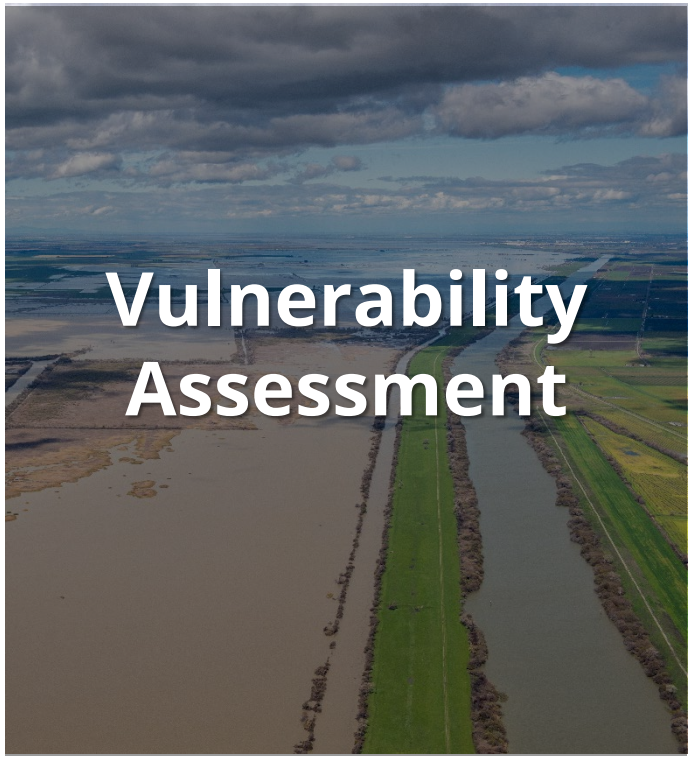
July 27, 2023

Delta Adapts Update

Delta Stewardship Council

A CALIFORNIA STATE AGENCY

Delta Adapts =



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Overarching goal is to build climate resilience in the Delta

Adaptation Process

Key Delta Vulnerabilities

Equity

Not all communities will be impacted by climate change the same

Ecosystems

The historical extent of ecosystems has declined by as much as 95%

Flooding

Substantial flooding expected in Central and South Delta

35% of Delta's land area and over 10% of population is exposed to 100 year flood

Agriculture

Flooding can expose 148k acres of ag lands, equating to about $73M in ag assets and $79M annual ag economic activity

