



# Welcome to the Levee Owners Workshop U.S. Army Corps of Engineers San Francisco District



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# Agenda

- |             |  |
|-------------|--|
| 0920 - 0930 | <b>Overview of San Francisco District</b>  |
| 0930 – 1030 | <b>Morning Block 1: Federal Flood Risk Management Programs</b> <ul style="list-style-type: none"><li>- Operations and Maintenance</li><li>- USACE Levee Safety Program</li><li>- National Levee Safety Program</li></ul> |
| 1030 – 1040 | <b>Break</b>   |
| 1040 – 1200 | <b>Morning Block 2: Levee Operations and Maintenance</b> <ul style="list-style-type: none"><li>- PL 84-99 Rehabilitation and Inspection Program</li><li>- Vegetation on Levees</li><li>- 408 Permissions</li></ul>       |
| 1200 – 1300 | <b>Lunch Break</b>   |
| 1300 - 1400 | <b>Afternoon Block 1: Flood Response (State and USACE)</b>   |
| 1400 - 1455 | <b>Afternoon Block 2: Recovery and Repairs</b> <ul style="list-style-type: none"><li>- Requesting Flood Recovery Assistance</li><li>- Regulatory Permitting</li></ul>  |



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# Interagency Collaboration for Sheltered Community Flood Resilience

Silver Jackets Interagency Project

U.S. Army Corps of Engineers San Francisco and Los Angeles Districts

Move through slides, enlarge or shrink text

Closed Captions

Mute/Unmute

Video

Emojis/Hand raise

Leave meeting

Participant list

Chat



Mute



Start video



Share



Record



Participants

3



Chat



# Overview of San Francisco District

**HOLLY COSTA  
EMERGENCY MANAGEMENT CHIEF  
SAN FRANCISCO DISTRICT**



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# U.S. Army Corps of Engineers San Francisco District

We **partner** to address community water resource needs

We **plan, design, and construct** water resource projects:

- Ecosystem Restoration
- Navigation
- Flood Risk Management
- Coastal Storm Risk Management

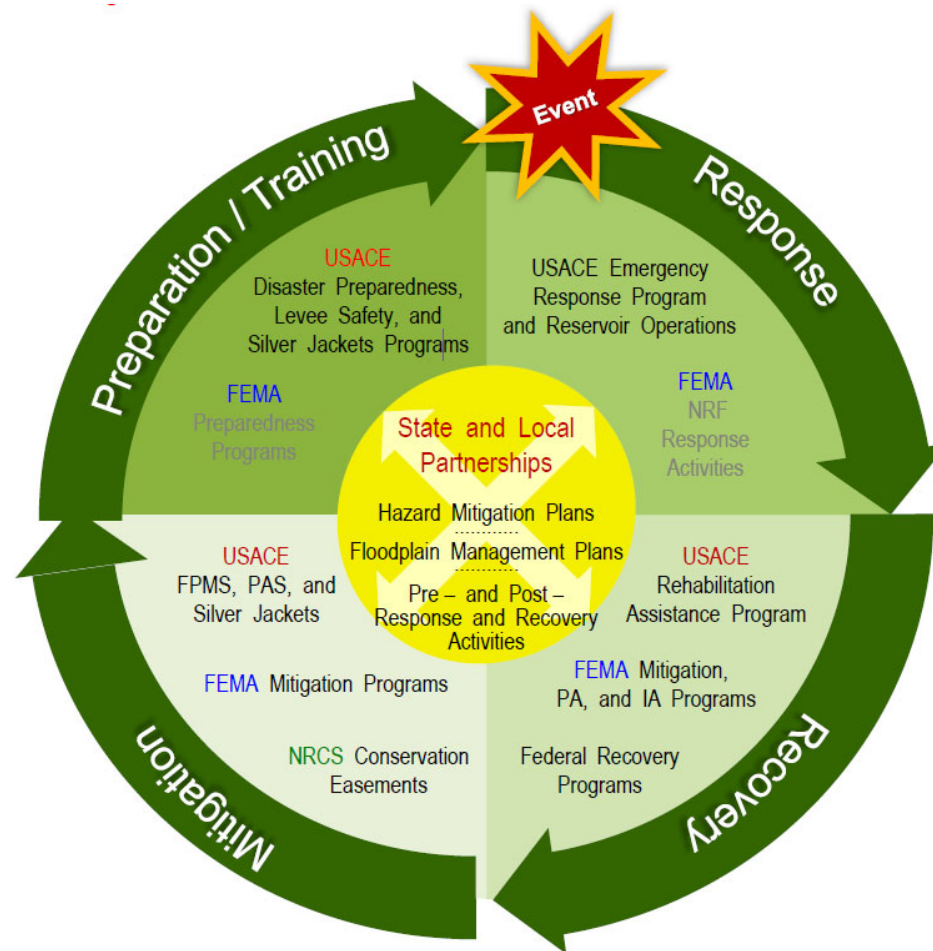
We **permit** construction along waterways and wetlands

We **operate** and **maintain** navigation channels, dams, and rec facilities

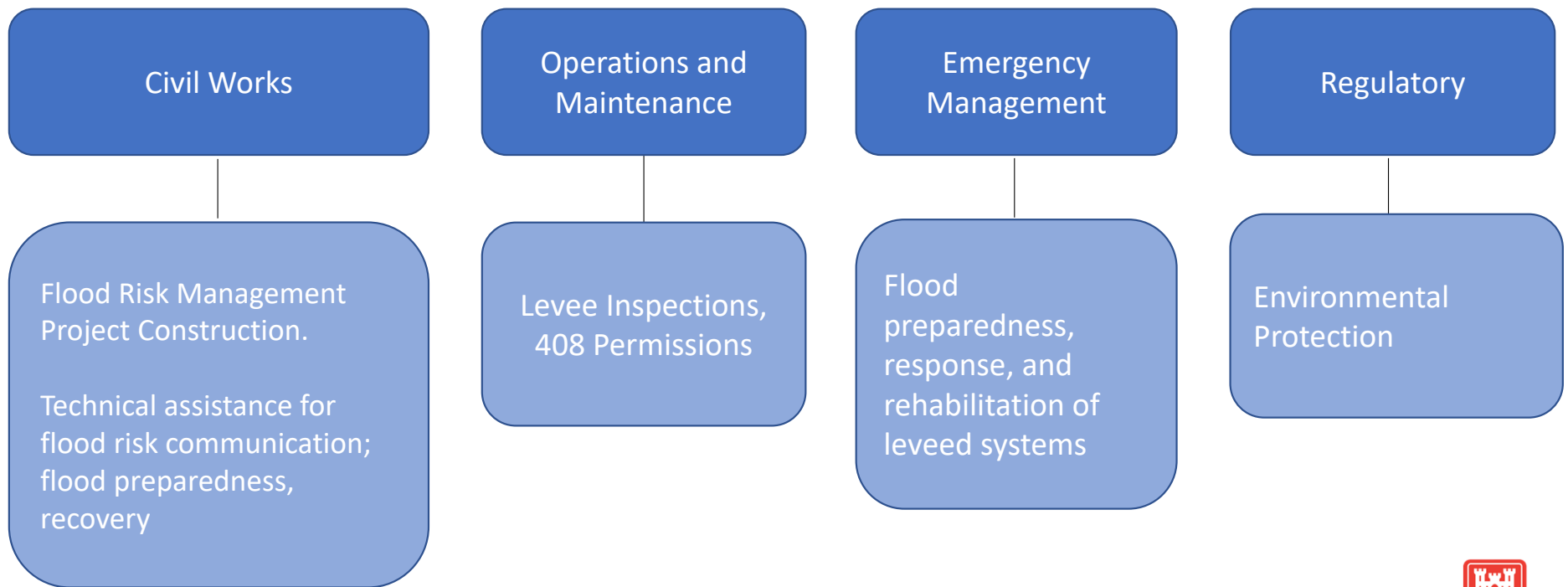
We support state **emergency management** activities



# San Francisco District Flood Risk Management Mission



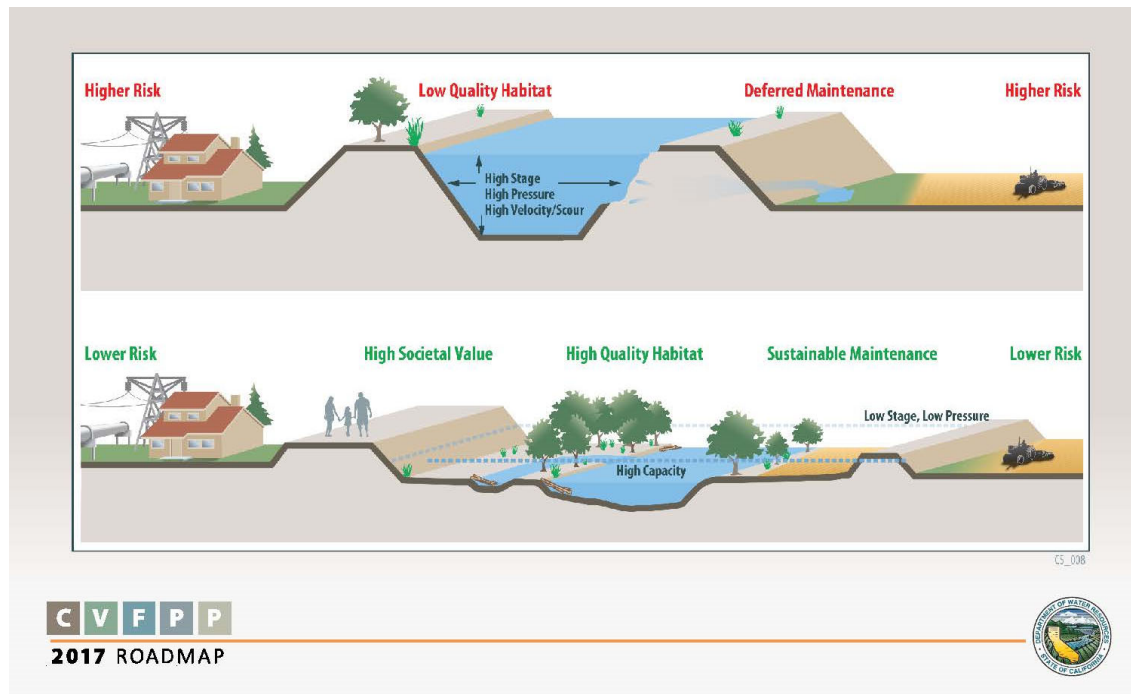
# San Francisco District Flood Risk Management Org Structure



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# Strategic Priorities – Engineering with Nature



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## Strategic Priorities – Environmental Justice



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# USACE Levee Safety Program

CYRUS YAGHOBI, PE  
LEVEE SAFETY PROGRAM MANAGER  
SAN FRANCISCO DISTRICT



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# Agenda

1. USACE Levee Safety Program
2. USACE Levee Inspection
3. Risk Framework for Levees
4. Risk Assessment
5. Risk Management
6. Risk Communication
7. ICW Inspection and Screening 10-YRS Schedule
8. USACE Training Opportunities for Non-Federal Sponsors
9. Reference



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# USACE Levee Safety Program

## **Levee Safety Program**

- Developed for managing the flood risk associated with levees.
- Combined effort between the sponsor and federal government to understand and efficiently manage & maintain the flood risk inherent to a levee.

## **Main Activities**

- Develop inventory of levees (NLD)
- Perform inspections & risk assessments
- Sharing levee information
  - Develop the flood risk awareness by local officials & sponsors management in order to effectively manage and reduce risk.
  - Promote the awareness of the inherent flood risk of levees amongst residents.

## **Guiding Principles**

- Life safety is the number ONE priority.
  - Property and environmental protection.
  - Provide risk-management information that will allow wise investment of resources.
  - USACE and sponsor working together by maintaining efficient communication and transparency.
  - Flexibility in adapting policies and procedures based on science and best practices.
-

# USACE Levee Safety Program

## Funding & Scheduling Constraints

- Distributing the workload evenly throughout the year
- Grouping projects in the same vicinity
- ICW funding sometimes delayed to the December-January
- FCCE funding usually comes in March-April timeframe
- Formal inspections during dry season recommended (WSE should be lower than the toe)
- Delays to formal inspection can lead to screening's delay



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# USACE Levee Inspection

## Types of Inspections

1. Formal Inspections (once every five years)
2. Special Inspections (as needed)
3. Site Visits (as needed, minimum of once every five years)

## Formal Inspection Notification to the Sponsor

1. Annual Schedule Update/Notification (this workshop)
2. Minimum One-Month Notice

## Sponsor's Role

1. Fill Pre-Inspection Forms
2. Vegetation & Other Maintenance
3. Culverts, Relief Wells, Pump Houses & Other Major Features Inspection Reports
4. Provide Access to All Features of the System
5. Provide Existing Information and Participate in Review



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# USACE Levee Inspection

**Table 1. Summary of Levee Site Visits and Inspections**

Activity	Site Visit	Formal Inspections	Special Inspections
<b>Definition/ Intent</b>	<ul style="list-style-type: none"> <li>• An optional collaborative activity to observe or verify changed conditions, provide technical advice and respond to sponsor's questions, capture progress of levee management measures, and inform the next inspection and/or risk assessment.</li> <li>• Provides flexibility for sponsors and USACE districts to engage and conduct a visual observation of the levee system between scheduled inspections.</li> <li>• Not intended to be as detailed as an inspection nor require extensive documentation.</li> </ul>	<ul style="list-style-type: none"> <li>• A pre-scheduled, comprehensive inspection.</li> <li>• Documents the condition of the levee, assesses progress of levee management activities, informs risk assessments and related recommendations, and includes specific evaluations or testing, such as exercising closures or testing pump station components.</li> <li>• Used to inform eligibility for PL 84-99 Rehabilitation Program.</li> </ul>	<ul style="list-style-type: none"> <li>• Unscheduled inspections conducted as needed due to changed conditions or to document levee performance.</li> <li>• Document changed conditions (from activities such as construction or interim risk reduction measures) or post event conditions (from flood events, earthquakes, sabotage, or other unusual events).</li> <li>• The scope and level of effort should align with those of a formal inspection but with a focus on the specific area(s) that have been impacted by the change in condition or where observations from the most recent flood event are necessary.</li> </ul>



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# USACE Risk Framework

## Three Components of Risk Framework

### 1. Risk Assessment

- a) TRG1 – Understanding the Risk

### 2. Risk Management

- a) TRG 3 – Fulfilling Daily Responsibility
- b) TRG 4 – Actions to Reduce Risk

### 3. Risk Communication

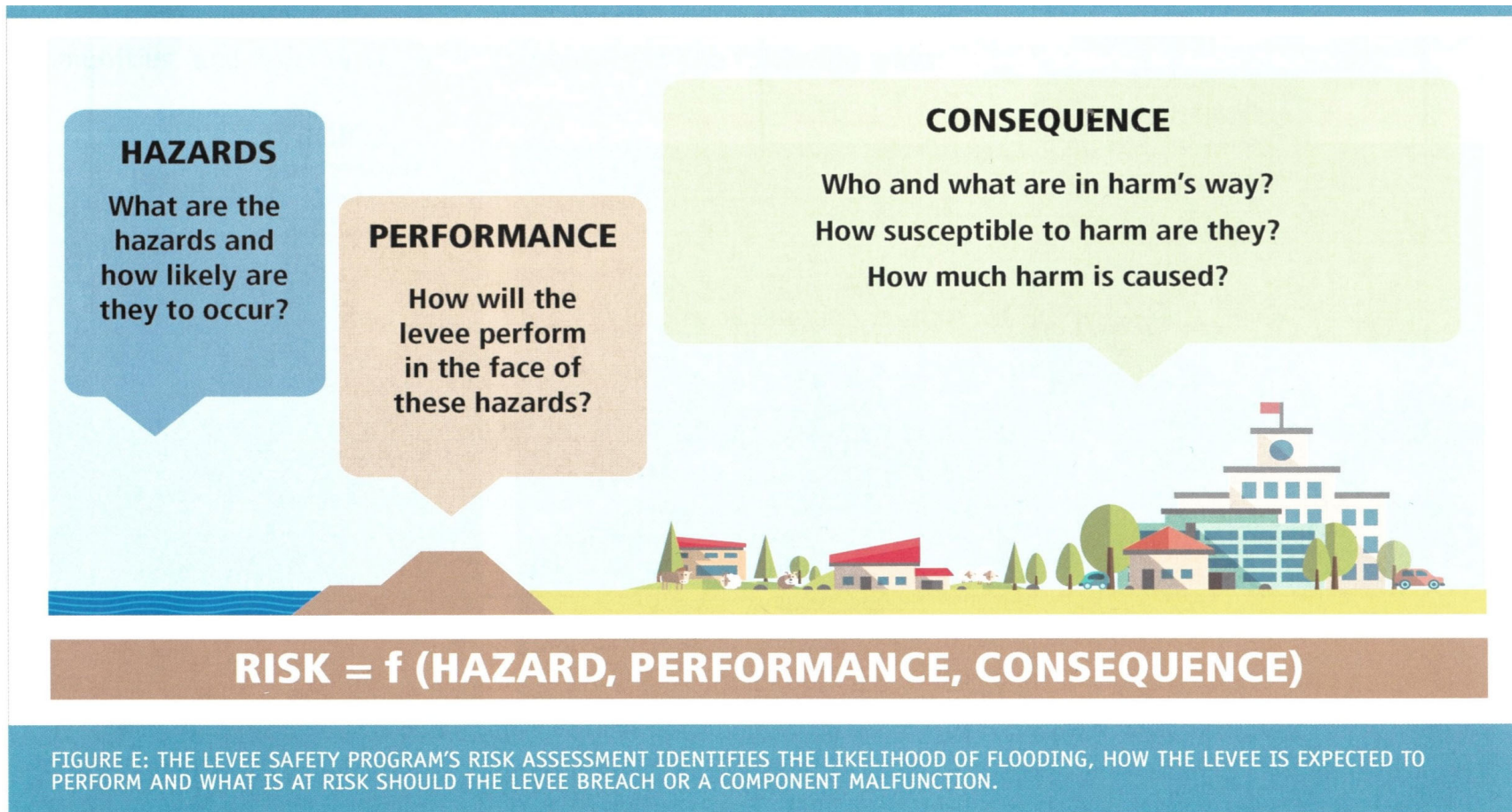
- a) TRG2 – Building Risk Awareness

## Benefits

- Evaluate the levees' risks to people, economy and environment.
  - Assist in identifying highest risk deficiencies and maximize risk reduction benefits.
  - Provide credibility to the decision process, selection of solutions, priorities and investment.
  - Increase awareness amongst maintainers and residents living behind levees.
-



# Risk Assessment



# Risk Assessment

## Main Components:

### Hazard

- How high (water surface), fast (flow), long (duration)? Flood & Earthquake?
- Expected Frequency?

### Performance

- Identify potential levee failure scenarios.
- Overtopping, seepage, erosion and other forms of breach.

### Consequence

- Estimate the warning time, impact and magnitude from flood.
- People, property and environment.

## Result

- Better understanding of the system risk (hazards, performance and consequences).
- Improve decision making.
- Levee Safety Action Classification Rating 1 to 5 (SPN ICW Systems are mostly LSAC 4 or 3. LSAC1 is highest risk.)

# Risk Management

## **Levee Risk Management is a Component of Flood Management**

- Levee Risk Management requires: Risk identification, evaluation, alternative selection and implementation with monitoring of effectiveness.
- Shared responsibility: Federal, state Agencies, local governments and tribal agencies. As well as private individuals (residents, land & business owners).
- Best outcome generally requires combined efforts by various entities.
- USACE through various programs can perform feasibility studies, provide technical & planning assistance, risk assessment information and support with community and partners regarding effective management of levee related flood risk.

