

Coachella Valley Water District Hazard Mitigation Plan

Public Meeting

October 25th, 2023

Our Mission

To meet the water-related needs of the people through dedicated employees, providing high quality water at a reasonable cost.

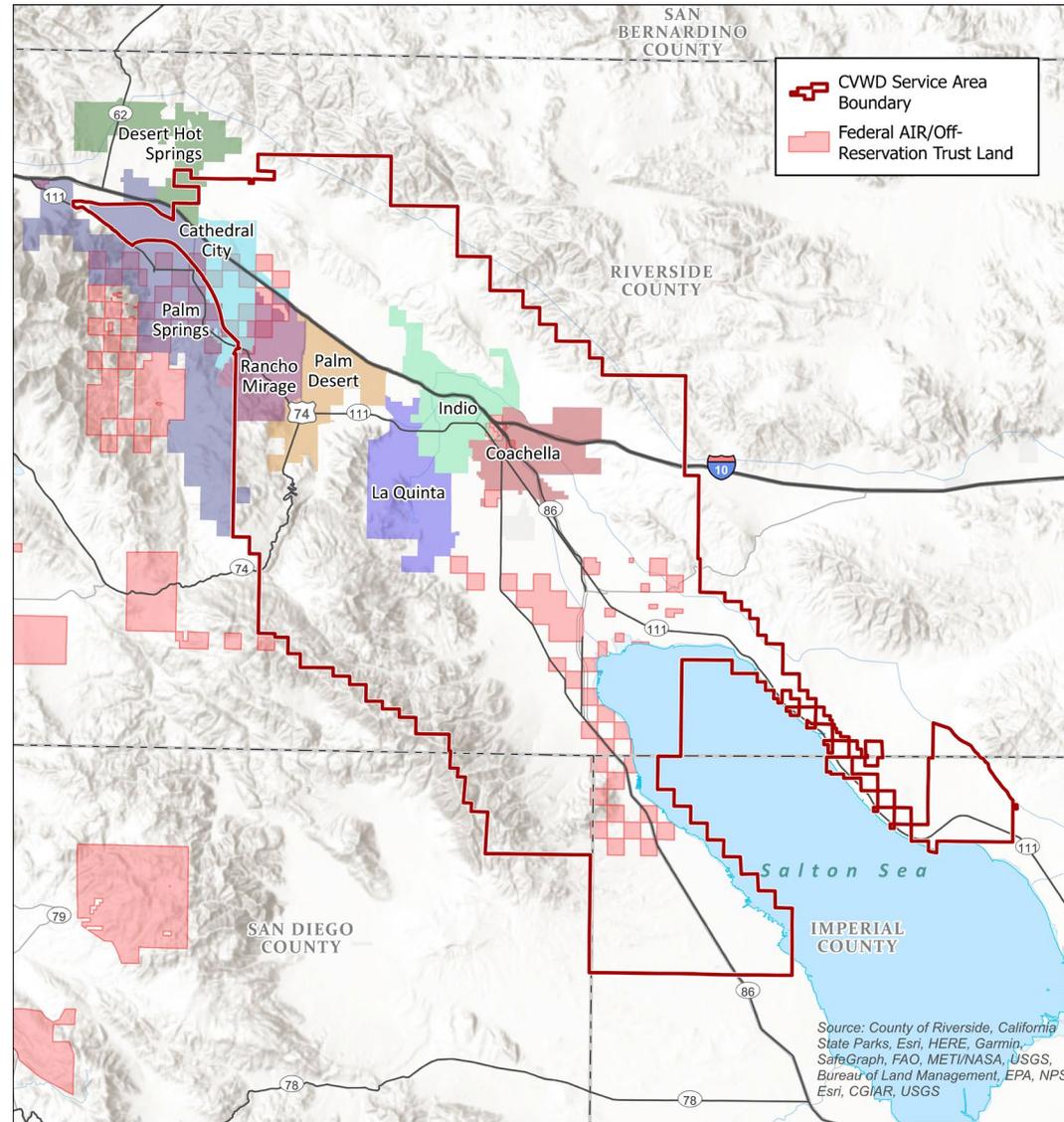
Why are you here?

WE
WANT

YOUR

FEEDBACK

Draft 2024 CVWD Hazard Mitigation Plan



Today's Agenda



CVWD and Hazard
Mitigation Planning



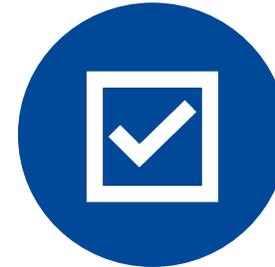
2024 Hazard Mitigation
Plan Review



Risk Assessment
Results



Public Input and
Mitigation Actions



Steps to Final Approved
Plan

CVWD & Hazard Mitigation Planning



What are the benefits of a Hazard Mitigation Plan?



