

# Staged Conveyance Actions

1. Implement critical projects immediately.
2. Address all of the Delta's problems in a comprehensive, timely and cumulative approach where assets and investments build on each other.
3. Avoid investing in assets that can become stranded, oversized or unnecessary.
4. Ensure a timely decision on the isolated facility, and if the decision is to build it, provide best strategy for regulatory permits and financing.

# Staged Conveyance Actions

## How the State Benefits:

1. Delta smelt and other Delta fisheries significantly improved.
2. Water supply more reliable:
  - a. Pumping reductions for fish protection reduced.
  - b. Extended outages from levee failures avoided.
3. Delta drinking water quality for State's 23 million users improved.
4. Critical levees improved to withstand significant seismic and storm events.
5. Investments are consistent with long-term, sustainable plan.

# Staged Conveyance Actions for Sacramento-San Joaquin Delta

Three implementation periods for decisions and action that complement and provide foundation for next stage actions.

<b>Initial Stage</b>	2007 – 2015	\$ 3.5 B Delta Improvements
<b>Second Stage</b>	2015 – 2025	\$ 1 B Delta improvements \$ 6 B if Isolated Facility built
<b>Final Stage</b>	2025 – 2040	\$ 1 B Delta improvements \$ 6 B if Isolated Facility built

(all costs in 2007 dollars)

# Staged Conveyance Actions for Sacramento-San Joaquin Delta

**State** share of Staged Conveyance for Initial Stage:

**Proposition 50**            \$ 0.5 B

**Proposition 84**            \$ 1.0 B

**Proposition 1E**            \$ 1.0 B

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\$ 2.5 B available (\$ 2.1 B needed)

**Federal**                    \$ 0.6 B

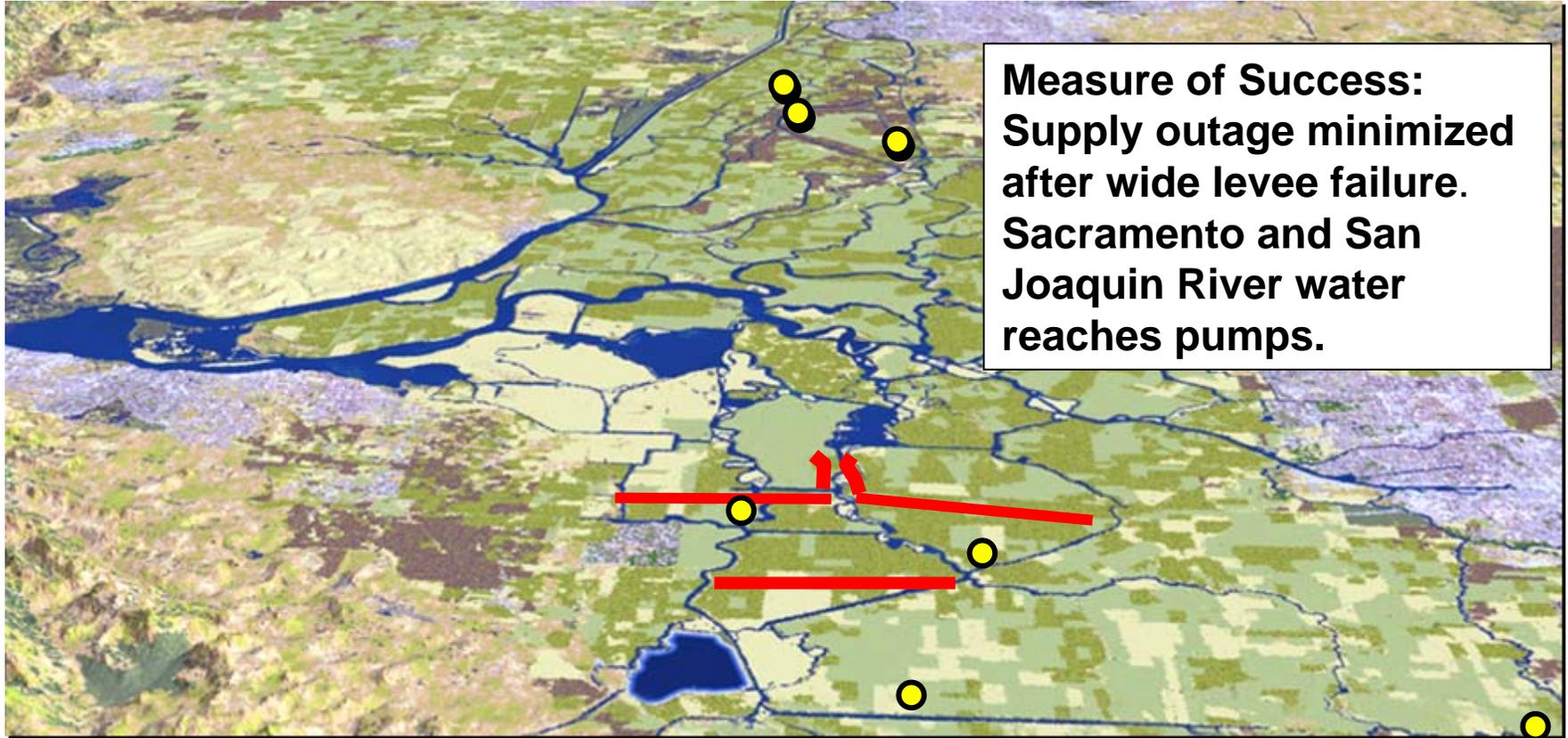
**Local**                        \$ 0.8 B

