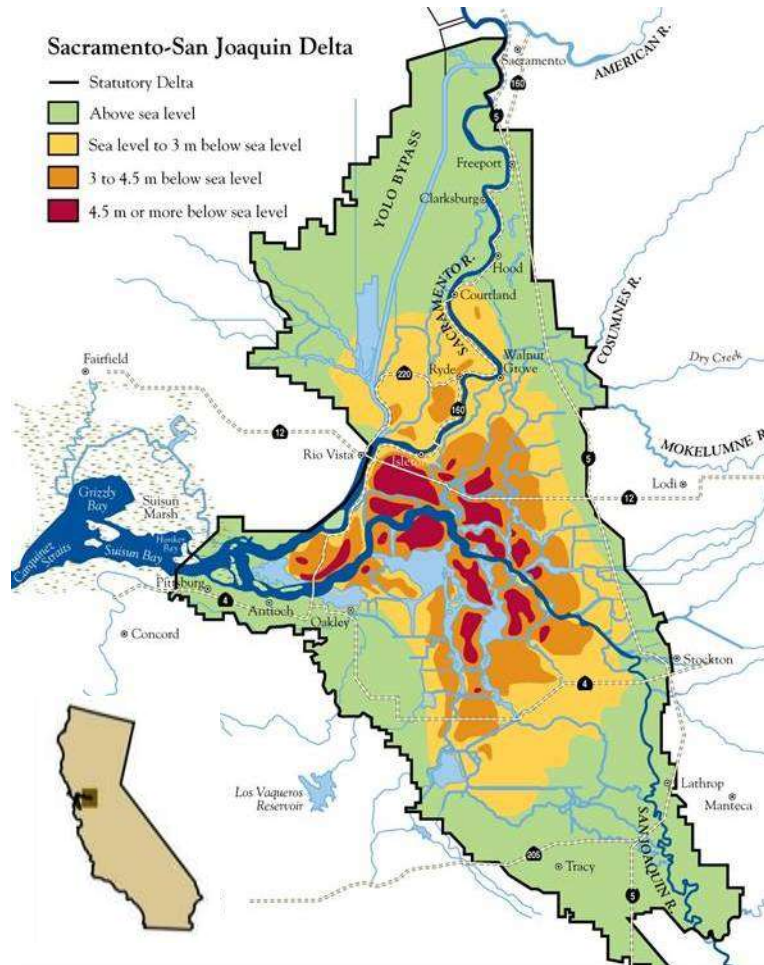


# Transitions for the Delta Economy



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Supported with funding from UC Davis  
Center for Watershed Sciences Delta  
Solutions Program

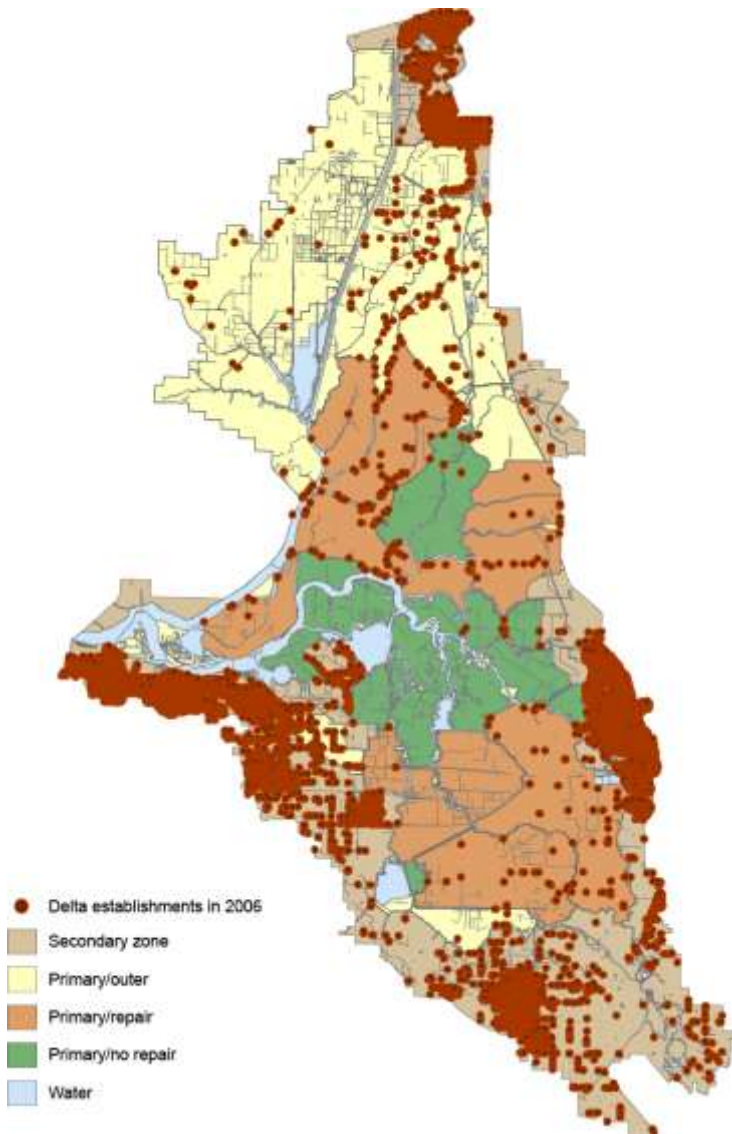
# Natural Forces & Management Decisions Will Shape the Delta