**RISK MANAGEMENT REDUCES LEVEE RELATED FLOOD RISK BUT DOES NOT ELIMINATE THE RISK.**



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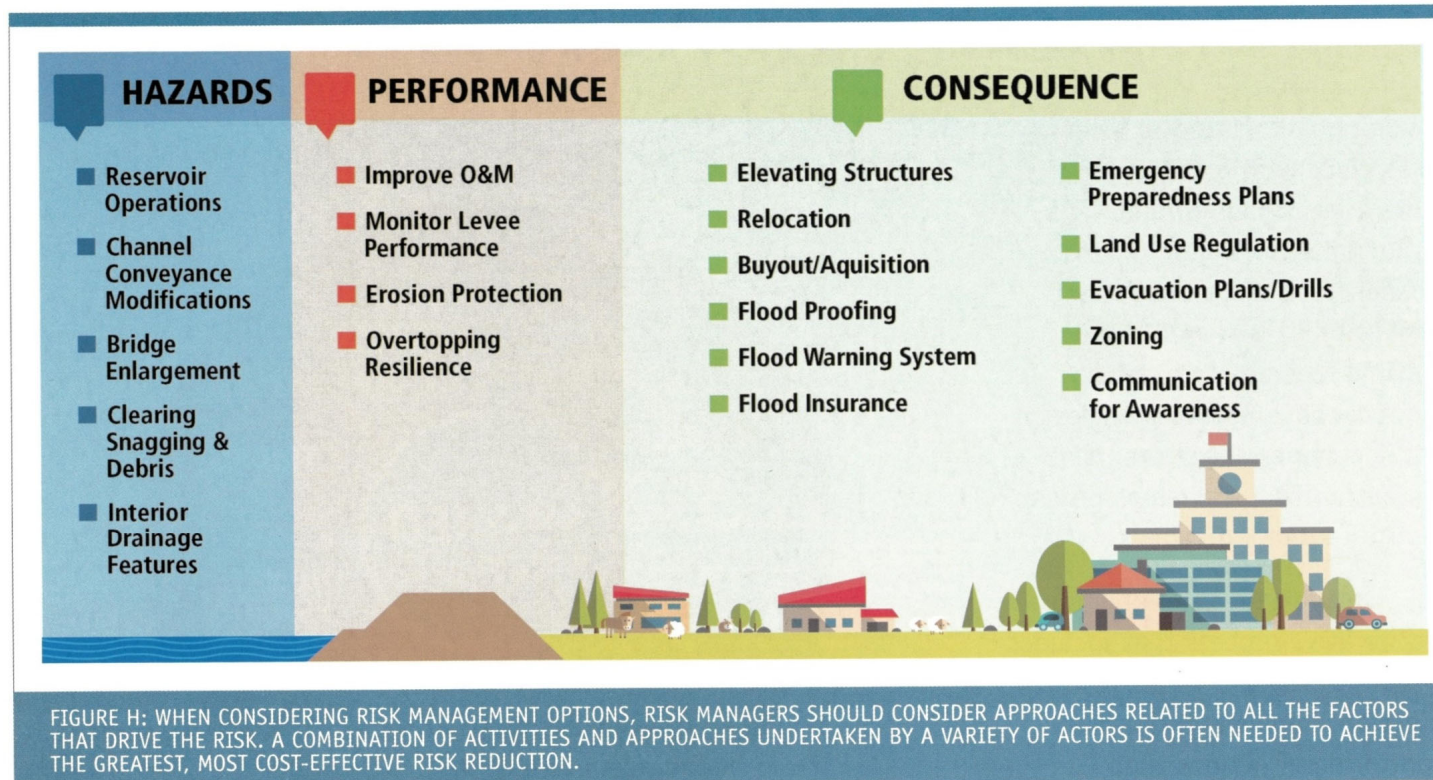
# Risk Management

## Roles and Responsibilities Overview



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# Risk Management (How to Reduce Risk?)



Note: Emergency Action Plans and Emergency Evacuation Plans are very cost effective ways to significantly reduce the remaining risk.



# Risk Communication

## Key Concepts

- Iterative & open 2-way exchange of information related to risk (amongst individuals, groups, and institutions).
- Fundamental for the risk assessment and management.
- Utilize to build knowledge & awareness, inform decisions, support preparedness, and plan in-advance of flood emergencies
- It's essential for the community, state and local government agencies and stakeholders.
- **Crisis Communication: directive/one-directional messaging during an emergency**



## USACE Support:

- Assist and coordinate with sponsors' levee & flood risk communication.
- Make levee information accessible through National Levee Database.
- Work together with FEMA on life safety, reduction of property damages and communicating risk.

# SF District Inspection and Screening Master Schedule

[illegible]

# SF District Inspection and Screening Master Schedule

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## KEY HISTORICAL EVENTS



Teton Dam, 1976



Hurricane Katrina, 2005



Oroville Dam and Spillway (California) , 2017



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# (DSL) 101: Fundamentals of Risk in Dam and Levee Safety

- Local sponsor's role and engagement in USACE pilot training programs
- Risk assessment
- Incorporation of risk informed approach with traditional design



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## References

- USACE Flood Risk Management Authorities: <https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/Frequently-Asked-Questions/FAQ-USACE-FRM-Authorities/>
- Engineering Circular (EC) [1165-2-218](#), USACE Levee Safety Program, 22 April 2021.
- Engineer Regulation (ER) 1105-2-101, Risk Assessment for Flood Risk Management Studies, 15 July 2019.
- Engineering and Construction Bulletin (ECB) No. 2022-7, Interim Approach for Risk-Informed Design for Dam Levee Projects, 20 Oct 2022.
- USACE HQ Levee Inspections & Site Visits Standard Operating Procedures, December 2022
- Engineer Manual (EM) 1110-2-2902, Engineering and Design, Conduits, Culverts, and Pipes; 31 March 1998
- DLS 101: Evolution of Risk Assessment: [https://rise.articulate.com/share/8Jow4fG29A56VOt1fRgOdNJ-E6\\_UFiHa#/lessons/d3glqYqxQ13mXwSbSuCEUOFkJ3Ykp99X](https://rise.articulate.com/share/8Jow4fG29A56VOt1fRgOdNJ-E6_UFiHa#/lessons/d3glqYqxQ13mXwSbSuCEUOFkJ3Ykp99X)



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# Contact

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# NATIONAL LEVEE SAFETY PROGRAM

SPN Levee Owners Workshop  
August 17, 2023

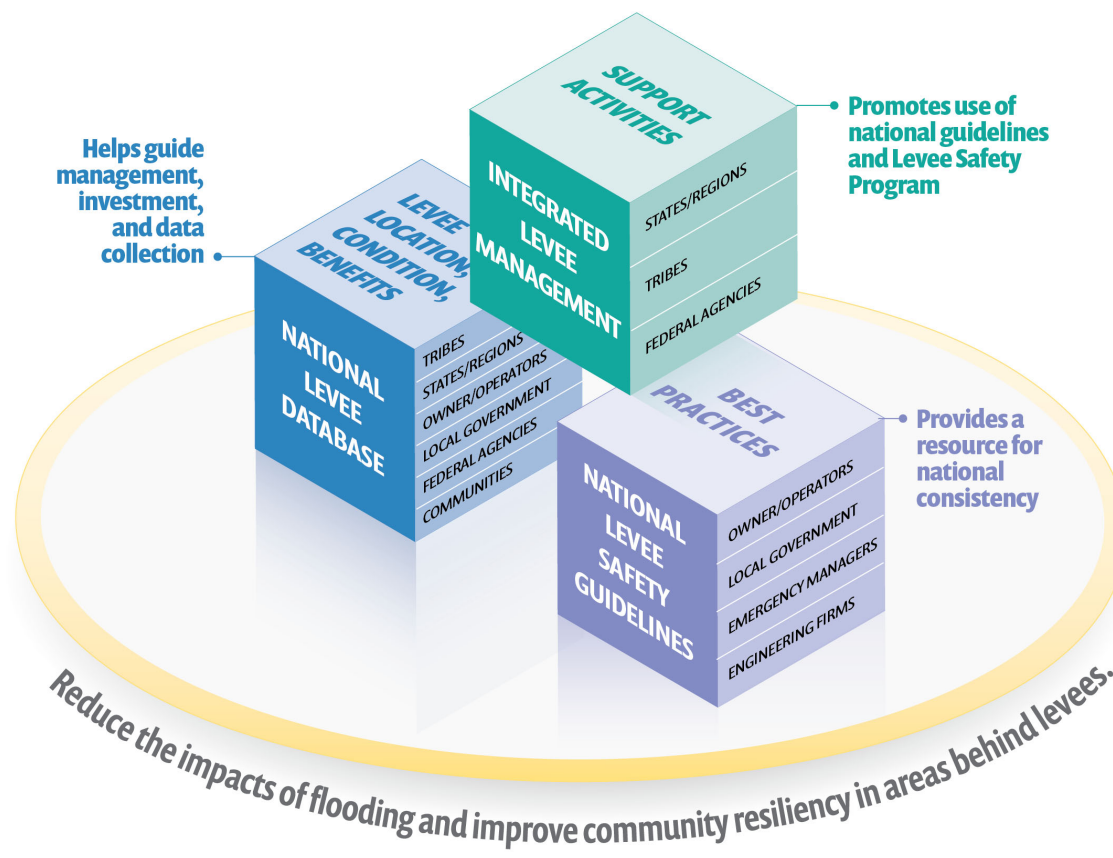
Mike Bachand, P.E.  
U.S. Army Corps of Engineers



# Agenda

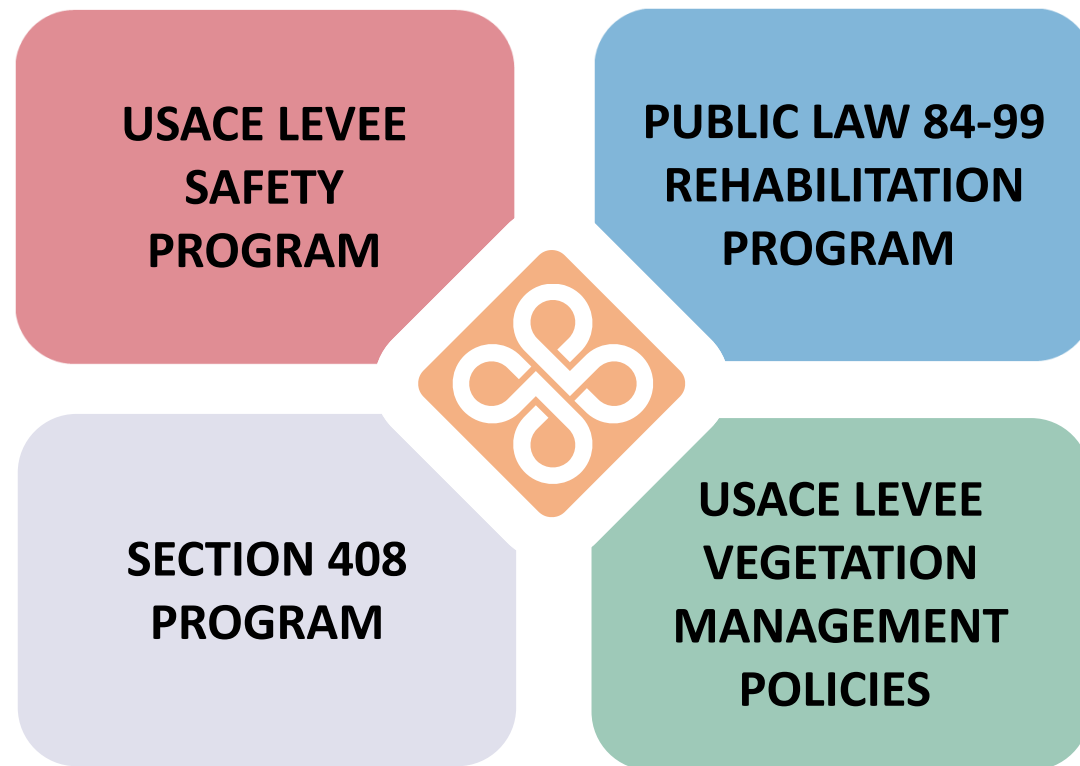
- National Levee Safety Program
- Feedback Received
- Myth Busting

# Main Components of the National Levee Safety Program (33 USC Ch. 46)





# Connections To USACE Levee Safety Program



# SUMMARY OF FEEDBACK



# Theme 1: Program Scope

## ***What We Heard***

- Split between those who wanted the program to focus solely on levee performance and those who saw value in a broader, integrated approach
- A broader approach would improve public awareness about flood risk and lead to more up-to-date flood risk information
- USACE and FEMA alignment is needed to create a consistent national approach to levees and managing flood risk

## ***Moving Forward***

- Levee reliability and performance is a program priority
- Broader considerations are important especially with climate and hydrological changes
- Program intent will be to highlight a more comprehensive picture and how decisions about levees fit into that picture

## Theme 2: Outreach and Communication

### ***What We Heard***

- Increasing public awareness is the most important challenge the program could address
- Limited awareness leads to problems on levees, such as encroachments, underfunding, and a lack of preparation for flooding

### ***Moving Forward***

- Feedback aligns with goals in program legislation related to support of public education and awareness efforts
- Important to understand the different facets of public education needs (e.g., general public; communities; local elected officials; policy makers)

# Theme 3: Operations and Maintenance

## ***What We Heard***

- Limited funding for operations, maintenance, repairs, or large-scale improvements
- Costs will continue to increase due to climate change, aging infrastructure, and improved detection of problems
- Technical challenges with lack of clear requirements

## ***Moving Forward***

- Program is focusing on some resources for levee owners/operators to help with operation and maintenance responsibilities
- Promote streamlining redundant requirements and provide more specific guidance for potential resources



# Theme 4: Unclear/Conflicting Requirements

## ***What We Heard***

- Lack of coordination and inconsistent expectations, especially related to USACE and FEMA programs
- Aligning processes is welcome but could be challenging due to different authorities and regulations

## ***Moving Forward***

- Intent of the program will be to try to improve clarity in the relationship between different programs
- Agree that roles and responsibilities at the different levels of government are complex
- Program provides a forum to highlight areas of conflict, though resolving the conflicts will take time

# Theme 5: National Levee Database

## ***What We Heard***

- Levee data is important to manage flood risk - database can be a helpful vehicle to deliver that information
- Current platform not meeting needs
- Concern over incomplete or inaccurate data
- Levee owners need to be part of the data management process

## ***Moving Forward***

- Focus on identifying relevant data; better direct connection to information; combining information with other national data sets; and improving transparency in how data is collected, reviewed and displayed

- **MYTH 1 – USACE Levee Safety Program already manages all levees in the US**



# National Levee Safety Program: Levees at-a-Glance



- **MYTH 1 – USACE Levee Safety Program already manages all levees in the US**





# THANK YOU

Michael Bachand, P.E.

Technical Manager – National Levee Safety  
Program

[Email.Michael.I.bachand@usace.army.mil](mailto:Email.Michael.I.bachand@usace.army.mil)



# Q+A and Group Discussion

Questions on San Francisco District's Flood Risk Management Program, USACE  
Levee Safety Program or the National Levee Safety Program



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Break! Please return by 10:40

1030 – 1040      Break

1040 – 1200      **Morning Block 2: Levee Operations and Maintenance**

- PL 84-99 Rehabilitation and Inspection Program
- Vegetation on Levees
- 408 Permissions

1200 – 1300      **Lunch Break**

1300 - 1400      **Afternoon Block 1: Flood Response (State and USACE)**

1400 - 1455      **Afternoon Block 2: Recovery and Repairs**

- Requesting Flood Recovery Assistance
- Regulatory Permitting



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# Public Law 84-99 Flood Control and Coastal Emergencies

FANNY CHAN

PL 84-99 PROGRAM MANAGER

SAN FRANCISCO DISTRICT

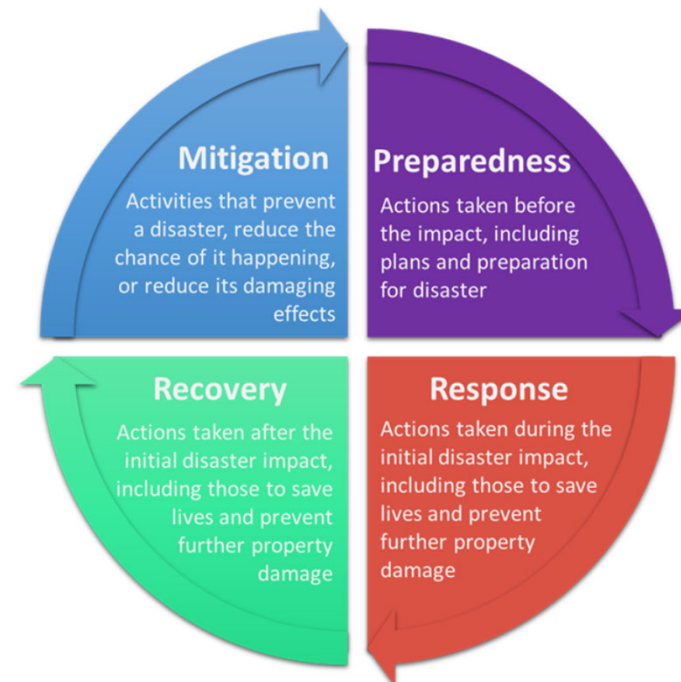


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# Public Law (PL 84-99)

PL 84-99 Emergency Flood Protection Act of 1965 as amended, authorizes preparedness, response, and recovery from natural disasters.

- Disaster Preparedness
- Advance Measures
- Emergency Operations
- Rehabilitation & Inspection
- Emergency Water/Drought
- Hazard Mitigation



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# Disaster Preparedness

- Sponsor's Annual Inspections & USACE Formal Inspections
- Planning for Quick and Effective Response
- Exercises and Trainings
- Stockpiling Equipment and supplies



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# Advance Measures

**Policy:** USACE may perform Advance Measures prior to flooding or flood fighting activities to protect against loss of life and significant damages to urban areas and/or public facilities due to an imminent threat of unusual flooding.

**Technical Assistance:** Provide technical review, advice, recommendations to state and local agencies prior to anticipated flood event (e.g. geotechnical analysis, FCW inspection, recommend construction methods)

**Direct Assistance:** Supplement state/local resources as part of approved project. May include supplies, equipment, contracting for construction of temporary flood control (permanent if more cost effective).  
Examples: repair/strengthening levees; temporarily raising levees; removal of stream obstructions



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# Emergency Operations

- Field investigations
- Flood Fighting
  - Issuance of supplies and equipment
  - Direct flood fight operations
  - Award of emergency contracts
- Post Flood Response
  - Emergency Debris Removal
  - Temporary Restoration of Critical Transportation Routes and Public Services and Utilities



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# Rehabilitation and Inspection Program (RIP)

- The repair of ACTIVE and eligible flood risk management (FRM) projects that are damaged or destroyed by floods and are Federally authorized and constructed coastal storm risk management (CSRM) projects damaged or destroyed by wind, wave, or water action of extraordinary nature.
- Inspections communicate flood risk to sponsors for determining O&M priorities. Inspections also inform PL 84-99 rehabilitation eligibility
- RIP is closely linked to Levee Safety Program



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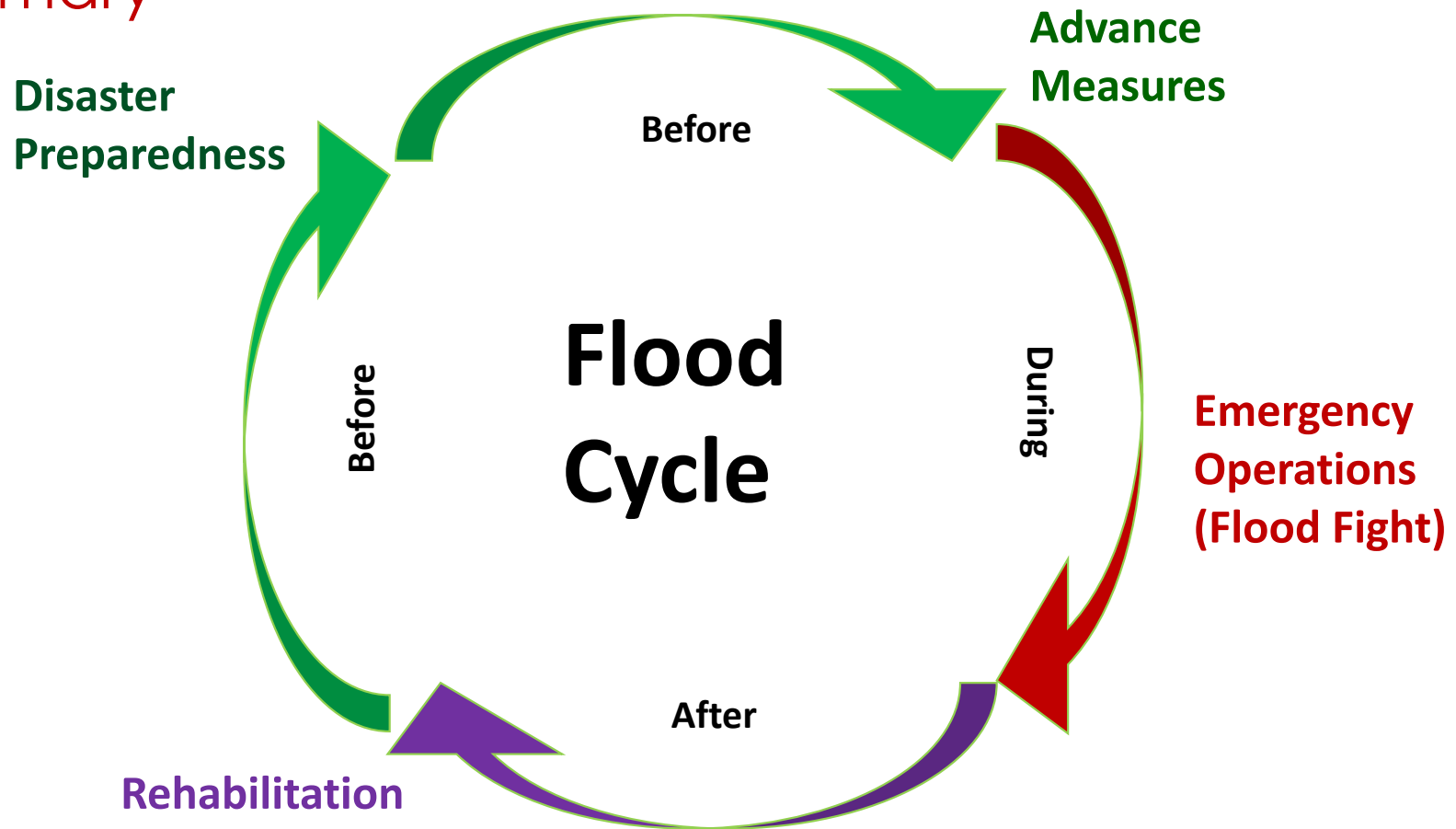
# Hazard Mitigation

- Coordination with other FRM programs
- Participation on State Hazard Mitigation Teams
- Interagency Levee Task Force and Non-Structural Alternative Projects



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## Summary



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# Contact

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An aerial photograph of a river winding through a landscape. A prominent levee runs along one side of the river. The surrounding area includes green fields, some bare trees, and a forested hill in the background.

