

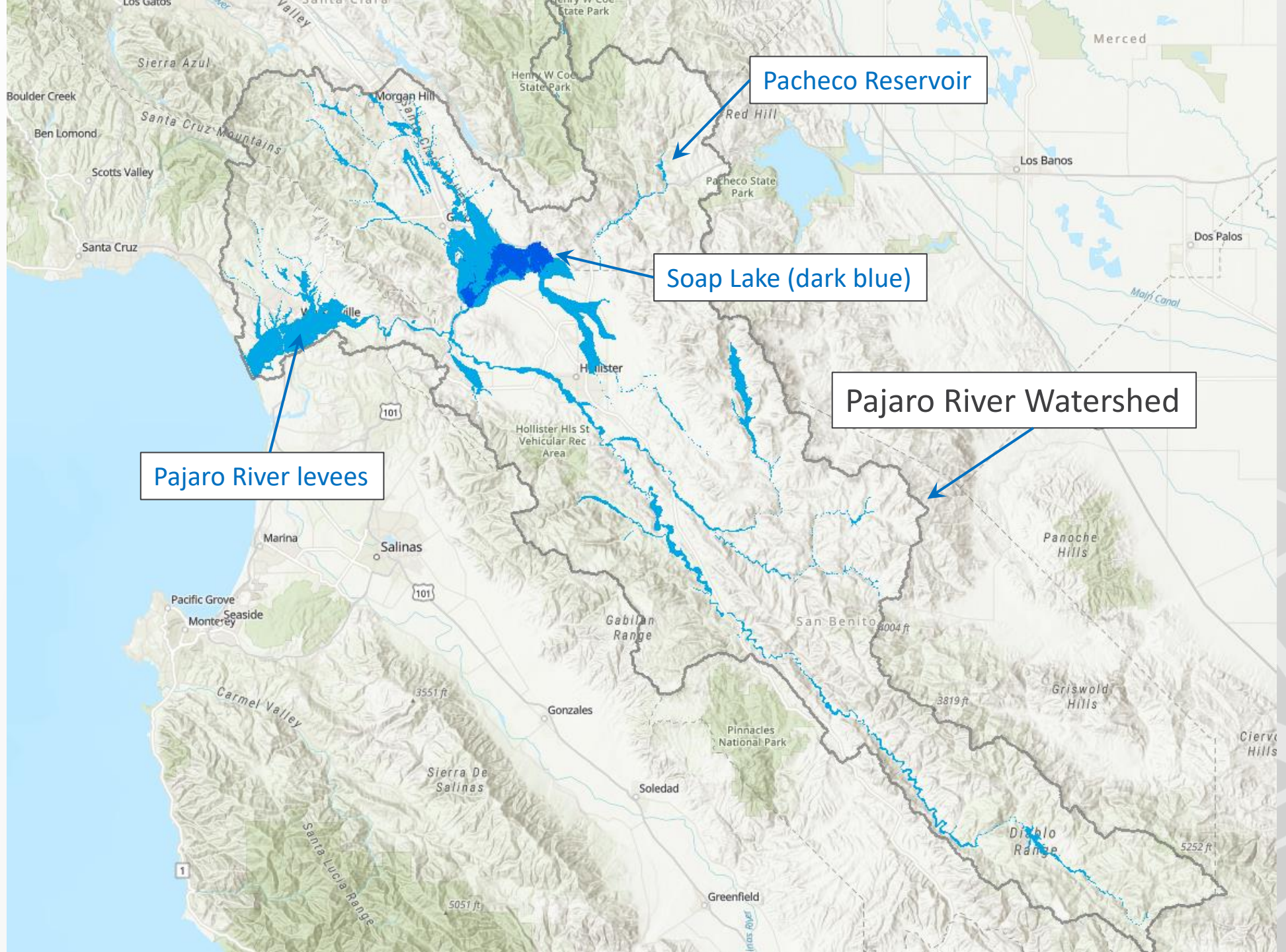


# The Pajaro Plan

**NWC 2024**

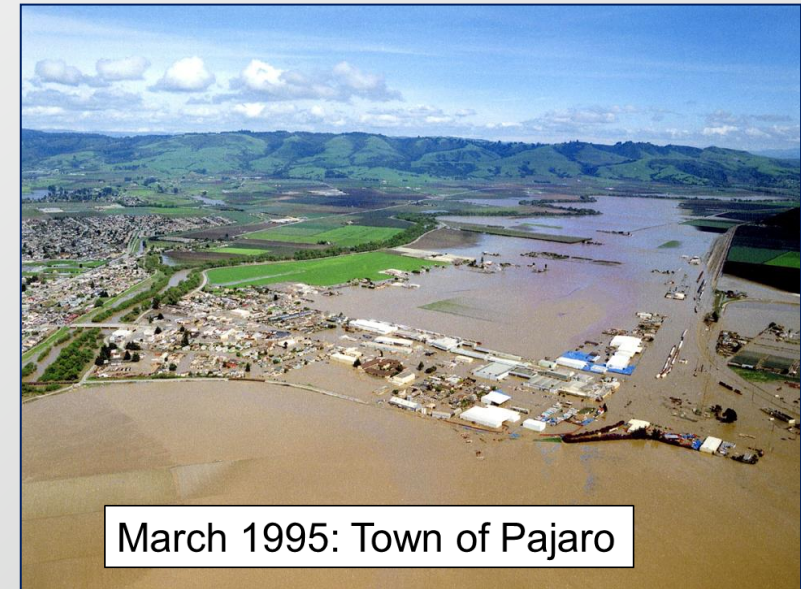
Mark Strudley, Ph.D., PRFMA







# Long history of flooding, initial construction, and Sisyphean planning...



March 1995: Town of Pajaro