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- Permanent flooding of subsided islands
  - Earthquakes, flooding, sea level rise
  - Decision to repair or abandon after flooding
- Changes in water salinity
  - Sea level rise, island flooding
  - Decision to build new conveyance
- Habitat development
  - Decision to improve aquatic habitat
- What impacts on the Delta economy?

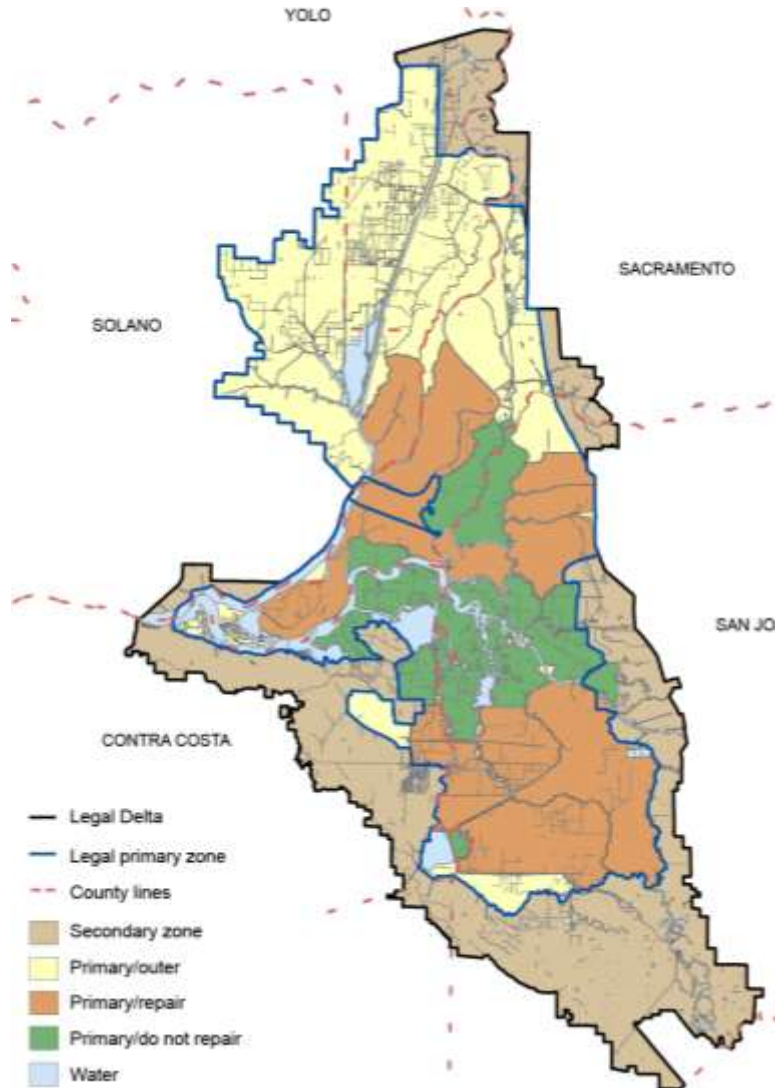