Understand and plan for natural hazard impacts on the District



Improve CVWD's capacity to respond to and recover from the impacts of the natural disasters



Define projects to reduce or eliminate these impacts to ensure the continued functionality of critical services



Reduce the disaster assistance costs resulting from natural disasters



No plan, no \$\$ - FEMA mitigation grant funding is tied to an approved and adopted HMP

Jurisdictional Responsibilities

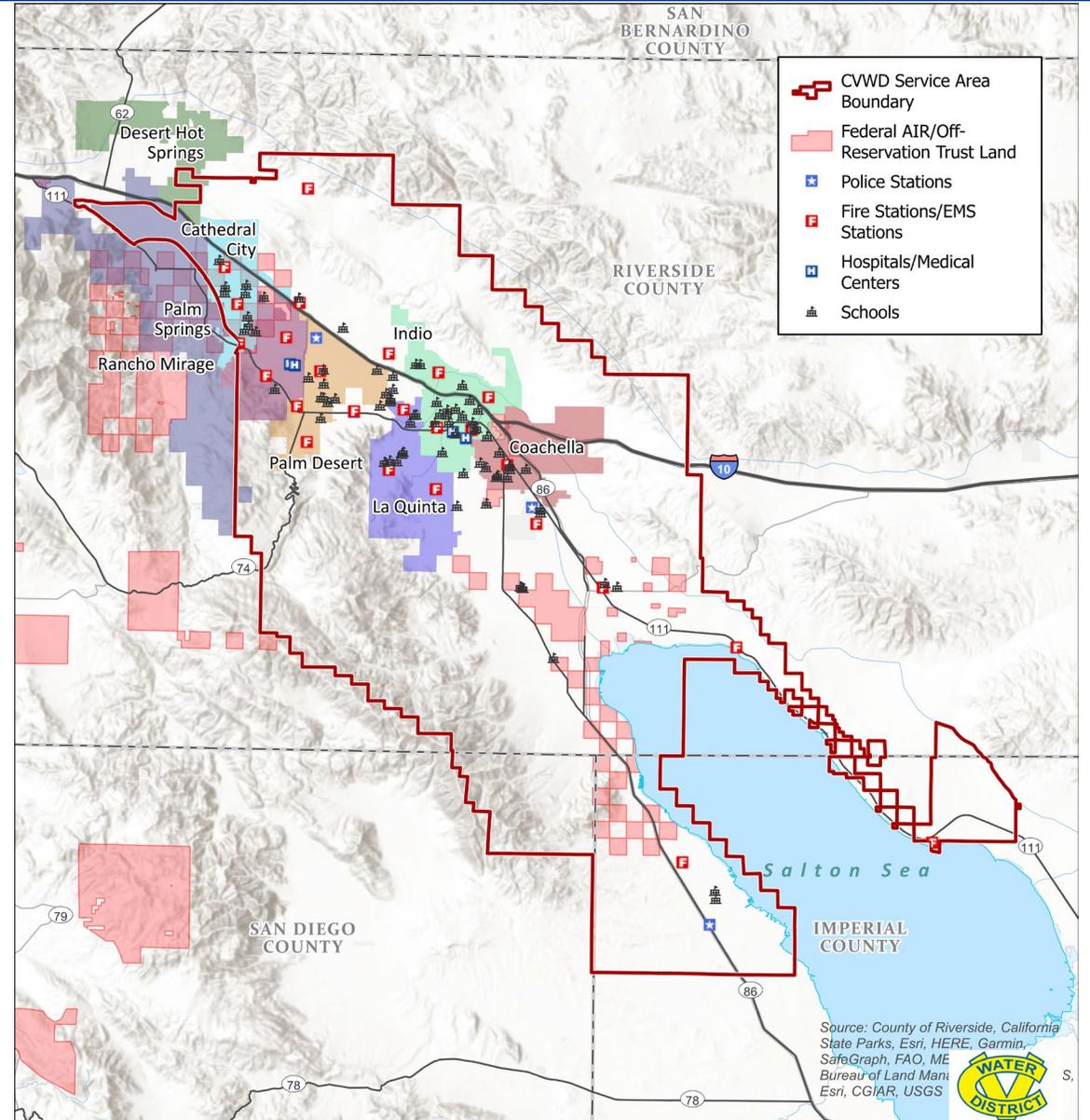
Coachella Valley Water District

Responsible for **District-Owned** Assets

- **Domestic Water**
- **Stormwater**
- **Sanitation**
- **Irrigation and Agricultural Drainage**

Neighboring Counties, Cities, State

- **Public Roads**
- **Bridges**
- **Critical Facilities**



Updates from 2019 HMP



- 43 mitigation actions have been established as best practices and implemented in routine business operations.
- 17 mitigation actions were completed during the past 5 years
- Actions addressed all hazards including flood, drought, wildfire and earthquake risk

District Mitigation Success Stories



Reduce Flood Risk



Wildfire and Drought Mitigation



Emergency Response

See 2024 CVWD HMP Section 1.4 Mitigation Success Stories for additional examples.

