newport Beach has two sources of water: groundwater pumped from four wells in Fountain Valley and imported water from Metropolitan via MWDOC. Currently, Newport Beach pumps 75 percent of its water from wells and imports the remaining 25 percent.

HAZARDS

Detailed hazard profiles for the planning area are provided in Section 3. The City of Newport Beach is located along the coast and is subject to coastal hazards including coastal storms/erosion and tsunamis. The City is also subject to all other hazards identified in 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 events. High fire hazard severity zones are present on several sides of the City. Significant portions of the City are within both the 100-year and 500-year FEMA flood zones. Portions of Newport Beach are threatened by flooding/inundation from Prado Dam, Santiago Creek Reservoir, Villa Park Reservoir, San Joaquin Reservoir, Big Canyon Reservoir. Human-caused hazards and power outages are also hazards that could impact the City. There are no hazards that are unique to Newport Beach.

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

**Table L-1
Newport Beach Hazard Identification**

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance
Climate Change	Significant	Likely	Critical	Medium
Coastal Storms/Erosion	Significant	Likely	Negligible	Medium
Dam/Reservoir Failure	Limited	Unlikely	Limited	High
Drought	Extensive	Likely	Negligible	Medium
Earthquake Fault Rupture & Seismic Hazards	Extensive	Likely	Catastrophic	High
Flood	Significant	Occasional	Limited	Medium
Geologic Hazards	Significant	Occasional	Critical	Medium
High Winds/ Santa Ana Winds	Extensive	Highly	Negligible	Medium
Landslide/Mudflow	Limited	Unlikely	Negligible	Low
Tsunami	Significant	Unlikely	Limited	High
Wildland/Urban Fire	Limited	Occasional	Negligible	Low
Human-Caused Hazards	Limited	Unlikely	Limited	High
Liquefaction	Significant	Likely	Catastrophic	High
Power Outage	Significant	Highly	Negligible	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		

The identification of hazards provided in Table L-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 L-2, Newport Beach Infrastructure and Exposure to Hazards, identifies Newport Beach’s water and wastewater infrastructure assets that are located within the mapped hazard zones, identified above.

**Table L-2
Newport Beach Infrastructure and Exposure to Hazards**

Hazard		Infrastructure Type		
		Interties (#)	Potable Pipeline (miles)	Wastewater Pipeline (miles)
Fire Hazard Zone	Moderate	0	5.9	0.4
	High	1	4.7	1.1
	Very High	1	1.8	0.6
FEMA Flood Zone	100-Year	0	4.6	0.4
	500-Year	0	6.3	1.4
Alquist-Priolo Rupture Zone		0	0	0
Ground Shaking	Moderate	2	0.7	7.3
	High	2	66.0	0
	Extreme	0	3.3	0
Liquefaction	Moderate	0	2.0	0
	High	0	6.8	0
	Very High	0	10.4	0
	Unknown	0	4.0	0
Landslide Zone		0	1.8	0.9
Tsunami Zone		0	5.9	1.5

The City has infrastructure or pipelines in all hazard areas except the Alquist-Priolo rupture zone. Several miles of the City’s potable water lines are in areas identified as susceptible to flooding. Additionally, several miles of potable water lines are located within areas identified at risk for high and extreme ground shaking and high and very high liquefaction potential in the event of an earthquake.

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. Newport Beach’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 L-3a through L-3d 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 L-3a
Planning and Regulatory Capabilities Summary**