# Initial Stage

- Stockpile disaster response material in Delta.
- Strengthen critical levees on west side (50% of west side levees improved).
- Complete initial habitat improvements for Delta.
- Implement Franks Tract Project (improves conditions for Delta smelt and Delta water quality).
- Install fish screens for 2,000 cubic feet per second (cfs) intake at Clifton Court Forebay.
- Start Delta island subsidence restoration plan (50% complete).
- Agree on size, timing and use for isolated facility based on success of initial stage actions.

# Staged Conveyance: Initial Stage

## A. Preemptive Actions to Reduce Severity of Delta Disaster



- Stockpile materials at critical locations to limit salinity intrusion
- Critical levees upgraded to form a solid salinity barrier

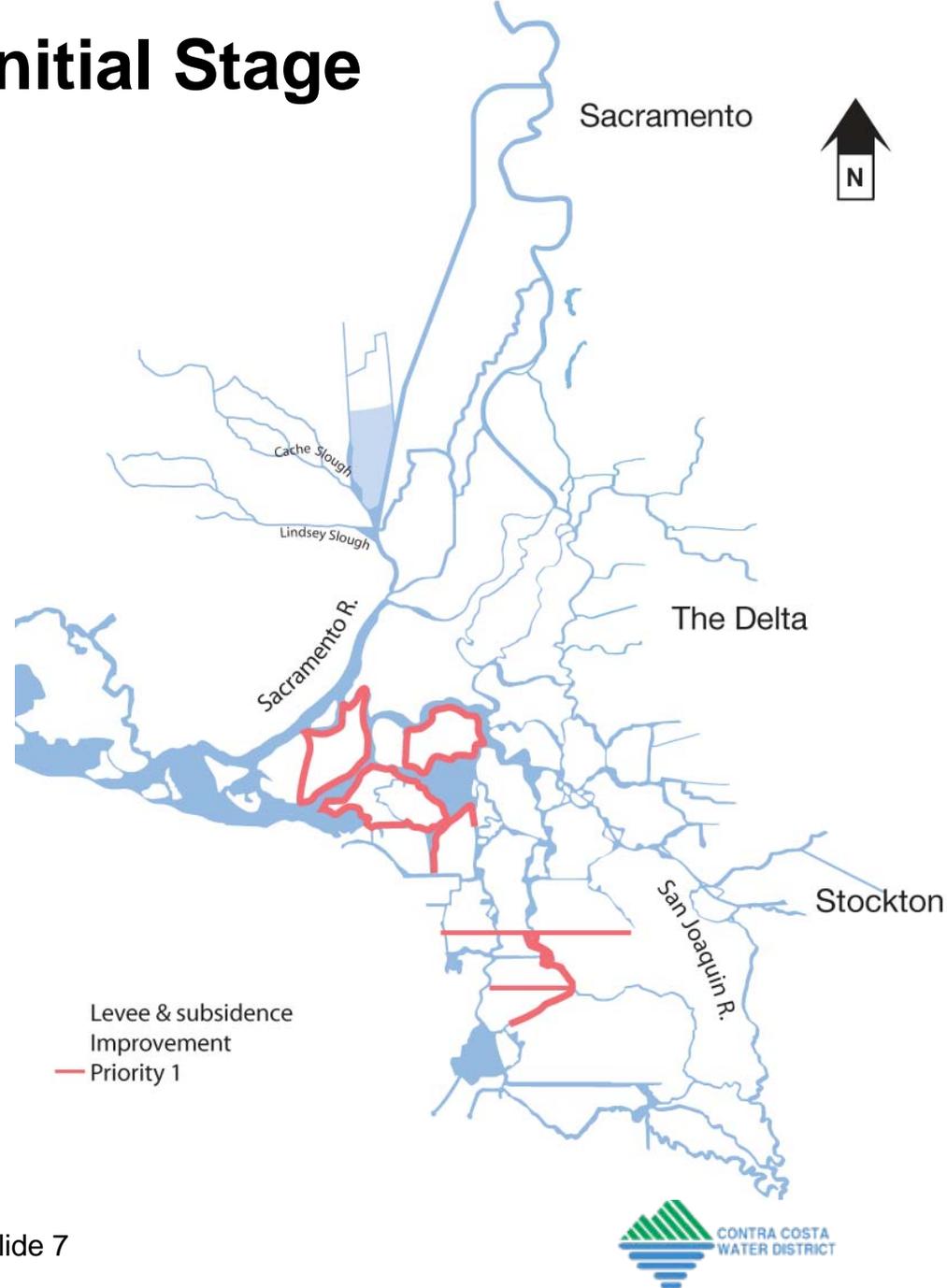
# Staged Conveyance: Initial Stage

## B. Levee Improvements

- Strategically improve levees in western and central Delta.
- Finance with bond funds.
- Focus on protecting:
  - Population centers
  - Islands that cause worst seawater intrusion if failed.
  - Infrastructure corridors.
  - Corridors to get Sacramento River water to pumps.

