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The State of the Delta

SPUR Lunchtime Forum

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PUBLIC POLICY
INSTITUTE OF CALIFORNIA

PPIC WATER POLICY CENTER

Outline

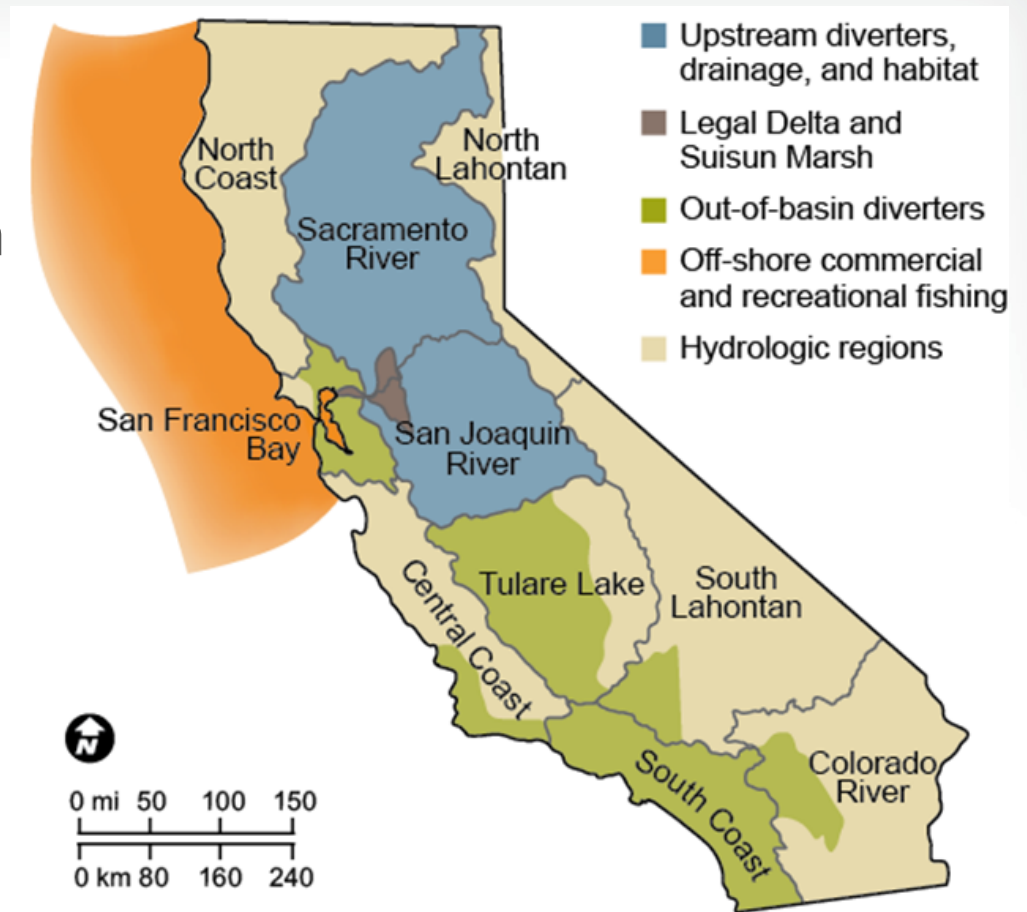
- **What the Delta means to California**
- Where are we and how did we get here?
- What's next?

The Delta is a major hub in the state's water system

<https://www.youtube.com/watch?v=M7B7ztQwHDE>

The Delta has statewide importance

- Biologically diverse ecosystem, migratory path for many native fish
- Integral part of state and federal water projects
- Exports water to 25 million people and 3 million acres of farmland
- Has economic and cultural value