Ordinance, Plan, Policy, Program	Responsible Agency or Department	Description/Comments
Building Code	Building Department, City Code and Water Quality Enforcement, AQMD	Standards for constructed objects such as buildings and non-building structures. Updated annually.
Zoning Ordinance	Planning Department, City of Newport Beach	Regulations and laws that define how property in a specific zone can be used. Updated as needed.
Subdivision Ordinance or Regulations	Building and Planning Departments, City of Newport Beach; County of Orange	Regulation and review of a proposed division of land against pre-determined standards designed to guarantee adequate infrastructure and vehicular access.
Special Purpose Ordinance	RWQCB, County of Orange, Army Corps of Engineers, Fish and Game – Fed and State, CDFG	Special regulations/ordinances which have limited application to ensure that consideration is given to areas of special interest or unusual value. Updated/Created as needed.
Growth Management Ordinances	County of Orange, LAFCO	Opposing or restricting urban sprawl. Part of the City’s General Plan.
Site Plan Review Requirements	Various City Departments	Review of architectural plans, landscape plans and engineered drawings of proposed improvements to a given lot to ensure compliance with all ordinances and specifications.
General Plan	Community Development Department, City of Newport Beach	Document designed to guide the future actions of the community. Includes long range goals and objectives for all activities that affect local government. Updated every 5 years.
Capital Improvements Plan	Public Works Department, Municipal Operations Department	Short range plan (4-10 years) which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan. Updated every 5 years.
Economic Development Plan	Community Development Department, City of Newport Beach	Comprehensive overview of the economy, sets policy direction for economic growth, and identifies strategies, programs, and projects to improve the economy. Part of the City’s general plan.
Emergency Response Plan	Municipal Operations Department, Police and Fire Departments	Plan of action for the efficient deployment and coordination of services, agencies and personnel to provide the earliest possible response to an emergency. Updated as needed.
Post-Disaster Recovery Plan	Municipal Operation Department	A developed set of strategies between individuals, private businesses, state and local government and the Federal government. NIMS.
Post-Disaster Recovery Ordinance	County of Orange, State of California	The ordinance guides preparation of short-term and long-term recovery plans.
Real Estate Disclosure Requirements	Community Development Department, State Real Estate Board, Tax Assessor	Disclosure of hazardous or defective conditions on real estate.
Security Issues	Various City Departments	Vulnerability assessment.
Title 22	SWRCB, County Health Services	SWRCB Regulations.
Portable Generators	Municipal Operations Department	The City’s Municipal Operations Department has 10 trailer style portable generators and various smaller generators that can be used to power buildings, pump stations and small equipment. Regulated by the AQMD.
Dam Safety	Division of Safety of Dams	Supports.
Water Discharge Requirements	SWRCB	NPDES permit through SWRCB.
NIMS	FEMA	NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines.
Safety	All City Departments, OSHA	Multiple safety programs fall under this category.
Water Quality	Municipal Operations Department, SWRCB, USEPA	The City has a comprehensive Water Quality Monitoring Program. City’s Water Quality Monitoring Program is updated as needed.

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

Staff/Personnel or Type of Resource	Responsible Agency or Department	Description/Comments
Planner(s) or Engineer(s) with Knowledge of Land Development and Land Management Practices	Public Works and Community Development Departments	Public Works Engineers, City Planners and the City hires outside contractors as needed.
Engineer(s) or Professional(s) Trained in Construction Practices Related to Buildings and/or Infrastructure	Public Works and Community Development Departments	Public Works Engineer's and Inspectors, Building Inspectors and Plan Checkers.
Planners or Engineer(s) with an Understanding of Natural and/or Human - Caused Hazards	Public Works and Community Development Departments, State and Federal Employees	The City will hire outside contractors as needed and work with State and Federal Employees.
Floodplain manager	Community Development and Public Works Department, County of Orange	The Community Development Department handles everything related to flood insurance, the Public Works Department Handles all other flood related responsibilities.
Surveyors	Public Works and Municipal Operation Department	The City has 3 on-call contactors for surveying work.
Staff with Education or Expertise to Assess the Community's Vulnerability to Hazards	Municipal Operations Department, Fire Department, Police Department, Public Works Department, County of Orange	The City's Emergency Services Coordinator works under the Fire Department and Municipal Operations Staff assess the community's vulnerability to hazards in relation to water, waste water, storm drains and electrical. The City will hire outside contractors as needed.
Personnel Skilled in GIS and/or HAZUS	GIS Division	The City has four full time employees dedicated to GIS and related functions. The City work with the Center for Demographic Research, CSUF and also hires outside contractors.
Scientists familiar with the hazards of the community	County of Orange, Cal Tech and other colleges and Universities and State/Federal Employees	Coordinate with outside agencies when needed.
Emergency Manager	Fire Department	The City's Emergency Services Coordinator works under the Fire Department and is responsible for Emergency Coordination and Hazard Mitigation for the City of Newport Beach.
Grant Writers	Municipal Operations Department	The City has an outside contractor that performs grant writing services.
Lab Testing	Municipal Operations Department, OCWD, MWD	The City has a contract with Test America Labs to perform Lab Testing.