## C. Begin Subsidence Restoration Program

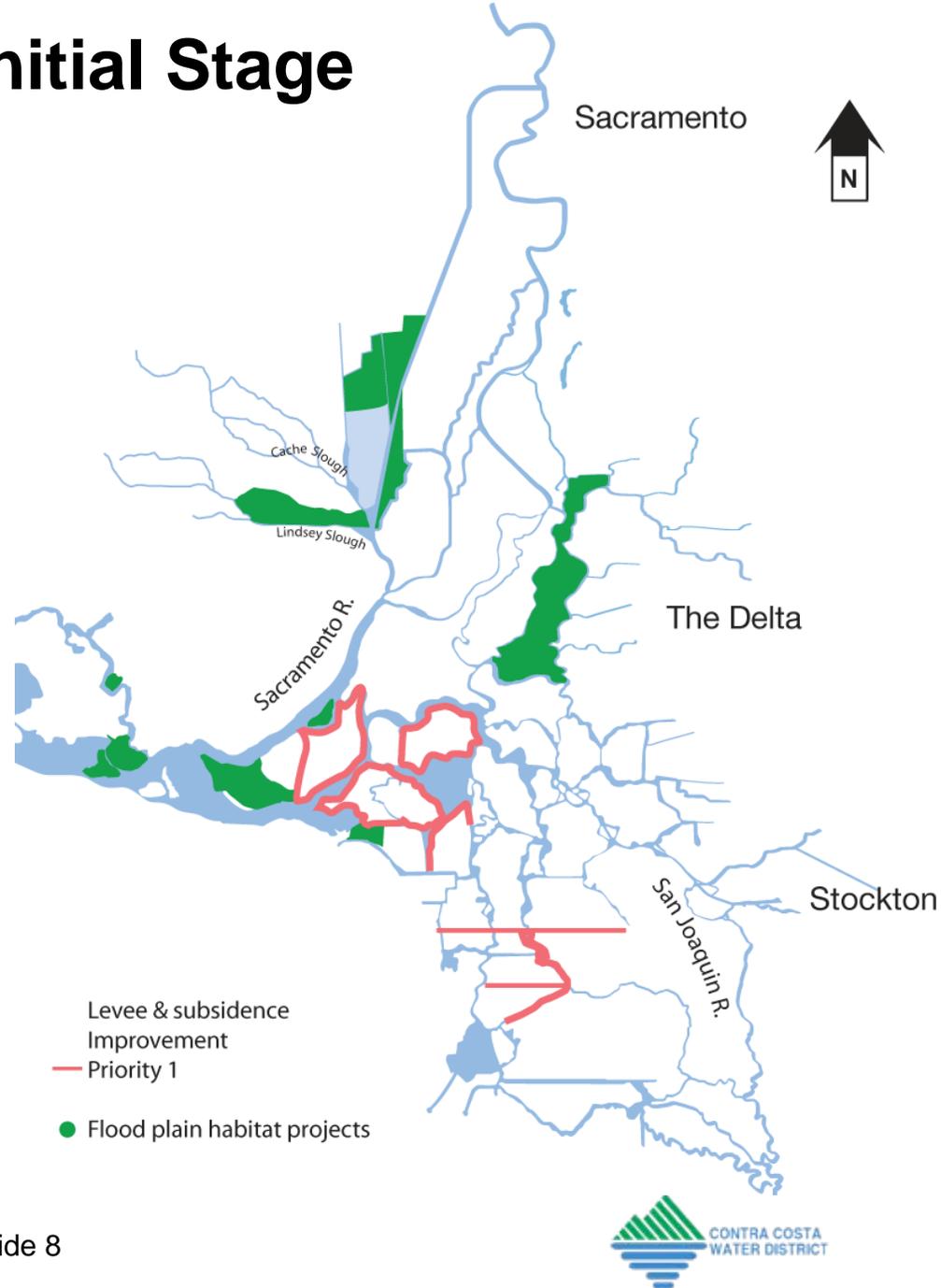
- Implement Best Management Practices (BMPs) in Delta with financial incentives to modify land use practices.



# Staged Conveyance: Initial Stage

## D. Begin Floodplain / Habitat Projects in the Delta

- Create habitat for endangered species.
- Start with lands already purchased.
- New eco-friendly levees create habitat, better flood protection, and are consistent with other levee investments.
- Implement Dutch Slough Restoration Project, Lower Sherman Island Project, and Meins Landing Restoration Project.
- Ensure export of organic carbon does not increase to protect drinking water.