1936/37 Flood Control Acts and 1944 Survey

1949 Levees Constructed

1955 and 1958: Catastrophic flooding

1966 House Document 491: Levee Reconstruction

1982/1986: More flooding

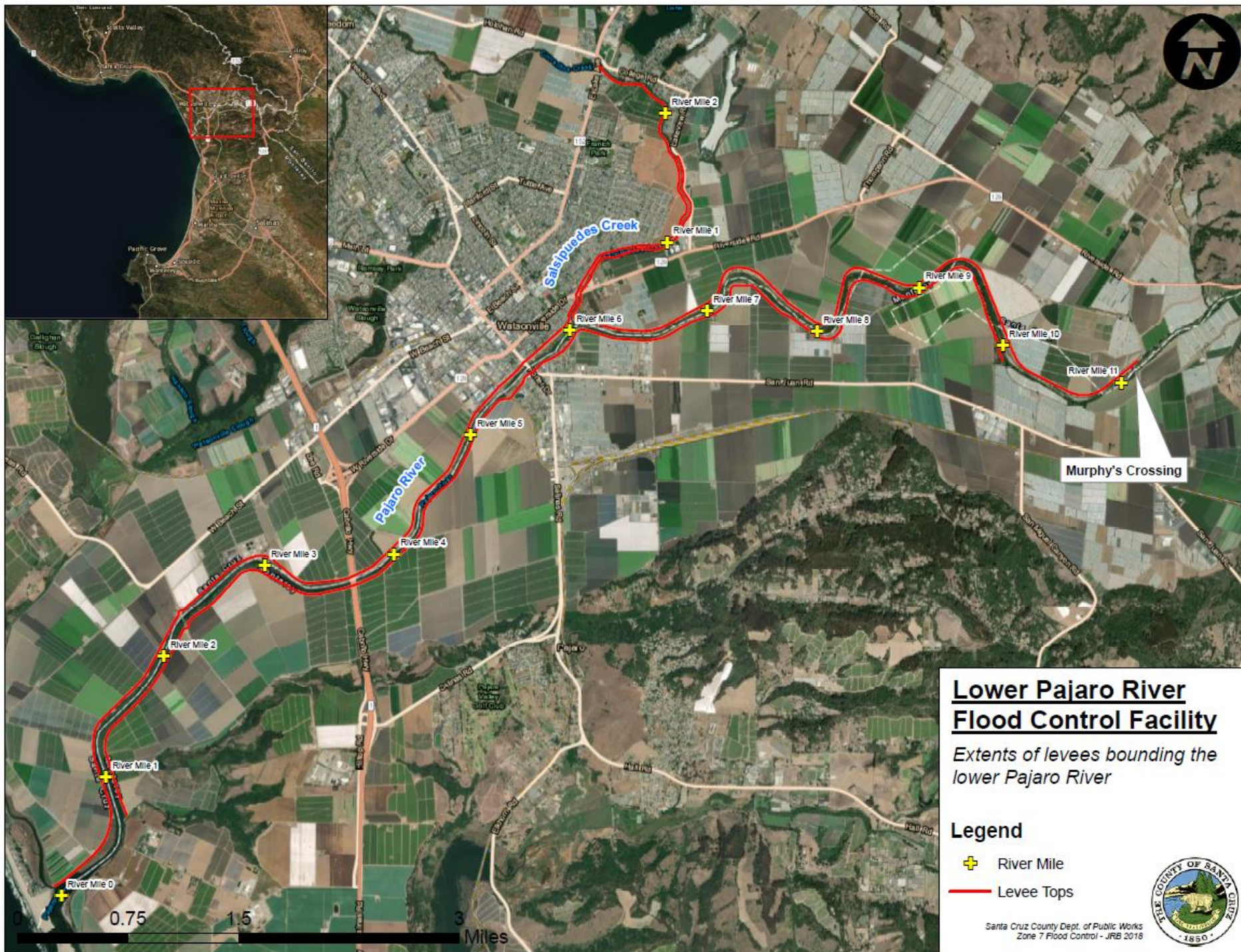
1974/75: USACE plan completed then rejected