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

Financial Resources	Agency or Department
Community Development Block Grants (CDBG)	Community Development Department, City of Newport Beach
Capital Improvements Project Funding	Public Works Department, City of Newport Beach
Authority to Levy Taxes for Specific Purposes	Finance, Various other City Departments; City of Newport Beach
Fees for Water, Sewer, Gas, or Electric Service	Finance, Municipal Operations Department; City of Newport Beach
Impact Fees for Homebuyers or Developers for New Developments/Homes	Community Development Department, Public Works Department and Finance Department; City of Newport Beach
Incur Debt Through General Obligation Bonds	Finance Department, City of Newport Beach
Incur Debt Through Special Tax and Revenue Bonds	Finance Department, City of Newport Beach
Incur Debt Through Private Activity Bonds	Finance Department, City of Newport Beach

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

Resource/Programs	Agency or Department	Description/Comments
HOA Educational Program	Fire Department	The City developed an education Program for Homeowners Associations (HOA's). Meeting and informational mailers are sent to the homeowners adjacent to the Fuel Modification Zone explaining the fire risk in the area and the fuel modification zone requirements.
Tsunami Educational Program	Fire Department	The City developed a tsunami educational program for residents, visitors and people who work in the tsunami and rouge wave susceptible areas. The brochures and other educational materials developed discuss what to expect, what to do in the event of a possible tsunami-generating earthquake, and how to make homes and businesses more flood resistant.
Public Notification System	Fire Department	The system is designed to warn residents of a fire or other impending disaster, and provide educational instructions.

MITIGATION STRATEGY

Mitigation Goals

Newport Beach 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 L-4, Newport Beach Mitigation Actions, identifies the mitigation actions, including the priority, hazard addressed, risk, timeframe, and potential funding sources.

**Table L-4
Newport Beach 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
Multi-Hazard								
Medium	Update Vulnerability Assessment Plan	All Utilities Facilities	Medium	10k	Short Term	Water/ Wastewater funds	Ongoing	Updates to Plan needed. The City is going to hire a consultant to completely update the existing plan.
High	Update Risk Management Plan	Big Canyon Reservoir, 16th St Yard	High	N/A	Short Term	Water Fund	Ongoing	Updates to Plan needed, last update in 2013. This is a working document that is updated frequently.
High	Update Seismic Study.	Big Canyon Reservoir	High	10k	Immediate	Water Fund	Ongoing	Updated to reflect current facility status Last update was in 2003. This action item covers earthquakes/ dam failures, liquefaction and geologic hazards.
High	Replacement of Aging Infrastructure.	Throughout City	Med	3.5 mil annually	Long Term	Water Fund	Ongoing	Replace older pipes before they break from age. Ongoing per the Master/CIP plan. This action item covers earthquakes, liquefaction and geologic hazards.
Flood/Climate Change								
Medium	Raising Sea Walls in high risk areas.	Balboa Island/ Balboa Peninsula	High	1.9 mil	Long	CIP	Ongoing	Raising ocean levels are causing flooding more often. Project will begin in January of 2018 and is expected to take up to 6 months.
High	Balboa Island Storm Drain Upgrades	Balboa Island	High	4 mil	Long Term	CIP	New	Raising ocean levels are causing flooding more often. This project will update the storm drain system and install pump stations to handle storm flows.

