

Sept 2024

Climate Adaptation & Environmental Justice in the Sacramento-San Joaquin Delta

Morgan Chow, Environmental Program Manager
Annie Merritt, Environmental Scientist



**Delta
Stewardship
Council**

A CALIFORNIA STATE AGENCY

Council Role and Activities

Implementing the Delta Plan

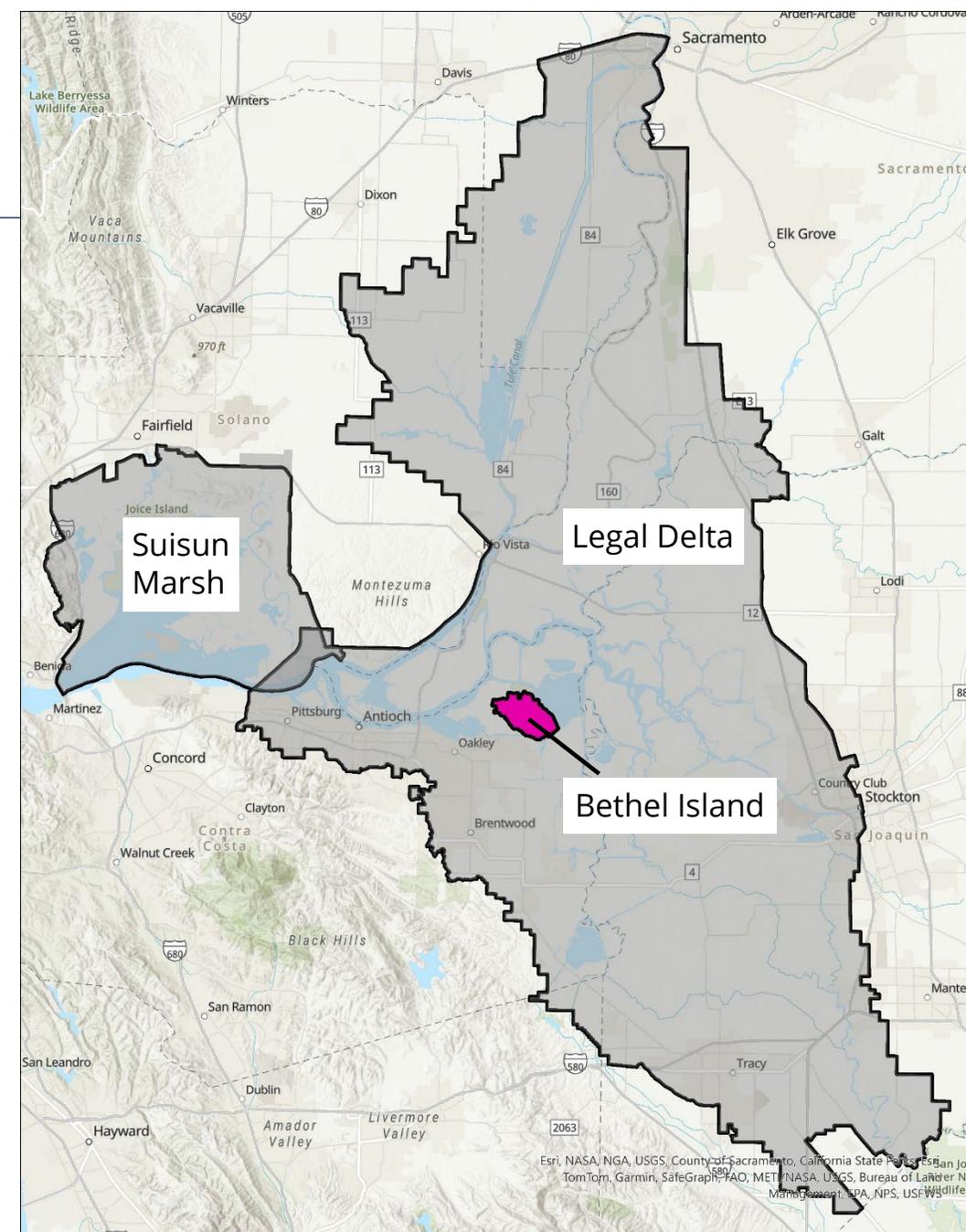
- Covered action authority
- Delta Plan Interagency Implementation Committee
- Performance measures

Amending the Delta Plan

- Setting priorities for state investment in Delta levees
- Promoting options for water management
- Weaving together a plan for ecosystem enhancement

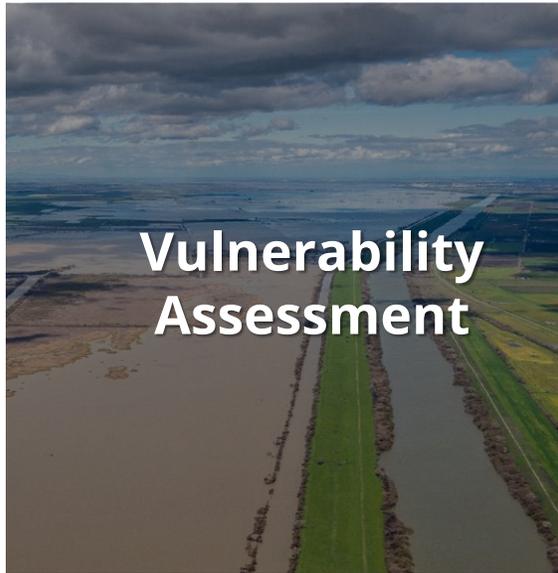
Connecting decision-makers with the best science