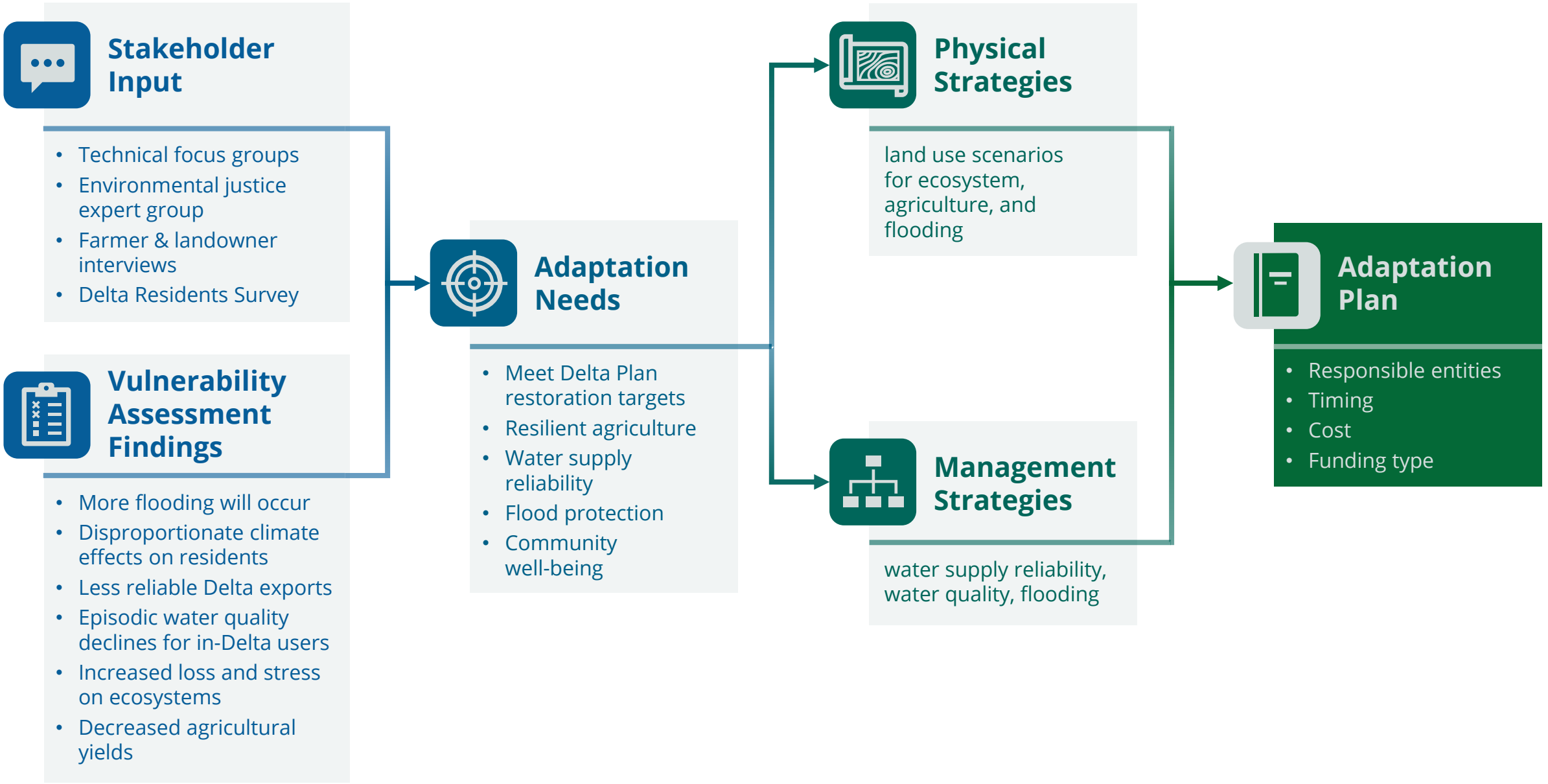
Water Supply Reliability

Delta exports decrease by about 10% on average and 20% in drier years

Delta Unique Elements

- Heart of State's water supply
- Place of ecological importance
- Agriculture is primary economic driver
- Extreme flood risk under current conditions
- Challenges with subsidence
- Many socially vulnerable populations

Adaptation Plan Methodology



Stakeholder Workgroup Meeting

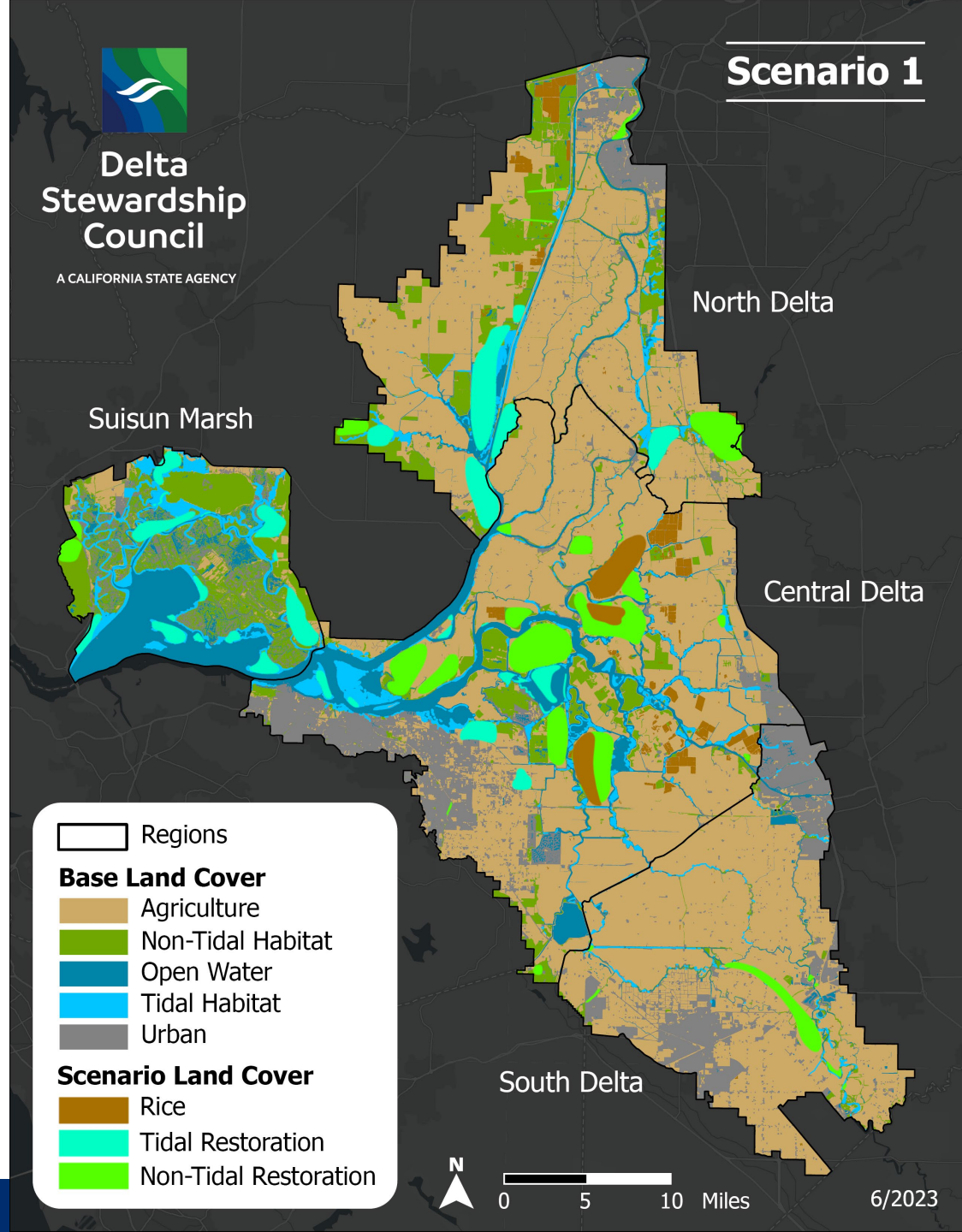
What are scenarios?