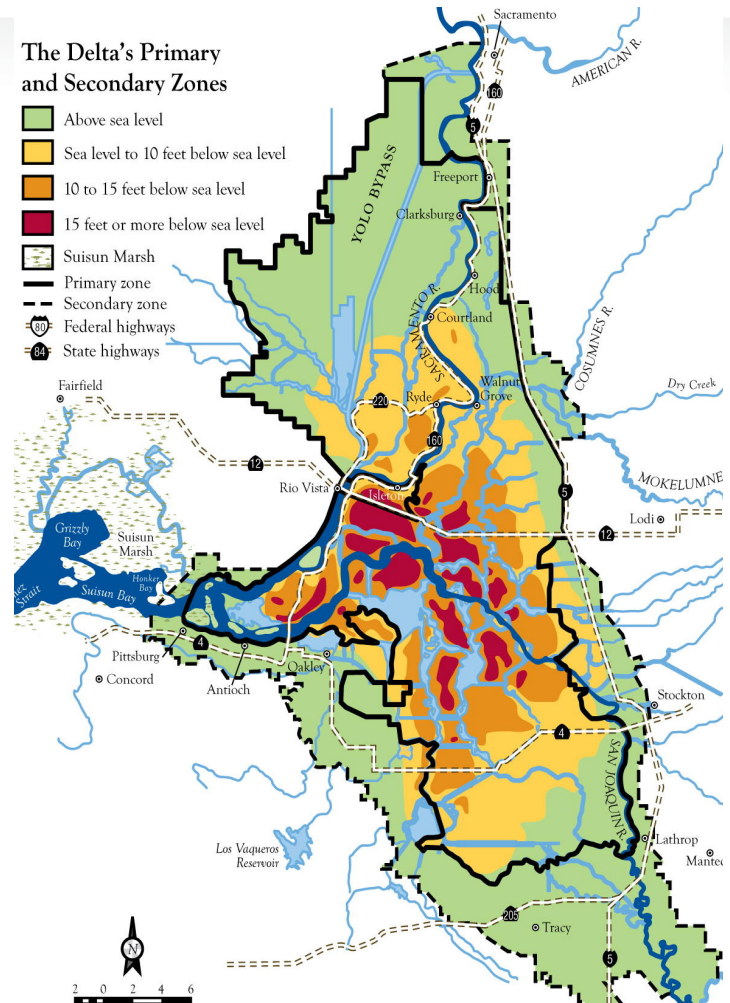


Outline

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The Delta today

- Levees are at risk:
 - rising sea levels
 - winter floods
 - sinking land
 - earthquakes
 - lack of funding
- Local economy is vulnerable
- Reliability of supply at risk
- Changing ecosystem harming native species



