

# SAN FRANCISCO DISTRICT

## ENGINEERING WITH NATURE SYMPOSIUM UC SANTA CRUZ NATURAL AND NATURE BASED FEATURES

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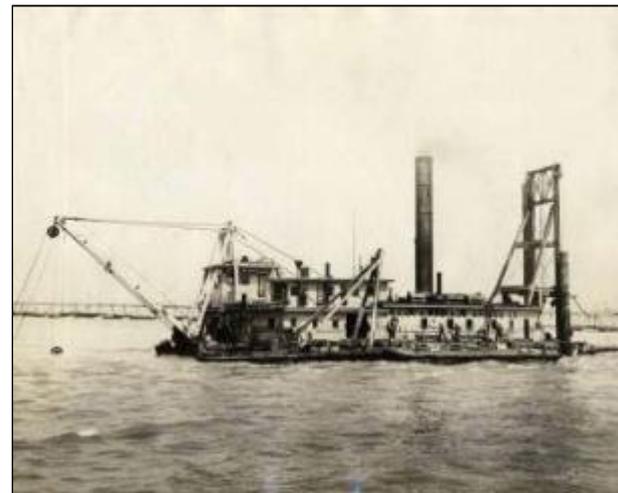


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# AGENDA

- **USACE Mission and Vision**
- **San Francisco District**
- **People Team Mission**
- **Projects in the SF Footprint**
- **Highlight Russian River**
- **Challenge – Permitting**
- **A future...**
- **Questions**



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# U.S. Army Corps of Engineers (USACE) Mission

Deliver vital public engineering services, in collaboration with our partners, to secure our Nation, energize our economy, and reduce risks from disasters.

## Vision

Provide Engineering solutions for the Nation's toughest challenges.

### Goal 1: Support National Security.

Deliver innovative, resilient, and sustainable solutions to DoD and the Nation.

### Goal 2: Deliver Integrated Water Solutions.

Deliver enduring and essential water resource solutions using effective strategies.

### Goal 3: Reduce Disaster Risks.

Deliver support that responds to, recovers from, and mitigates disaster impacts to the Nation while ensuring sustainable operations.

### Goal 4: Prepare for Tomorrow.

Build resilient People, Teams, Systems, and Processes to sustain a diverse culture of collaboration, innovation, and participation to shape and deliver strategic solutions.



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# USACE ORGANIZATION

- DoD - A Major Command in the Department of the Army – over 34,000 employees
- 3-Star General Officer Command headquartered in Washington, DC
- ASA(CW) provides Civil Works direction
- 9 Divisions and 43 Districts World-wide
- Geographic areas based on watershed boundaries
- 12,000 miles of inland waterways
- 926 harbors; >700 dams



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# South Pacific Division "Our Region"



South Pacific Division is one of nine USACE regional business centers. Four operating Districts plan, design, operate and maintain civil works and military projects and facilities within the region.



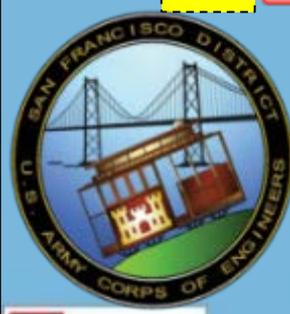
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# SAN FRANCISCO DISTRICT

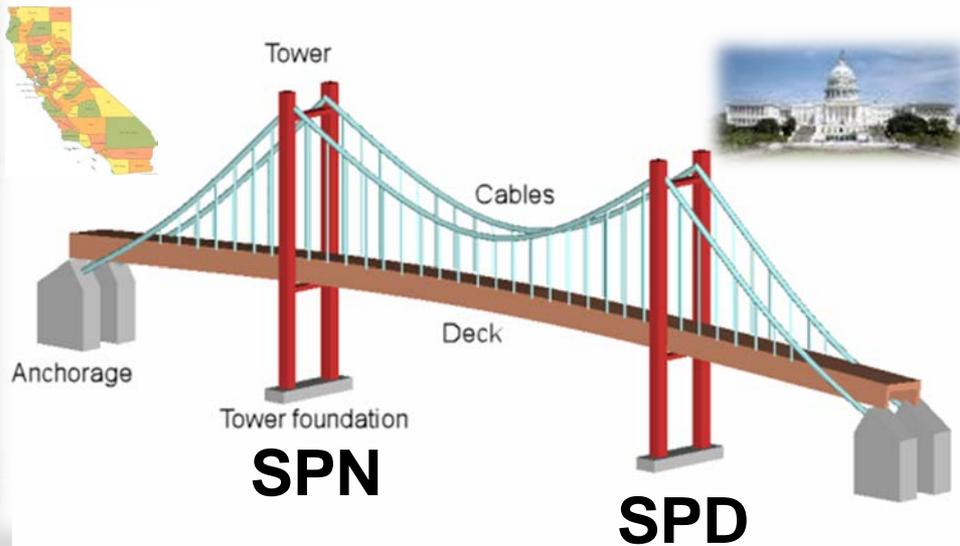
San Francisco District  
Regulatory Boundary