- Different ways to adapt on landscape and maximize needs
- Modeling exercise to guide and inform physical strategies
- Many strategies aren't tied to scenarios
- Not a parcel-level plan for adaptation

Scenario 1 Climate Smart Agriculture Focused

This scenario focuses on the continuation of existing land uses, which in the Delta is primarily agriculture.

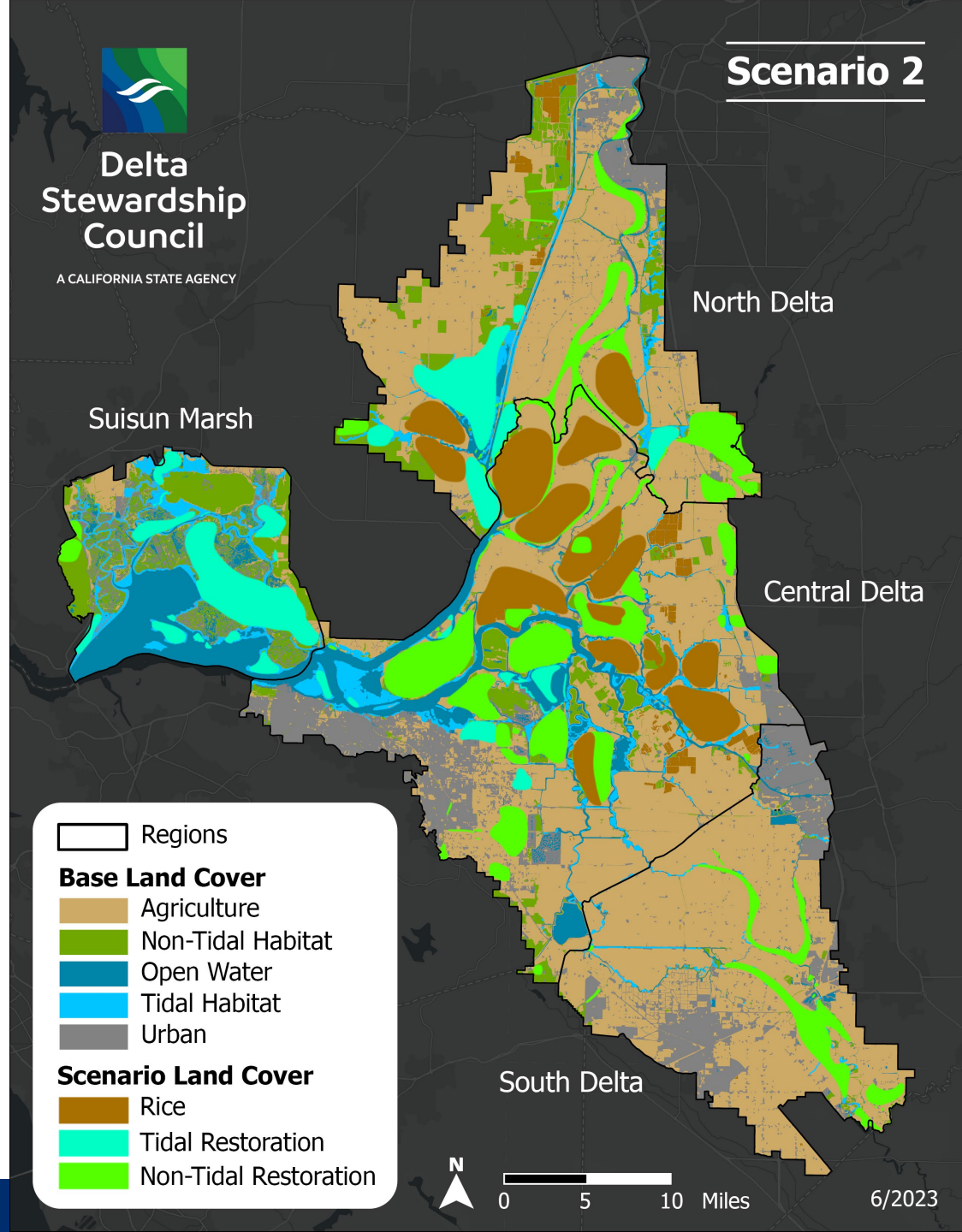
- All existing land zoned for agriculture continues on private land
- Restoration or multibenefit mosaics on suitable public lands
- Assumption of approximately 9% of subsided lands have subsidence reversal land cover types
- Restoration in Suisun Marsh is limited to less than 5,000 additional acres on public lands
- A set of climate smart adaptation strategies to enable agricultural use to continue on existing private lands with changing climate conditions
- Assumes all levees are improved to accommodate for climate change