Disadvantaged Communities Infrastructure Task Force

COACHELLA VALLEY DISADVANTAGED COMMUNITIES INFRASTRUCTURE TASK FORCE

Mission Statement

The mission of the Coachella Valley Water District (CVWD) Disadvantaged Communities Infrastructure Task Force is to secure access to safe affordable drinking water, wastewater and flood control services in historically disadvantaged Coachella Valley regions through strategic planning, funding procurement, needs assessment, and reporting – all in collaboration with community members and stakeholders.

A Disadvantaged Community is defined by the State of California as a community with an annual median household income that is less than 80 percent of the Statewide annual median household income (Water Code §79505.5 which cross references to Water Code §79505.5).

Task Force members include representatives from CVWD and the following:

- Congressman Raul Ruiz's office
- Assemblymember Eduardo Garcia's office
- Riverside County Fourth District Supervisor V. Manuel Perez's office
- California Department of Water Resources
- Riverside County Housing Department
- Riverside County Environmental Health
- Pueblo Unido Community Development Corporation
- Alianza Coachella Valley
- Leadership Counsel for Justice and Accountability
- Riverside County Transportation and Land Management Agency
- Coachella Valley Housing Coalition
- Mobile home park owners
- Community members

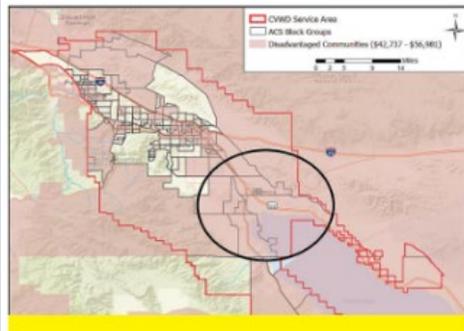


Thermal Mutual ceremonial well shut-off with Director Costello Estrada and Assemblymember Eduardo Garcia

Current Projects

St. Anthony/Ave. 66 Transmission Main (ECVWSP's First Ranked Project): The Project will construct the necessary backbone infrastructure for 3 consolidations and future consolidations along Pierce Street. The pipeline will also provide supply reliability to the DAC communities of Mecca, North Shore, & Bombay Beach communities.

Valley View Consolidation Project (ECVWSP's Second Ranked Project): This project will connect 13 small water systems (SWS) to CVWD's potable water system in two phases. These small water systems currently rely on private wells for drinking water.



Master Plans

In 2014 the Coachella Valley Regional Water Management Group completed a **Disadvantaged Community Outreach Demonstration Project** with the California Department of Water Resources to better understand the needs within disadvantaged community regions and obstacles to improvements. CVWD together with the Task Force identified the need to expand on the 2014 demonstration project and developed a **Domestic Water Supply Master Plan and a Sanitation Master Plan** – each outlines priority consolidation projects to link existing community water systems and sanitation systems to CVWD's which would provide these communities with safe and reliable drinking water and sewer service. The group has developed plans to address these needs.



Oasis Gardens Mobile Home Park Pipeline Installation

THE SANITATION MASTER PLAN capital costs total nearly **\$140 million (2018 dollars)**. It includes consolidation of 55 individual septic systems into 18 "projects." These projects have been ranked in order with consideration given to ease of completion, sequencing, and necessity.

THE DOMESTIC WATER SUPPLY MASTER PLAN capital costs total nearly **\$72 million (2018 dollars)**. This would consolidate 75 small water systems and group them into 39 "projects," which have been ranked in order by ease of completion, sequencing, and necessity.

Many of the communities in both Master Plans rely on private wells and are not connected to the CVWD system. CVWD cannot use ratepayer funds to connect the communities to the CVWD system due to State restrictions.

In 2022, CVWD successfully secured \$75.5 million in grant and loan funding for top priority water and sewer projects to improve infrastructure in the Eastern Coachella Valley within the next 3 years.

Successful Projects

CVWD used construction grants to fund and complete four projects to bring safe, reliable domestic water and fire protection to Disadvantaged Communities and one elementary school in the Eastern Coachella Valley.

Oasis Gardens Mobile Home Park – This project connected approximately 160 mobile homes to CVWD's system. The project installed a 125-foot long pipeline, a backflow device, and a fire hydrant to provide fire protection service to the community.

Thermal Mutual – Thirty-eight residential properties were linked to a failing 50-year-old well and families experienced low water pressure and sand in their plumbing. The project installed approximately 2,000 feet of 8-inch pipeline in the streets.

Westside Elementary School – The private, on-site well at this school in Thermal for nearly 500 K-6 students had no redundancy or back-up power. The project installed an offsite 1,350-foot pipeline for improved water supply reliability and fire flow.

St. Anthony's Sewer Pipeline and Lift Station – This infrastructure project replaced the failing on-site sewer treatment lagoon system and connected St. Anthony's and Huerta Mobile Home Park to the centralized wastewater collection and treatment system operated by CVWD. These improvements provide residents with safe, reliable, long-term wastewater services.