San Francisco District  
Civil Works Boundary



# People – Team – Mission

7



- **Bridge:** Washington, D.C. (HQ, USACE; Congress; Administration) to the people in our Geographic Area - solve the challenging problems for our Nation!
- **Tower and Foundation:** the people of SPN; the stronger the tower and foundation; the more we can support
- **Cables:** Our team and relationships – tie us together with our partners, SPD, and D.C.; we are only as strong as the cabling tying us together
- **Bridge Deck:** the authorities by which we deliver solutions (some lanes are faster than others – at times, the pedestrian lane moves the fastest!)



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# SELECT PROJECTS IN THE NORTHERN SAN FRANCISCO FOOTPRINT

Sonoma Bay Lands

Hamilton Airfield

Napa Salt Marsh

*Russian River*

Humboldt Bay



## TIDAL RESTORATION DESIGN

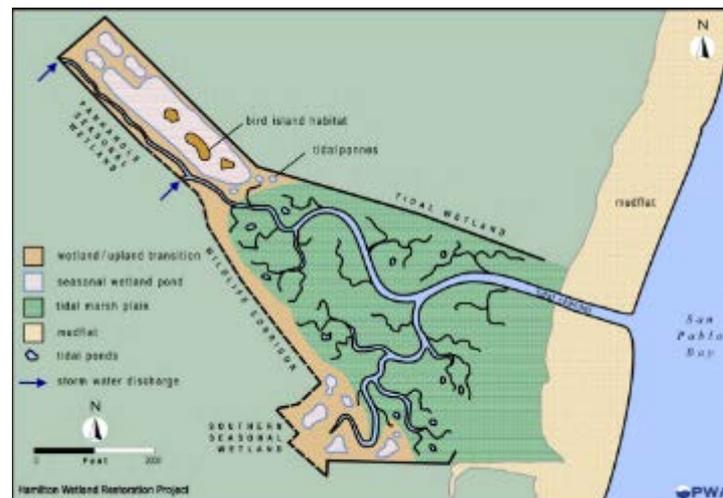
19 breaches

17 ditch blocks

4 miles of levee lowering to MHHW

2 miles of channels/berms

500,000 cubic yards of cut/fill



# PAST AND PRESENT SALMON HABITAT IN THE RUSSIAN RIVER WATERSHED



Steelhead

Coho



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# ECOSYSTEM RESTORATION PROBLEM STATEMENT

Aquatic and riparian habitat: Limited and simplified aquatic habitat, poor connectivity with floodplain habitat; reduced native aquatic and plant species



# THE FIRST CHALLENGE – WHAT WILL I SEE?



Pre-Construction



During Construction



Post-Construction



Post-Construction High Water Event



Constructed off-channel habitat provides critical summer and winter habitat for ESA-listed coho and steelhead (top)

Post construction

As riparian vegetation matures, the project realizes additional aquatic and terrestrial habitat benefits (bottom)



One year after construction



- Constructed side-channel habitat provides critical summer and winter habitat for ESA-listed coho, Chinook, and steelhead
- As riparian vegetation matures, the project realizes additional aquatic and terrestrial habitat benefits

# *San Francisco District – Sustainability Award Presentation with Sonoma Water (22 AUG 18)*



In 2013, the San Francisco District completed channel restoration of Dry Creek Reach 15.



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# *The Second Challenge*

Tell our story...