# Staged Conveyance: Initial Stage

## E. Implement Franks Tract Project to Improve Water Quality and Reduce Fish Losses



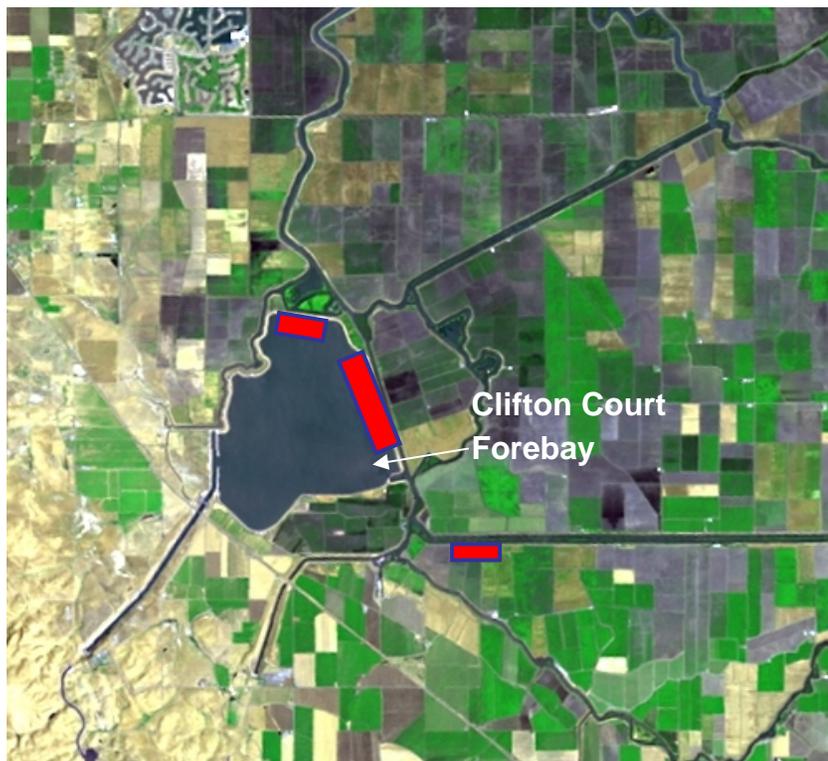
Modify Delta channels near Franks Tract to reduce seawater intrusion and fish near South Delta pumps.

Measures of Success:

- Improves exported water quality 10 – 15 %.
- Fewer fish lost to predation in Delta and to South Delta pumps.

# Staged Conveyance: Initial Stage

## F. Staged Implementation of New South Delta Screened Intakes – Potential Locations to Distribute diversions



Add new screens, up to 2,000 cfs, for South Delta export facilities.

Divert water directly into Clifton Court Forebay through screens.

Measures of success: Screens reduce number of fish diverted into forebay so fish are not lost to predation or to pumps.

**Screens work: CCWD has diverted over 800,000 AF through its screen on Old River.**

**Fish count: 0 salmon, 1 Delta smelt larva!**

# Staged Conveyance: Initial Stage

## Continue “Outside the Delta” Programs

**G. Decrease Non-point Pollution in San Joaquin River**

**H. Floodplain / Habitat Corridors to reduce flood risk**

**I. Develop 3 - 5 Million Acre Feet (MAF) of Surface and Groundwater Storage**

- Helps manage global climate change by capturing increased spring runoff (faster melting snow pack).
- Flexible water management tool that can be used for many purposes.

# Staged Conveyance: Initial Stage

## End of Initial Stage

### J. Decision on high quality Delta pipeline

**Size:** 2,500 to 5,000 cubic feet per second: avoids stranded assets and unused capacity, ensures urban high quality supplies, avoids unstable levee construction.

**Timing:** Implement when needed, not before.

**Location:** Alignment, rights of ways, connections, etc.

**Operations:** Governance, authority, priorities, and mitigation for remaining Delta beneficial uses.

**Financing:** Beneficiaries, cost share, type of bonds.

# Staged Conveyance Actions

## Measures of Success

### Fishery recovery indices

- Population and diversity of ESA populations increased.

### In-Delta water quality

- Cost minimized for treatment and/or Delta facilities.
- Delta water quality for fish improved.

### Supply reliability/Levee protection

- Probability of 3-month or longer emergency outage of the Delta is reduced.
- Pumping curtailments for fish protection reduced.