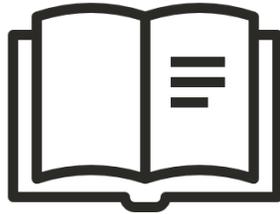
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2024 Hazard Mitigation Plan Review



Comment on the 2024 Draft Plan



Access Volumes 1 and 2 of the 2024 Coachella Valley Water District Hazard Mitigation Plan:

[Local Hazard Mitigation Plan | Coachella Valley Water District - Official Website \(cvwd.org\)](#)



Provide comments on the draft plan:

[2024 Hazard Mitigation Plan Update - Public Comment Survey \(surveymonkey.com\)](#)

Draft 2024 Hazard Mitigation Plan Overview



Coachella Valley Water District

Volume 1 Part 1 Background Information

- **Chapter 1** - Introduction
- **Chapter 2** - Changes to the Plan Update
- **Chapter 3** - Planning Process
- **Chapter 4** - Coachella Valley Water District Profile
- **Chapter 5** - Hazards of Concern
- **Chapter 6** - Regulations and Programs

Volume 1 Part 2 Risk Assessment

- **Chapter 7** - Risk Assessment Methodology
- **Chapter 8** - Hazard Profiles and Risk Assessments (Natural Hazards)
- **Chapter 9** - Hazard Profiles and Risk Assessments (Other Hazards of Interest)

Volume 1 Part 3 Mitigation Plan

- **Chapter 10** - Mitigation Goals
- **Chapter 11** - Mitigation Alternatives
- **Chapter 12** - Action Plan and Implementation
- **Chapter 13** - Plan Maintenance

Draft 2024 Hazard Mitigation Plan Overview



Coachella Valley Water District

Volume 2 Appendices

- **Appendix A - Adoption Resolution**
- **Appendix B - Steering Committee Engagement Documentation**
- **Appendix C - Neighboring Jurisdiction Engagement Documentation**
- **Appendix D - Public Engagement Documentation**
- **Appendix E - Summary of Federal and State Programs**
- **Appendix F - Natural Hazard Vulnerability and Risk Assessment**
- **Appendix G - Summary of Previous Mitigation Actions**
- **Appendix H - Agendas for Annual Maintenance**

