



2019 Orange County Regional Water & Wastewater Hazard Mitigation Plan

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Safety and Health Supervisor



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Agenda

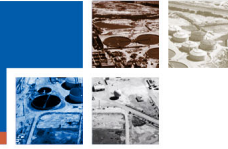


- History
- Hazard Mitigation Planning
 - Plan requirements and process
 - Overview and benefits
- Orange County Regional Water and Wastewater Multi-Jurisdictional Mitigation Plan (HMP)
 - Benefits of Regional Planning
 - Framework
 - Hazard/risk identification
 - Mitigation strategy
- Annex C – Orange County Sanitation District



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Participating Agencies

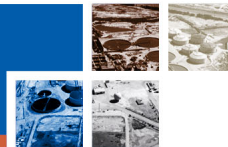


Municipal Water District of Orange County	City of La Habra	Serrano Water District
Orange County Water District	Laguna Beach County Water District	South Coast Water District
Orange County Sanitation District	Mesa Water District	Trabuco Canyon Water District
South Orange County Wastewater Authority	Moulton Niguel Water District	City of Westminster
City of Buena Park	City of Newport Beach	Yorba Linda Water District
El Toro Water District	City of Orange	
City of Garden Grove	Santa Margarita Water District	



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History

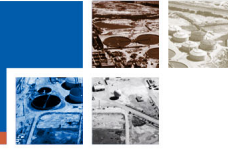


- The Disaster Mitigation Act of 2000 requires all cities, counties and special districts to develop and adopt a Hazard Mitigation Plan (HMP) to be eligible to receive federal grants pertaining to disaster mitigation.
- In 2005 the Water Emergency Response Organization (WEROC) sought funding with member agencies.
- In 2007 the Municipal Water District of Orange County (MWDOC) member agencies prepared the HMP.
- In 2012 OCSD Board of Directors approved the updated HMP.
- This 2019 Plan builds on the original 2007 Plan and the previous 2012 update.



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Hazard Mitigation Overview



What is Hazard Mitigation?

- Sustained actions taken to reduce or eliminate long-term risk to life and property from hazards
- Mitigation actions do NOT stop a hazard from occurring
- Mitigation actions REDUCE the impact of a hazard when it occurs

What is a Hazard Mitigation Plan?

- Identifies the natural hazards a community faces
- Assesses the risk/vulnerability to the hazards
- Identifies specific actions that can be taken to reduce the risk from the hazards

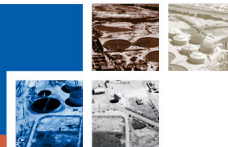
What is a Multi-Jurisdictional Hazard Mitigation Plan (HMP)

- A hazard mitigation plan in which multiple entities join efforts into one planning process
- An HMP benefits participating agencies by facilitating cross jurisdictional discussions, collaboration and planning
- Each participating agency in an HMP is approved as an independent governing jurisdiction



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Plan Requirements and Process




- Review and incorporate existing plans, studies, reports, and technical information
- Document how the plan was prepared and who was involved
- Identify how the plan will be monitored, evaluated, and updated regularly
 - Provide for continued public participation in plan maintenance
 - Five-year cycle for FULL updates




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Process



Public Involvement	Risk Assessment	Mitigation Strategies
<ul style="list-style-type: none"> Residents/business owners Government agencies Community organizations Schools Non-profits 	<ul style="list-style-type: none"> Identify & profile hazards <ul style="list-style-type: none"> Description History Location Magnitude/severity Likelihood Identify risks Potential losses <ul style="list-style-type: none"> Critical facilities 	<ul style="list-style-type: none"> Capabilities <ul style="list-style-type: none"> Ability to expand Goals Specific actions Actions completed since last plan Integration into other planning mechanisms



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Benefits of an Updated and Approved HMP

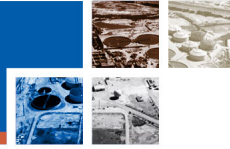


- Increases awareness of hazards, risk, and vulnerabilities
- Identifies actions for risk reduction
- Aligns risk reduction with other objectives
- Builds partnerships for risk reduction
- Focuses resources on the greatest risks




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Benefits of an Updated and Approved HMP – Cont.