**Table L-4 [continued]
Newport Beach 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
Landslide								
Medium	Complete an inventory of locations where critical facilities, other buildings, and infrastructure are vulnerable to landslides.	Water/ Wastewater Facilities	Med	2k	Long Term	Water Fund	New	Creating an inventory of critical facilities will give the City the ability to stock high lead time items and better plan for emergencies.
Tsunami								
Medium	Evaluate the tsunami threat to infrastructure in the tsunami inundation zone.	Water/ Wastewater Facilities	Med	10k	Long Term	Water Fund	New	City staff will evaluate the critical facilities in the Tsunami inundation areas to see if there are any future mitigation actions that can be performed.
Wildland/Urban Fire								
Medium	Upgrades to water system sources used for fire suppression.	Hoag Hospital	Med	100k	Long Term	Water Fund	Ongoing	Work with Hoag Hospital to increase their backup water facilities. Communications continue with Hoag. There is a high cost to the private facility for this item.
Medium	Enhance on-site coordination with the City's Fire Department during Fire events.	Water/ Wastewater Facilities	High	N/A	Long Term	Water Fund	New	Create a notification system between the Fire Department and the Utilities Department. Possibly a training program as well.
Power Outage/ High Winds - Santa Ana Conditions								
High	Back-up generators for water and waste water pump stations.	16 th Street Pump Station/ Various Waste Water Stations	High	1 mil	Long Term	Water/ Waste Water Fund	New	Design and install back-up generators where feasible.

**Table L-4 [continued]
Newport Beach 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
Coastal Storms/Erosion								
Low	Dredging/ Sand Replacement	Various Beaches	Med	500k	Long Term	CIP	New	The City's PW Department is working with the Army Corp. of Engineers to place sand that is dredged from the Santa Ana River Channel and relocate it to various beaches in the City to replace sand that has eroded.
Human-Caused								
Medium	Update Vulnerability Assessment Plan.	Water Facilities	High	10k	Immediate	Water Fund	Ongoing	Plan is several years old and should be updated.
Medium	Update Security Systems.	Water Facilities	High	120k	Long Term	Water Fund	Ongoing	Update for new SCADA vulnerabilities. Ongoing, the last major update was in 2015.
Drought								
High	Create new ordinances and an allocation based water budget that promotes water conservation.	City Wide	High	250k	Long Term	Water Fund	New	Have ordinances and allocation based structure in place before the next drought.
<p>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.</p>								

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: Update Water & Wastewater Master Plan.

Status: Water Master Plan will be complete in mid-2018, no date set for the Wastewater Master Plan.

Mitigation: Establishment of Online resources concerning disaster mitigation.

Status: The City has online and public outreach programs/resources that cover the Utilities Department hazard mitigation.

Mitigation: Development of Public Education Program for hazard mitigation.

Status: Complete.

Mitigation: Establishment of Department DOC Drill Program.

Status: DOC has been built and a drill program was created and implemented.

Mitigation: Construction of DOC.

Status: The Department DOC construction was completed in October of 2017.

Mitigation: Prepare & Provide resources for EOC operations.

Status: The Utilities Department provides resources and participates in EOC drills/operations.

Mitigation: DSOD Inspection.

Status: DSOD inspections take place annually.

Mitigation: SCADA Alarm system for water loss.

Status: Full SCADA System upgrade took place in 2015.

Mitigation: Installation of cathodic protection on well line.

Status: The cathodic protection was re-done on the well line in 2015.

PLAN INTEGRATION

Newport Beach's General Plan, Capital Improvement Plan, Municipal Code, Water Master Plan, Wastewater Master Plan, Emergency Operations Plan, and yearly maintenance plans are all used to implement mitigation initiatives identified in this annex. The City has used the previous HMP to prioritize items in the water and waste water master plans, CIP projects, create training programs/coordination efforts between City Departments and create yearly maintenance programs. After adoption of the HMP, the City will continue to integrate mitigation priorities into these documents.