# Vegetation on Levees: Understanding Policy, Risk and Maintenance

LORENA GUERRERO & CYRUS YAGHOBI  
SACRAMENTO & SAN FRANCISCO DISTRICTS



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# Presentation Overview

## **1. Current State of the Policy**

Standing guidance

Interim guidance

## **2. Design Deviations and Vegetation**

When is it required?

When is it desired?

## **3. Comprehensive Solutions**

The value of Vegetation Design Deviations

Conclusions



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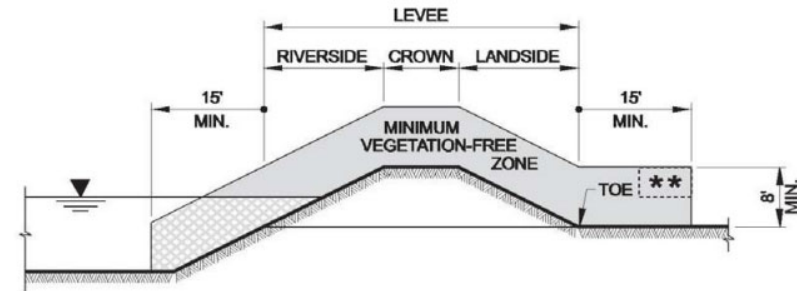
# USACE Vegetation on Levees Policy

**The vegetation-free zone applies to all vegetation except grass.**

**Grass species** are permitted, for the purpose of erosion control.

The minimum width of the corridor must be the width of the levee, floodwall, or embankment dam, including all critical appurtenant structures, **plus 15 ft on each side, measured from the outer edge of the outermost critical structure.**

## Vegetation on Levees Policy- [EP 1110-2-18](#)



\*\* IN THIS 4' X 7' TRANSITION ZONE, TEMPORARY OBSTRUCTION BY LIMBS AND CROWN IS ALLOWED DURING DEVELOPMENT OF NEW PLANTINGS, FOR UP TO 10 YEARS

▼ WATER SURFACE ELEVATION AT ORDINARY HIGH WATER MARK

 VEGETATION-FREE ZONE BELOW THE ORDINARY HIGH WATER MARK



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# Current State of Vegetation on Levees Policy

[WRRDA 2014 \(sec 3013\)](#) by congress required USACE to review its current levee maintenance policies. USACE is in the process of reviewing and amending its levee maintenance policies.

USACE issued [Implementation Guidance for Section 3013](#) of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Vegetation Management Policy in the interim while the review is underway.

USACE is still undergoing its comprehensive review of the vegetation related policy to determine suitable changes.

[EP 1110-2-18](#) is the most recent vegetation on levees policy, no changes have occurred since the 2009 ETL.



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# Implementation Guidance for Section 3013 (WRRDA 2014)

In addition to policy review requirement, Section 3013 provides interim actions until the date on which revisions to the guidelines are adopted in accordance with the provision, which includes:

A prohibition on the removal of existing vegetation **as a condition or requirement** for any approval or funding of a project or any other action

**Unless the specific vegetation is demonstrated to present an unacceptable safety risk**

Note: An unacceptable safety risk may include consideration of conditions that **could structurally compromise the performance** of the levee system or its foundation; **impair or prohibit needed access for inspection or emergency activities**; and/or pose other risks identified by risk assessments or analyses.



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# ER 1105-2-101 – Risk Assessments for Flood Risk Management Studies

**Purpose:** provides **guidance on risk assessment requirements** for flood management studies, including but not limited, to **feasibility studies, post-authorization changes, general reevaluation studies, dam and levee safety studies, and major rehabilitation studies.**

Promulgates the **Risk Framework**, a decision-making process consisting of three tasks:

- Risk Assessment
- Risk Communication
- Risk Management

**ECB 2022-7** provides guidance on **how the ER is implemented** (*the how-to guide*)



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## How is Vegetation Policy Being Applied

Site / Project Phase	Vegetation Policy Compliance	WRRDA 2014 Compliance	Courses of Action
Sites / Projects already completed <b>with</b> an updated O&M Manual.	Levee inspections and risk assessments include assessment of vegetation.	Inspection and risk assessment results are provided without the imposition of any requirement to remove or address existing vegetation. Vegetation alone cannot be grounds for removal from PL 84 99 without documented unacceptable safety risk*.	Sponsor to comply with O&M manual, or request System Wide Improvement Framework with vegetation variance.
Sites / Projects already completed <b>without</b> an updated O&M manual; or projects seeking accreditation.	Responsible party to evaluate the project for policy compliance.	Removal of existing vegetation <b>NOT Required</b> unless vegetation presents an unacceptable safety risk.	Responsible party to assess risk of retaining vegetation or bring site into compliance.
Sites / Projects in construction, design, or planning.	New sites are required to have a vegetation free zone, per policy	USACE will not assume that non-compliant vegetation must be removed. Conduct a risk assessment during the design phase in accordance with Engineer Regulation <b>(ER) 1105-2-101, Risk Assessments</b> for Flood Risk Management Studies. Deviations from mandatory design standards are only permitted if deviations would not incrementally increase risk.	Build a compliant project (consider design alternatives such as adjacent levees, setbacks etc.) or request a Design Deviation to plant or retain vegetation in VFZ. Conduct a risk assessment for existing vegetation.

# Definition of a Design Deviation with Respect to Vegetation on Levees

Formerly known as a *Vegetation Variance*. A design deviation is **any deviation from mandatory design standards**.

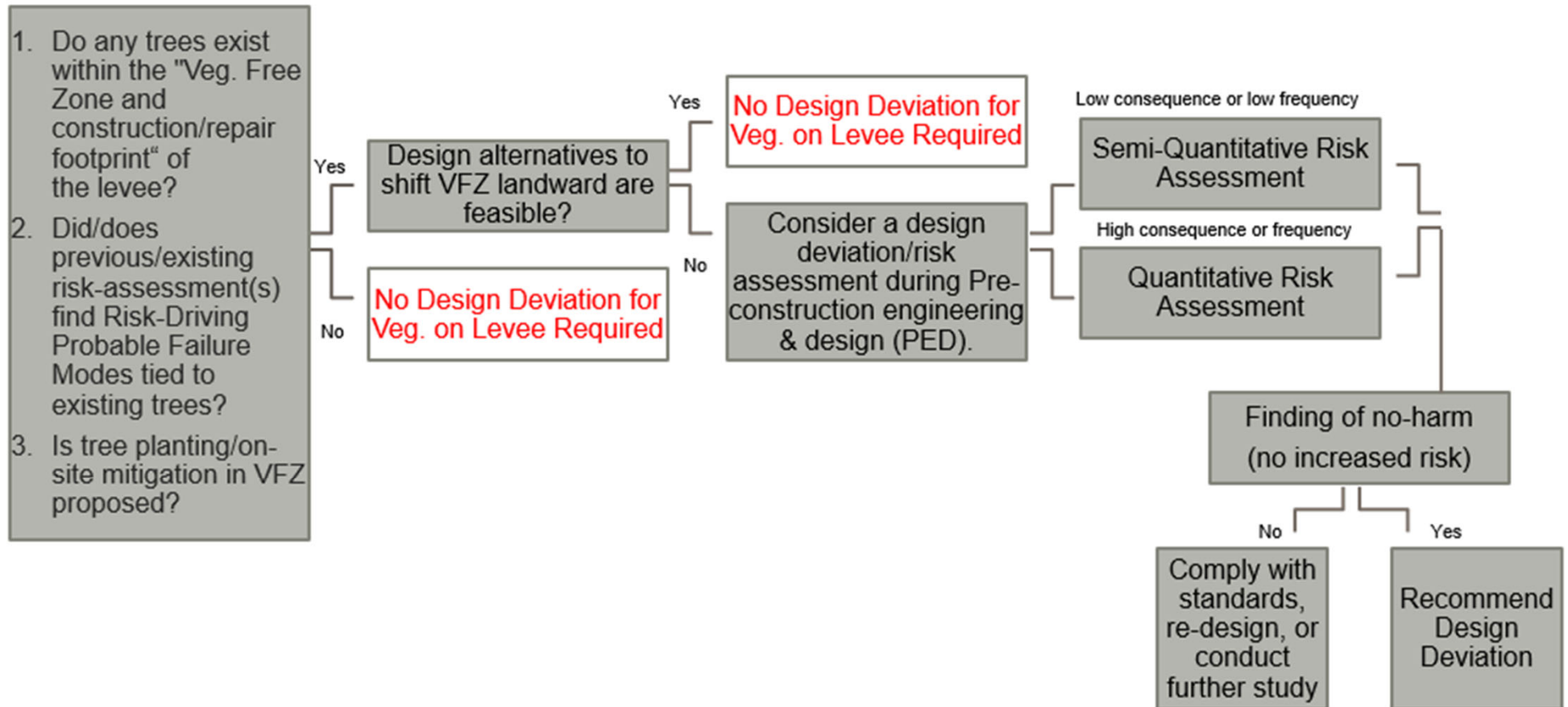
- is a request by the design team which **requires concurrence** from the Levee Safety leadership from the district level up to the headquarters level.
- is the **outcome of a risk assessment** driven by a need to deviate from design standards.
- is required to be **justified and documented** with clear rationale.
- may require detailed O&M recommendations to maintain risk at the calculated levels.

**Must do no harm-** should not increase the risk to the population and property above the risk the population currently experiences.



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# Design Deviation for Vegetation on Levees



# Comprehensive Solutions

## **Potential Opportunities:**

- Possibilities for collaboration on setback and adjacent levees (multiple benefits) for projects with major levee improvements planned
- Engineering with Nature - to reduce maintenance costs and build more resilient projects
- Project scalability/defining priorities - larger projects provide an opportunity for more comprehensive solutions
- Project team tailored to the needs of the project

## **Potential Challenges:**

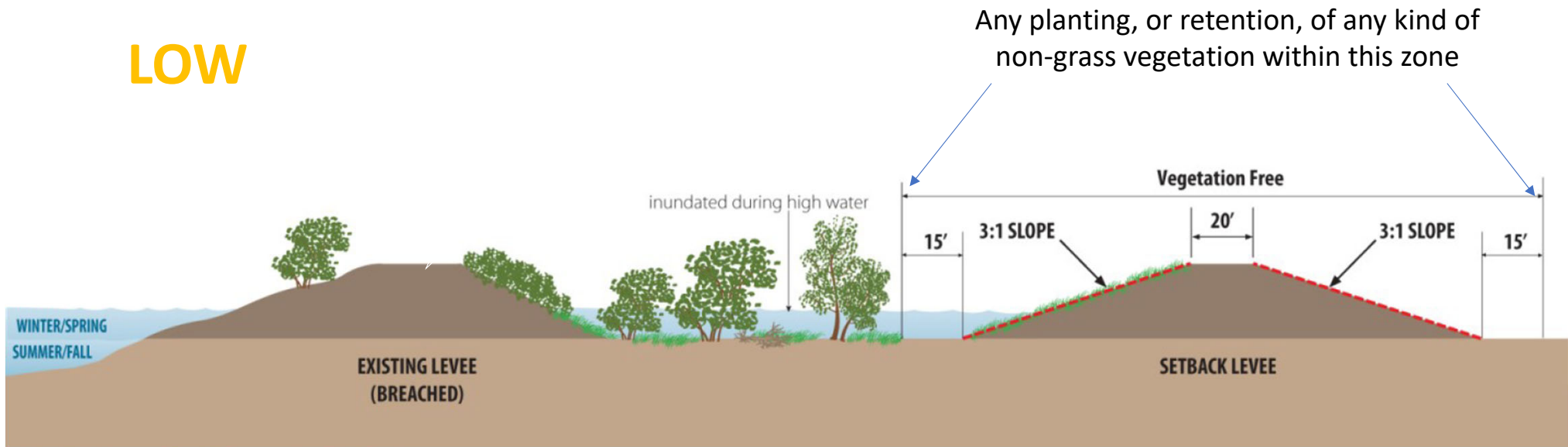
- States of emergency and accelerated project schedules
- Environmental permitting - mitigating for restoration
- Solving real estate challenges for setback levees and bringing down costs
- Benefit-Cost Ratios for projects
- Addressing seepage issues



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# Situational Value of Design Deviation for Vegetation – Setback Levees

LOW



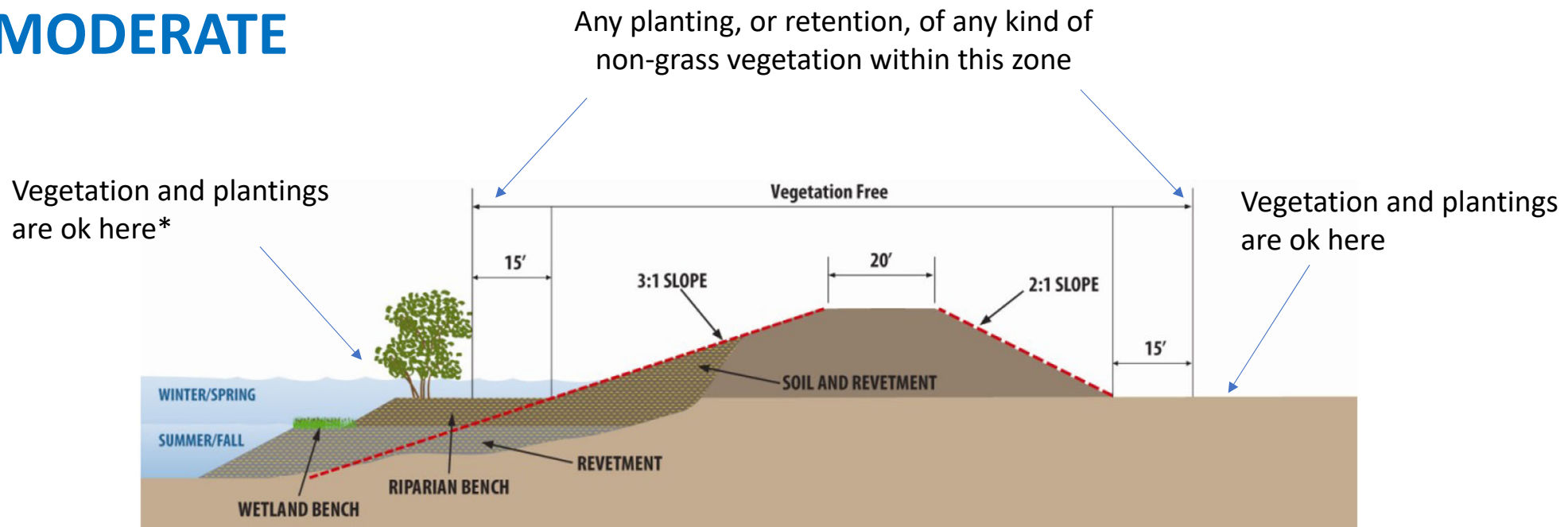
\*Considerations- Setback levees provide an opportunity to research how unmaintained levees with vegetation change over time



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# Situational Value of Design Deviation for Vegetation – Bank Repairs/Recovery

## MODERATE

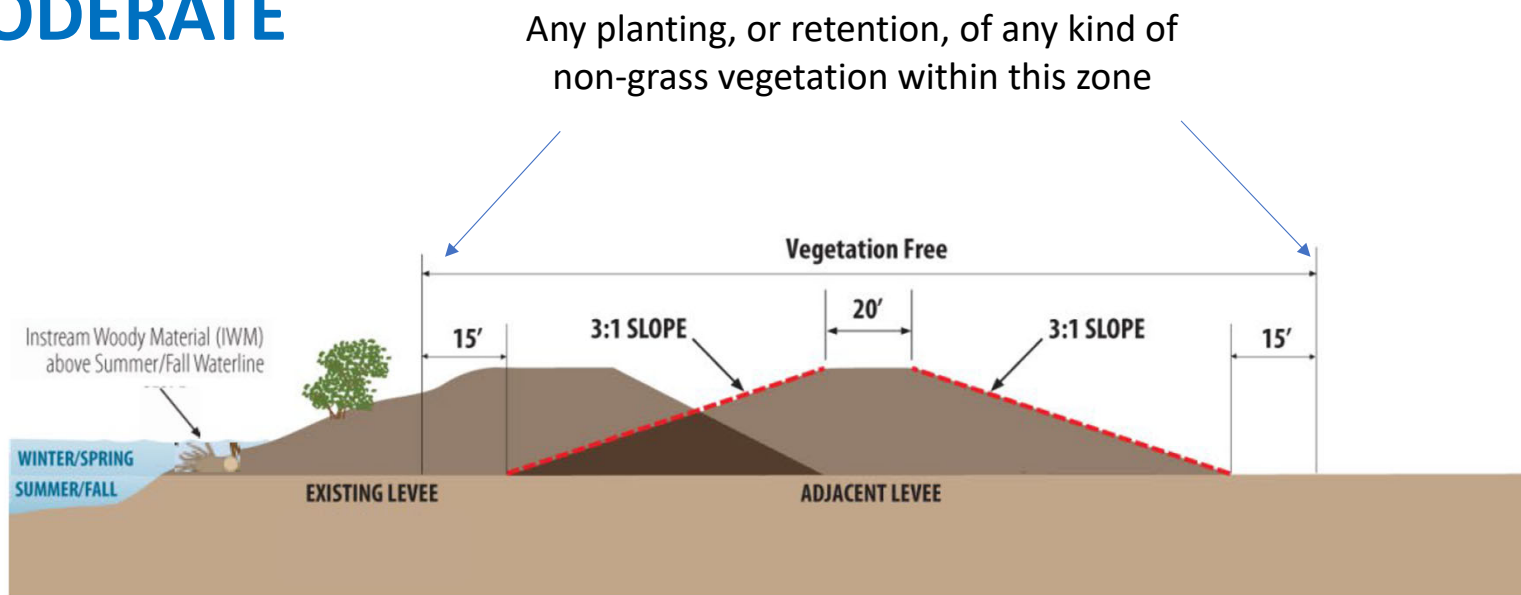


\* Considerations: If planting new large woody vegetation on the waterside of the levee, an analysis for stage increases or velocity changes may be required as part of the design risk assessment. Check with your engineering team.



# Situational Value of Design Deviation for Vegetation Adjacent Levees

## MODERATE

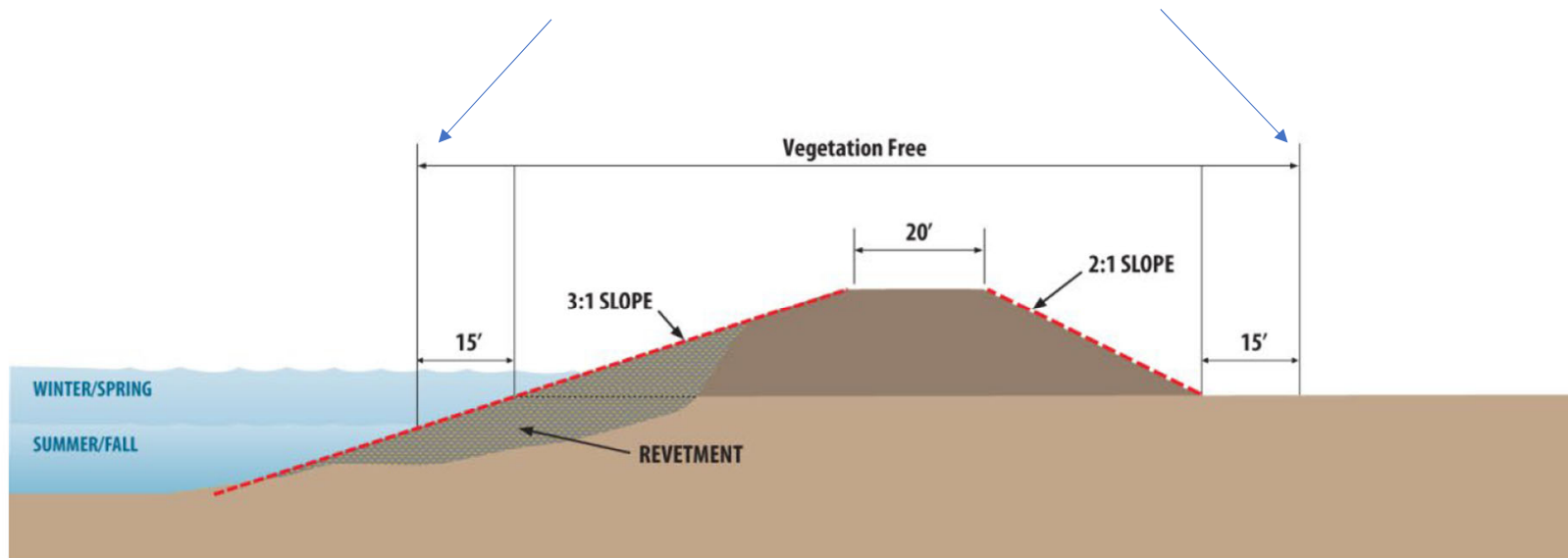


\*Considerations- Other laws may consider adjacent levees differently than USACE and therefore may have different vegetation rules. Check with your planner.