Planning reformulation: 1990s and 2000s

MCWRA Formed: 1990

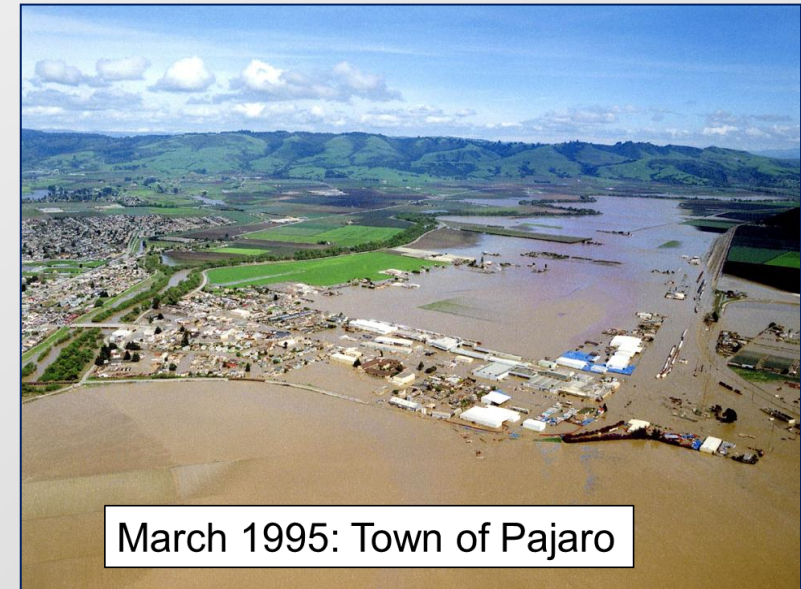
Zone 7 Formed: 1991







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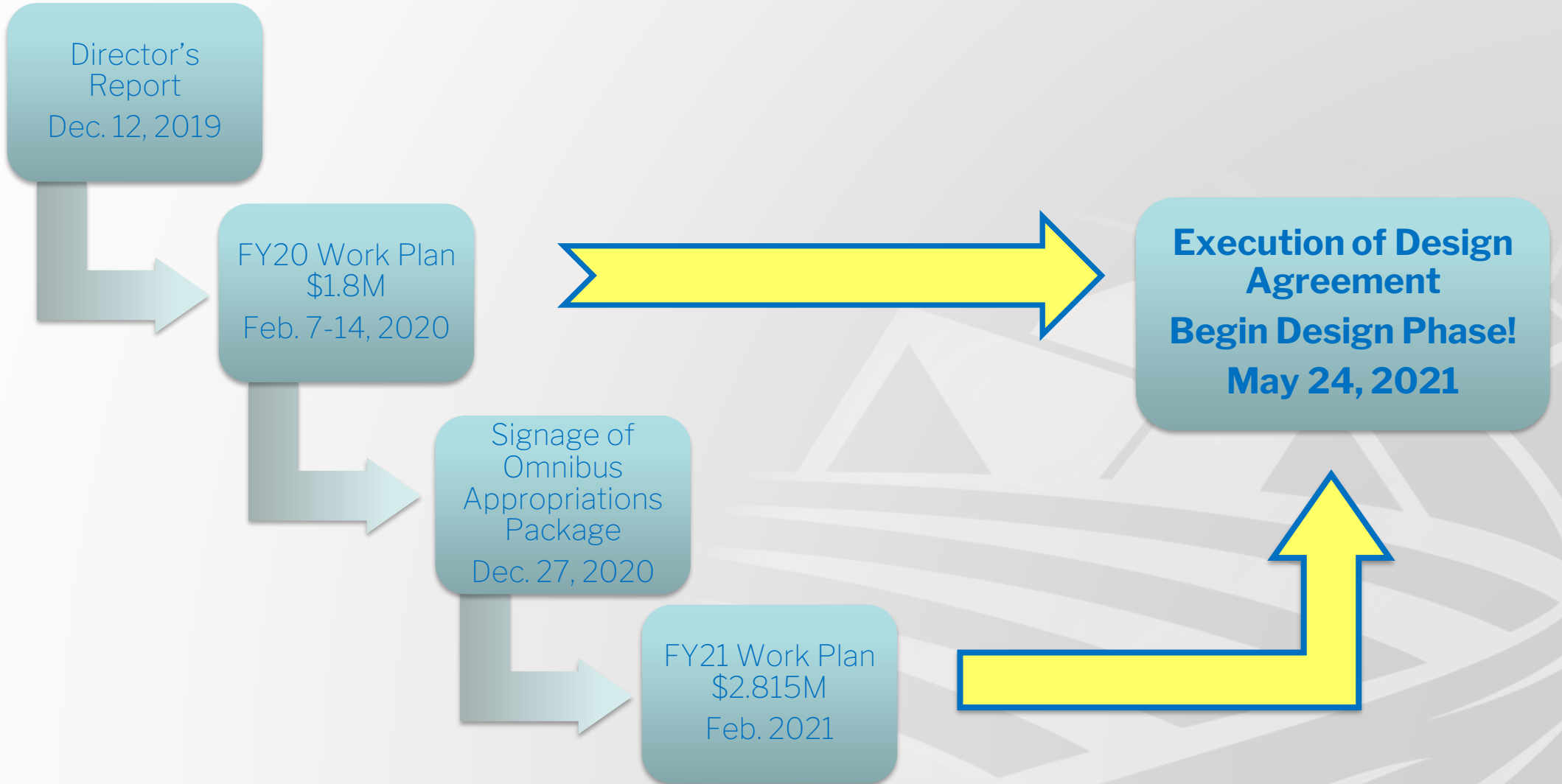
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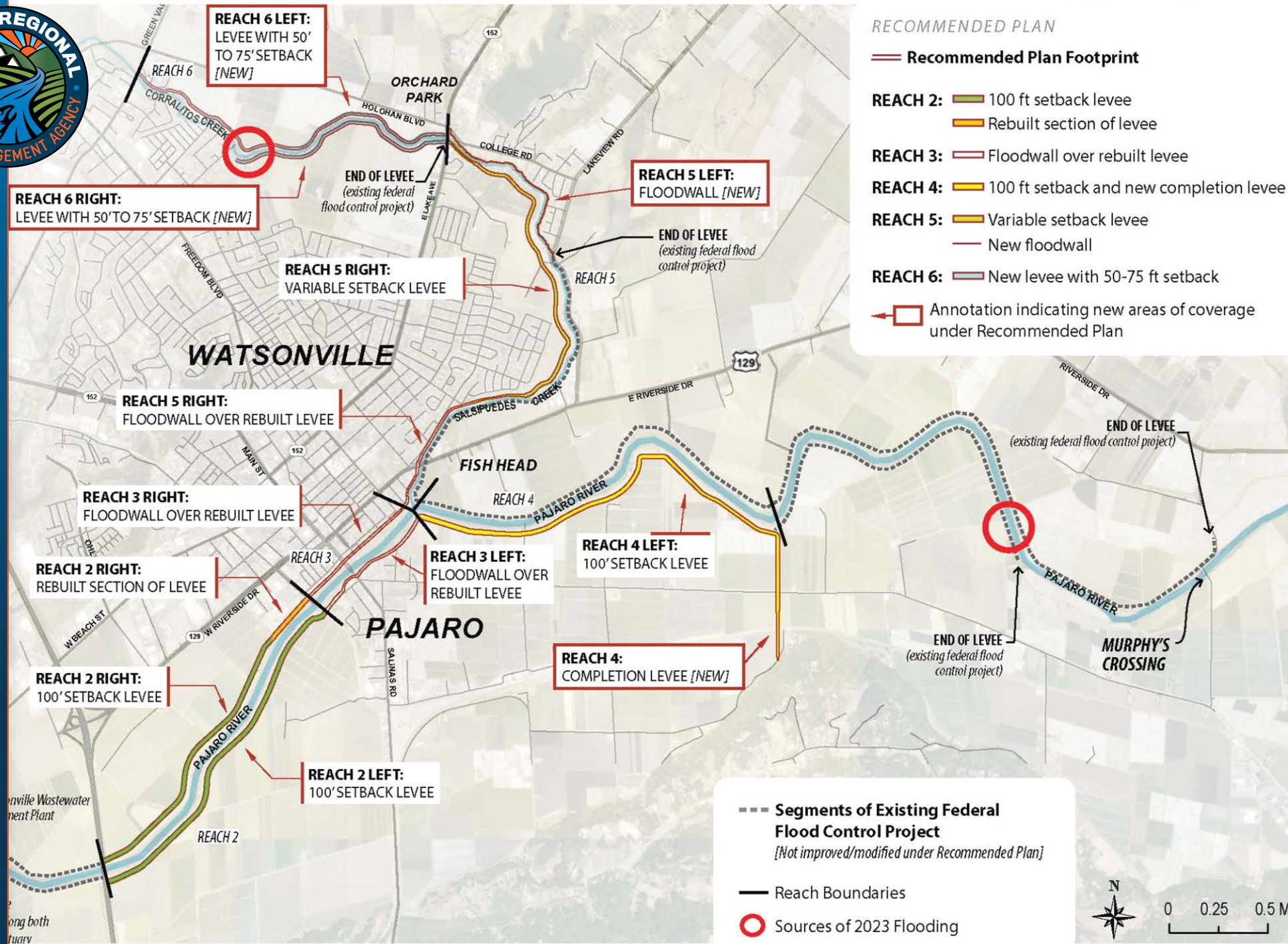