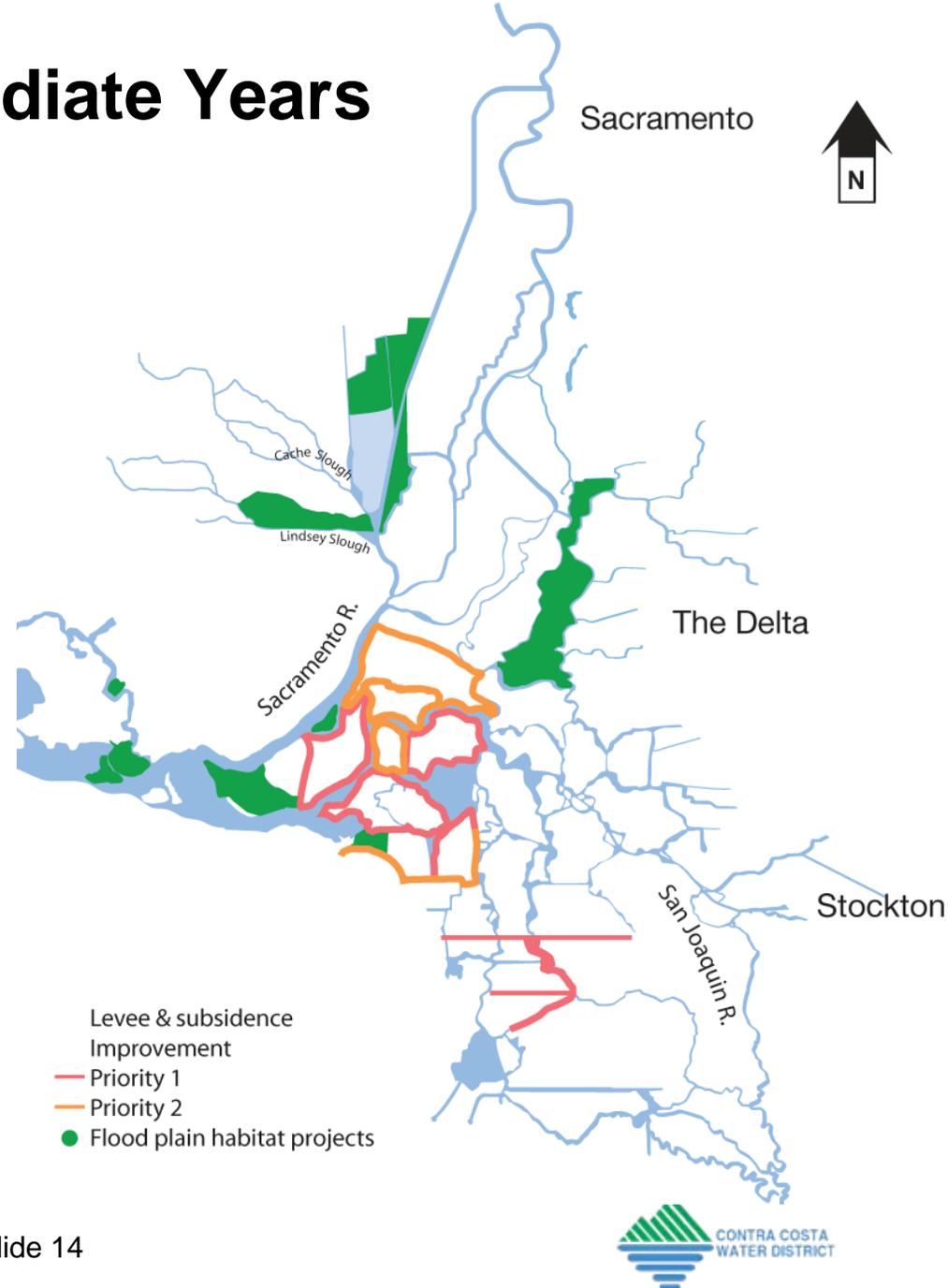
### Sustainability

- Subsequent investments are consistent with long-term plans.