# Situational Value of Design Deviation for Vegetation Levee Prism Repair/Recovery

**HIGH**

Any planting, or retention, of any kind of non-grass vegetation within this zone



\*Considerations- There is no waterside habitat at this site, therefore any remnant habitat will be restricted to the levee.

# Other Future Project Design Considerations

## Future Project Designs Considerations

- A. Primary vegetation risks as informed by science
- B. Prioritizing habitat areas
  - A. Urban areas vs rural areas
  - B. On-site vs offsite mitigation
- C. Location on the river - integration of the repair into the levee system
- D. Design options to explore
  - A. Use of willows and riprap to prevent wake erosion (EWN)
  - B. Integration of forbs and grass allies for the vegetation free zone
- E. Climate change and levee projects' resiliency
- F. Emergency repairs constraints



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# Conclusion

## **Comprehensive solutions are needed**

Methods to reduce O&M costs from vegetation and to reduce disturbance to habitats from O&M are needed. Design sites to effectively reduce risk while reserving space for habitat. Adjacent/setback levees are more comprehensive solutions

**Design Deviations are a last resort** (where critical infrastructure adjacent to erosion site hinders other design alternatives and onsite mitigation can be within TRGs)

If needed, DDs/SQRAs should be done during design phase  
Consider on-going costs and capabilities of the LMA/sponsor during design  
May be needed in the future for emergency repairs

**Accurate cost comparisons are needed** (full cost of design deviation efforts plus the cost of maintenance; vs cost of setback levees; land acquisition vs VMP/O&M cost vs maintaining on-site mitigation in perpetuity; consider also schedule impacts)



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# Contact

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Geo-Sciences Section  
U.S. Army Corps of Engineers, San Francisco District  
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[Cyrus.M.Yaghobi@usace.army.mil](mailto:Cyrus.M.Yaghobi@usace.army.mil)

Lorena G. Guerrero  
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Planning Division  
USACE Sacramento District  
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# Section 408 Permissions

JESSICA VARGAS  
SECTION 408 COORDINATOR  
SAN FRANCISCO DISTRICT

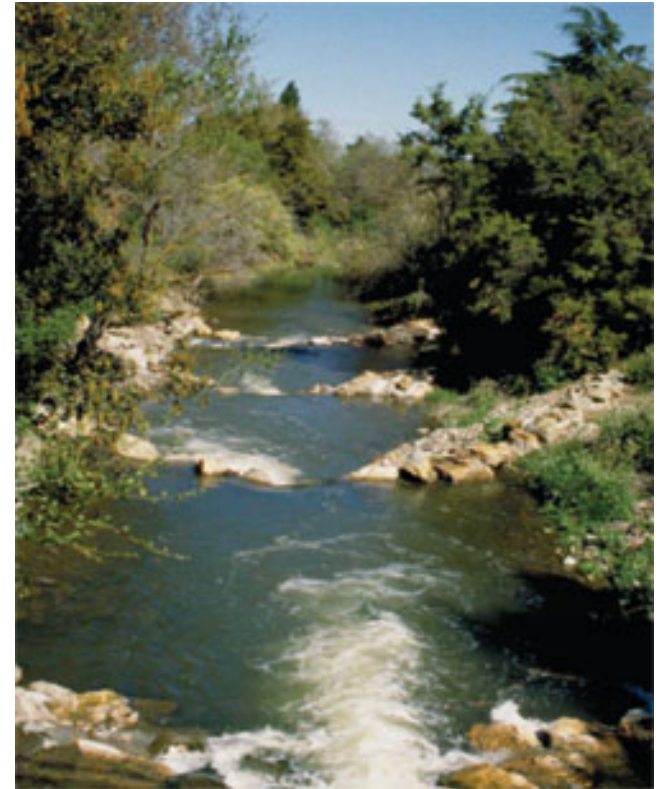


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# What is Section 408

- Rivers and Harbors Act 1899, as amended, Section 14
- 33 USC § 408 (Section 408)
  - *Unlawful to any person or persons to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States...the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work.*



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# Examples of 408 Requests



Dredging to widen/deepen channels and harbors



Road or utility crossing of levees and channels



Armoring or modifications to beach fill



FRM Channel Restoration Projects



Levee raises and improvements



Recreation improvements/additions to levees

## Section 408 and Maintenance

408 Permission is not required for Sponsor maintenance and repair activities.

- Regular Operations and Maintenance activities including flood fighting and/or emergency activities, as specified in the USACE-issued O&M manual
- Activities to restore the federal project to the physical dimensions and design of the constructed project without any changes to the real property, existing design features, or physical dimensions or performance of the USACE project



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# Section 408 Required

When does 408 apply?

- Proposed project that would go over, under or through a federal project
- An activity affecting a USACE project not yet constructed or under construction is considered to be an alteration, occupation, or use of the federal project
- 408 request can come from Sponsor or other entity

Enforcement:

- It is the policy of USACE to pursue enforcement and correction of unauthorized alterations and encroachments
- Sponsors with O&M responsibilities for the federal project are responsible for ensuring no unauthorized alterations are occurring within the project boundaries
- Unauthorized encroachments may result in unacceptable ratings during USACE inspections and affect PL 84-99 eligibility



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# Section 408 Review Process

- EC-1165-2-220 - Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408
- San Francisco District Section 408 Procedural Review Plan for Low-Impact Alteration Requests
  - Section 408 provides USACE authority to grant permission to alter a USACE civil works project if:
    1. Does not impair usefulness of the project
    2. Not injurious to the public interest
  - Regulatory Division Permits cannot be issued if a 408 is needed.

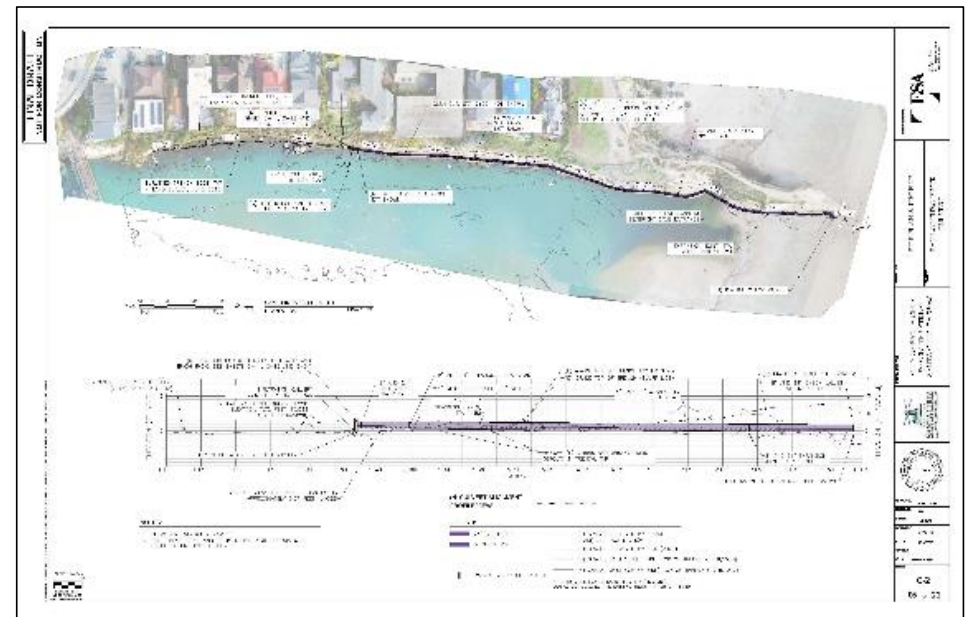


# Section 408 Review Process

Early coordination is encouraged to determine if a 408 permission is required.

Review requirements:

1. Statement of No Objection
  - From the Non-Federal Sponsor
2. Technical Review
  - Engineering
  - Environmental
3. Real Estate Review
4. NEPA





# Contact

Jessica Vargas

Section 408 Coordinator

Jessica.M.Vargas@usace.army.mil

(415) 503-2936

<https://www.spn.usace.army.mil/Missions/Projects-and-Programs/Section-408-Program/>



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# Q+A and Group Discussion

Questions on PL 84-99, Vegetation on Levees or 408 Permissions.



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## Lunch Break! Please return by 12:55

1200 – 1300	<b>Lunch Break</b>
1300 - 1400	<b>Afternoon Block 1: Flood Response (State and USACE)</b>
1400 - 1455	<b>Afternoon Block 2: Recovery and Repairs</b> <ul style="list-style-type: none"><li>- Requesting Flood Recovery Assistance</li><li>- Regulatory Permitting</li></ul>



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CALIFORNIA DEPARTMENT OF WATER RESOURCES

# State-Federal Flood Operations Center

## *Overview and 2023 Flood Response*

Lance Ablang, PE

State-Federal Flood Operations Center  
DWR Hydrology and Flood Operations Branch

Wade Wylie, PE

Flood Projects Inspection & Assessment Section  
DWR Hydrology and Flood Operations Branch





## **DWR's Mission**

### ***Protect:***

- Life, property, and infrastructure
- Water quality and water supply
- Environment

### ***Authority – derived from:***

- CA Emergency Services Act (Govt. Code 8607)
- State Emergency Plan
- CA Water Code Section 128

## FOC Responds to...

- High water / flooding
- Large and/or intense storms
- Earthquakes / tsunamis
- Dam incidents

## FOC's Role

---

*Coordinate DWR's  
response to flooding  
statewide*

- Two centers
  - Sacramento
  - Eureka





## FOC Coordination

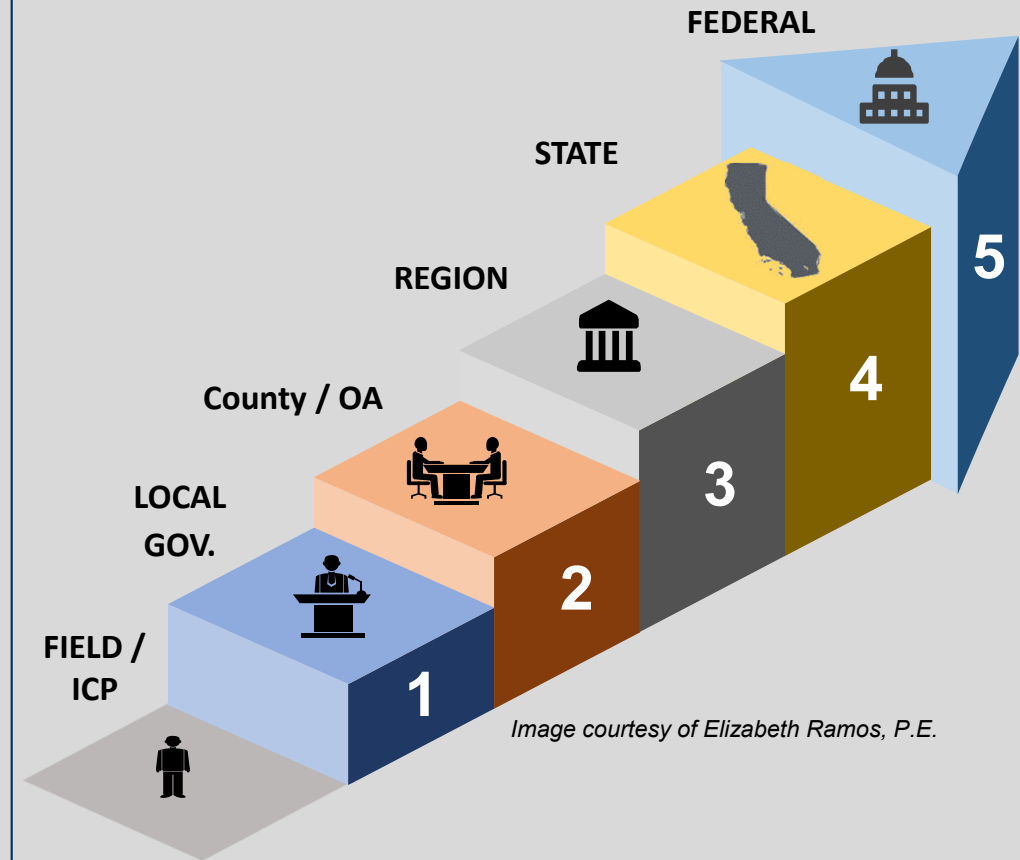
### *Provides:*

- Situational awareness
- Technical and direct assistance
- Conduit for federal assistance under Public Law 84-99

### *Does NOT:*

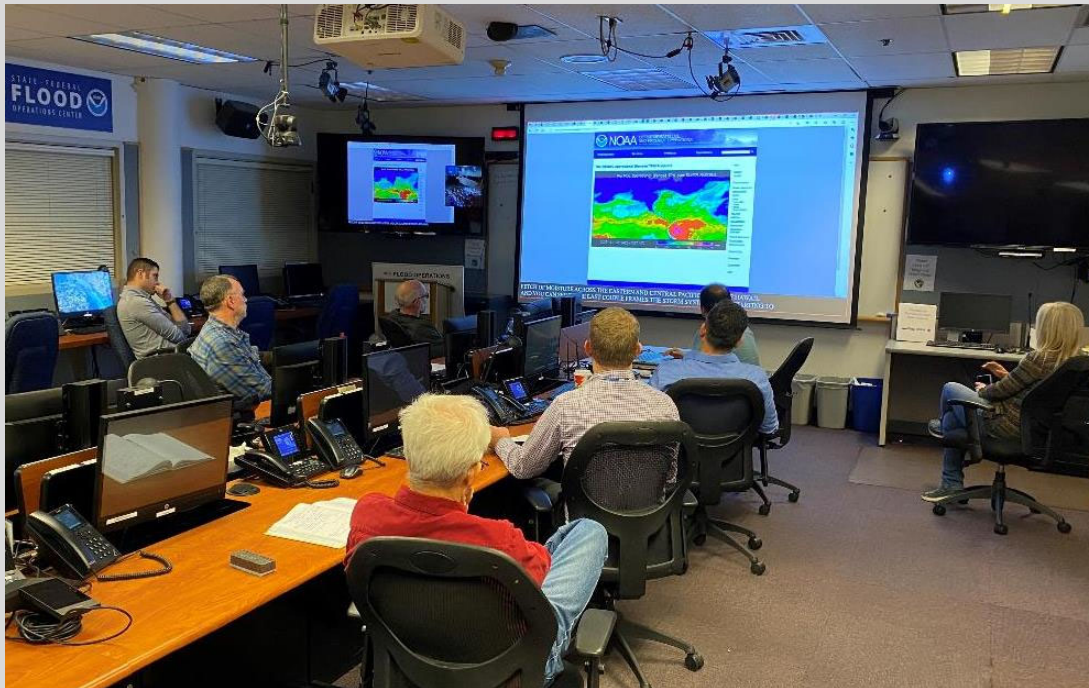
- Declare emergencies
- Order evacuations
- Repair levees

## SEMS Structure



Emergencies start and end at the local level

## DWR / NWS Weather and Hydrology Briefings



- Available online
- Past access = current access
- To request access:  
[flood.webmaster@water.ca.gov](mailto:flood.webmaster@water.ca.gov)
- Email notice sent when briefings are posted online

## Flood Emergency Assistance

*DWR is the lead state agency for flood emergency response*

Technical Assistance –  
Always provided upon request



Direct Assistance –  
May or may not be provided based  
on the FTMP



# Resources

California Data Exchange Center (CDEC)

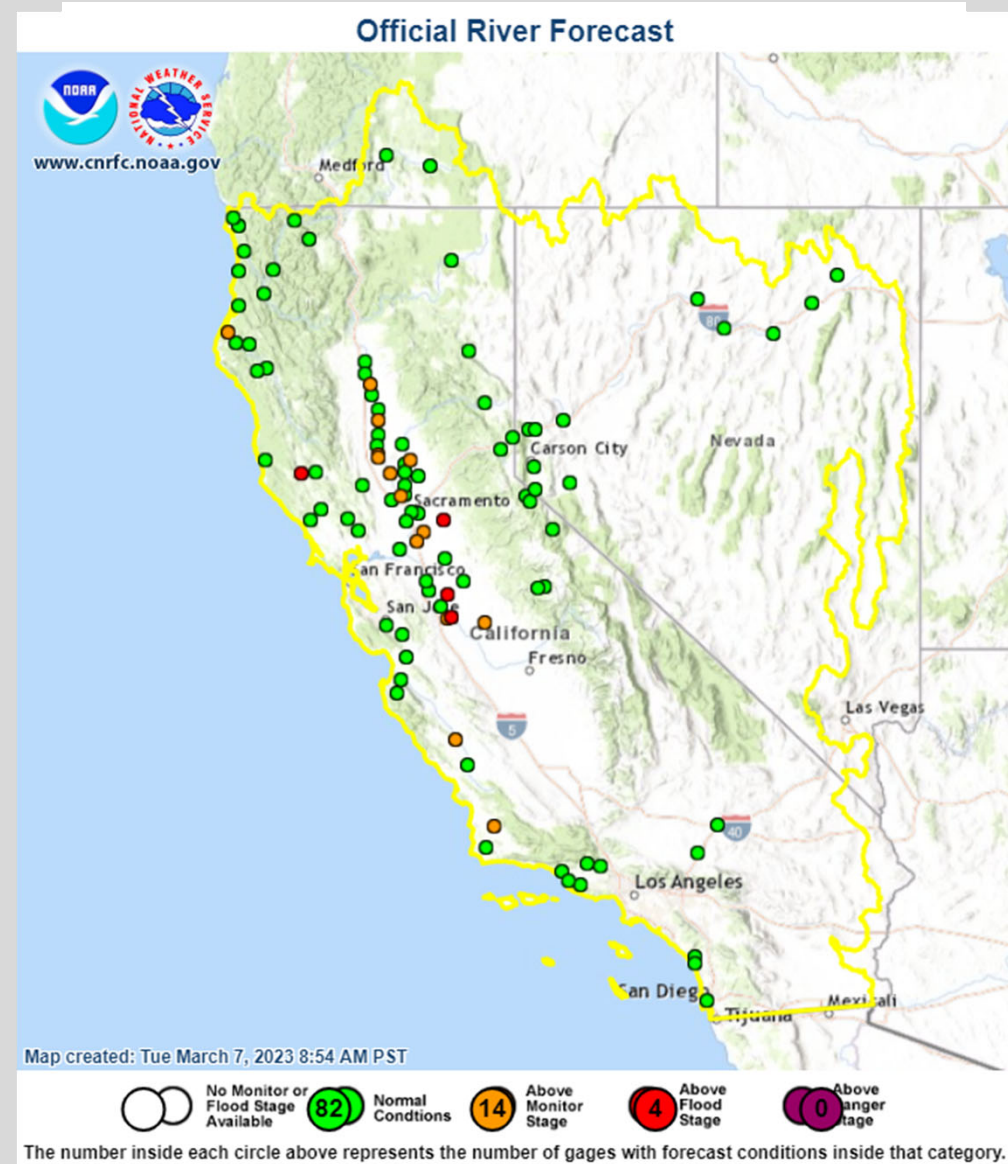
<http://cdec.water.ca.gov>

California Nevada River Forecast Center

<http://www.cnrfc.noaa.gov/>

Division of Flood Management

<https://www.water.ca.gov/Programs/Flood-Management>



## Bottom line:

To request DWR assistance:

- Follow the SEMS structure  
Local → County (OA) → DWR
- DWR Technical Assistance = always provided
- DWR Direct Assistance = flood threat mitigation process
- Flood fight materials can be pre-positioned



# Flood Fighting Methods Training

**California Department of Water Resources  
Division of Flood Management**



# Training Benefits



- Tried and true methods
- Group organization (emphasis on efficiency)
- Class size 15-30 participants
- All day course

# Morning Classroom Instruction



- Examples of past flood fighting events
- Identification of flood related threats
- Mitigation of related threats



# Afternoon Hands-On Instruction



- Build flood fight structures
- Demonstrate flood fight crew management

# Flood Fight Materials

## California Department of Water Resources Division of Flood Management





# Flood Fight Materials

- Sandbags
- Plastic Sheeting
- Wooden Stakes
- Twine
- DWR Buttons
- Rock



# Flood Fight Materials





# Other Flood Fight Material

## Muscle Wall



## Super Sacks

# FFM Locations

- North Coast
- Northern California
- Delta
- Central Coast
- Central Valley
- Southern California