# Pajaro River Flood Risk Mgmt. Project Update

- Project will be built in phases, reach by reach.
- Construction is scheduled to start on Reach 6 in late summer 2024.





# What is PRFMA?



Created July 2021

Plan, manage, finance flood risk reduction projects/programs

Joint Powers Authority (public agency)

Counties of Monterey & Santa Cruz

City of Watsonville

Monterey County Water Resources Agency

Santa Cruz County Flood Control & Water Conservation District

Board of Directors = One representative from each agency

Meets monthly







# Pajaro River Multi-Benefit Flood Risk Management Project

## PROJECT OBJECTIVES

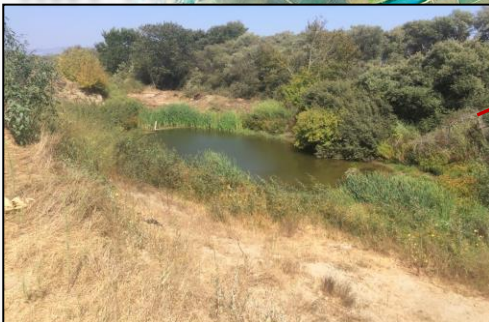
- Protect the lives, homes and livelihoods of our agriculturally-based community.
- Provide 100-year flood protection to the disadvantaged communities of the City of Watsonville and Town of Pajaro.
- Setback levees improve flood system robustness and resiliency to sea level rise and climate change while providing opportunities to achieve multi-benefit objectives.
- Work with Pajaro Valley Water Management Agency to identify opportunities to improve groundwater management.
- Provide a vegetated corridor and low flow design to enhance riparian habitat and fish passage.