# Changes Mainly Will Affect Inner Delta



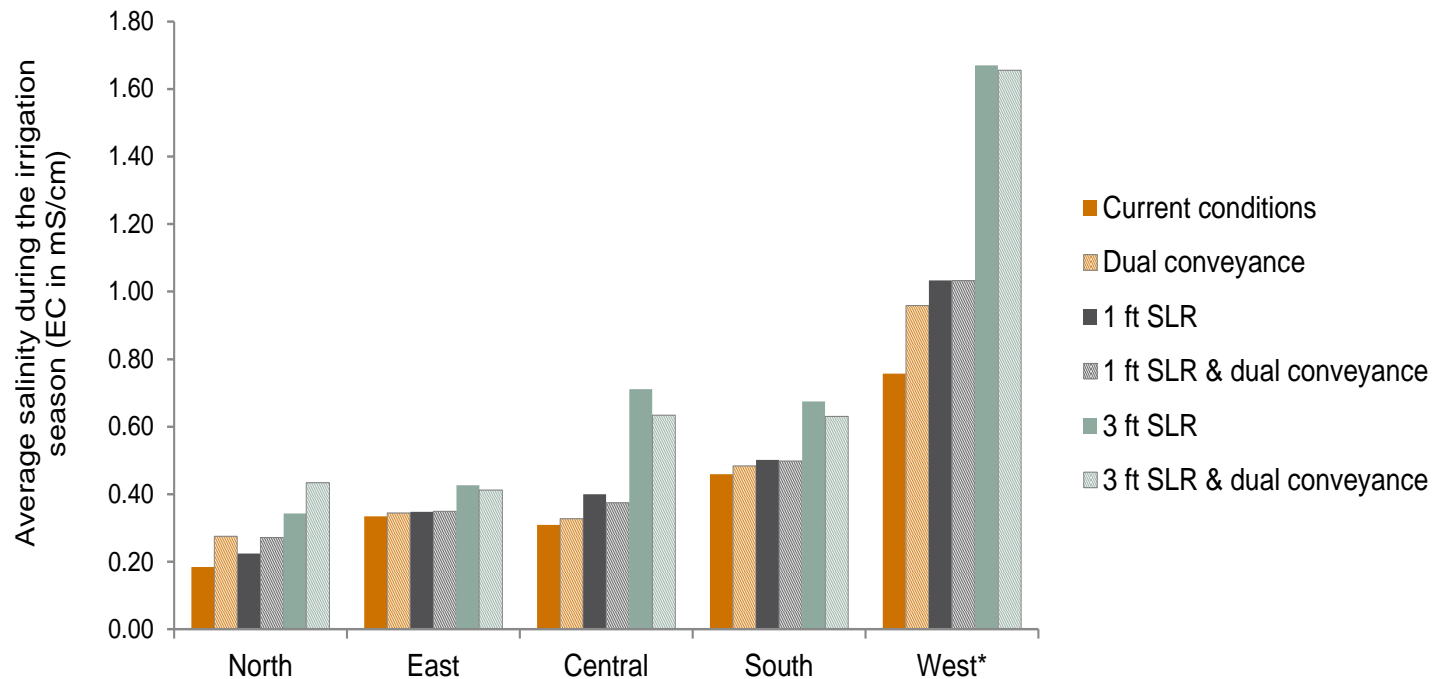
- Most residents (98%), economic activity (96%), and growth in the more urbanized “secondary zone”
- “Primary zone” economy is heavily agricultural

# Permanent Island Flooding Increasingly Likely



- 4 islands abandoned in 20<sup>th</sup> century
- Most expected to flood between now and 2050
- Some (green areas) may not pass business case for repair after flooding