Scenario 2 Restoration Focused

This scenario focuses on meeting restoration targets and habitat types that are identified in the Delta Plan, assuming restoration occurs on suitable public lands first.

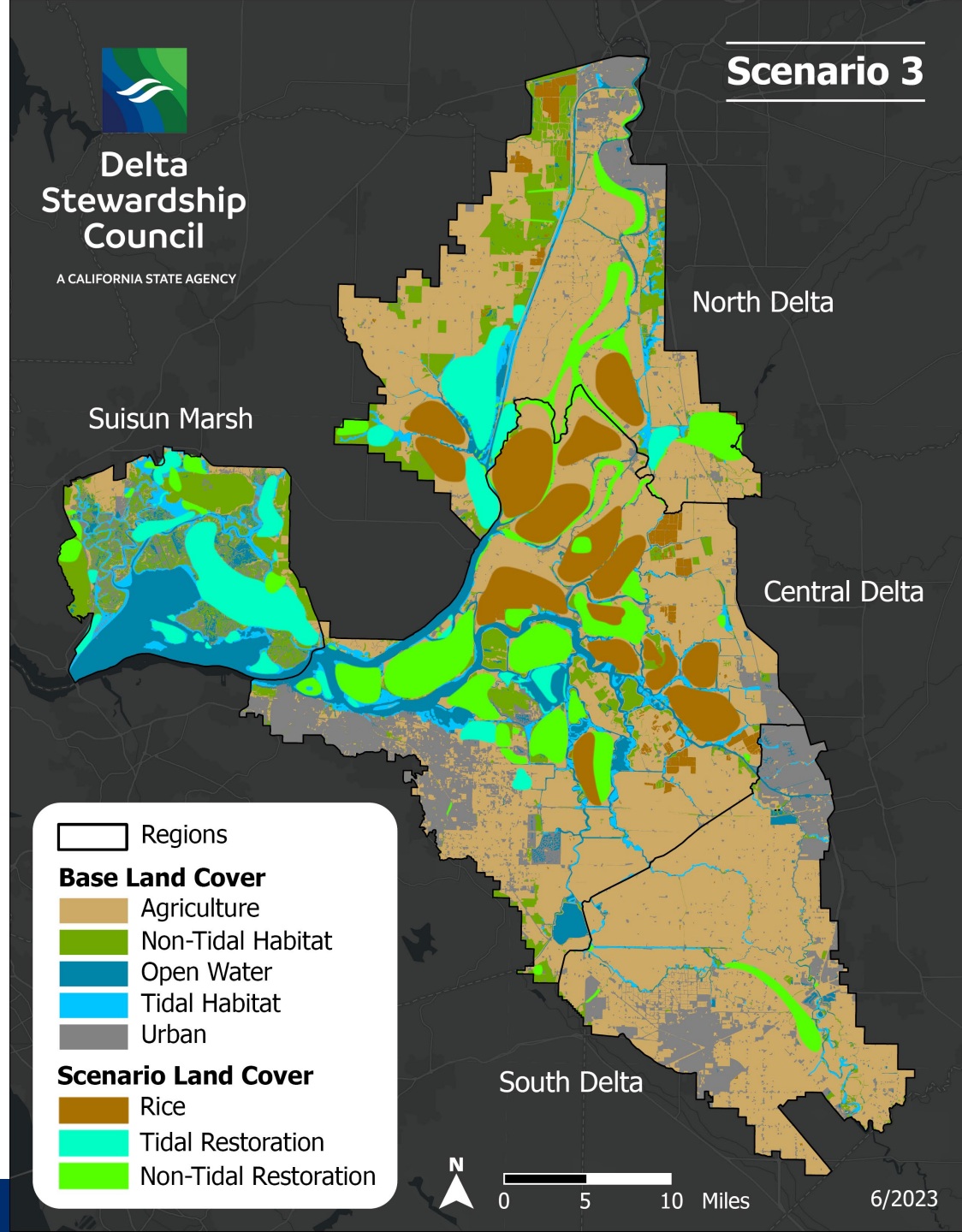
- Restoration is focused on public lands first to meet Delta Plan restoration targets and performance measure specifying targets for 2050 by habitat type
- Limited private land (approximately 30,000 acres or 5% of the Delta) located at suitable elevations have been identified for restoration
- Approximately 30% of subsided lands have been identified for subsidence reversal land cover types
- Restoration in Suisun totals to almost 21,000 acres on public lands
- Assumes all levees are improved to accommodate for climate change



Scenario 3 Less Restoration in Delta

This scenario focuses on meeting overall restoration targets established in the Delta Plan and reducing conversion of prime farmland.