## MULTI-BENEFITS

- Protection to Disadvantaged Communities
- Setback Levees
- Groundwater Management
- Protect State Facilities
- Riparian Habitat
- Fisheries
- Open Space
- Climate Change Resiliency
- Recreation



**HWY 1 in 1995 Flood**



**Floodplain Reconnection for Habitat**



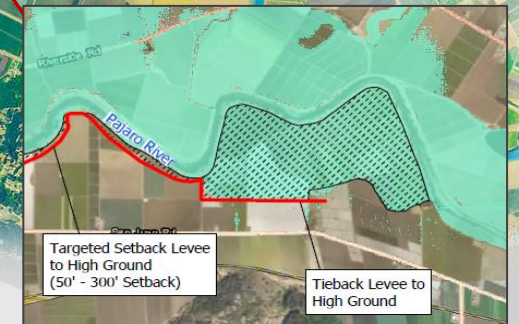
**Enhanced Fish Passage**



**Levee Trails and Public Access**



**College Lake Integrated Resource Management**



Targeted Setback Levee to High Ground (50' - 300' Setback)

Tieback Levee to High Ground

**Floodplain Recharge**



Buffer, fund, advance



Assets

An act to amend Section 12687.5 of the Water Code, relating to water.

[Approved by Governor September 28, 2022. Filed with Secretary of State September 28, 2022.]

LEGISLATIVE COUNSEL'S DIGEST

AB 489, Mark Stone. Flood management projects: state funding: Pajaro River Flood Risk Management Project.

Existing law provides for state cooperation with the federal government in the construction of specified flood control projects. For certain flood control projects authorized on or after January 1, 2002, or for small flood management projects for which specified findings have been made on or after that date, existing law requires the state to pay 50% of specified nonfederal costs. Existing law authorizes the state to pay up to 70% of those nonfederal costs upon the recommendation of the Department of Water Resources or the Central Valley Flood Protection Board if either entity determines that the project will advance one of several specified objectives.

Existing law authorizes the state, through the Flood Control Subventions Program, to fund the planning, engineering, design, and construction of the project, as provided, so long as state funds do not exceed the state's share of funds if federal funding was provided. Existing law requires the department to make specified findings before any funds appropriated by the Legislature are provided to the flood control project.

*The people of the State of California*

SECTION 1. Section 12687.5 of the Water Code, relating to water, is amended to read: (a) The state may advance funds for planning, engineering, designing, and constructing the flood control project, as well as for the acquisition of required lands, easements, rights-of-way, and utility relocations, among other purposes. The bill would grant the state discretion to reduce retention withheld under any cost-share agreement to fund the flood control project to 0%. The bill would revise the limitation on the amount of state funding provided in the absence of federal funding by instead authorizing the state to advance funding in the absence, in whole or in part, of federal funding, in an amount that does not exceed the amount that would be the equivalent nonfederal share if there was federal project funding.



Section

An act to amend Section 12687.5 of the Water Code, relating to water.

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Existing law authorizes the state, through the Flood Control Subventions Program, to advance funds for planning, engineering, designing, and constructing the flood control project, as well as for the acquisition of required lands, easements, rights-of-way, and utility relocations, among other purposes. The bill would grant the state discretion to reduce retention withheld under any cost-share agreement to fund the flood control project to 0%. The bill would revise the limitation on the amount of state funding provided in the absence of federal funding by instead authorizing the state to advance funding in the absence, in whole or in part, of federal funding, in an amount that does not exceed the amount that would be the equivalent nonfederal share if there was federal project funding.

*The people of the State of California*

SECTION 1. The Legislature enacts the following law: (a) The Pajaro River Federal Flood Control Project, as authorized by the United States Army Corps of Engineers, is hereby authorized to be constructed in the Counties of Monterey and Santa Cruz, as described, to those counties, or to local agencies in those counties, as provided. Existing law authorizes state funding, upon appropriation by the Legislature, to be used for planning, engineering, designing, and constructing the flood control project, as provided. In the absence of federal funding, existing law authorizes the state, through the Flood Control Subventions Program, to fund the planning, engineering, design, and construction of the project, as provided, so long as state funds do not exceed the state's share of funds if federal funding was provided. Existing law requires the department to make specified findings before any funds appropriated by the Legislature are provided to the flood control project.



Senate Bill No. 489

CHAPTER 677

An act to amend Section 12687.5 of the Water Code, relating to water.

[Approved by Governor September 28, 2022. Filed with Secretary of State September 28, 2022.]