Risk Assessment Results



HAZARDS OF CONCERN

Natural Hazards



Drought



Earthquake



Extreme Temperature



Extreme Weather



Flood



Landslide & Other Earth Movements



Levee & Dam Failure



Wildfire

Other Hazards of Interest

Agricultural Pests & Diseases

Aquatic Invasive Species

Energy Shortage & Power Failure

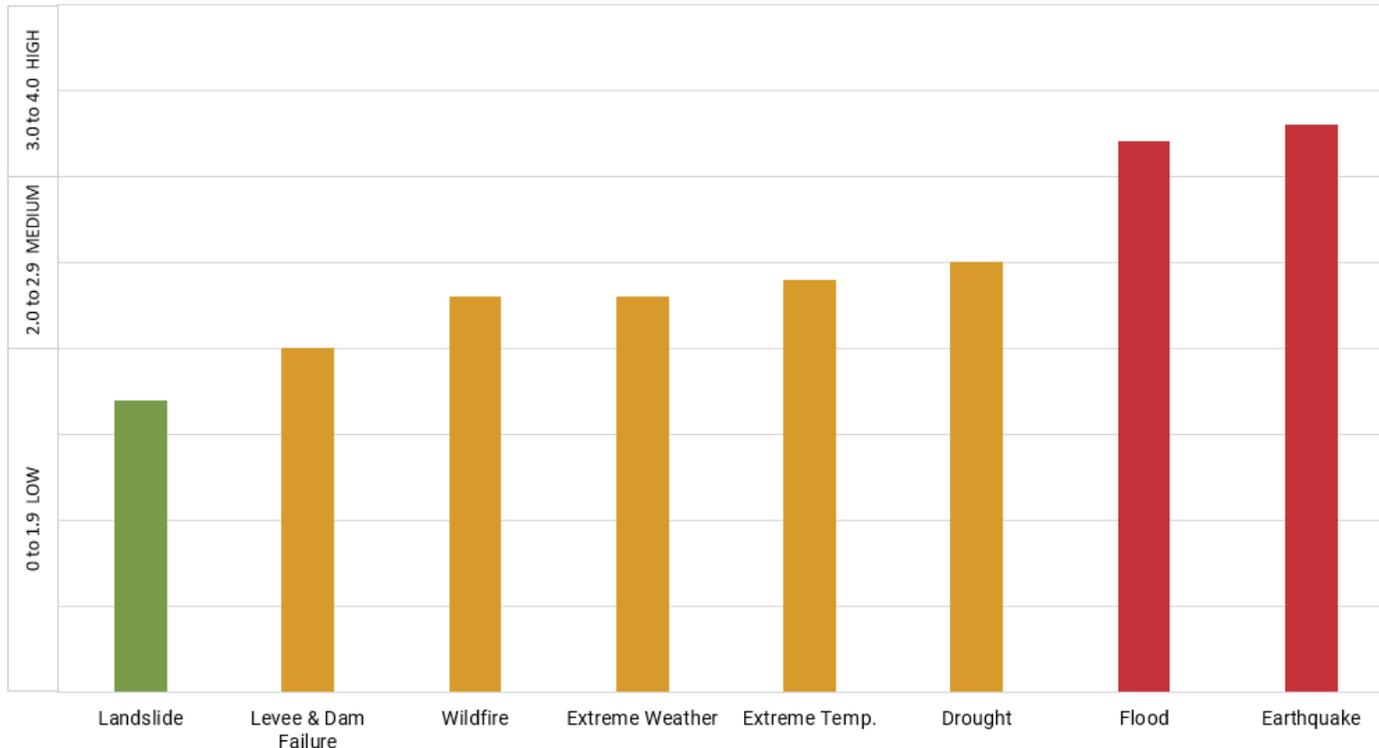
Hazardous Materials Releases

Public Health Emergencies

Terrorism & Sabotage

Natural Hazard Risk Summary

Natural Hazard Risk



Risk was determined by weighted scoring of:

- Probability of Occurrence
- Impact to Property, People, and District Operations
- Spatial Extent (area impacted)
- Warning Time
- Duration of the Hazard Event

Example Risk Assessment Summary

Hazard Name

Brief description of the hazard.

CHANGES SINCE 2019

 Federal Disasters

 Significant Events

HAZARD RISK RANKING



Low Medium High

COACHELLA VALLEY WATER DISTRICT



SOCIALLY VULNERABLE POPULATION

XX% XX,XXX

Of Total Population Persons

CLIMATE PROJECTIONS

 Description of how climate change may impact or amplify the hazard

ASSETS IN HAZARD AREA

XX Domestic Water 

X Sanitation 

X Stormwater 

X Irrigation & Agricultural Drainage 

Number of **disaster declarations** and other **significant hazard events** in the last 5 years (since 2019)

Low, medium, or high **Priority Risk Index** ranking

Number of **District-owned critical assets**, by category, in the hazard area

Defined socially vulnerable communities for the HMP – “A community with an **annual median household income that is less than 80 percent** of the Statewide annual median household income.”

Description of how **climate change** may impact or amplify the hazard



Earthquake

Earthquakes are natural geological phenomena characterized by the sudden release of energy in the Earth's crust, resulting in ground shaking, tremors, and vibrations. They occur when there is a rapid release of accumulated stress along fault lines or because of volcanic activity.

CHANGES SINCE 2019

+0

Federal Disasters

+0

Significant Earthquake Events

HAZARD RISK RANKING



COACHELLA VALLEY WATER DISTRICT



SOCIALLY VULNERABLE POPULATION

33% 114,212

Of Total Population Persons

CLIMATE PROJECTIONS



It is unknown whether climate change has a direct impact on earthquake probability. However, cascading hazards related to earthquakes are exacerbated by climate change.