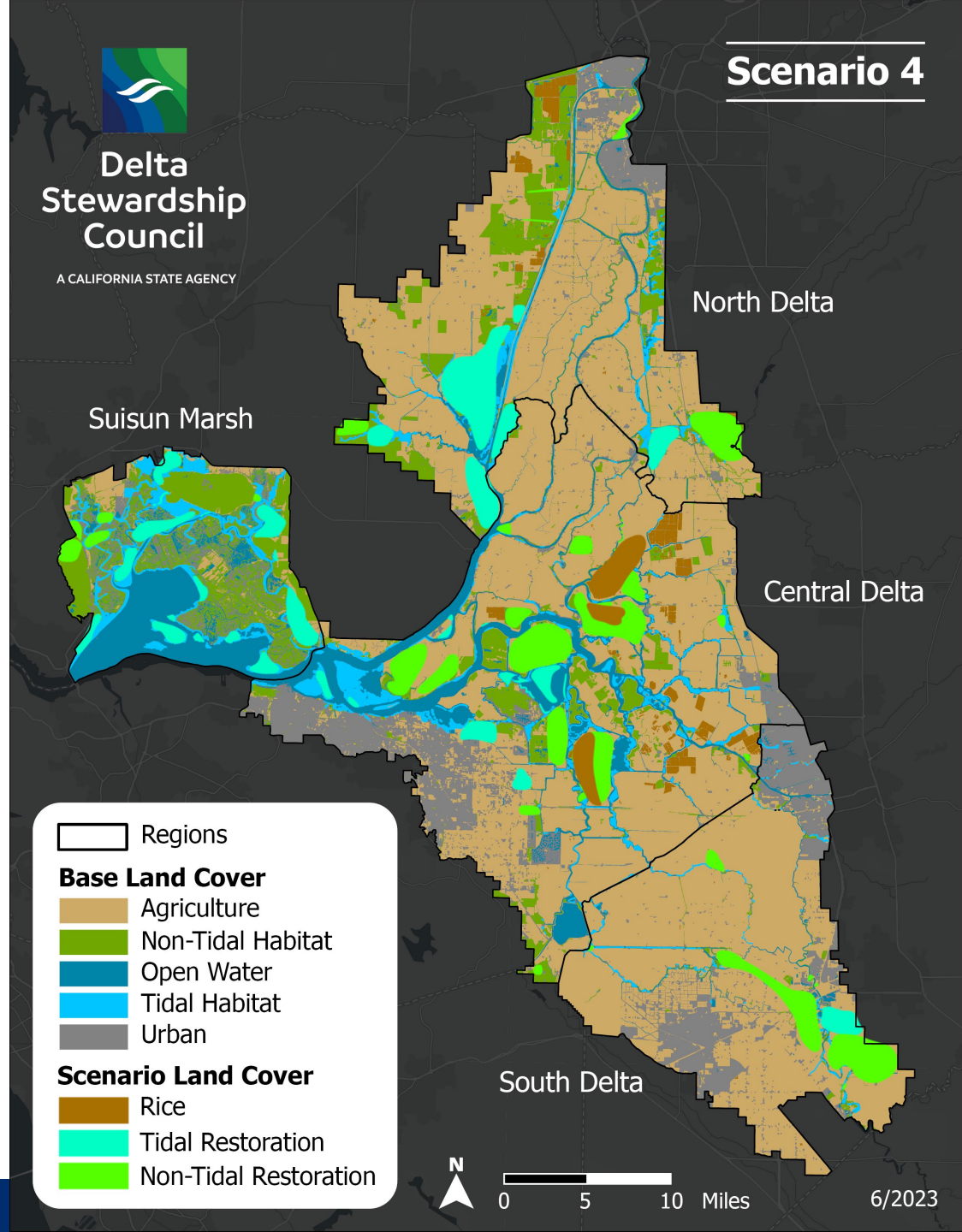
- Focuses restoration on public lands first
- Substantially reduces the amount of restoration assumed on private lands (15,000 acres)
- Approximately 30% of subsided lands have been identified for subsidence reversal land cover types
- Supports more resilient long term Delta landscape by halting and reversing subsidence
- Restoration in Suisun totals approximately 21,000 acres on public lands + 3,000 acres of restoration on privately-owned land



Scenario 4 Levee Underinvestment

Assuming less funding for flood risk reduction is available, this scenario highlights the Delta impacts that would occur with less levee improvements made.