LEGISLATIVE COUNSEL'S DIGEST

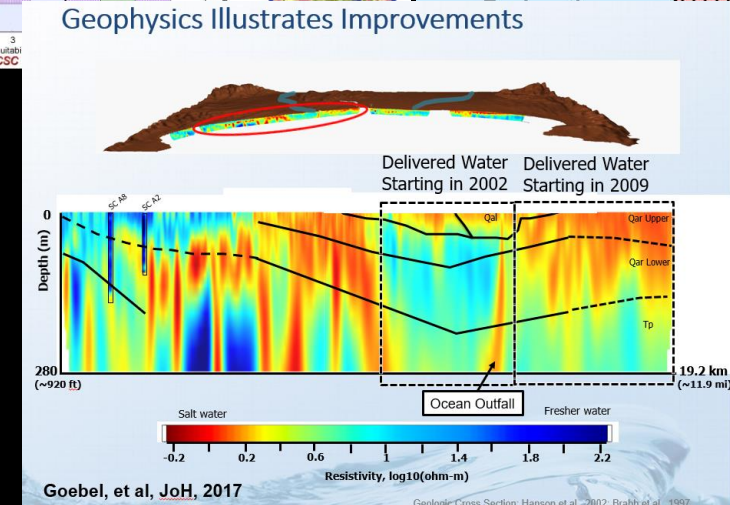
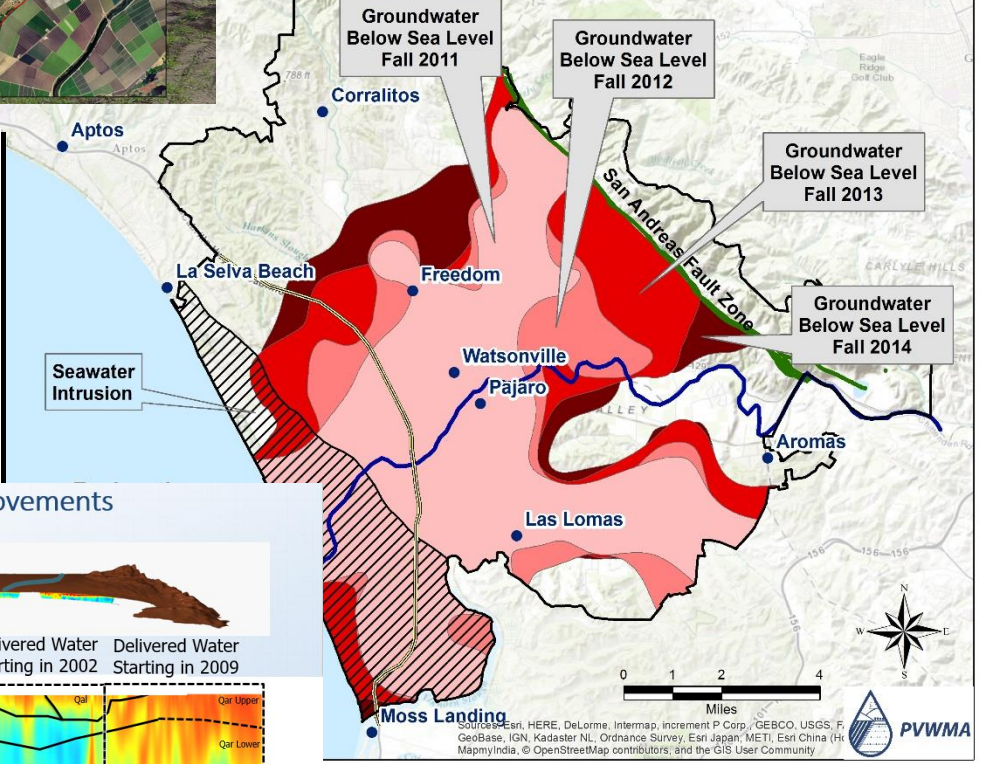
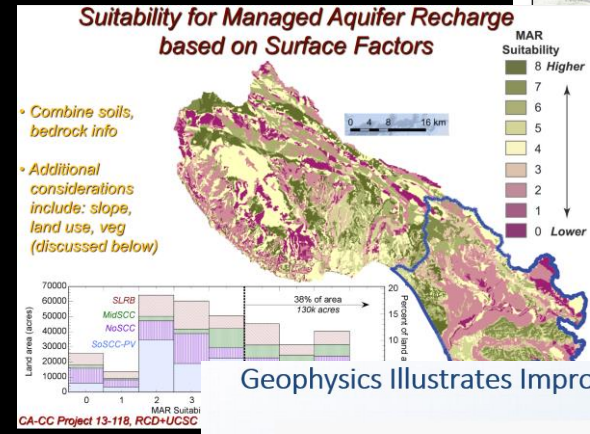
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Existing law provides for state cooperation with the federal government in the construction of specified flood control projects. For certain flood control projects authorized on or after January 1, 2002, or for small flood management projects for which specified findings have been made on or after that date, existing law requires the state to pay 50% of specified nonfederal costs. Existing law authorizes the state to pay up to 70% of those nonfederal costs upon the recommendation of the Department of Water Resources or the Central Valley Flood Protection Board if either entity determines that the project will advance one of several specified objectives. Notwithstanding these requirements, existing law authorizes the state to provide subvention of funds, up to 100% of the costs, for the project for flood control on the Pajaro River in the Counties of Monterey and Santa Cruz, as described, to those counties, or to local agencies in those counties, as provided. Existing law authorizes state funding, upon appropriation by the Legislature, to be used for planning, engineering, designing, and constructing the flood control project, as provided. In the absence of federal funding, existing law authorizes the state, through the Flood Control Subventions Program, to fund the planning, engineering, design, and construction of the project, as provided, so long as state funds do not exceed the state's share of funds if federal funding was provided. Existing law requires the department to make specified findings before any funds appropriated by the Legislature are provided to the flood control project.