# Second Stage: Intermediate Years

## Projects and Programs in 2015 – 2025

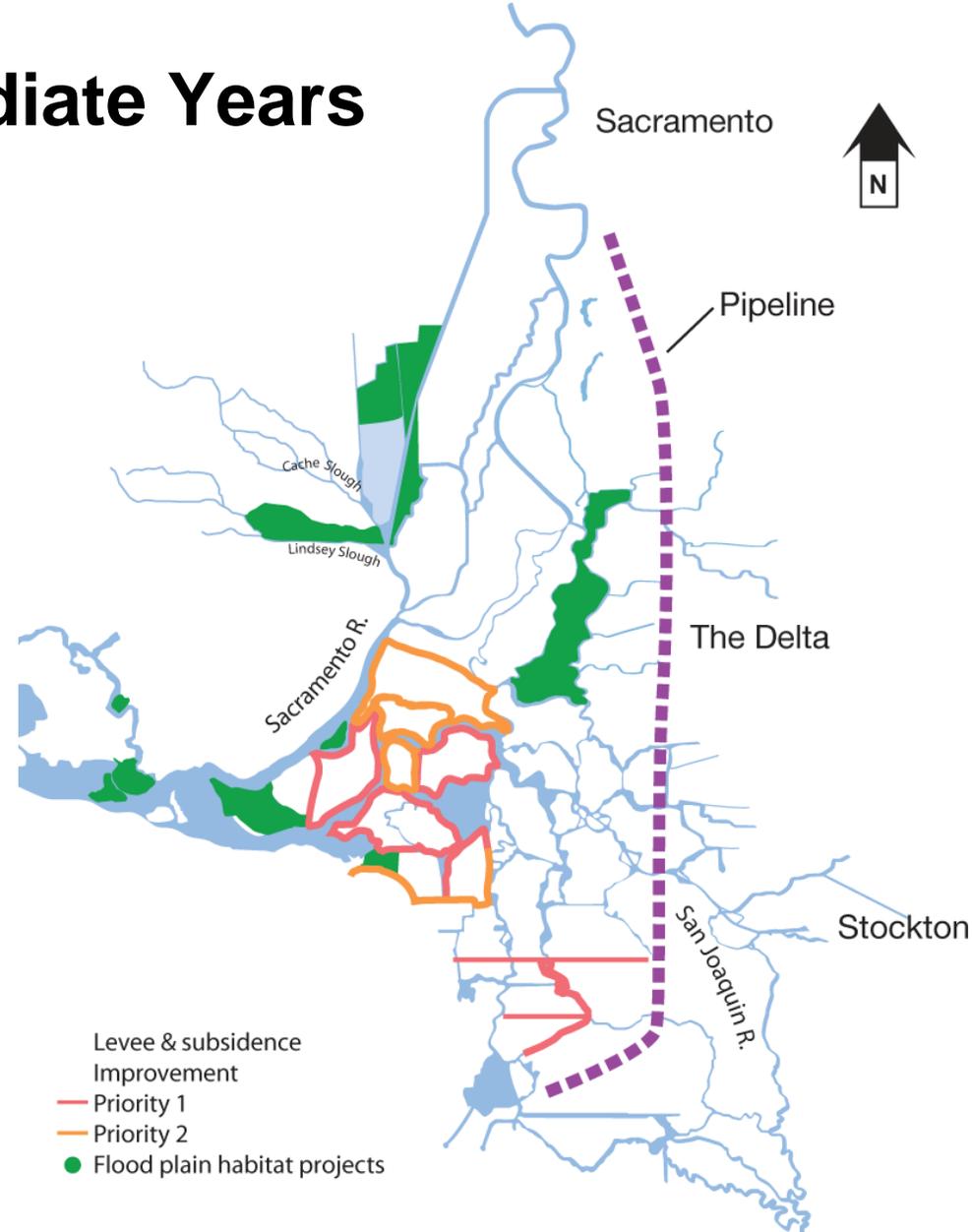
- A. Continue BMPs to reduce/ minimize subsidence.**
- B. Continue investments in levees and habitat, consistent with sustainable Delta.**
- C. Complete permitting and financial plan for isolated facility.**