# Warehouse Storage



## Warehouse locations:

- Sacramento
- Sutter County
- Stockton
- Delta
- Pomona

# Flood Fight Material Containers

- One Mile Wave Wash Protection
- Each container has:
  - Sandbags: 12,000 each
  - Plastic Sheeting: 54 rolls
  - Twine: 1 case
  - Wooden Stakes: 2,160 each
  - DWR Buttons: 14,000 each



# Logistics

- Request from FOC
- Provide own material handling and transport
- Account for total weight of FFM requested
- Contact CalOES for assistance with material handling and transport







## State-Federal Flood Operations Center

(916) 574-2619

[flood\\_center@water.ca.gov](mailto:flood_center@water.ca.gov)

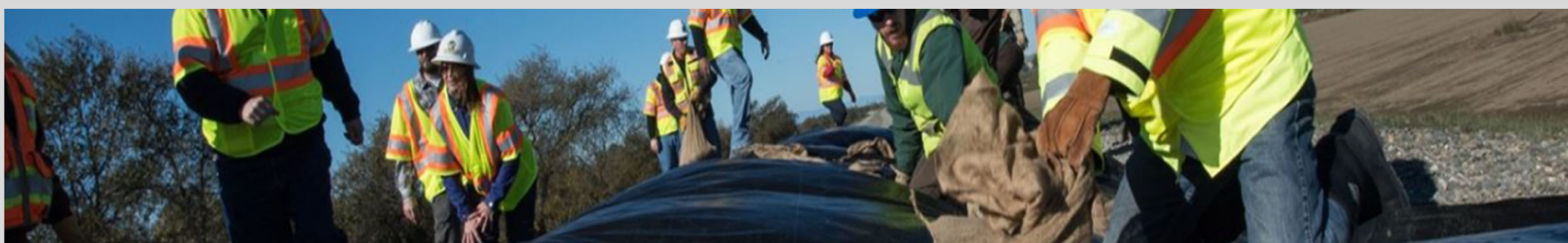


California Department of Water Resources

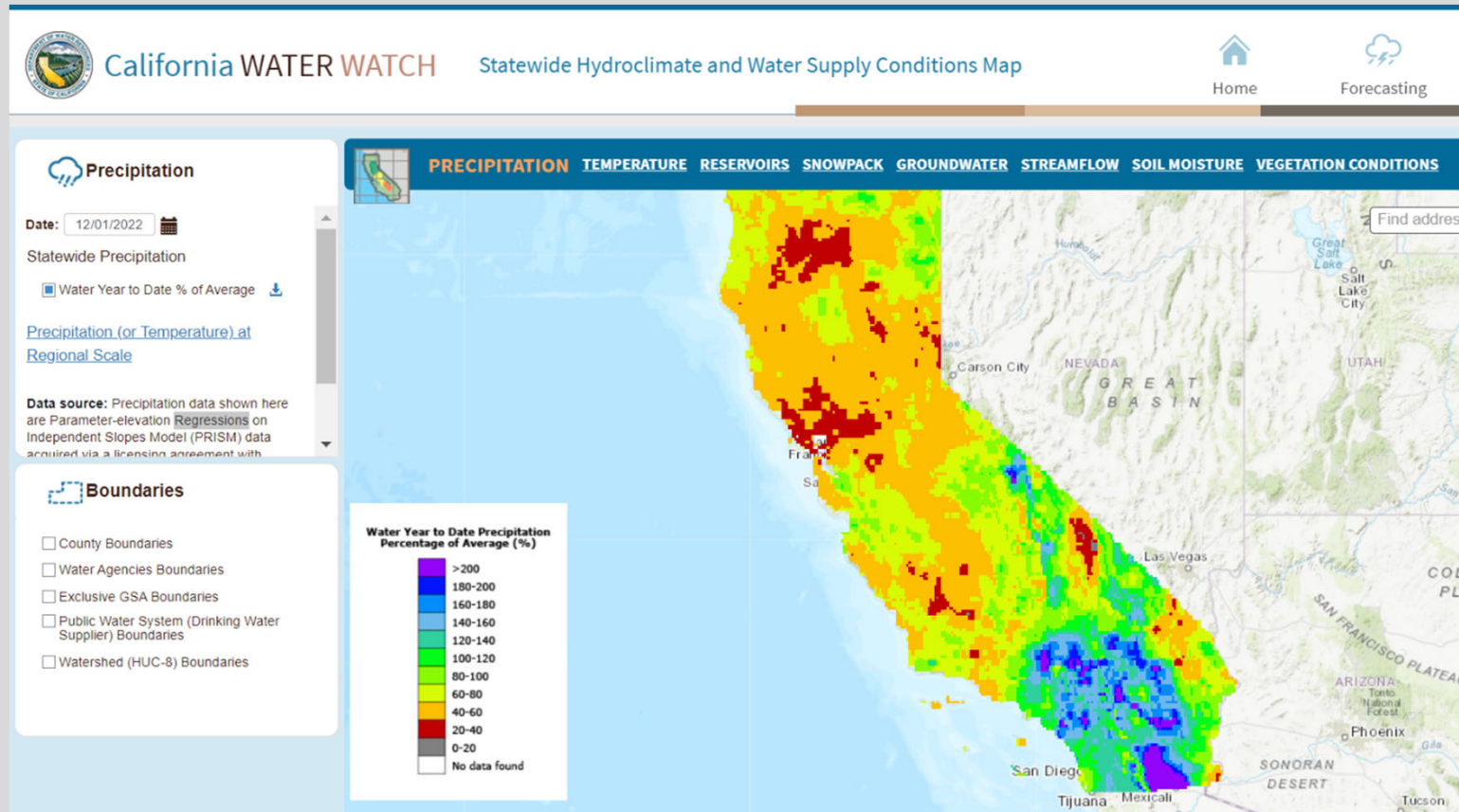
# 2023 Flood Response

*January –June: A Review of The 2023 Activation*

Wade Wylie, Division of Flood Management - FPIAS

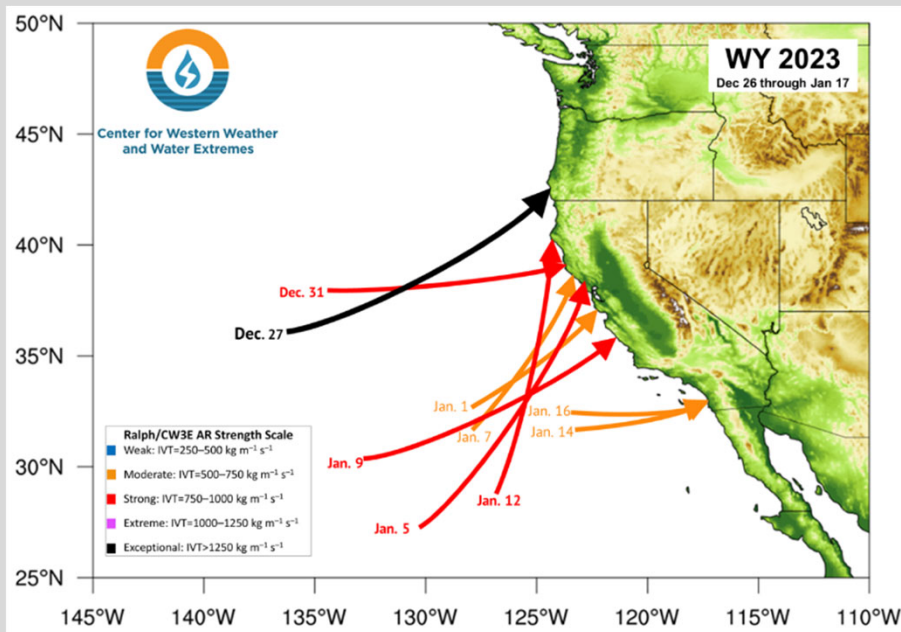


# December 1, 2022 - California Water Watch

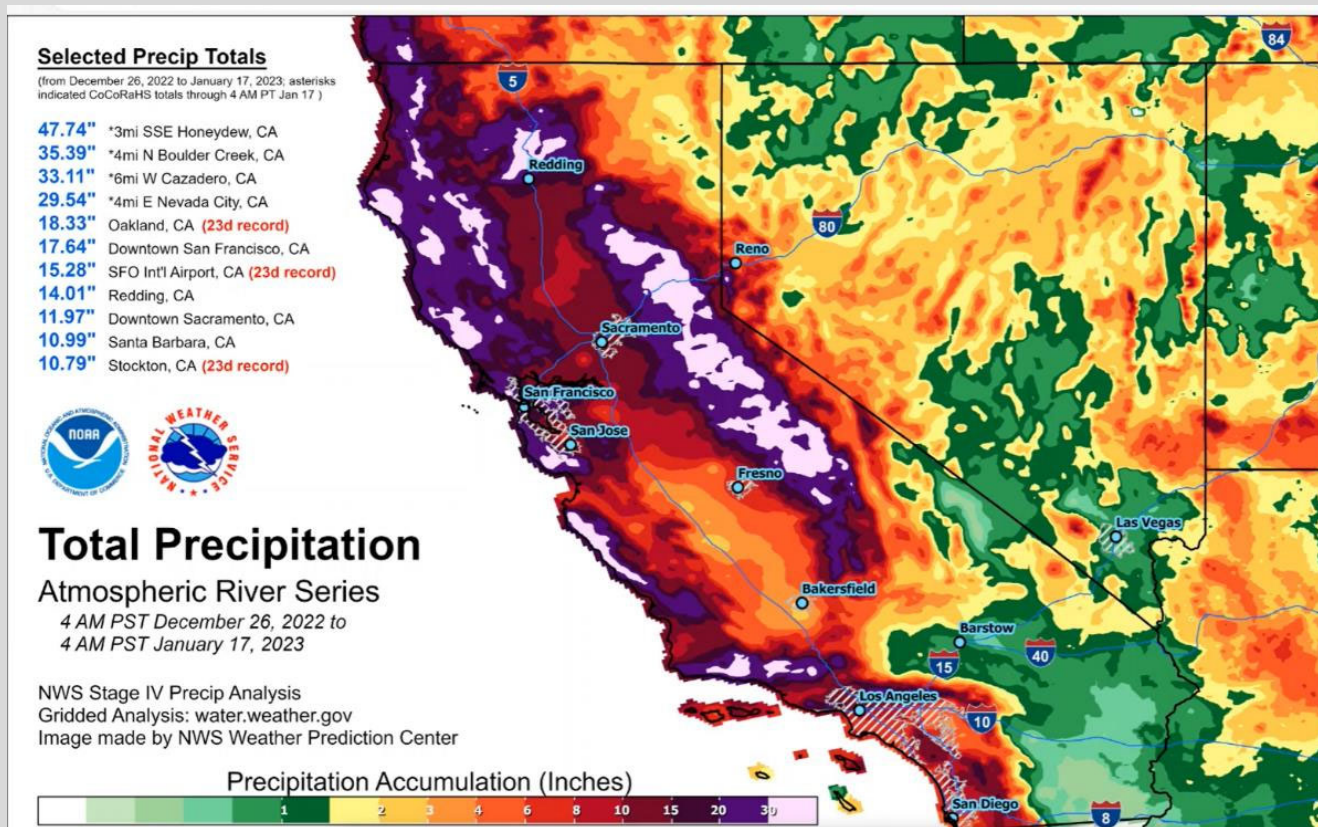


# Round 1 Storms January 2023

- 9 Atmospheric Rivers in 3 weeks
- 1 Exceptional
- 4 Strong
- 4 Moderate

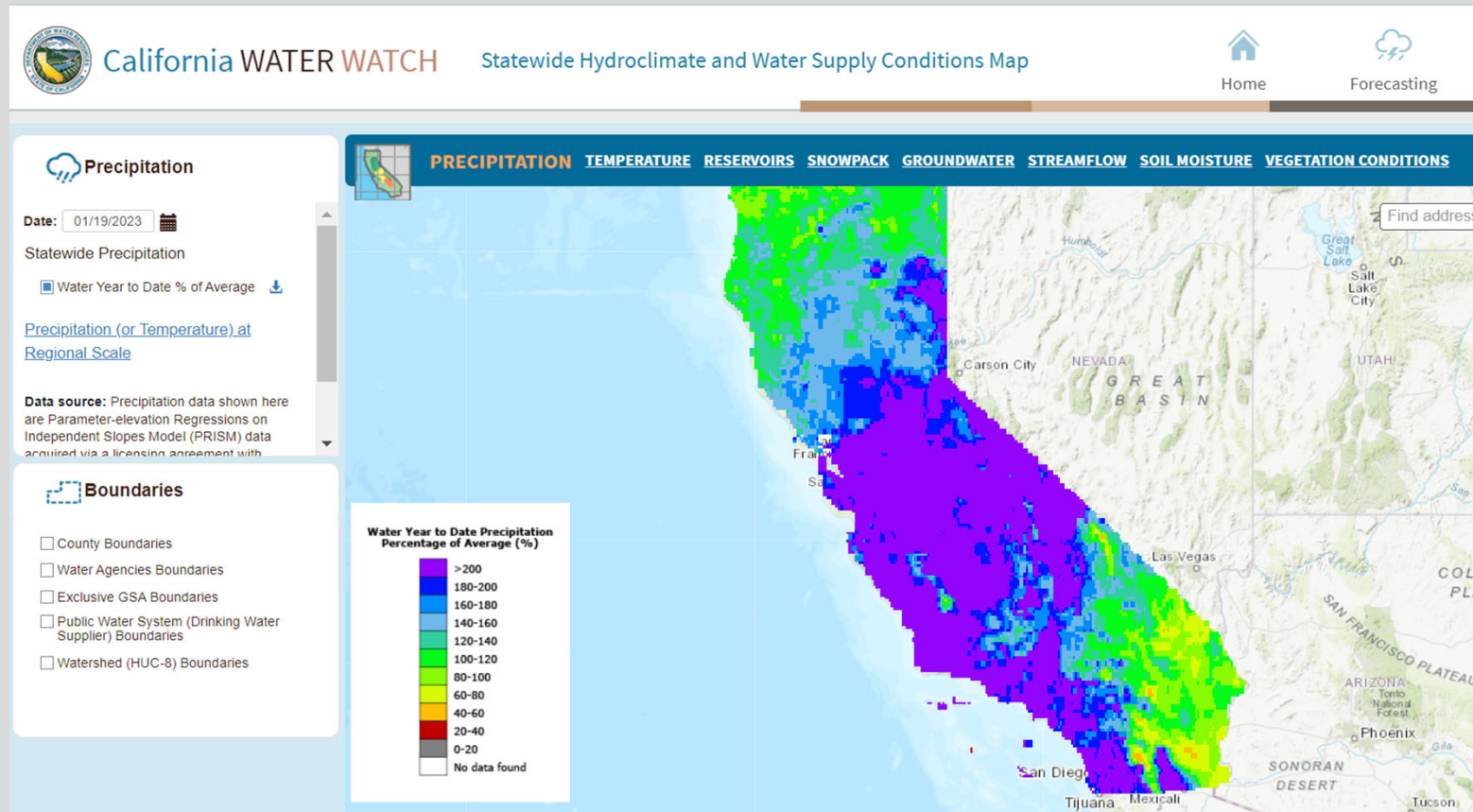


# The Hazard: Extreme 20-day Cumulative Rainfall Totals





# Conditions January 19, 2023



California Water Watch

# DWR Response:

## Activated Flood Operations Center (Jan 3- Jan 20<sup>th</sup>)

- Deployed Flood Flight Specialists, CCC Crews, Geotechnical Engineers, and Incident Command Teams
- Coordination with NOAA/CNRFC, FEMA, US Army Corps. of Engineers, Caltrans and CAL OES
- River, Reservoir and Snowmelt Forecasting
- Provided Flood Fight Materials
- Provided Liaisons to Multiple EOCs
- FOC Staffing Peak 153
- DWR Staffing Peak 258
- 57 incidents, 217 Comms Logs





## DWR R

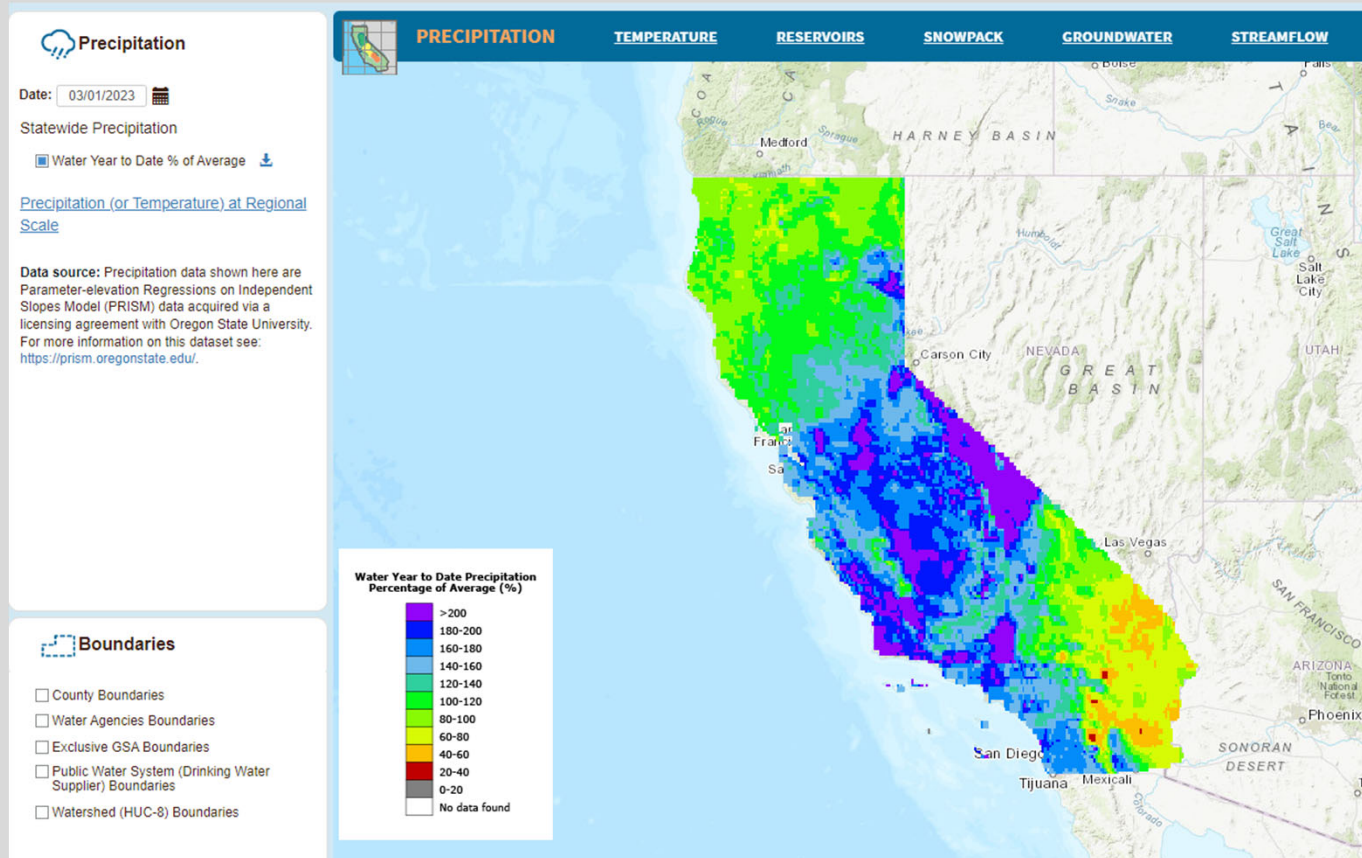
- Cosumnes Overtopping
- LSJLD Erosion
- Merced-Bear
- RD 1600 S



## Round 2 – Cold Storms

- After a month-long break in storm activity, a series of cut-off lows move south from Gulf of Alaska bringing heavy snow to California
- Several locations not used to snow were impacted leading to a second emergency declaration.