- Assumes a smaller amount of funding is available for levee improvements
- Reduced levee improvements may not protect all assets
- All other existing uses remain the same
- Assumes approximately 9% of subsided lands is converted to rice



Metrics Evaluation

- Quantitatively compare tradeoffs among scenarios
- Measures tradeoffs related to ecosystem, agriculture, flood risk reduction, water quality, economics, equity

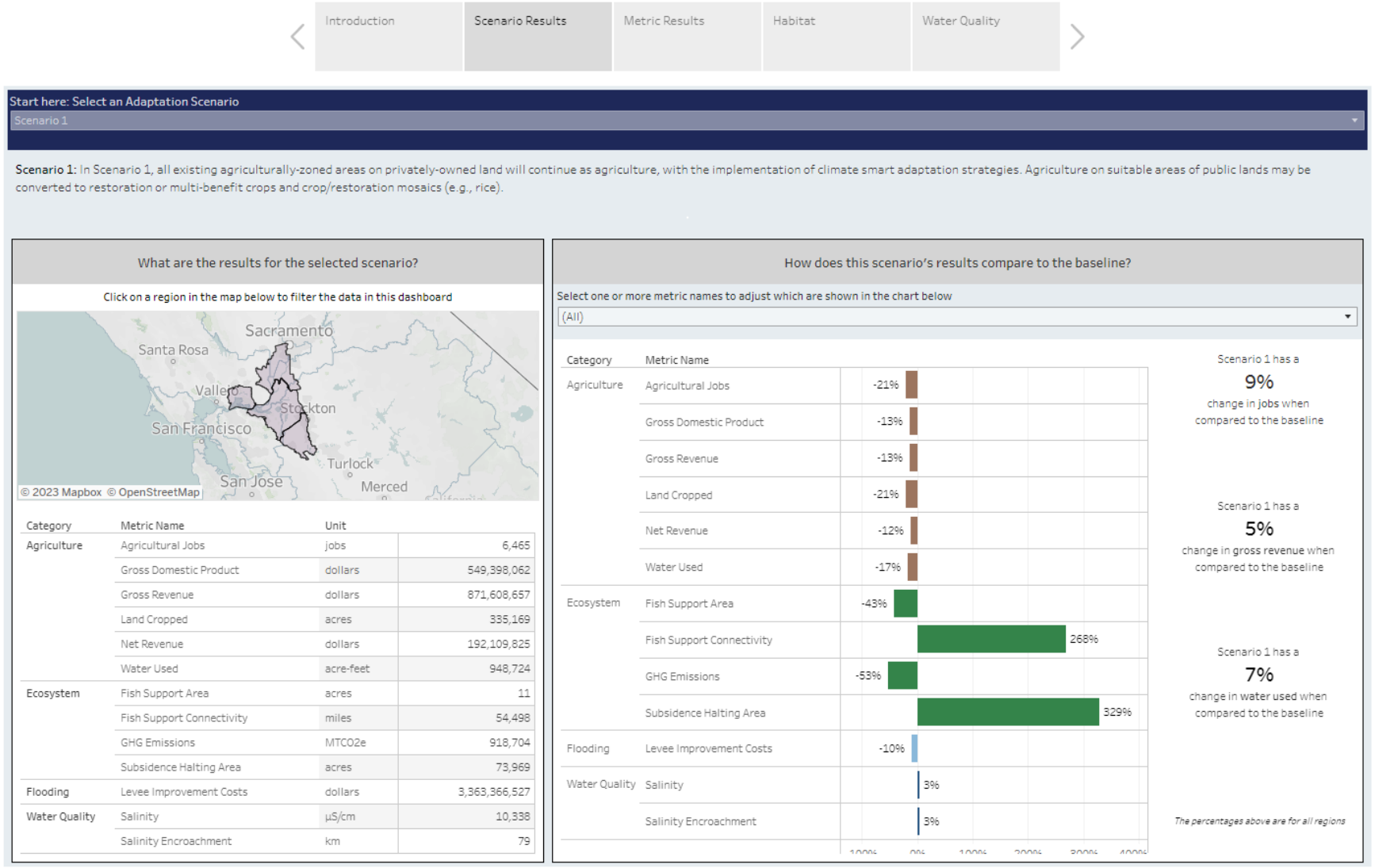
Benefits and Tradeoffs

- Scenario 1: Maintains agricultural jobs and revenue; maximizes protection of prime farmland; continued high greenhouse gas emissions
- Scenario 2: Meets overall targets and by habitat type; generates less greenhouse gas emissions; fewer ag jobs and reduced ag revenues
- Scenario 3: Meets overall Delta Plan restoration goals by acreage, but not by habitat types; reduces conversion of prime farmland by about 15,000 acres
- Scenario 4: Levee costs total about half compared to other scenarios; flood consequences are great