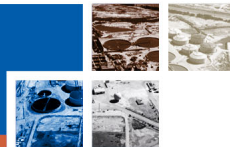


- Communicates priorities to potential funding sources
- Enables action to reduce loss of life and property, lessening impact of disasters
- FEMA-approved HMP is a condition for receiving certain types of **non-emergency disaster funding**



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Benefits of Regional Planning

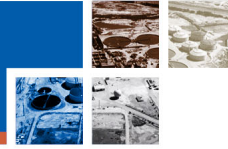


- Standing OC Water and Wastewater Utility Best Practice
- Historically
 - Worked together to improve regional and local reliability and resiliency
 - Utilize joint or collaborative capital improvement projects, planning processes and emergency management practices
- This Plan
 - Focused only on the agencies that provide drinking water and wastewater services
 - Greater analysis of the risk as it applies specifically to these services
 - Project planning driven by the principles of economies of scale
 - Enhance limitations on risk by working together
 - Enhances mutual aid planning objectives



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HMP Framework

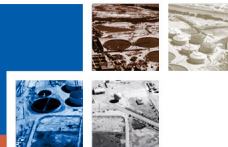


- Introduction and Purpose
- Planning Process Documentation
- Risk Assessment and Hazard Identification
- Mitigation Strategy
- Plan Maintenance
- Jurisdictional Annexes (Annex C is the OCSD Plan)



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Regional Risks



- GIS mapping of water/wastewater infrastructure overlaid with hazard maps
 - Wildfires
 - Flood
 - Fault rupture
 - Earthquakes
 - Liquefaction/landslides
 - Tsunamis
 - Manmade (terrorism, accidental)
- Replacement cost and value to the community
 - Worst-case scenario assuming complete cost of replacement
 - Relative measure of the impacts of the various hazards



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Annex C: OCSD Hazards & Risks

Hazards	Risk to Infrastructure
<ul style="list-style-type: none"> • Flooding • Earthquake • Liquefaction • Human-Caused • Wildfire • Tsunami • Coastal Erosion 	<ul style="list-style-type: none"> • Lift Stations • Treatment Plants • Wastewater Pipeline



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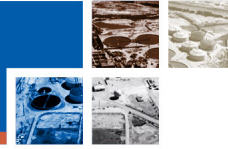
Development of OCSD Mitigation Strategy

- Reviewed risk and capabilities specific to service area
- Mitigation strategies reflect vulnerabilities of critical facilities
- Reviewed existing mitigation actions to determine:
 - Relevant mitigation actions that should remain or be revised
 - Mitigation actions that are no longer feasible/viable
 - Mitigation actions that have been completed
 - New mitigation actions



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OCSD Mitigation Actions

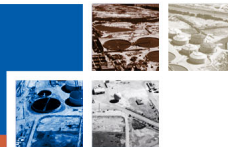


- Build redundancy into the treatment process
- Follow the asset management plan for replacement and refurbishment of facilities
- Identify locations & install sensors / alarms for harmful contaminants entering the treatment system
- Improve security at higher priority sites
- Upgrade supervisory control and data acquisition (SCADA) system to existing sites as needed
- Harden and improve physical security
- Examine opportunities for online water quality sensing
- Perform a seismic study analysis for critical infrastructure



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Next Steps



- Immediate Action:
 - Staff recommends approval and adoption the 2019 Orange County Regional Water and Wastewater Hazard Mitigation Plan (Annex C)
 - MWDOC will provide Annex C and signed Resolution to FEMA for future grant applications
- Over the Next 5 Years:
 - Staff will integrate the HMP concepts into local hazard mitigation plan (LHMP)
 - Work on and implement mitigation actions
 - Apply for mitigation grant funds for projects
 - Monitor implementation of the plan
 - Continue community and partner agency involvement
 - Continue to review and update the plan as applicable



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Questions?