# Dual Conveyance May Not Have Major Salinity Impacts

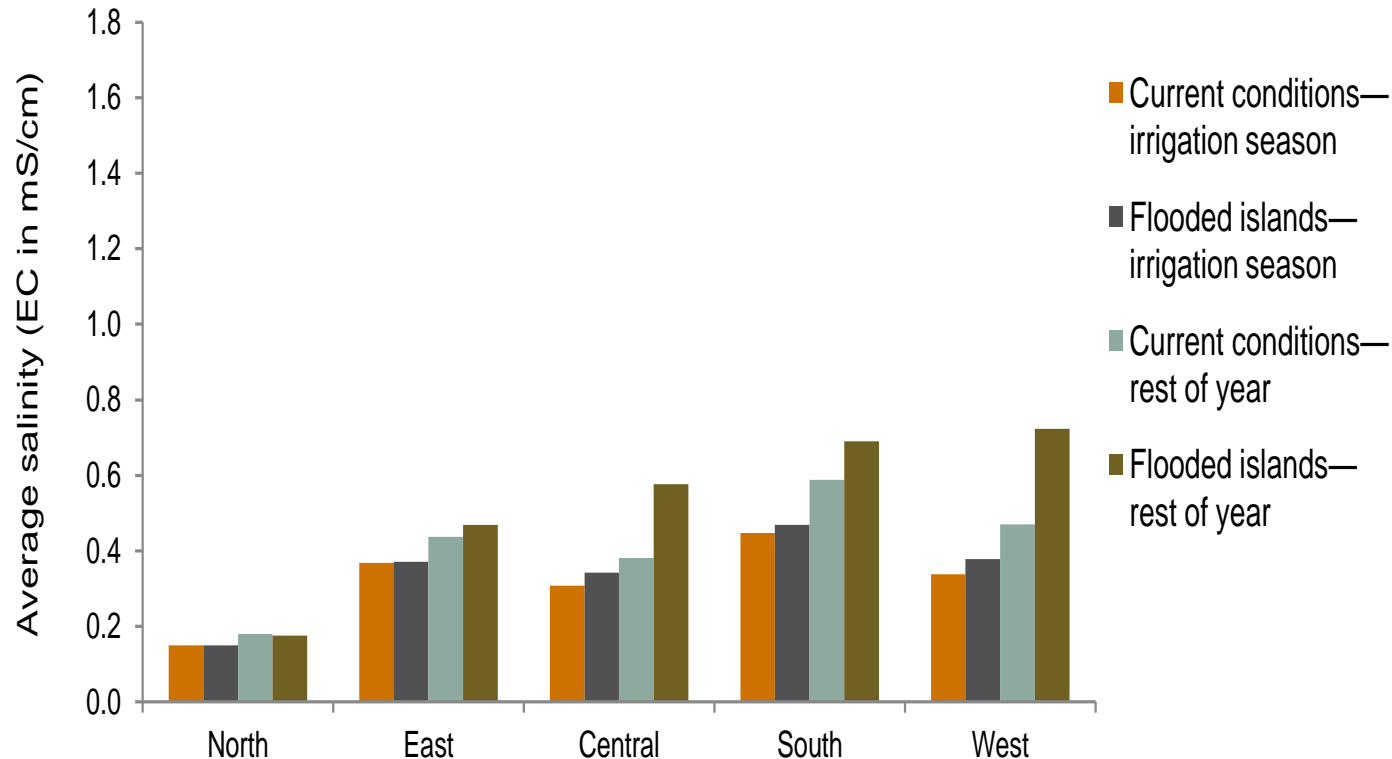


**We considered historical hydrology, operations, and exports (1981-2000), with average exports of 4.9 maf/year**



# Salinity from Permanent Western Island Flooding May Also Be Limited

Historical hydrology, operations, and exports 4/02 – 12/04, with 5 western islands flooded (6 maf/year exports)



**This is long-term – not right after the “big gulp” – and preliminary. 3-D models are needed to look at island flooding with sea level rise**



# We Looked at 4 Ecologically Promising Conservation Areas



- About 45,000 acres (less than BDCP is considering)
- Mostly low-value cropland, less than half farmed in 2007



# Potential Losses to Delta Economy by Mid-Century

Dollar values in 2008\$ millions

|                     | Water Quality              |                         | Land Availability   |                              | Total |
|---------------------|----------------------------|-------------------------|---------------------|------------------------------|-------|
|                     | Dual conveyance & 1 ft SLR | Western island flooding | Habitat conversions | Flooding of “no-repair” zone |       |
| Jobs                | 16                         | 2                       | 397                 | 1,379                        | 1,793 |
| Revenue             | 1.4                        | 0.3                     | 38                  | 180                          | 219   |
| Value-Added         | 0.8                        | 0.2                     | 21                  | 107                          | 129   |
| State & Local taxes |                            |                         |                     |                              | 14    |

About two-thirds of all losses are “direct” and would occur in the primary zone

- About 15 percent of primary zone economy
- About 1 percent of total Delta economy (and probably less, given continued growth in other sectors)





# Policy Implications

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- **Create a levee policy**
  - State and federal funds for subsidies are limited
  - Focus available funding on most important areas and assets
- **Encourage growth in recreation**
  - Water-based recreation about 1/3 as large as agriculture in Delta
  - May help offset some other losses



# Policy Implications (cont.)

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- **Conduct research on water quality and levees**
  - More and better salinity modeling to look at different scenarios
  - Which levees are strategic for water supply, habitat?
- **Develop mitigation strategies**
  - Landowners *and* communities
  - Even when not legally required (e.g. permanent island flooding)
  - Water exporters should play a role here



# For More Information

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- *Transitions for the Delta Economy* (Jan 2012)
- *Managing California's Water* (Feb 2011)
- *California Water Myths* (Dec 2009)
- *Comparing Futures for the Sacramento-San Joaquin Delta* (July 2008)
- All available for free download at [www.ppic.org](http://www.ppic.org)



# Notes on the use of these slides

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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.