Adaptation Scenario Dashboard

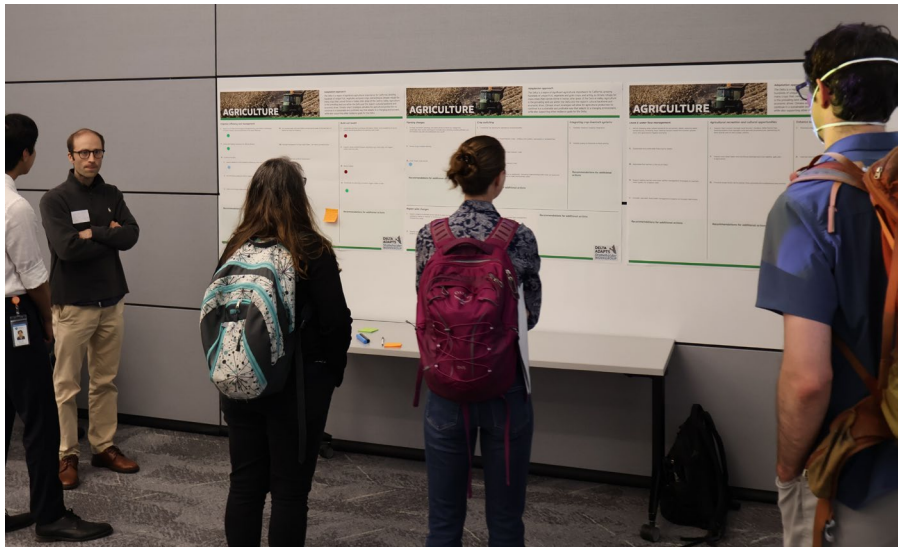
- Allows users to explore adaptation scenarios, metrics evaluated and visualize benefits and tradeoffs