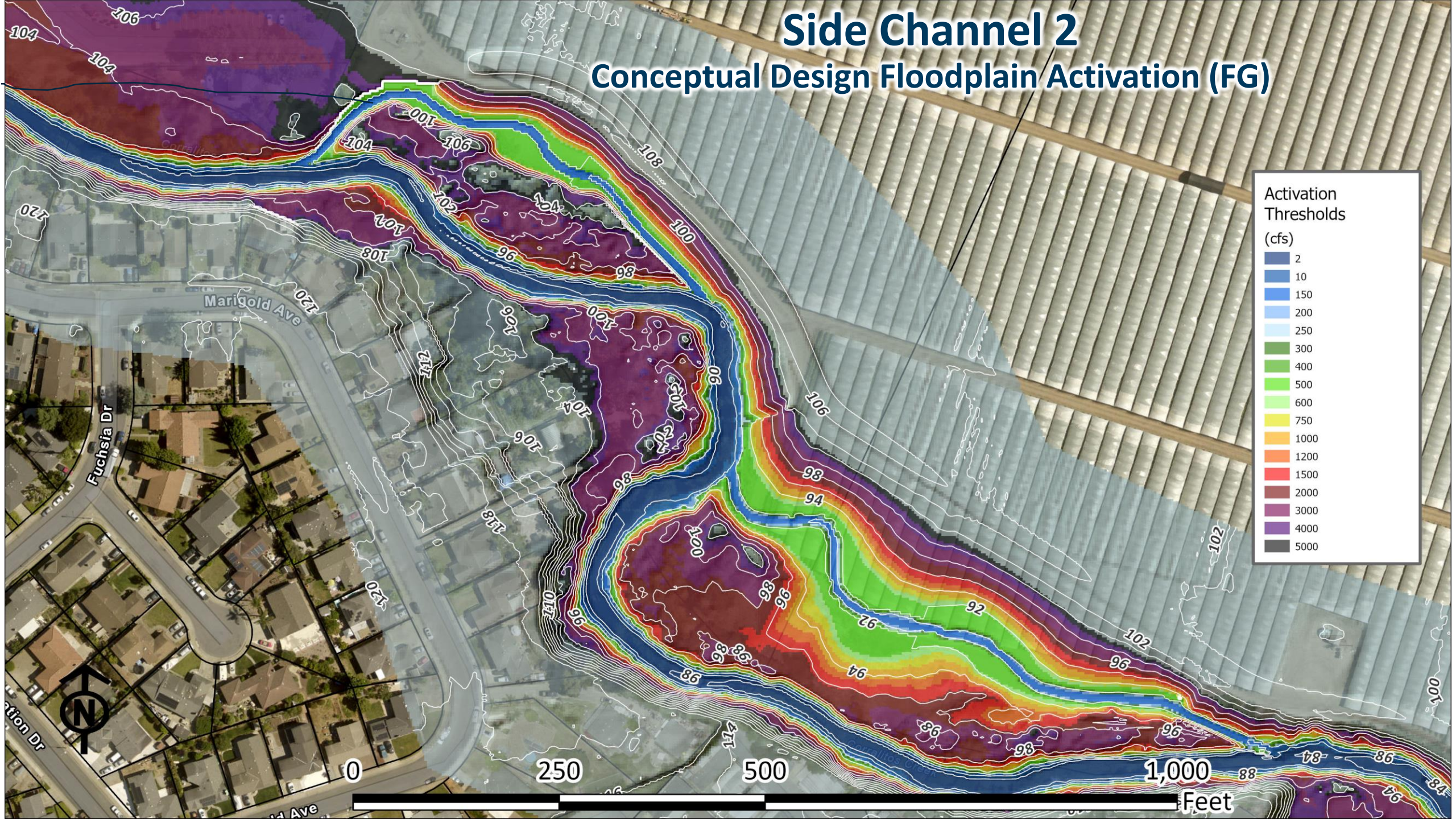
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# Pajaro Valley Groundwater Basin

1. High priority, critically overdrafted basin under SGMA
2. Groundwater dependent for approx. 95% of water needs, including a ~\$1 billion agro-economy
3. Approved GSP-Alternative (1<sup>st</sup> High Priority Basin in State w/ approved plan)
4. Supply management: MAR&R, Recycled Water, Surface Water
5. Demand management: Conservation programs
6. Isolated from state and federal water supply projects



# Side Channel 2 Conceptual Design Floodplain Activation (FG)



Activation Thresholds (cfs)

2
10
150
200
250
300
400
500
600
750
1000
1200
1500
2000
3000
4000
5000

0 250 500 1,000 Feet

**Legend**

- Analysis Extent
- Avg WY Recharge (ft)
- < 1
- 1 - 3
- 3 - 10
- 10 - 15
- 15 - 20
- > 20

# Tier 2 Existing Topography - Average WY Recharge



**Step 1.** - Days of inundation are multiplied by limiting recharge rates based on average  $K_{sat}$  (ft/day). The total volume of recharge is limited in a WY by the storage volume (acre-ft).

**Step 2.**  
Percent Coarse ~ 50%  
Percent Fine ~ 50%  
Used Rosetta to estimate  $K_{sat}$  based on Soil that is 50% Sand, 25% Silt, 25% Clay = 0.34 ft/day

WY 1957-2022 Acre-feet of recharge / Acre FAU Size (Feet Recharge)