# Second Stage: Intermediate Years

## Projects and Programs in 2015 – 2025

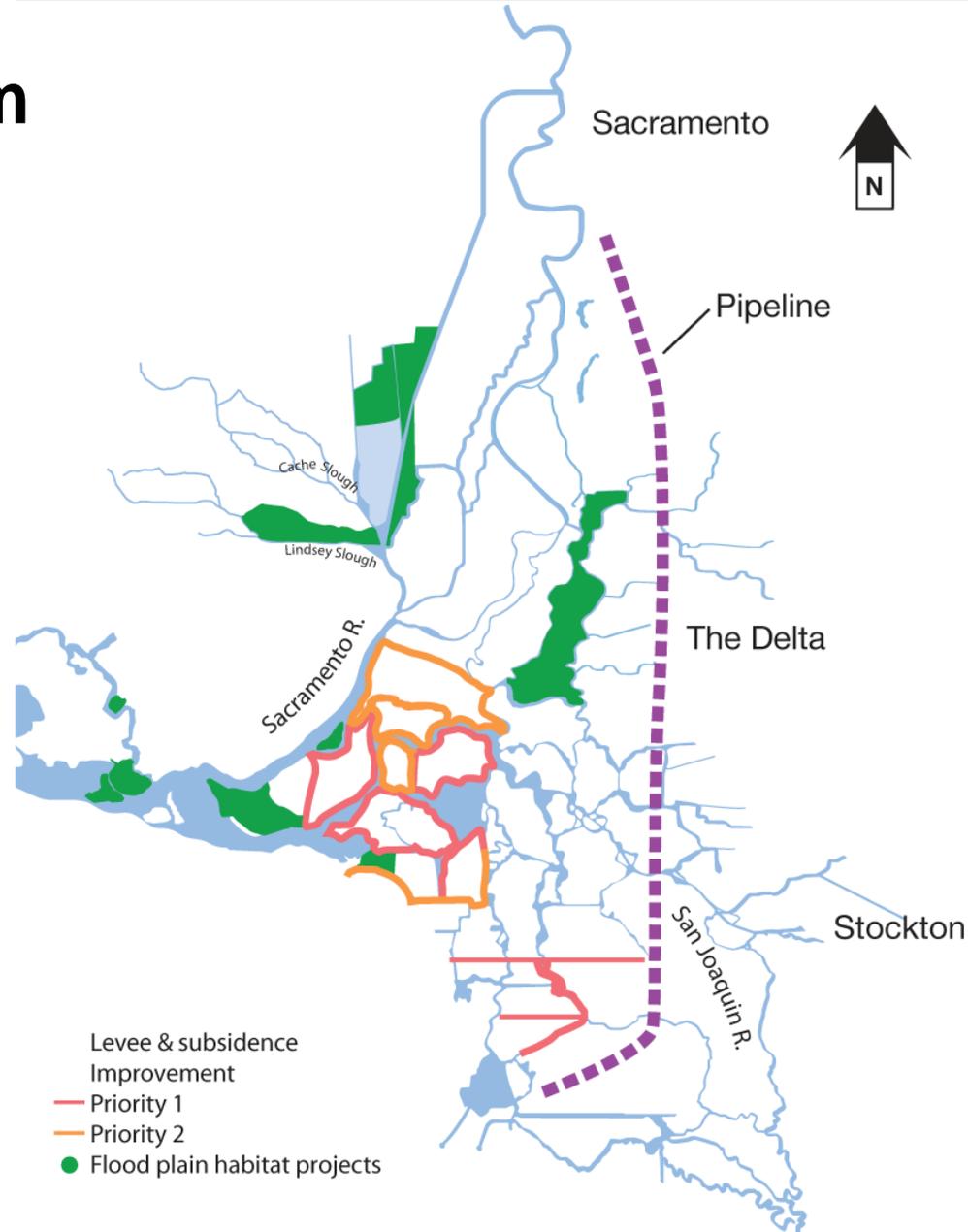
**D. Drinking water quality:**  
Begin implementation of advanced membrane filtration or high quality Delta pipeline.



# Final Stage: Long-Term

## Projects and Programs 2025+

Modify Clifton Court Forebay, Banks Pumping Plant, and Jones (Tracy) Pumping to accommodate sea level rise.



# Staged Conveyance: High Quality Pipeline Implementation Off-Ramps

1. Sea level rise proves to be manageable in Delta after 30 years, Delta still usable.
2. Membrane treatment is cost effective for reducing bromide and other disinfection byproduct precursors.
3. Subsidence is manageable in Delta with BMPs.
4. Fisheries in Delta recover.