CRITICAL ASSETS IN HAZARD AREA

222

Domestic Water



31

Sanitation



70

Stormwater



52

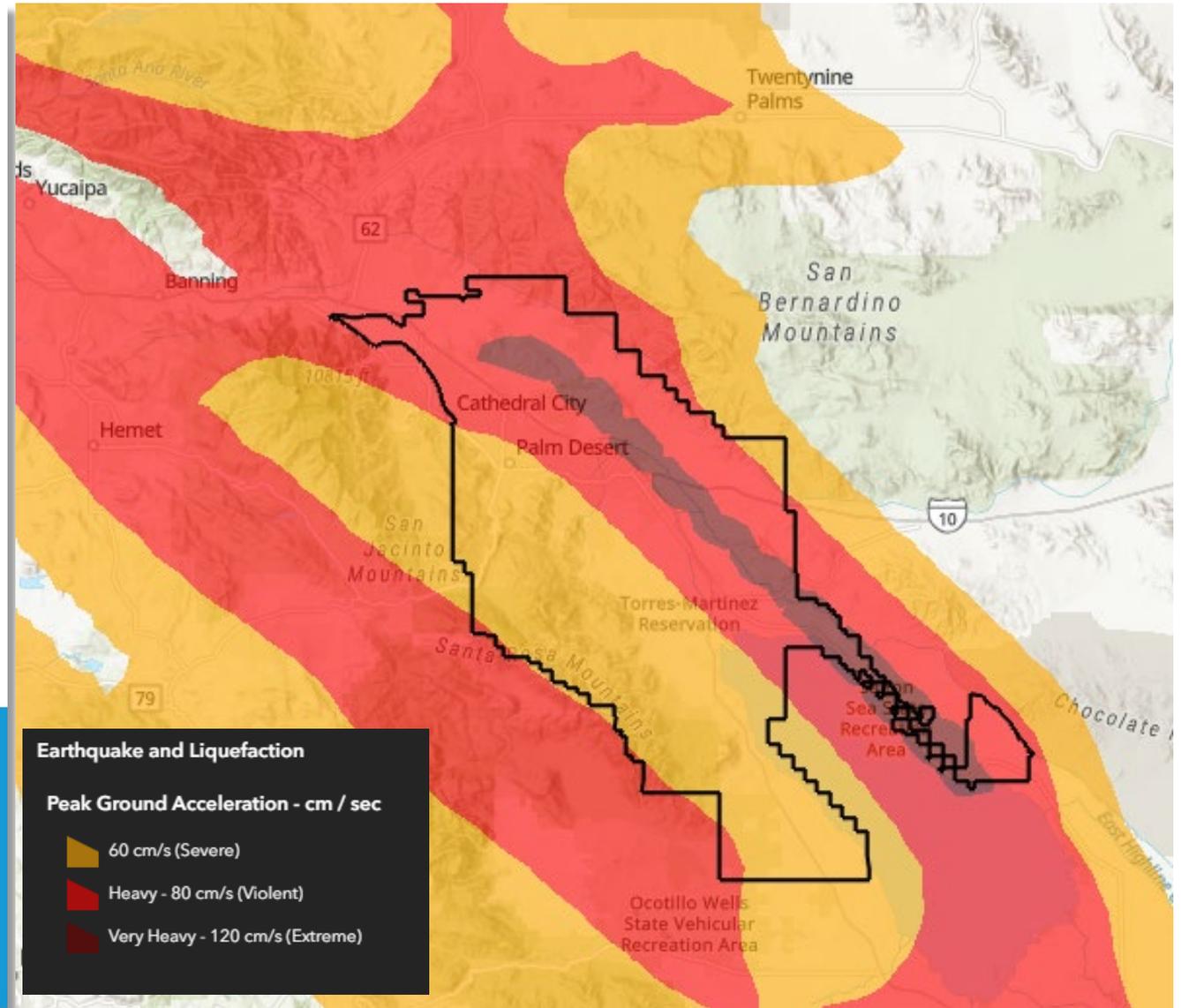
Irrigation & Agricultural Drainage



Earthquake and Liquefaction

Peak Ground Acceleration - cm / sec

- 60 cm/s (Severe)
- Heavy - 80 cm/s (Violent)
- Very Heavy - 120 cm/s (Extreme)





Flood

The severity of a flooding event is typically determined by a combination of several major factors, including topography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface. Flood events can be brought on by heavy rainfall.