- Synthesis, peer review, identifying and funding high-priority science



Council Climate and TEJ Initiatives

Delta Adapts



Tribal and EJ Issue Paper



Build a network of community leaders



Identify environmental justice issues



Identify options to address those issues



**EXTREME
HEAT**

By 2050, increased temperatures in Bethel Island will lead to:



- **22** extreme heat days per year on average
- More **unhealthy** ozone days



Increased **cooling costs** for homes and businesses



Heat stress on landscapes and ecosystems



WILDFIRE

By 2050, increased temperatures and more frequent droughts will:



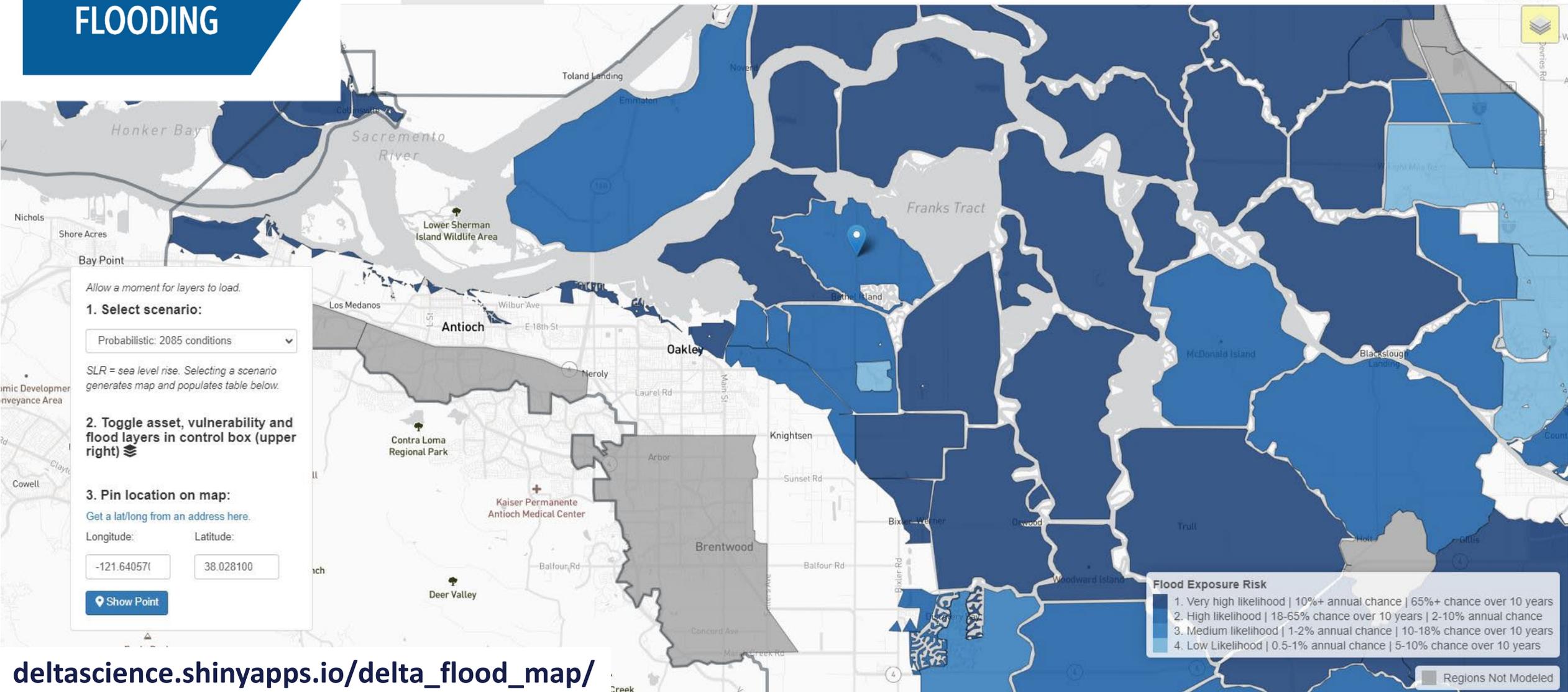
Increase the size and severity of remote wildfires, which will...



Increase the frequency and duration of **poor air quality days**



FLOODING



Allow a moment for layers to load.

1. Select scenario:

Probabilistic: 2085 conditions

SLR = sea level rise. Selecting a scenario generates map and populates table below.

2. Toggle asset, vulnerability and flood layers in control box (upper right)

3. Pin location on map:

Get a lat/long from an address here.