Preliminary Results – Subject to Change



Modeling courtesy of DWR/Jacobs/CBEC

**Legend**

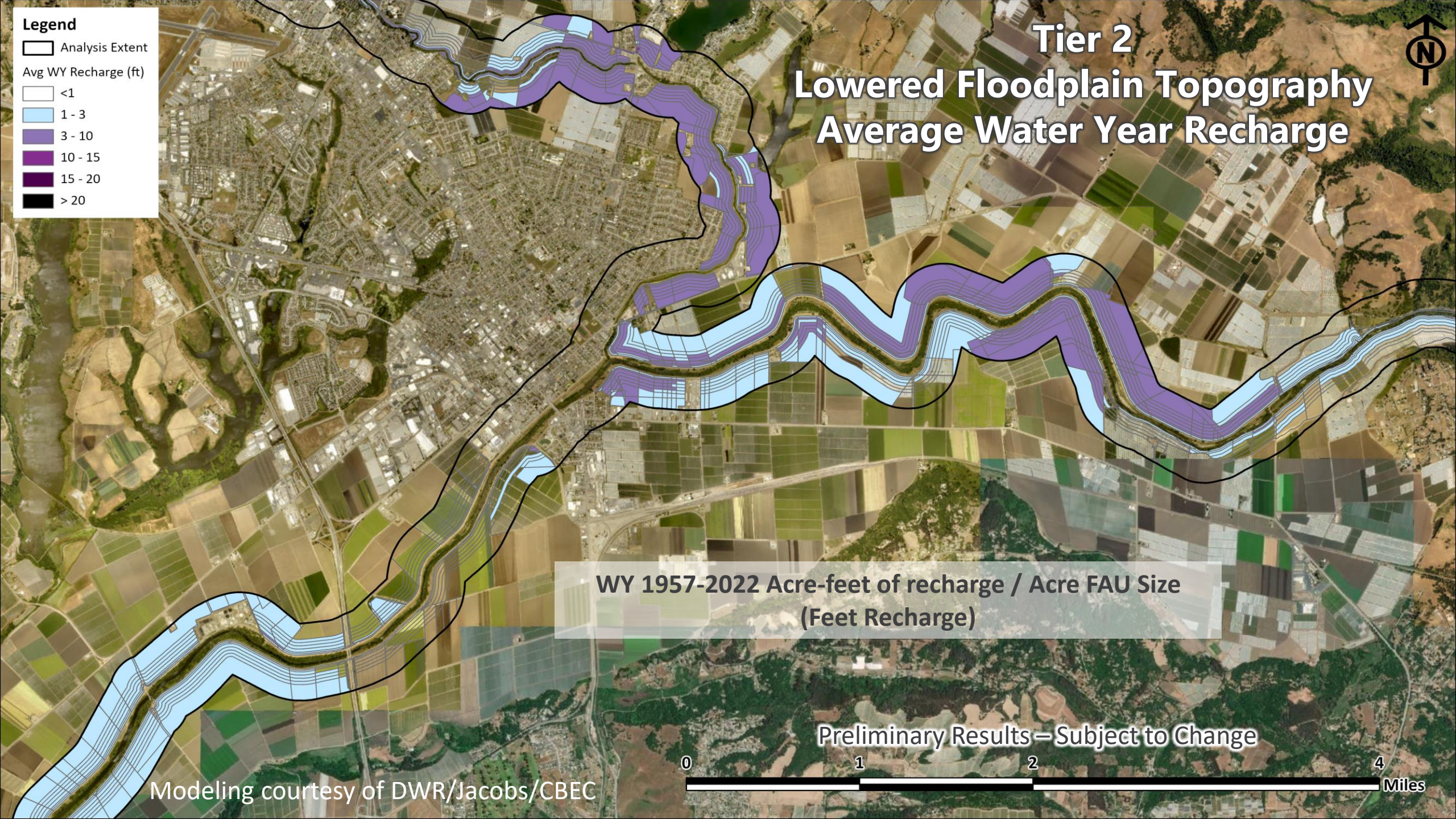
Analysis Extent

Avg WY Recharge (ft)

- <1
- 1 - 3
- 3 - 10
- 10 - 15
- 15 - 20
- > 20



# Tier 2 Lowered Floodplain Topography Average Water Year Recharge



WY 1957-2022 Acre-feet of recharge / Acre FAU Size  
(Feet Recharge)

Preliminary Results – Subject to Change



Modeling courtesy of DWR/Jacobs/CBEC

# Assembly Bill 876 and Pajaro River Project Definition



- Signed into law in October 2023 to expedite construction of modern flood infrastructure for historically underserved communities in the lower Pajaro River Watershed.
- Defines “Pajaro River Project” as:
  - “The project for flood control on the Pajaro River and its tributaries in the Counties of Monterey and Santa Cruz.”
- Does not include ongoing or postconstruction O&M.





# Assembly Bill 876 Exemptions

- The Pajaro River Project and the issuance of any permit, funding, or other approval by a state or local agency for the Pajaro River Project is exempt from:
  - Lake and Streambed Alteration Agreement (LSAA) requirements, waste discharge requirements (Porter-Cologne Water Quality Control Act), and any related mitigation measures.
- Requires that the environmental assessment prepared by USACE (pursuant to NEPA) for the Pajaro River Project be conclusively presumed to satisfy the requirements of CEQA and the issuance of any permit, funding, or other project approval.
- Flood control projects along the Pajaro River and its tributaries are subject to the exemptions listed in AB 876 provided all criteria listed below apply to the components of the projects to which they are applicable:
  - Increase the level of flood protection for disadvantaged communities, as specified.
  - Receive an Engineering With Nature designation under the USACE program.
  - Incorporate habitat and groundwater recharge enhancements through EcoFIP analysis and implementation.
  - Incorporate BMPs to control erosion and runoff from construction activities.
  - Incorporate visual surface water monitoring to detect and correct accidental discharge of construction-related pollutants.
  - Do not involve disposal or placement of flood-delivered sediments into waters of the state or at locations or in a manner where sediments may be washed into waters of the state by rainfall or runoff.
  - Avoid causing a violation of applicable water quality standards.





**For more information:**

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[www.prfma.org](http://www.prfma.org)