Broad categories of ecosystem stressors—all related to human actions

Discharges



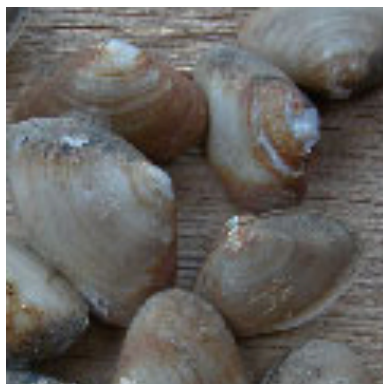
Direct fish management



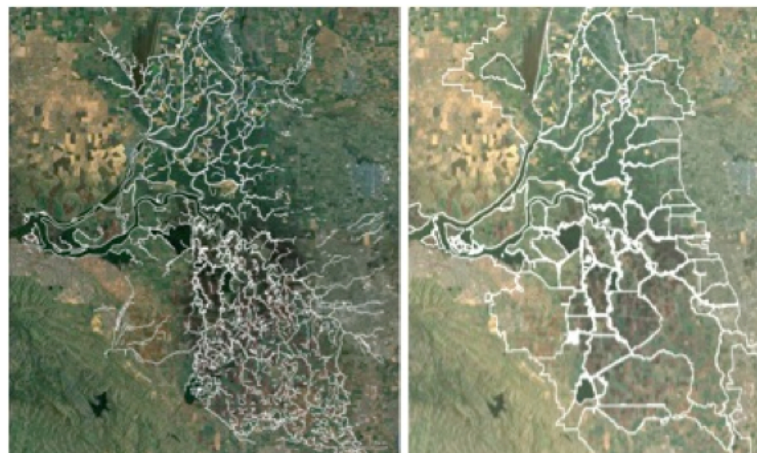
Flow regime change



Invasive species



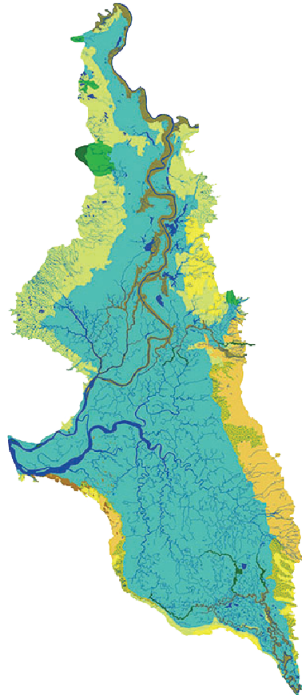
Physical habitat loss and alteration



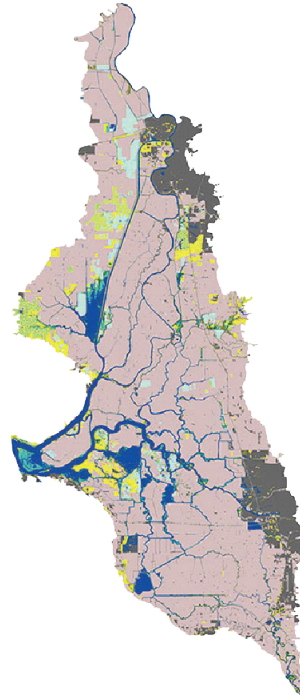
Farming has radically changed Delta habitat



Historic habitat
(early 1800s)



Current habitat
(early 2000s)



Sacramento–San Joaquin Delta habitat types

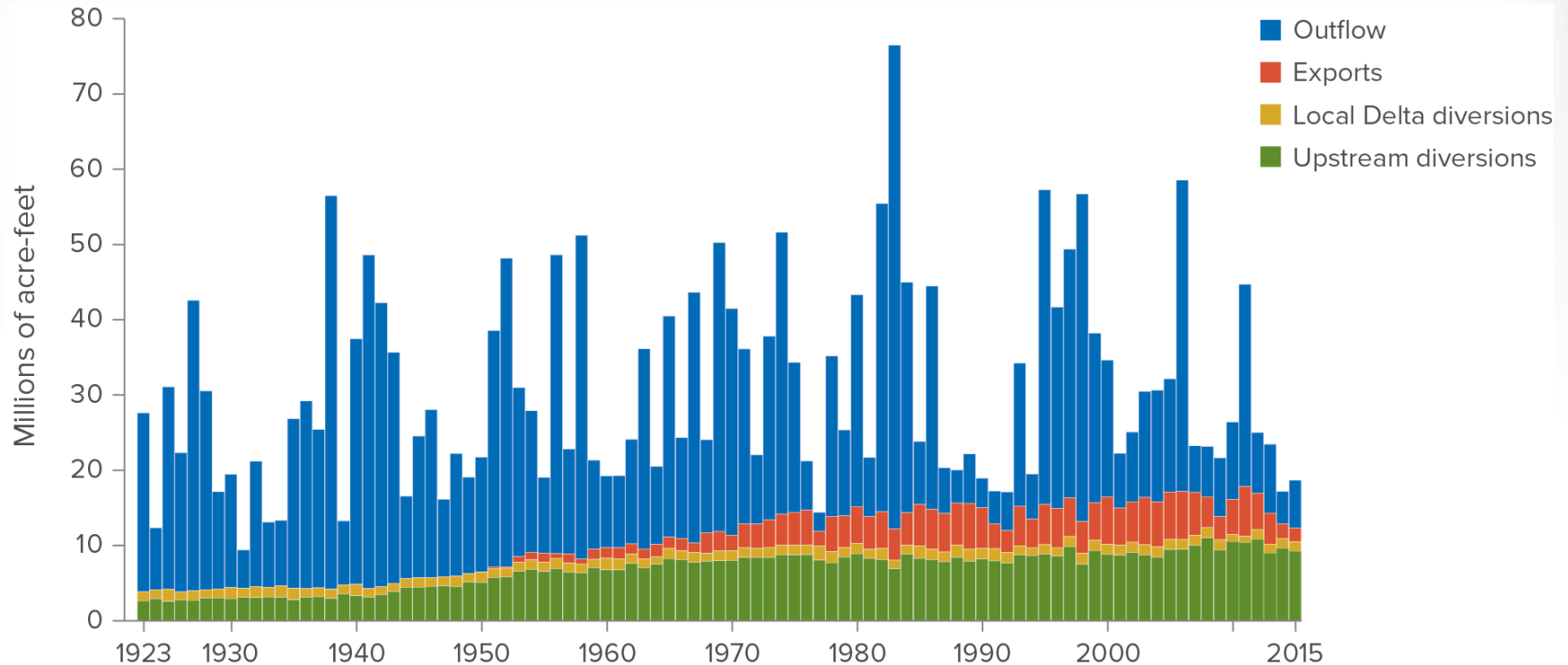
- Water
- Freshwater emergent wetland (tule marsh)
- Willow thicket
- Willow riparian scrub or shrub
- Valley foothill riparian
- Wet meadow and seasonal wetland
- Vernal pool complex
- Alkali seasonal wetland complex
- Stabilized interior dune vegetation
- Grassland
- Oak woodland or savanna