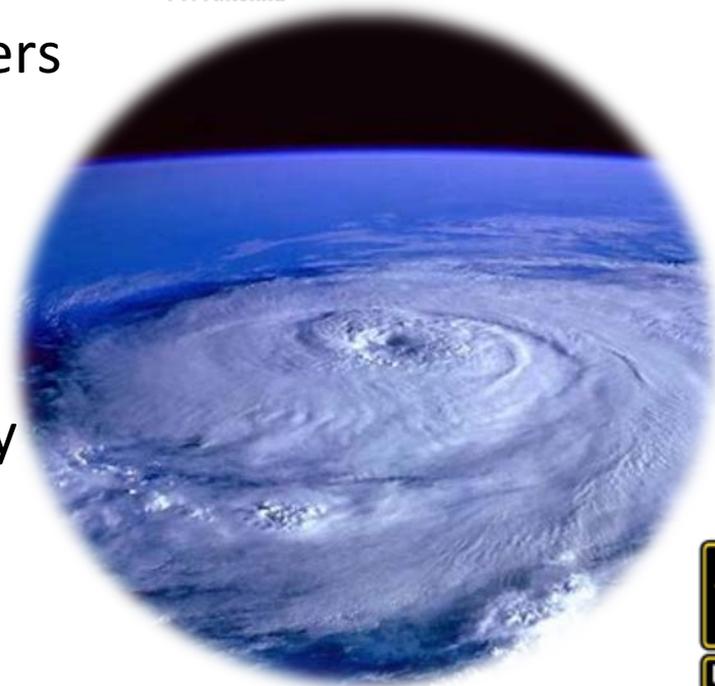
...with a partner

...with a holistic view for  
multiple agencies/stakeholders

...where the economics align  
with adaptive management

...monitor and retell the story

...Nature Happens!



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# PROFESSIONAL READING FRAMEWORK

## Resiliency



Jun 2017

## Challenges

- Institutions for Multi-Level Cooperation
- ***Regional Adaptation Planning for Sea-Level Rise***
- Funding Portfolio
- ***Integrated Permitting***
- The Climate Science Enterprise
- ***Civic Engagement***
- Political Leadership



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# PERMITTING PROJECTS

Consultation for potential impacts to endangered species with the U.S. Fish & Wildlife Service and/or National Marine Fisheries Service.



Above: East Bay Regional Park District's Dotson Family Marsh Project: 164 acres of tidal and seasonal wetland



Left: Sonoma Land Trust's Sears Point Project: 940 acres of tidal and seasonal wetland restoration and public access in southern Sonoma County.

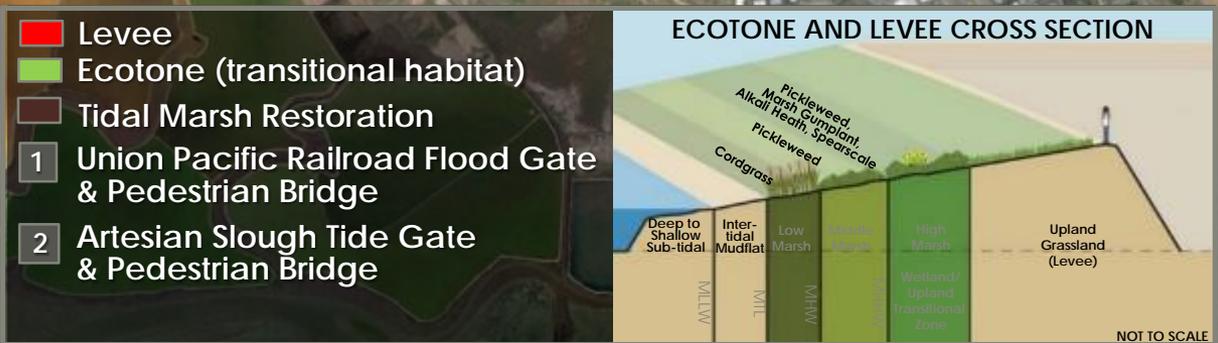


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# SOUTH BAY SHORELINE PROJECT

- **Flood Risk Management (FRM)**
  - ▶ 4-mile long levee
  - ▶ Manages risk for population of ~5,500, ~1,100 structures, & regional wastewater facility
- **Ecosystem Restoration**
  - ▶ 2,900 acres of tidal wetlands including ecotone
- **Recreation**
  - ▶ Provides key connections to San Francisco Bay Trail & viewpoints



**South San Francisco Bay Shoreline Project – Brief to Regional Water Quality Control Board**  
 (13 DEC 17)

What: Executive Leaders from USACE and our project partners

What: Briefing to the San Francisco Bay Regional Water Quality Control Board to achieve two objectives: 1) Board to approve Water Quality Certification 2) Convey to the Board that their policy must change related impacts from ecotone fill and credit for converting salt ponds into tidal habitat. The board voted and approved the Certification and agreed to work to revise their policy as it relates to fill impacts and credit for ecosystem enhancement for future projects the Corps will be involved in.

Where: Board Meeting, Oakland, Calif

Way Ahead: Continue to pursue additional environmental documents and complete the Design plans to position the project for the FY 18 Work Plan to support a summer contract to construct the first reach of levee.

Adri Bakstins, CPM, USACE, San Francisco District

US Army Corps of Engineers, San Francisco District



# Questions

**WE THE PEOPLE**  
insure domestic Tranquillity, provide for the common  
and our Posterity, do ordain  
this Constitution