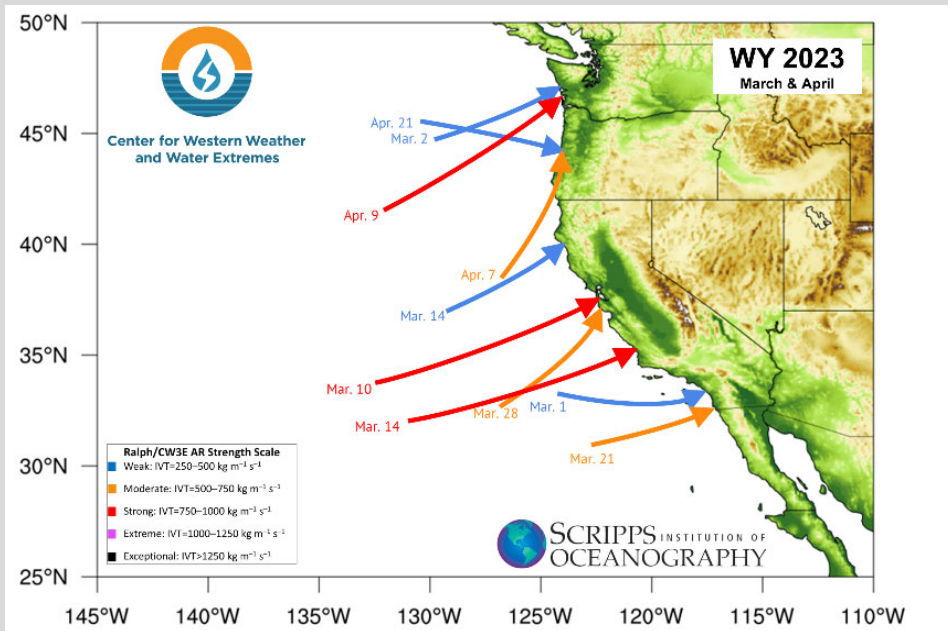
# Conditions March 1, 2023



California Water Watch

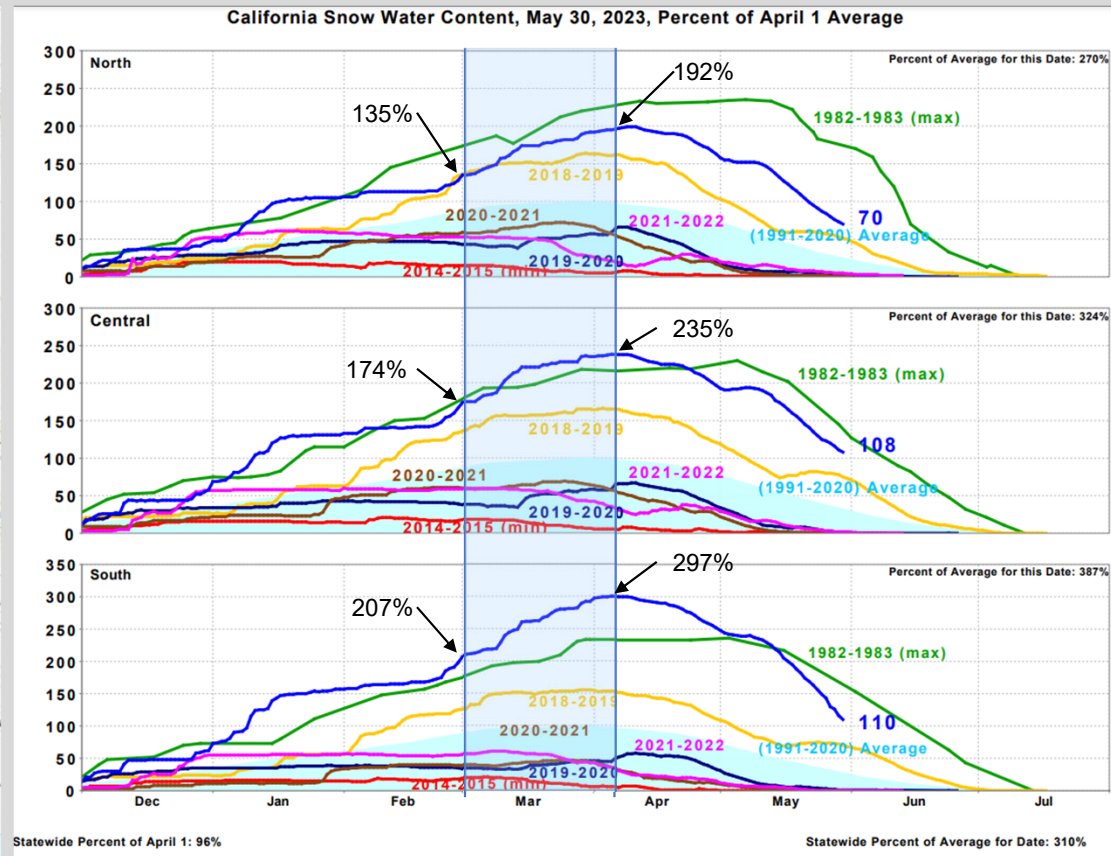
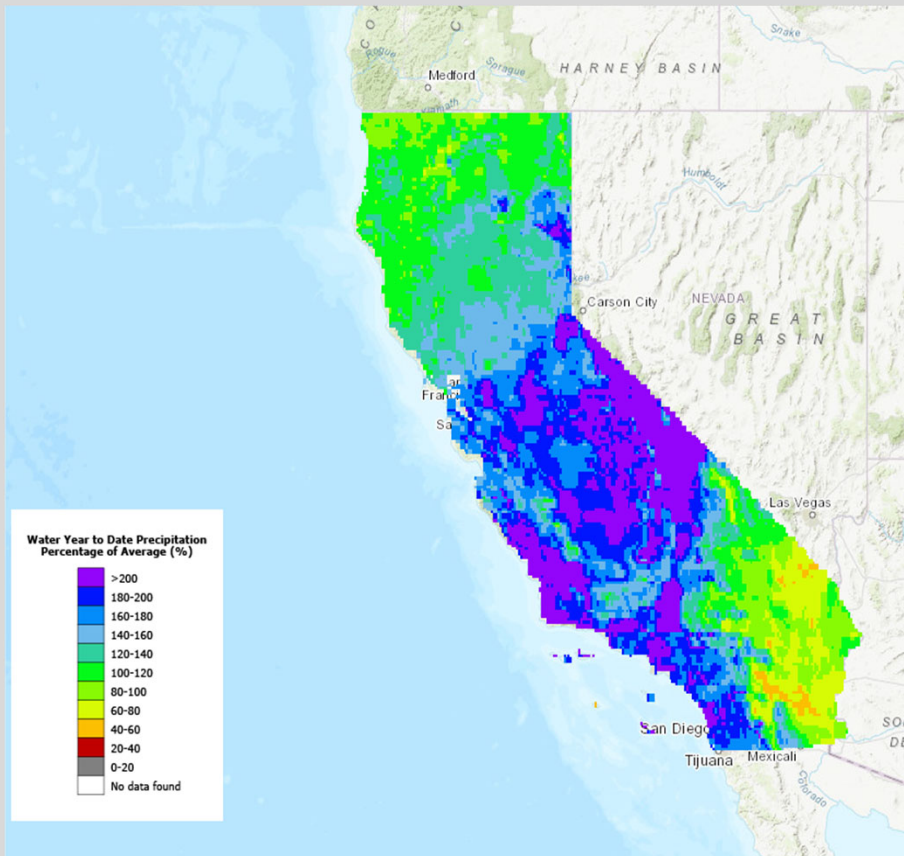


# Round 2 Storms March - April 2023



- 7 Atmospheric Rivers in 5 weeks
- 2 Weak
- 2 Strong
- 3 Moderate

# Conditions March 31, 2023

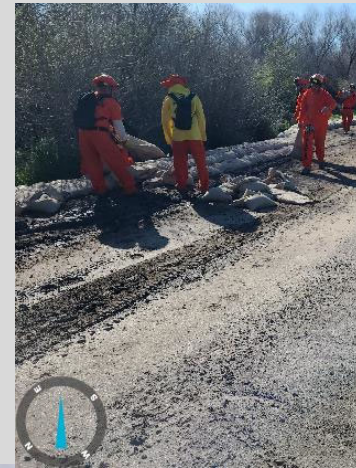




# DWR Response:

Activated Flood Operations Center March 9- June 16

- Deployed Flood Flight Specialists, CCC Crews, Geotechnical Engineers, and Incident Command Teams
- Coordination with NOAA/CNRFC, FEMA, US Army Corps. of Engineers, CALFIRE, Caltrans, and CAL OES
- River, Reservoir and Snowmelt Forecasting
- Provided Flood Fight Materials
- Provided Liaisons to Multiple EOCs
- Created the Tulare Basin APU
- FOC Staffing Peak 211
- DWR Staffing Peak 266
- 25 incidents, 211 Comms Logs

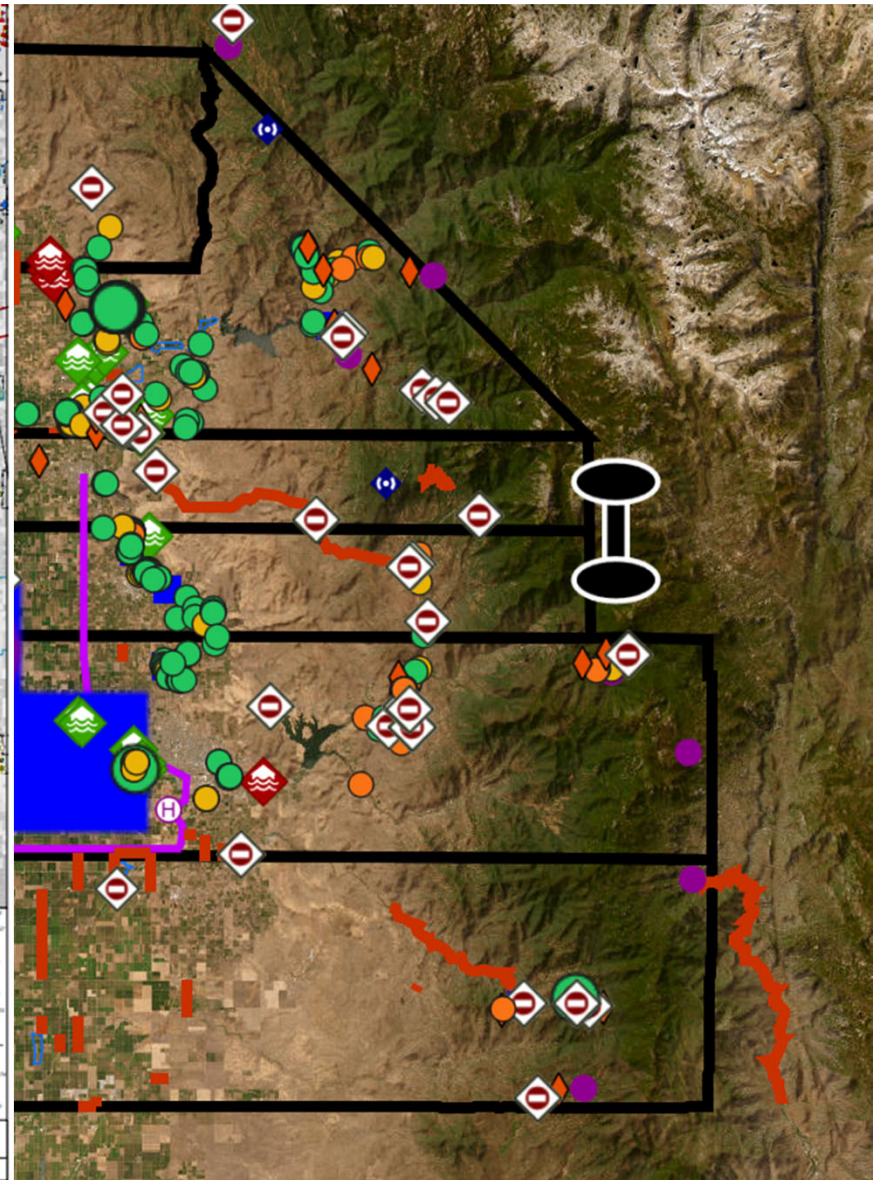
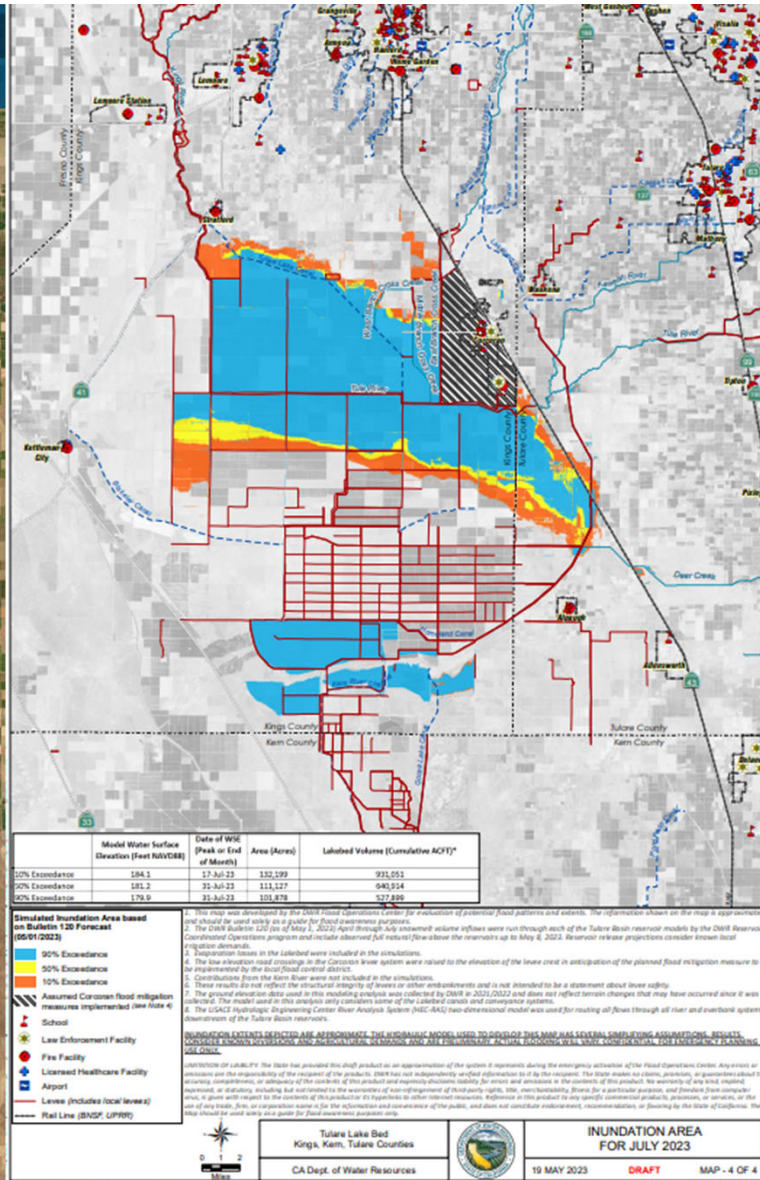




DW

Map

- Pajaro
- RD 209
- RD 206
- LSJLD
- Inunda
- Tulare
- Tulare
- Much M





# **San Joaquin System Conditions** for the San Joaquin Hydrologic Region Reservoirs through July Bulletin 120 forecast, Reservoir, and River data

Stanislaus River	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	1,450,000	364,152	1,085,848	32,800 May 26, 2023
50%	1,630,000		1,265,848	
10%	1,820,000		1,455,848	

Tuolumne River	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	2,610,000	486,437	2,245,848	53,400 May 26, 2023
50%	2,750,000		2,385,848	
10%	2,970,000		2,605,848	

Merced River	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	1,420,000	151,935	1,055,848	38,100 May 25, 2023
50%	1,550,000		1,185,848	
10%	1,700,000		1,335,848	

San Joaquin River	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	2,930,000	3,380,000	2,540,000	100,000 May 26, 2023
50%	3,130,000		2,740,000	
10%	3,380,000		2,990,000	

Merced Streams Group	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	1,420,000	151,935	1,055,848	38,100 May 25, 2023
50%	1,550,000		1,185,848	
10%	1,700,000		1,335,848	






San Joaquin River	A-J Forecast Volume (af)	Obs Runoff Volume (af)	A-J Remaining Volume (af)	CNRFC forecast Peak day Runoff (af)
90%	2,930,000	3,380,000	2,540,000	100,000 May 26, 2023
50%	3,130,000		2,740,000	
10%	3,380,000		2,990,000	

## **Reservoir Inflow Forecasts and Reservoir Coordination with Partner Agencies**

Snowmelt and Seasonal Runoff Forecasts are ingested into reservoir operations models

Reservoir operations models can generate downstream river stage forecasts based on expected, wetter, or drier runoff possibilities from snowmelt runoff

These model results are communicated weekly to partner agencies and emergency managers in the San Joaquin Valley and Tulare Lake Basin

Dam, River	Operator	Volume Encroached <sup>1</sup> (af)	Inflows <sup>1</sup> (cfs)	Releases <sup>1</sup> (cfs)	Current Flows <sup>2</sup> (cfs, gage ht ft)	Target Flows <sup>3</sup> (cfs)	10% Forecast River Flows (cfs)
New Melones		-700,739	4,128	2,131	1,502	8,000	2,000
Stanislaus River					Orange Blossom		
Don Pedro		485,256	6,146	11,381	10,628	10,500	10,900
Tuolumne River					Modesto		
New Exchequer		11,235	3,500	6,000	5,135	6,000	6,000
Merced River					Stevinson (MST)		
Friant		148,430	6,724	9,642	6,377	8,000	12,000
San Joaquin River					Gravelly Ford		
Pine Flat					4,750	4,750	4,750
Kings River		378,814	7,136	12,896	Crescent Weir <sup>4</sup>		

River/Gage	Station	Monitor Stage (cfs)	Flood Stage (cfs)	Current Flows <sup>2</sup> (cfs)	1983 Peak Flows (cfs)	2017 Peak Flows (cfs)	Daily Flow peak-to-date	90% Flood Release (cfs)	50% Flood Release (cfs)	10% Flood Release (cfs)
San Joaquin River	Vernalis	20,600	33,700	28,646	45,100	41,700	36,694	24,000	32,000	36,000
San Joaquin River	Patterson	16,000	-	15,341	28,700	23,273	21,512	14,000	22,000	26,000
San Joaquin River	Newman	10,000	-	11,686	30,700	21,500	18,083	11,000	19,000	23,000
Eastside Bypass	El Nido	n/a	n/a	9,875	n/a	12,708	14,738	6,000	8,000	10,000
James Bypass	James Bypass	n/a	n/a	4,204	n/a	3,440	4,315	4,100	4,300	4,750



- Expanded Flood Fight Material
  - Quantities
  - Locations
- Requested Needed Replacement FF Materials from USACE
- Deployed since January:
  - Burlap Sandbags: 1,599,400
  - Plastic Sandbags: 304,000
  - Plastic Sheeting (rolls): 1,177
  - Twine Cases: 29
  - Stakes: 29,160
  - Button Cases: 12
  - Super Sacks: 23,750
  - Muscle wall: 1.9 miles
  - 9 Flood Fight Containers





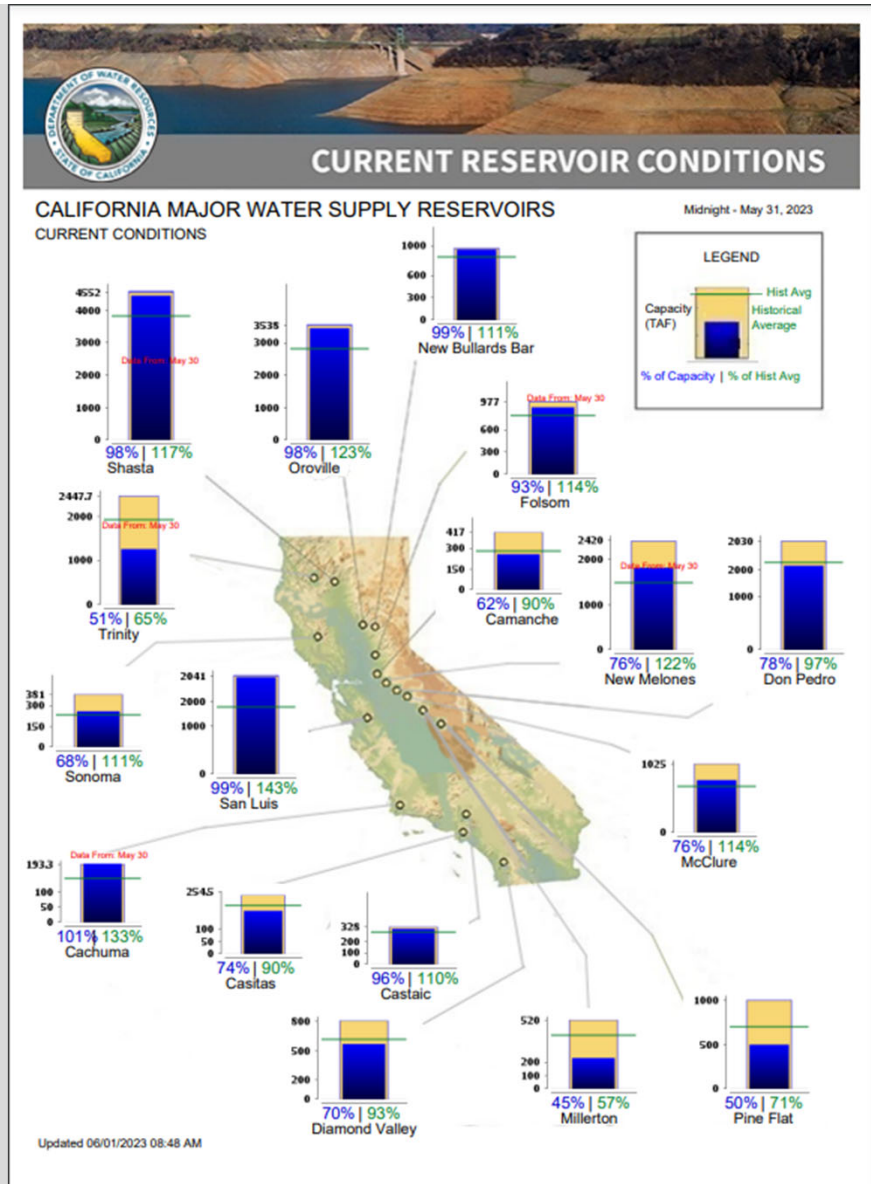
# DWR Readiness

- Technical Assistance
- Resource Requests
- Hydrology and Modeling Products
- Emergency Contracts
- Coordination with LMA's and Reservoir Operators