CHANGES SINCE 2019

+1

Federal Disasters

+6

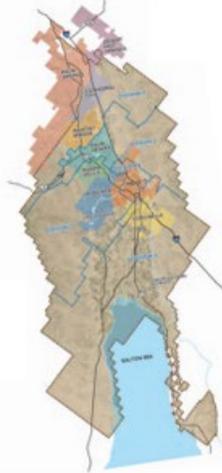
Significant Flood Events

HAZARD RISK RANKING



High

COACHELLA VALLEY WATER DISTRICT



SOCIALLY VULNERABLE POPULATION

31% 33,633

Of Total Population Persons

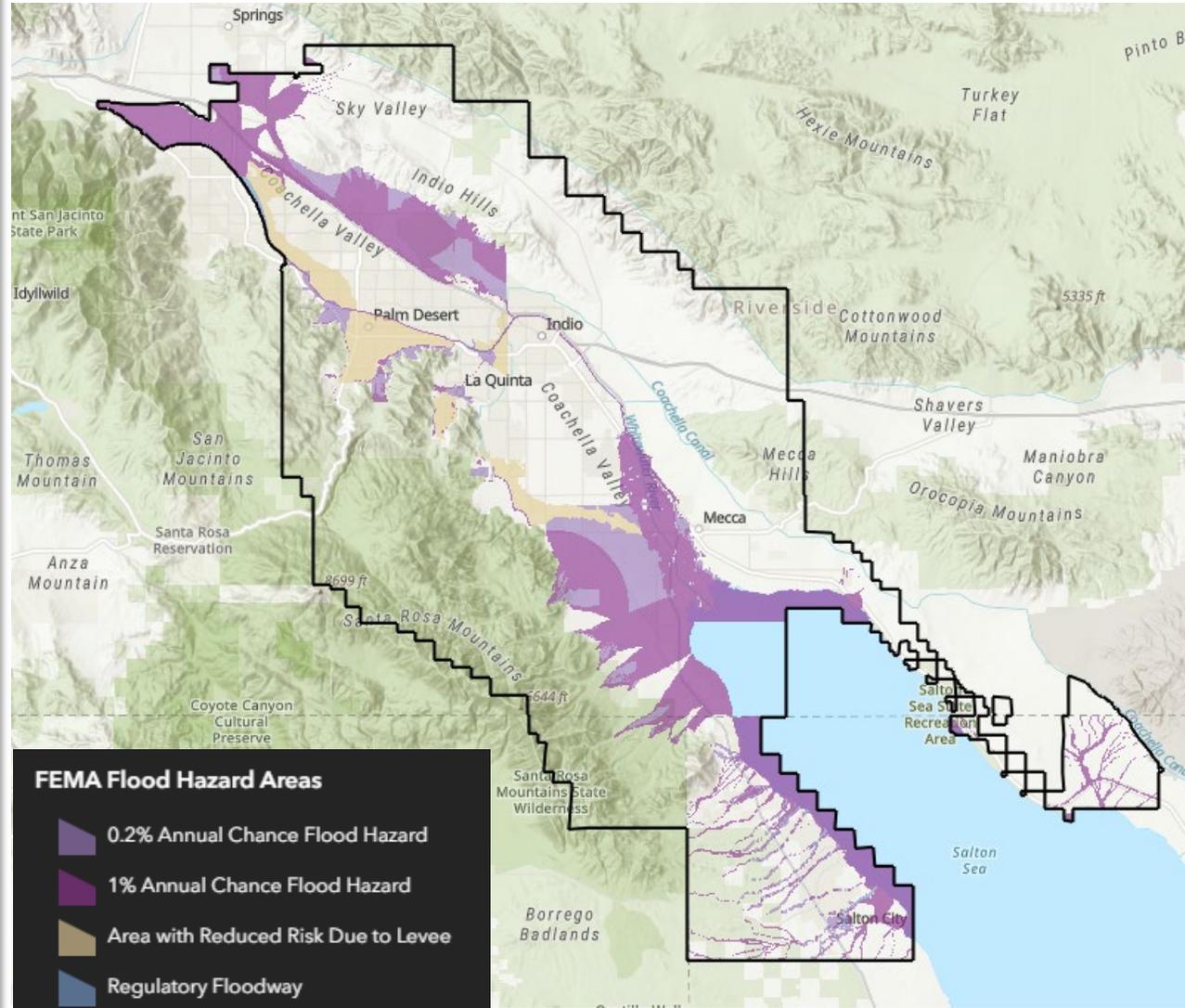
CLIMATE PROJECTIONS



Extreme rainfall events are expected to increase because of climate change, increasing the risk of flash flooding



Hurricanes and tropical storms may increase as oceans become warmer, causing these storms to develop and carry precipitation inland