Modern Delta only

- Agriculture/nonnative
- Managed wetland
- Urban/barren

SOURCE: A. Whipple et al., Sacramento–San Joaquin Delta Historical Ecology Investigation: Exploring Pattern and Process (San Francisco Estuary Institute & The Aquatic Science Center, 2012).

Delta outflows have declined as farms and cities have increased their use



SOURCE: Updated from Delta Vision Blue Ribbon Task Force, Our Vision for the California Delta, Figure 7b (2007). For the period 2010–15, upstream diversions (green) are estimated based on water-year type and historical upstream uses.

Conflict between human use of water and environmental goals is growing

- More than 35 species listed under endangered species acts
- The reliability of exports is falling
- Changing climate will make it harder to achieve all goals



Three issues dominate the Delta debate

- Whether to build a new conveyance project to divert water from Sacramento River
- How much water to allocate to endangered fish species
- What to do about 1,100 miles of Delta levees

Conveyance fixes



Species on the brink



Levees at risk



...and three stakeholder groups have competing narratives on “fixes”

- Delta water users worry about reliability of water supply
- Environmental interests seek to reverse decline in native species, improve ecosystem health
- Local interests want to maintain their current economic and cultural uses of the Delta



Delta Reform Act (2009) set “Coequal Goals” for Delta Policy

“Coequal goals” means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem.

The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.

(CA Water Code §85054)

Bay Delta Conservation Plan: What happened?

- Aimed to address water supply reliability and long-term improvements of ecosystem by pursuing approval of a HCP/ NCCP to comply with ESA
- Proposed constructing two tunnels to divert Sacramento River water under the Delta and acquiring or improving 150,000 acres of habitat
- Wasn't able to achieve approval from federal agencies for a 50-year permit

Next iteration: WaterFix and EcoRestore

- Disentangles ecosystem restoration from water supply infrastructure
- Seeks shorter term permit, so lost the long-term assurances
- More focused restoration--but with very ambitious timeline



Outline

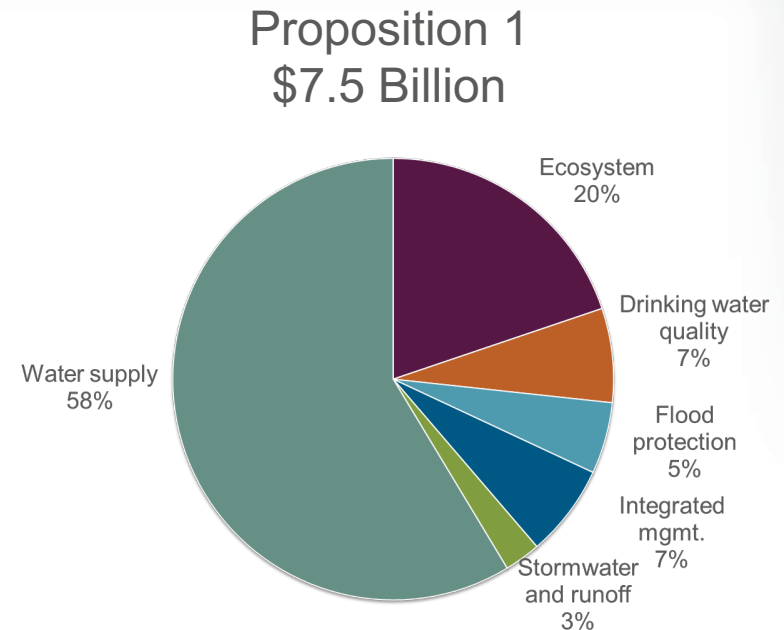
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Administration hopes to move quickly, but there is still uncertainty