# The Benefit!



# USACE PL 84-99 Flood Response

HOLLY COSTA  
EMERGENCY MANAGEMENT CHIEF  
SAN FRANCISCO DISTRICT



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## Public Law (PL) 84-99

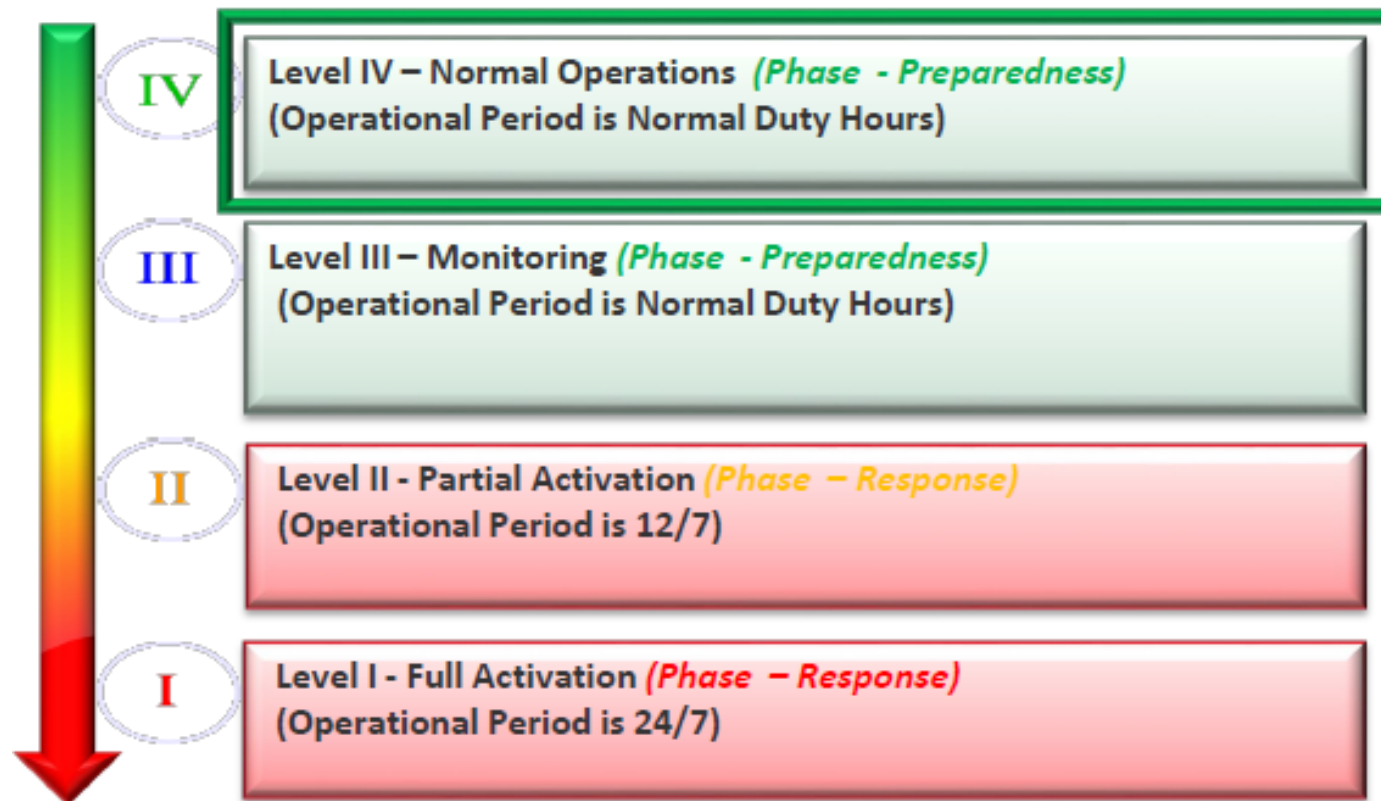
**PL 84-99 Emergency Flood Protection Act of 1965, as amended, authorizes preparedness, response, and recovery from natural disasters.**

- Disaster Preparedness
- **Emergency Operations**
- Rehabilitation & Inspection
- Emergency Water/Drought
- Advance Measures
- Hazard Mitigation



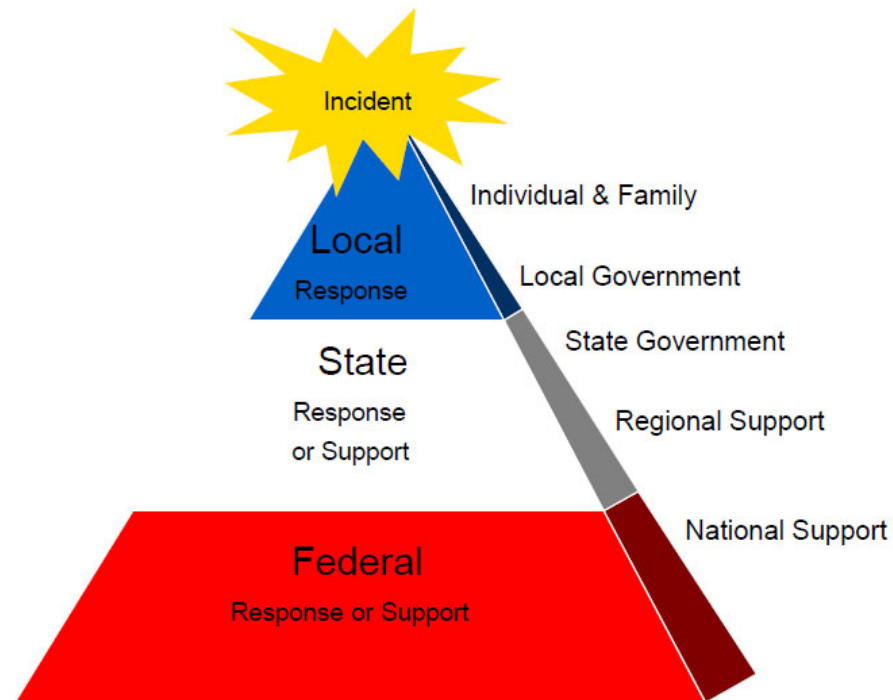
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## Levels of EOC Activation





# State and Local Responsibility



- **Emergency preparedness and response is primarily a state and local responsibility.**



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# Flood Fight Assistance

Flood fight assistance may be applied when the following criteria are met:

- Declaration of Emergency
- Rivers are at or above flood stage
- Local resources are fully employed



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# Technical Assistance

Consists of providing review and recommendations in support of state and local efforts and helping to determine feasible solutions to unusual situations.

Evaluation of flood risk management (FRM) projects:

- identify potential problems (seepage, boils, etc)
- evaluate conditions to determine the requirements for additional protection

Recommendations:

- Solutions to address problems found in FRM projects
- Providing hydraulic, hydrologic, structural and/or geotechnical analysis
- Flood fight planning



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## Direct Assistance

### Issuing supplies

- Sandbags, plastic sheeting, etc.

### Loan of equipment

- Pumps, sandbag filling machines, etc.

### Manage flood fight operations

- Requested by appropriate state or local officials
- Legal responsibility remains with state or local officials

### Contingency contracting

### Levee reinforcement and/or raise

### Channel clearance/dredging

Deliberate levee cut must be coordinated with USACE to be eligible for rehabilitation assistance



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# Advance Measures

Advance Measures are performed due to an imminent threat of unusual flooding for protection against loss of life and damages to urban areas and/or public facilities.

## Requirements:

- Written request from Governor/Tribe
- Project Information Report (PIR) – approved at HQ
- Must be engineeringly feasible and capable of being constructed prior to flooding
- Signed Cooperation Agreement (CA)
- Cost sharing:
  - 100% Federally funded for investigation and design
  - Temporary construction: 100% Federal
  - Permanent construction: 75% Federal/25% local

Intended to be temporary and removal is a local responsibility



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# Flood Fight Assistance

- All Federal flood fight assistance is intended to be temporary, an emergency measure
- Corps flood fight assistance is 100% federally funded, with the exception of some supplies and equipment
  - Equipment must be returned in the same condition it was issued.
  - Unused stock returned.
  - Supplies expended must be replaced or reimbursed.
  - Commander may waive reimbursement if there is a Presidential Disaster Declaration.
- Removal or upgrade of all emergency measures is a local responsibility



# Ending Flood Response Activities

Field flood response activities substantially terminate when floodwaters recede to bankfull, absent a short-term (less than 72 hours) threat of a return to flood conditions.

The Ten Day Rule: USACE assistance may be provided for a **maximum of ten (10) days** from the date of receipt of the governor's request for assistance. Subsequent requests for additional assistance resulting from the same disaster will not extend the 10-day period or trigger a new 10-day period. No work, including contract work, shall be performed after the 10-day period expires.



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San Francisco District

# Contact

Holly Costa  
Emergency Management Chief  
[Holly.N.Costa@usace.army.mil](mailto:Holly.N.Costa@usace.army.mil)



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# Q+A and Group Discussion

Questions on State and USACE Flood Response.



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# Requesting Flood Recovery Assistance

HOLLY COSTA  
FANNY CHAN  
EMERGENCY MANAGEMENT  
SAN FRANCISCO DISTRICT



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San Francisco District

## Public Law (PL) 84-99

**PL 84-99 Emergency Flood Protection Act of 1965, as amended, authorizes preparedness, response, and recovery from natural disasters.**

- Disaster Preparedness
- Emergency Operations
- **Rehabilitation & Inspection**
- Emergency Water/Drought
- Advance Measures
- Hazard Mitigation



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# Rehabilitation & Inspection Program (RIP)

- Repair of eligible flood risk management (FRM) projects damaged or destroyed by floods or coastal storms.
- Inspections communicate flood risk to sponsors for determining O&M priorities.
- Inspections also inform PL 84-99 rehabilitation eligibility. An inspection results in a project status of either Active or Inactive.
- The intent of this program is to ensure that damaged flood risk management projects are operationally effective prior to the next flood season.
- RIP is closely linked to the Levee Safety Program



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# Rehabilitation Program Eligibility

Both Federal and Non-Federal FRM projects can be eligible (not just levees)

- Sponsor requests levee rehabilitation eligibility for Non-Fed FRM projects. Participation is voluntary
- Continuing Eligibility Inspections (CEI) verify that an Active FCW continues to meet minimum acceptable performance levels for the RIP.
- CEI's for FCW will normally be conducted on a biennial cycle.
  - FCW's that have undergone a CEI and received a project condition code of Acceptable or Minimally Acceptable will retain an Active status in the RIP.
  - An FCW that has an overall project condition of Unacceptable is immediately placed in an Inactive status, and the FCW Database appropriately updated.
- Results of CEI's will be provided to the sponsor and maintained at districts for a minimum of 10 years.



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# Rehabilitation Policy

- Active FCW damaged by a flood or coastal storm
- Assistance is intended to repair back to pre-disaster condition and level of protection
- Deficient/deferred maintenance is sponsor's responsibility
- Damages must exceed \$15,000
- Favorable Benefit Cost Ratio (BCR) is required\*
- Land, easements, rights-of-way, relocations and borrow sites are the public sponsors' responsibility to provide at no cost to the Federal Government



## Cost share

- Federal flood risk management project: 100% Federal
- Non-Federal flood risk management project: 80% Federal and 20% Local
  - Local cost share can be cash, work-in-kind, or combination
  - Work-in-Kind value is based on the Corps' estimate to accomplish work



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# Rehab Project Designs

- Intent of the Rehabilitation program is to repair back to the pre-flood level of protection
- Least cost alternative
  - Not always repairing back to pre-flood condition
  - Setbacks to reduce levee embankment required
- Improvements due to state-of-the-art technology
  - Not considered a betterment if required due to sound engineering principles.
  - Examples: use of geomembrane and increasing riprap size for updated scour models
- Increasing the cross section to increase reliability
  - Not considered a betterment if the increase is considered reasonable and necessary.
- Sponsor preferred alternative:
  - Sponsor pays the cost difference between least cost and sponsor preferred.



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# Rehabilitation Process

Flood event occurs – Disaster Declared

Corps issues Notice to Public Sponsors

Sponsors submit Request for Assistance

Corps conducts Field Investigation

Corps develops Project Information Report



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# Rehabilitation Process



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# Contact

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Emergency Management Chief  
[Holly.N.Costa@usace.army.mil](mailto:Holly.N.Costa@usace.army.mil)

Fanny Chan  
PL 84-99 Program Manager  
[Fanny.N.Chan@usace.army.mil](mailto:Fanny.N.Chan@usace.army.mil)



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# Q+A and Group Discussion

Questions on USACE and State Flood Response.



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# Regulatory Permitting

JAYME OHLHAVER  
SENIOR REGULATORY PROJECT MANAGER  
SAN FRANCISCO DISTRICT



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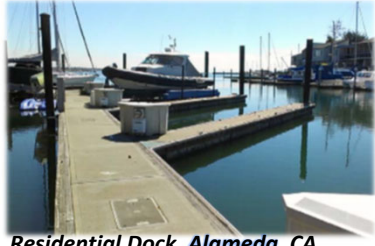


## Mission

*To protect the Nation's aquatic resources and navigation capacity, while allowing reasonable development through fair and balanced decisions.*



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# Corps' Regulatory Authorities

Authority	Geographic	Activity	
Section 10 Rivers and Harbors Act of 1899	Navigable Waters of the United States	All work over, through, and under navigable waters (e.g. dredging, docks, and beach renourishment)	 <i>Residential Dock, Alameda, CA</i>
Section 404 Clean Water Act of 1977	Waters of the United States (including wetlands)	Discharge of dredged or fill material	 <i>Alameda Creek, Fremont, CA</i>
Section 103 Marine Protection, Research, and Sanctuaries Act	Ocean	Transportation of dredged material for the purpose of disposal in the ocean	 <i>Hopper dredge Essayons, Pacific Ocean</i>



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## Jurisdiction Limits – Tidal Waters

**High Tide Line:** shoreward limit of jurisdiction for **Section 404**; intersection of land and water at the **maximum** height reached by a rising tide.



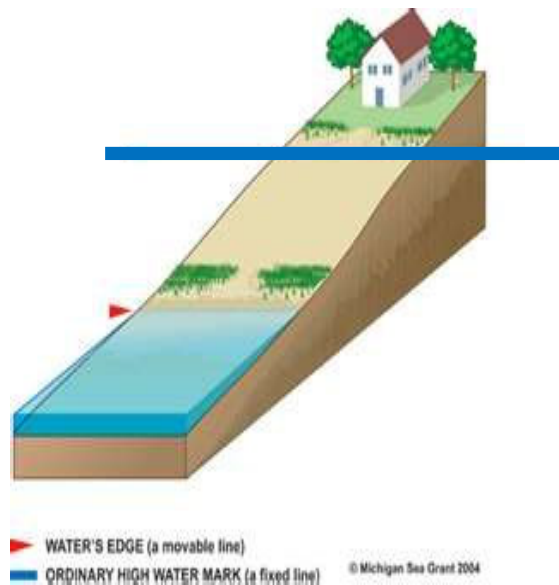
**Mean High Water:** shoreward limit of jurisdiction for **Section 10**; line on the shore reached by the plane of the average high water.



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# Jurisdiction Limits – Non-Tidal Waters

**Ordinary High Water:** shoreward limit of jurisdiction for **Section 404 (and Section 10 if navigable)**; line on the shore established by normal fluctuations in water level.



## Wetlands\*

- Hydric Soils
- Hydrophytic Vegetation
- Hydrology

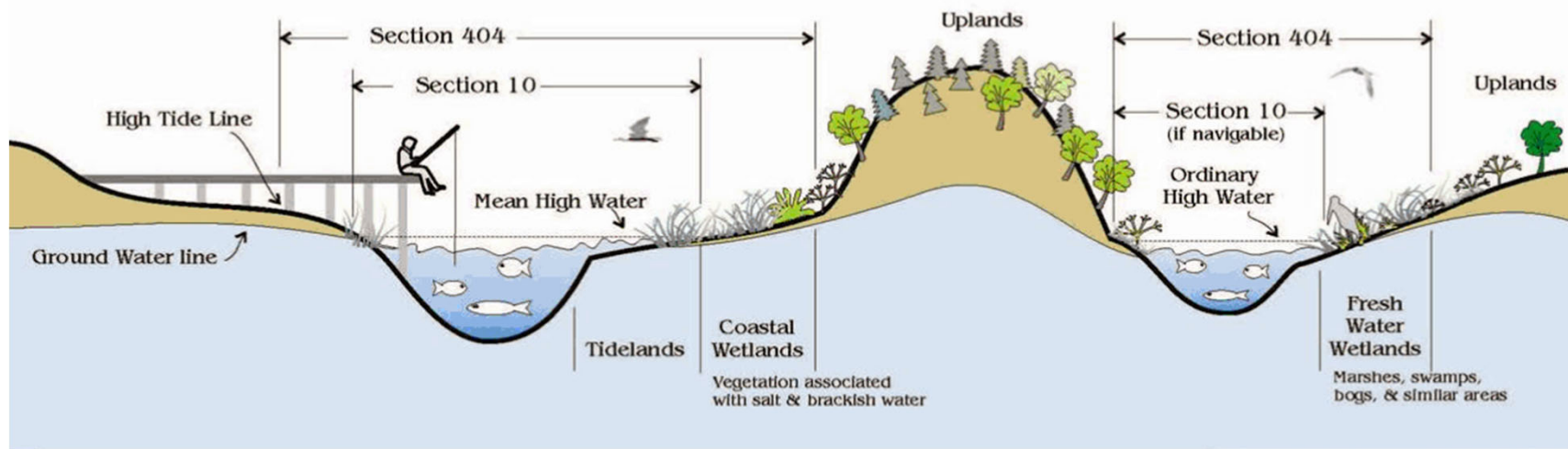


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# CORPS OF ENGINEERS REGULATORY JURISDICTION

## Tidal Waters

## Fresh Waters



Typical examples  
of regulated activities

### **Section 103** Ocean Disposal of Dredged Material

Ocean discharges of  
dredged material

### **Section 404** Discharge of Dredged or Fill Material (all waters of the U.S.)

All filling activities, utility lines, outfall structures,  
road crossings, beach nourishment, riprap,  
jetties, some excavation activities, etc.

### **Section 10** All Structures and Work (navigable waters)

Dredging, marinas, piers, wharves,  
floats, intake / outtake pipes,  
pillings, bulkheads, ramps, fills,  
overhead transmission lines, etc.