- Link: rebrand.ly/deltaadapts070523



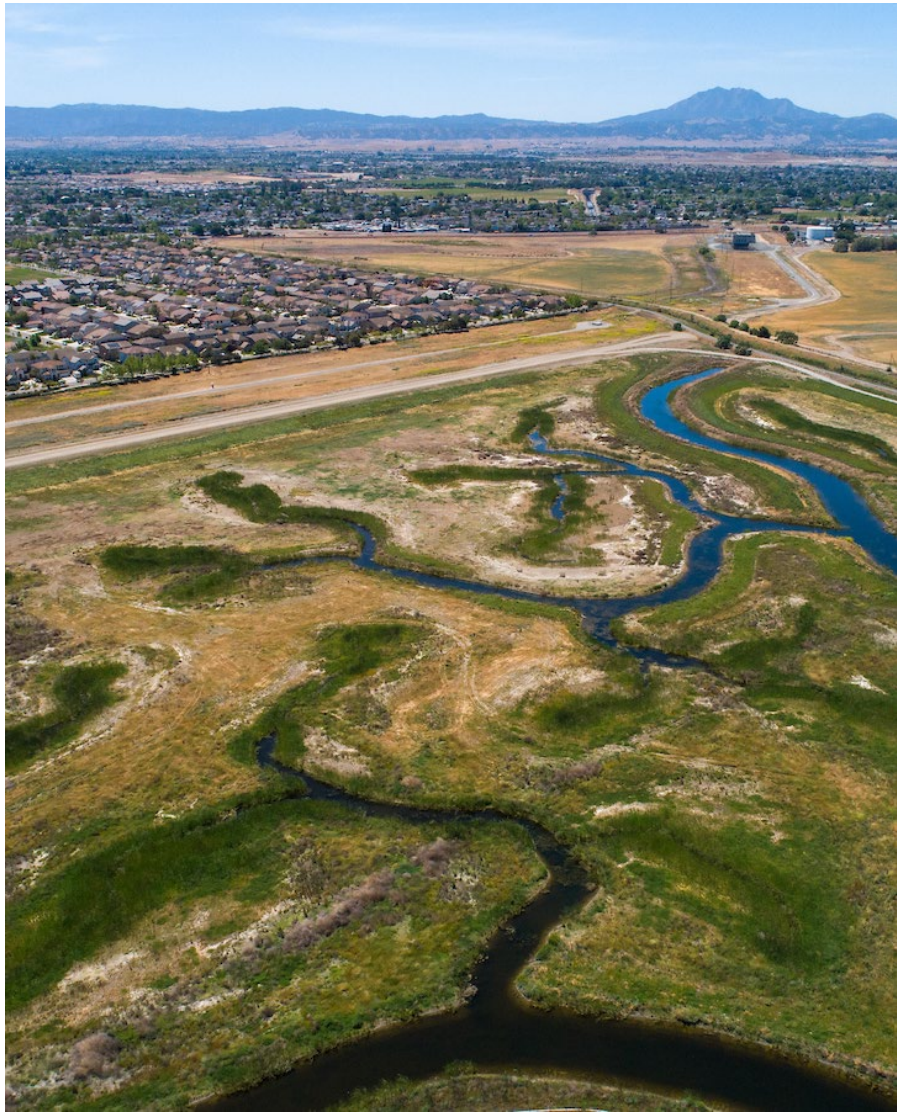
Scenario Insights

- It’s about the process
- Some of what we learned…
  - What stakeholders value and want to see in adaptation
  - What benefits and tradeoffs are
  - Levees are cost effective adaptation
  - Public lands alone cannot meet restoration goals or habitat types
  - Large scale restoration will not negatively impact salinity in socially vulnerable communities



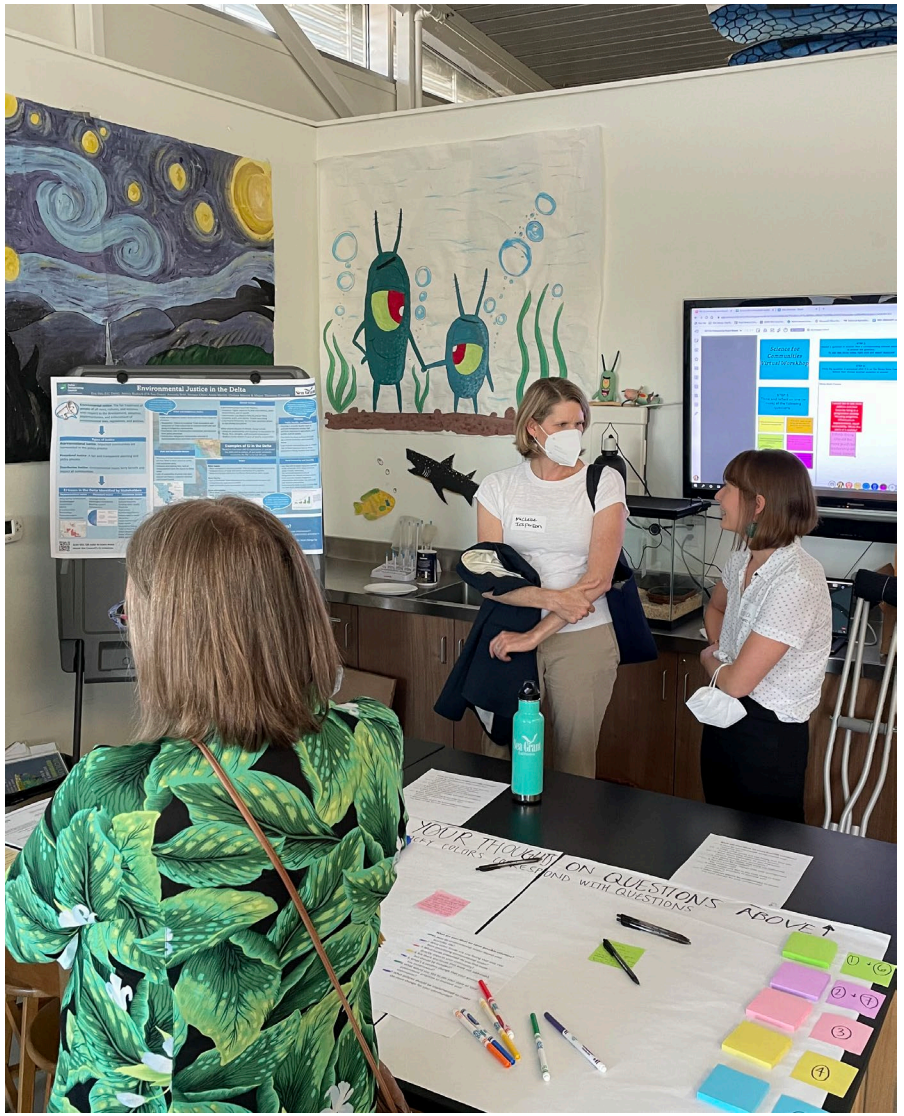
SWG Key Takeaways

- Importance of flood protection and levees
- Address subsidence
- Funding
- Tradeoffs will be required
- Prioritization and protection of vulnerable communities
- Incentivize restoration on private lands



Next Steps

- Request for tribal consultation
- Prepare draft adaptation strategies and implementing actions
- Work with Focus Groups, Environmental Justice Expert Group, and Stakeholder Workgroup members to review draft strategies and actions
- Release Public Draft Adaptation Plan in late 2023



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