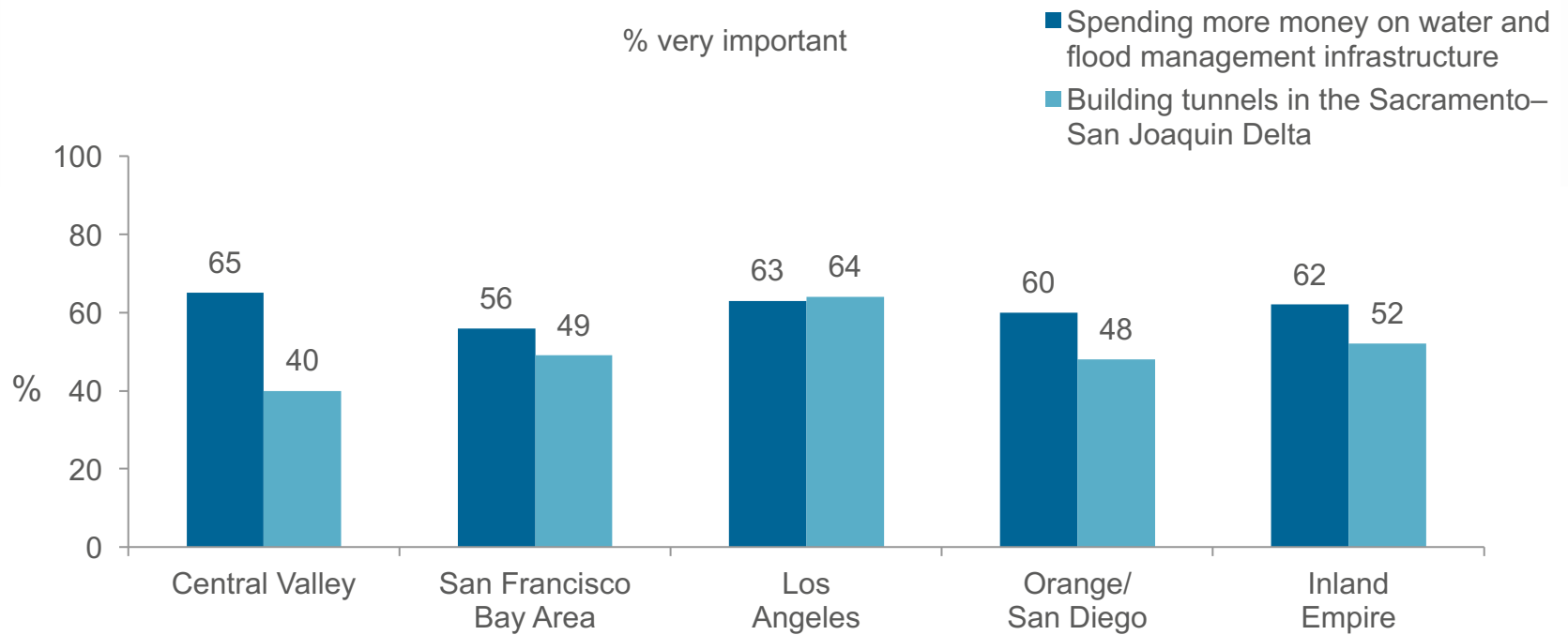
- EIR/EIS seeking final approval from state and federal agencies
- Continues to meet opposition from environmental and in-Delta interests
- Some water uses are concerned about costs and water deliveries

Costs are high, with no clear funding for ecosystems

- Water users on the hook for:
 - \$17 billion tunnels
 - \$300 million for some ecosystem improvements
- No long-term funding source for ecosystem and related science and monitoring
- Levee improvements rely on limited state funds



Success may require compromise, but will also require broad public support

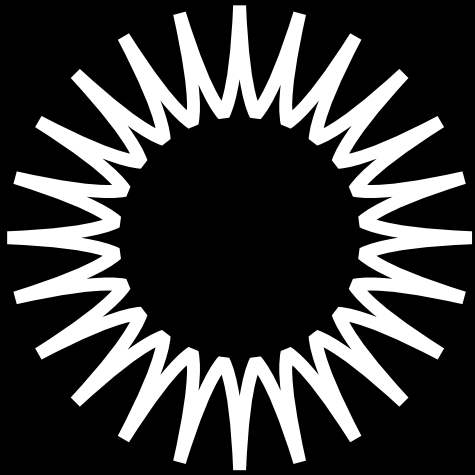


Notes on the use of these slides

These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

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Thank you for your interest in this work.



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