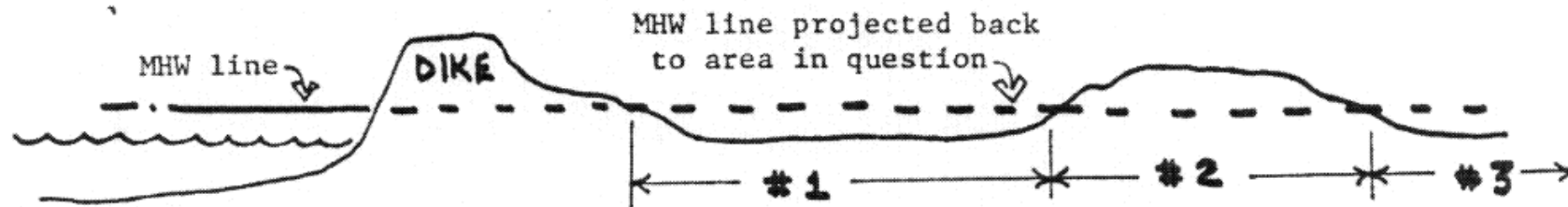


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## Section 10 Jurisdiction Behind Dikes (Levees)

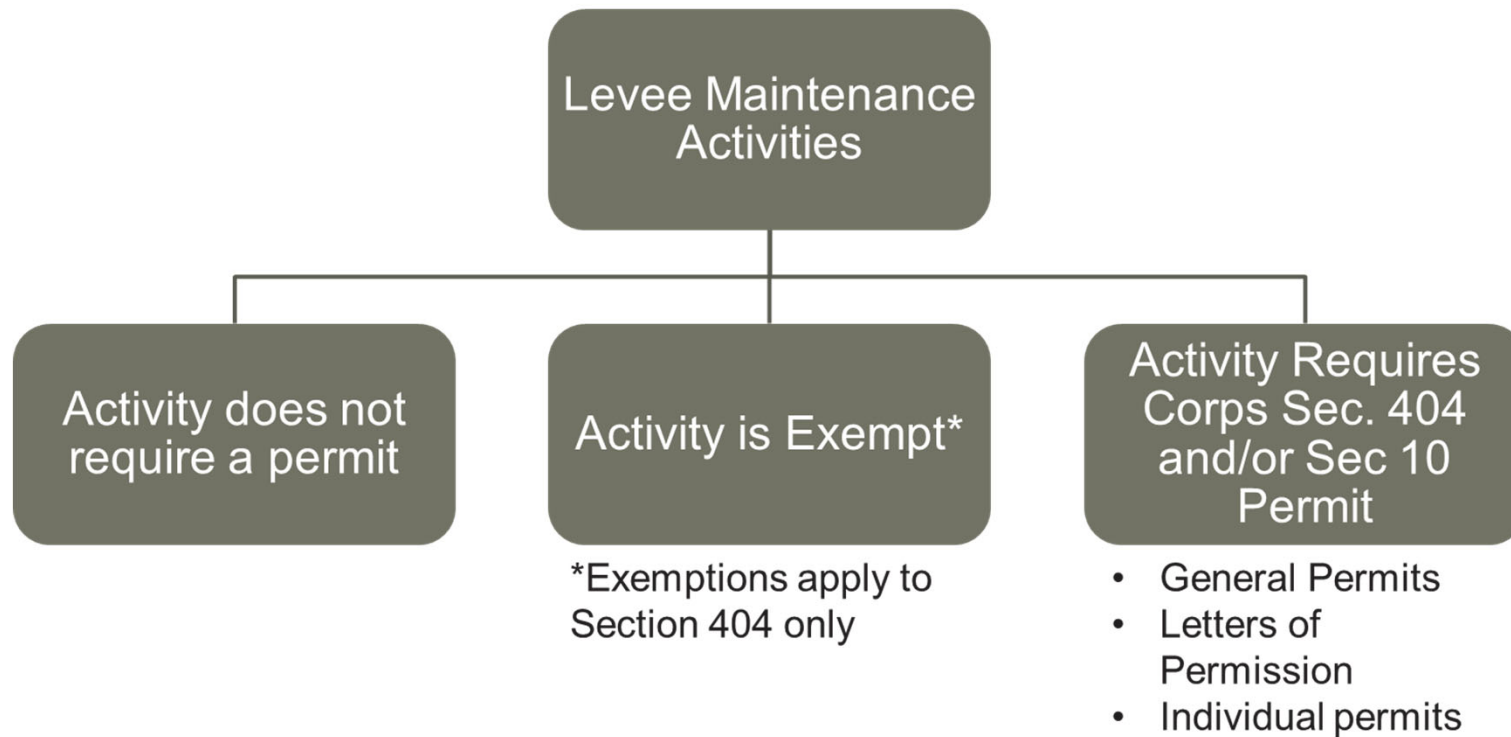
Section 10 jurisdiction will be exercised over areas behind dikes if all of the following criteria are met:

1. The area is presently at or below mean high water (MHW),
2. The area was historically at or below MHW in its "unobstructed, natural state" (i.e. the area was at or below MHW before the dikes were built), and
3. There is no evidence (elevation data) that the area was ever above MHW.



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# Levee Maintenance Activities and Corps Permitting





# Maintenance That May Not Require Section 404/10 Permits

## Activities occurring outside Corps geographical jurisdiction

- May require a Jurisdictional Determination.

## Activities not regulated, such as work that doesn't disturb the soil:

- Herbicide application
- Mowing
- Cutting/trimming trees



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# Maintenance That May Not Require a Section 404 Permit

## 404(f) Exemptions: Maintenance Activities

- Activities, including emergency reconstruction, that DOES NOT alter the original character, scope, or size of the fill design are exempt from Section 404.
- If activity would involve ANY modifications to the original fill design, then the activity DOES NOT qualify for the maintenance exemption.
- Only covers Section 404 of the CWA



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# Maintenance That May Require Section 404/10 Permits

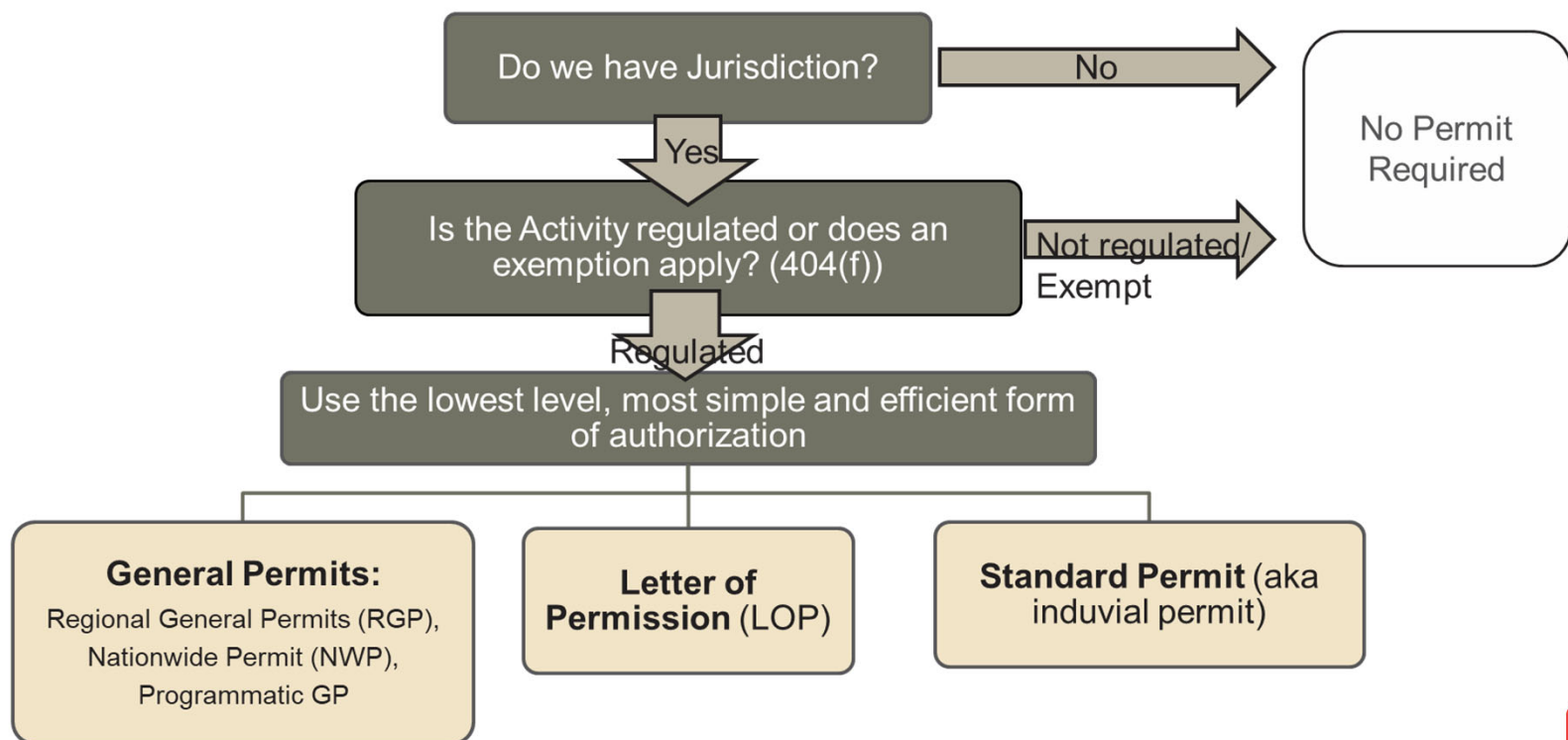
- Activities in tidal waters or wetlands
- Temporary dewatering for erosion repairs
- Any modification that changes the character, scope, or size of the original fill design



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# Permitting Process

Sequential Approach to Decision Making:



# General Overview: Content of Application

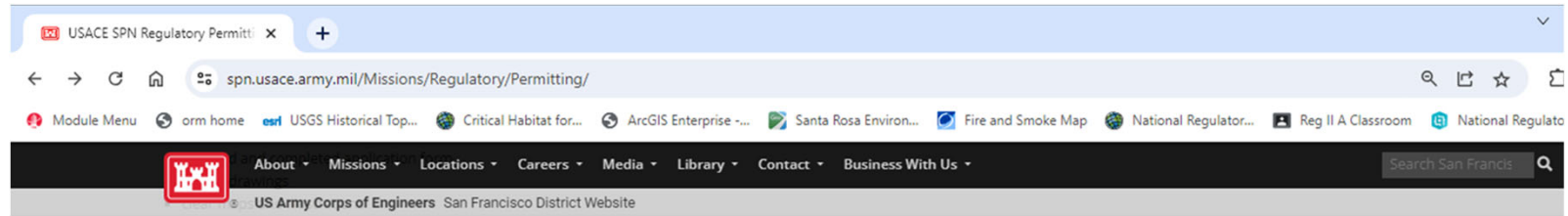
- Complete description of the proposed activity
- Necessary drawings, sketches, or plans sufficient for Public Notice
- Project location
- Purpose and Need
- Scheduling
- Names and addresses of adjoining property owners
- Location and dimensions of adjacent structures
- List of other required authorizations, approvals, or denials
- Applicant signature
- Information required to be in Public Notices
- Additional specific information on a case-by-case basis



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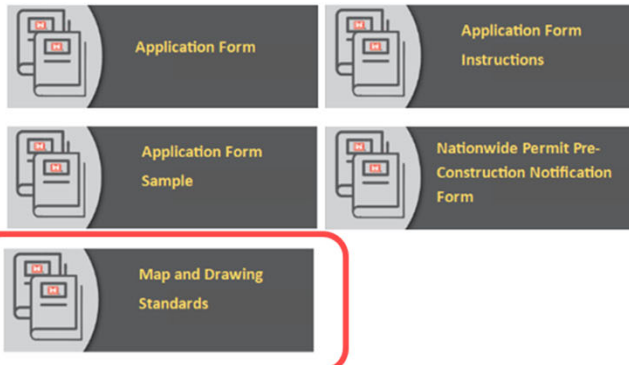


# Map and Drawing Standards



Submit applications to [CESPN-RG-Submittal@usace.army.mil](mailto:CESPN-RG-Submittal@usace.army.mil).

For questions regarding the preparation of an application, please contact our general information line at (415) 503-6795 or e-mail [CESPN-RG-Info@usace.army.mil](mailto:CESPN-RG-Info@usace.army.mil).



**NOTE:** Documents must be opened using Adobe Acrobat. It will not open in a web browser, right click the "Application Form" link and select "Save Link As" to download the application. Then go to the folder you downloaded to and open the PDF document. You may need to select "Enable All Features" to view the form in Adobe Acrobat.

## Permit Fees

Fees are required for most standard permits. A fee is not charged for transferring a permit from one property owner to another, for verifications under general permits, for letters of permission, or for permits issued to governmental agencies.



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# Interactions with Other Agencies

- Coordinate with USFWS and NMFS on endangered species issues.
- Coordinate with RWQCB on water quality issues
- Coordinate with USFWS, EPA and CDFW on wetlands issues.
- Coordinate with CCC and SFBCDC on coastal issues.
- Coordinate with SHPO on historic properties issues.
- Coordinate with tribes
- Also coordinate with local governments as needed.



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# Emergency Levee Maintenance

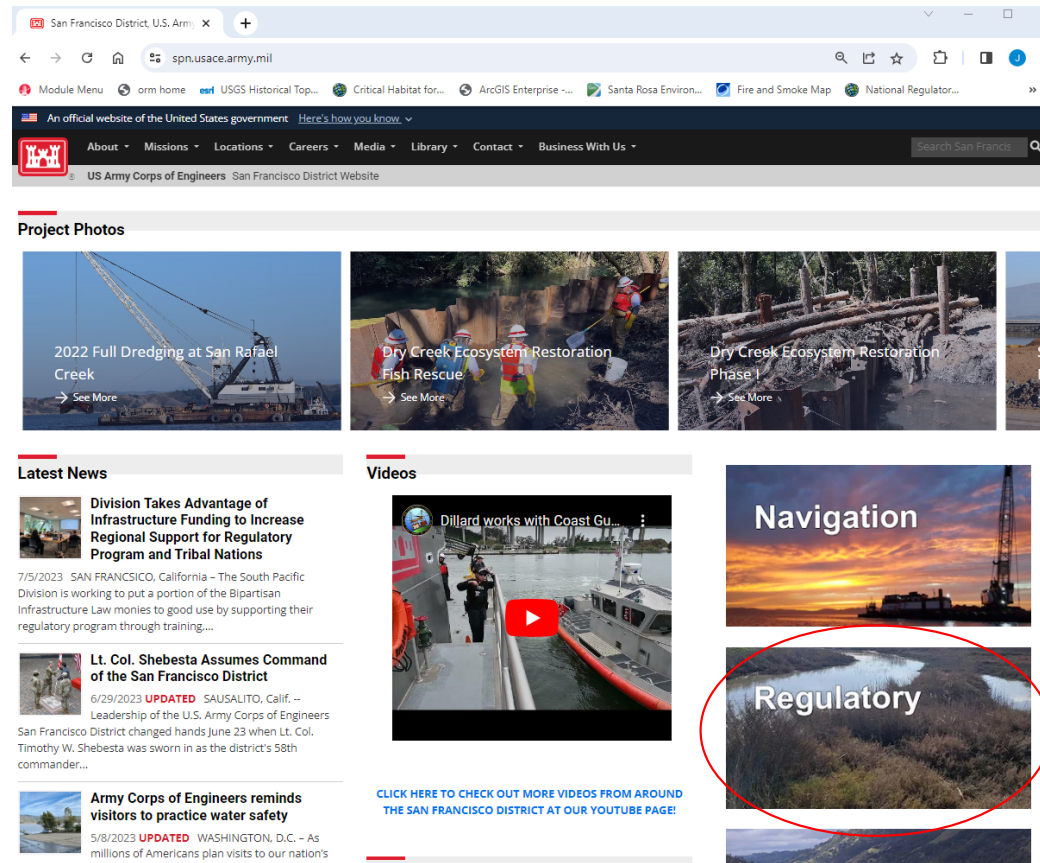
- Regional General Permit 5:
  - Authorizes discharges of dredged/fill material and/or work or structures for necessary repair and protection measures associated with an emergency situation.
  - "**emergency situation**" is a clear, sudden, unexpected, and imminent threat to life or property demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property or essential public services
  - Does not cover deferred maintenance
  - Must provide Corps prior notice
  - Must be minimum work necessary to address emergency
  - Must be ready to mobilize within 7 days of verification

<https://www.spn.usace.army.mil/Missions/Regulatory/Permitting/Emergency/>



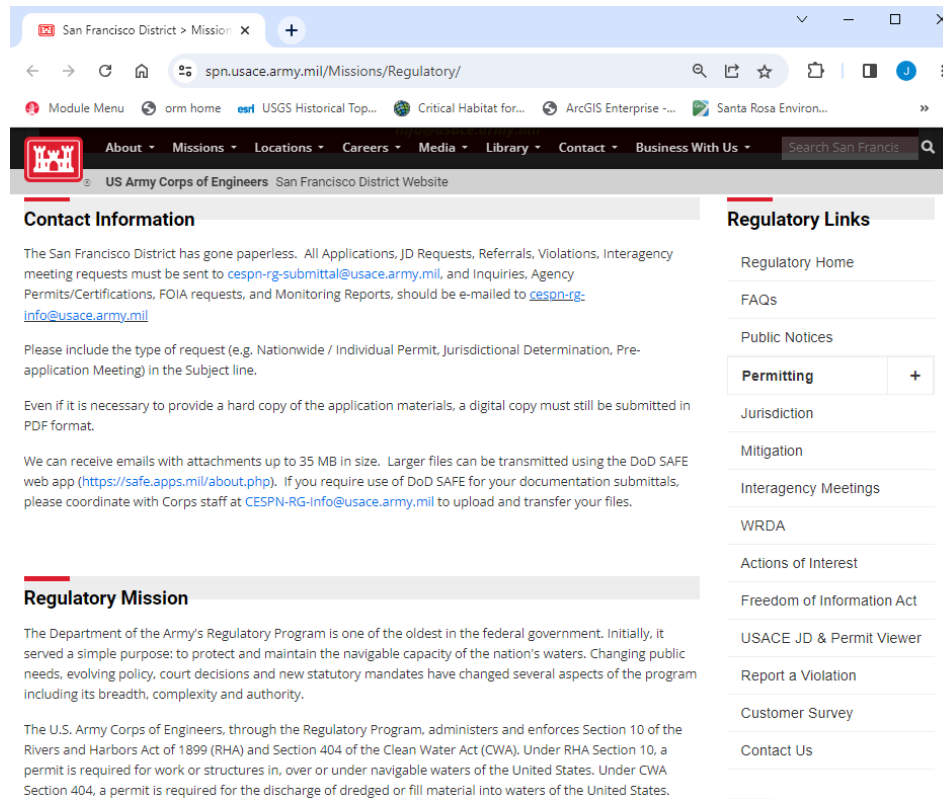
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# Webpage



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# Webpage



The screenshot shows a web browser window with the URL `sfn.usace.army.mil/Missions/Regulatory/`. The page features a navigation bar with links like "About", "Missions", "Locations", "Careers", "Media", "Library", "Contact", and "Business With Us". The main content area is divided into two columns. The left column, titled "Contact Information", provides details on how to submit requests, including email addresses like `cespn-rg-submittal@usace.army.mil` and `info@usace.army.mil`, and instructions on file formats and sizes. The right column, titled "Regulatory Links", contains a list of links: "Regulatory Home", "FAQs", "Public Notices", "Permitting" (highlighted with a blue bar and a plus icon), "Jurisdiction", "Mitigation", "Interagency Meetings", "WRDA", "Actions of Interest", "Freedom of Information Act", "USACE JD & Permit Viewer", "Report a Violation", "Customer Survey", and "Contact Us". A blue bracket on the right side of the page groups the "Regulatory Links" section.

## Contact Information

The San Francisco District has gone paperless. All Applications, JD Requests, Referrals, Violations, Interagency meeting requests must be sent to [cespn-rg-submittal@usace.army.mil](mailto:cespn-rg-submittal@usace.army.mil), and Inquiries, Agency Permits/Certifications, FOIA requests, and Monitoring Reports, should be e-mailed to [cespn-rg-info@usace.army.mil](mailto:cespn-rg-info@usace.army.mil).

Please include the type of request (e.g. Nationwide / Individual Permit, Jurisdictional Determination, Pre-application Meeting) in the Subject line.

Even if it is necessary to provide a hard copy of the application materials, a digital copy must still be submitted in PDF format.

We can receive emails with attachments up to 35 MB in size. Larger files can be transmitted using the DoD SAFE web app (<https://safe.apps.mil/about.php>). If you require use of DoD SAFE for your documentation submittals, please coordinate with Corps staff at [CESPN-RG-Info@usace.army.mil](mailto:CESPN-RG-Info@usace.army.mil) to upload and transfer your files.

## Regulatory Mission

The Department of the Army's Regulatory Program is one of the oldest in the federal government. Initially, it served a simple purpose: to protect and maintain the navigable capacity of the nation's waters. Changing public needs, evolving policy, court decisions and new statutory mandates have changed several aspects of the program including its breadth, complexity and authority.

The U.S. Army Corps of Engineers, through the Regulatory Program, administers and enforces Section 10 of the Rivers and Harbors Act of 1899 (RHA) and Section 404 of the Clean Water Act (CWA). Under RHA Section 10, a permit is required for work or structures in, over or under navigable waters of the United States. Under CWA Section 404, a permit is required for the discharge of dredged or fill material into waters of the United States.

## Regulatory Links

- Regulatory Home
- FAQs
- Public Notices
- Permitting** +
  - Nationwide Permits
  - Individual Permits
  - Regional General Permits
  - Emergency Permits
- Jurisdiction
- Mitigation
- Interagency Meetings
- WRDA
- Actions of Interest
- Freedom of Information Act
- USACE JD & Permit Viewer
- Report a Violation
- Customer Survey
- Contact Us

## Regulatory Links

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# Contact

Jayne Ohlhaber  
Senior Project Manager, Regulatory  
San Francisco District  
(415) 503-6834  
[Jayme.A.Ohlhaber@usace.army.mil](mailto:Jayme.A.Ohlhaber@usace.army.mil)

Contact the Regulatory Division to determine if you need authorization for your activity before you start work.

General info: (415) 503-6795  
[Cespn-rg-info@usace.Army.Mil](mailto:Cespn-rg-info@usace.Army.Mil)



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# Q+A and Group Discussion

Questions on requesting flood recovery assistance and regulatory permitting.



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# Closing



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# Thank you!

**Please provide feedback on how San Francisco District can support your levee management needs and priorities.**

Future Information Sessions

- Engineering with Nature for multibenefit floodplains
- Technical support for flood preparedness, response and recovery

**Please reach out with questions.**

Holly Costa - [Holly.N.Costa@usace.army.mil](mailto:Holly.N.Costa@usace.army.mil)

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