FEMA Flood Hazard Areas

- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Regulatory Floodway

ASSETS IN HAZARD AREA

81

Domestic Water



18

Sanitation



15

Stormwater



4

Irrigation & Agricultural Drainage



PUBLIC INPUT AND MITIGATION ACTIONS



Public Survey Responses

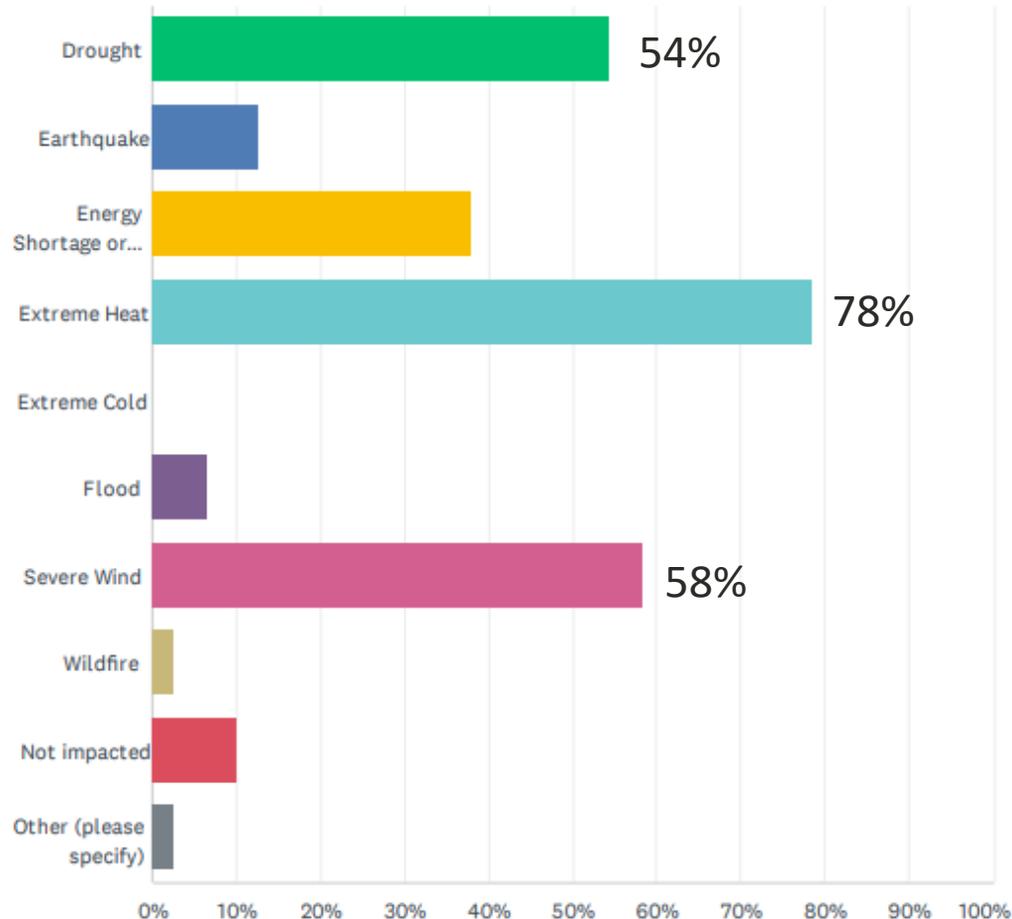
85 community members took the survey



- The 2024 HMP includes 50 mitigation actions that address the needs of the district and public input considerations.
- Survey participants suggested actions CVWD should continue to do or should start doing to **reduce or eliminate risk** of future hazard events.
- 93% of the suggestions are included in the 2024 HMP or are existing core capabilities.

Public Survey Responses

Which of the following hazard events have you been impacted by in the past five years?

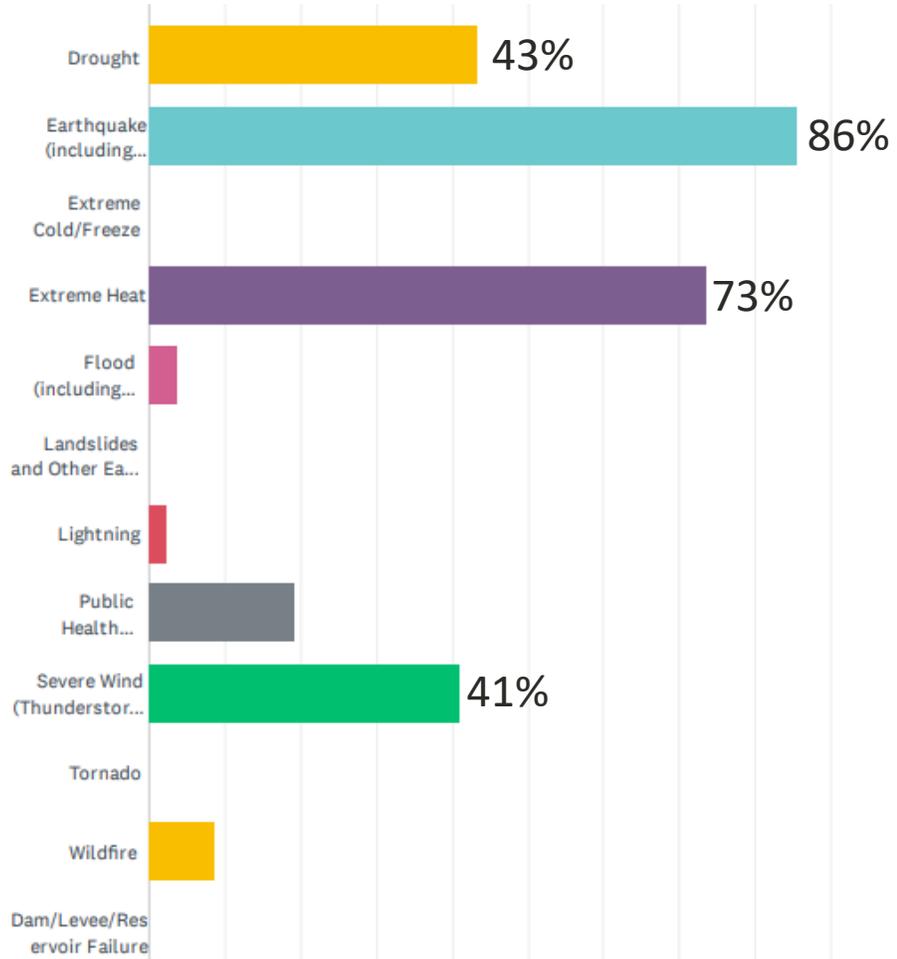


Mitigation actions in the 2024 CVWD HMP to address the top three impacts identified by the public:

- Drought: 6 mitigation actions
- Extreme Heat: 6 mitigation actions
- Severe Wind: 12 mitigation actions

Public Survey Responses

Which natural hazards are the highest threat to the community?



Mitigation actions in the 2024 CVWD HMP to address the highest threats identified by the public:

- Drought: 6 mitigation actions
- Earthquake: 25 mitigation actions
- Extreme Heat: 6 mitigation actions
- Severe Wind: 12 mitigation actions

Steps to Final Approved Plan



2024 HMP – Steps to Final Approved Plan

- **October 16 - October 30 – Public review of online draft plan**
- **October 25, 2023 – Public Meeting**
- **November-February 2024 – Cal OES and FEMA Review**
- **April 2024 – Plan Adoption by CVWD Board**