Longitude: Latitude:

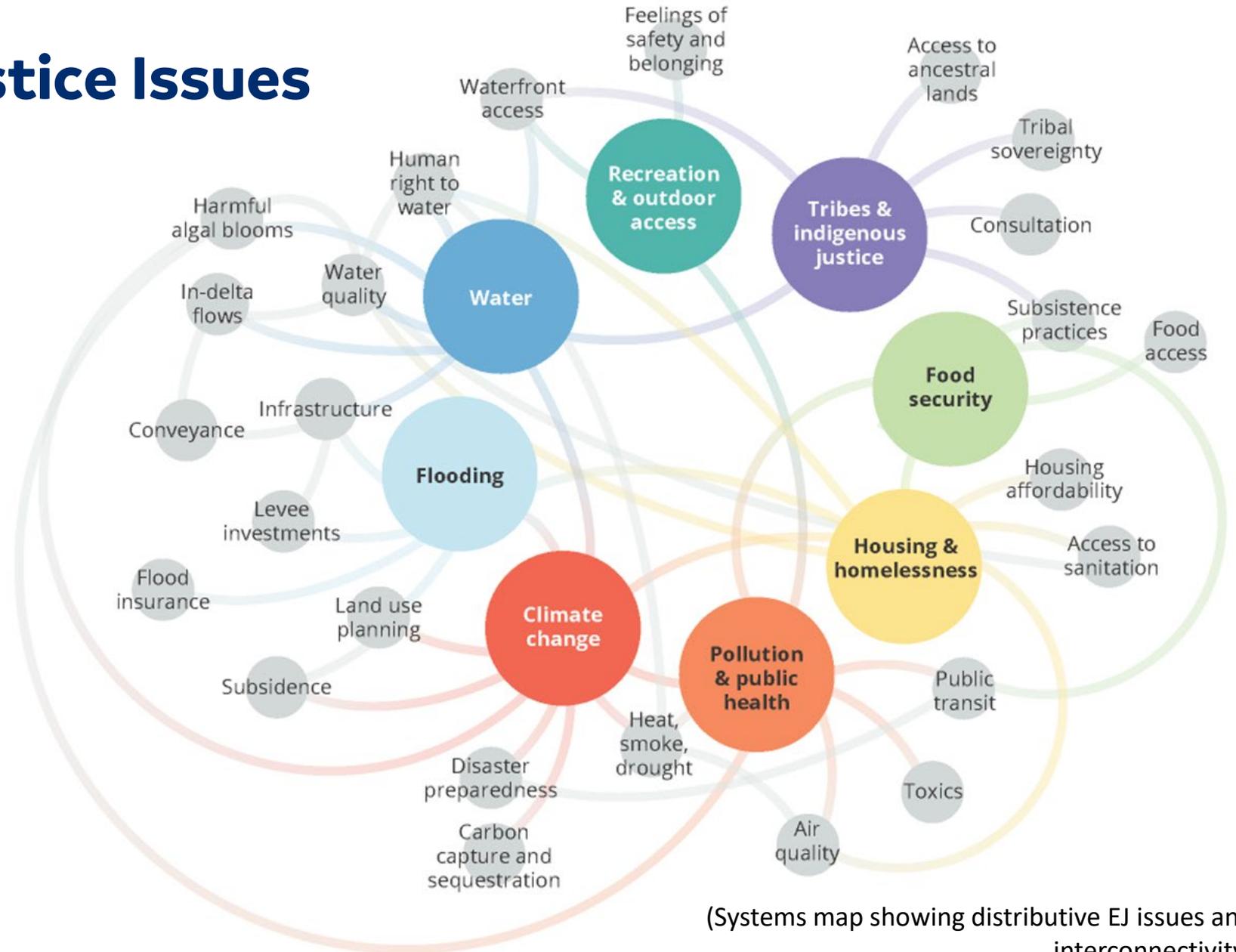
[Show Point](#)

Flood Exposure Risk	
1. Very high likelihood	10%+ annual chance 65%+ chance over 10 years
2. High likelihood	18-65% chance over 10 years 2-10% annual chance
3. Medium likelihood	1-2% annual chance 10-18% chance over 10 years
4. Low Likelihood	0.5-1% annual chance 5-10% chance over 10 years

Regions Not Modeled

Environmental Justice Issues

“Everything is **connected**. When you change one thing, it will change another. We must use that **intersection** to build [broader] community with groups that are **not explicitly focused on the issue at hand.**”



(Systems map showing distributive EJ issues and interconnectivity)

Key vulnerabilities / issues relevant to Bethel Island

Key climate vulnerabilities



Increased flood risk: The risk of flooding is expected to increase with climate change.



Extreme heat: By mid-century, Bethel Island is projected to experience an average of 22 extreme heat days per year.



Wildfire: Bethel Island will likely experience more poor air quality events due to increased frequency and severity of remote wildfires.

Key EJ issues

- **Flood risk, adaptive capacity, & levee investments:** Concerns about development in flood-vulnerable areas, ability of vulnerable residents to evacuate and recover, & the need for levee improvements.
- **Drinking water quality & affordability:** Concerns about those reliant on small water systems or domestic wells lacking capacity to adequately treat their water.
- **Recreation & outdoor/greenspace access:** Bethel Island is among the Delta communities in which the percentage of the population residing within ½ mile of a park/open space is lower than the statewide average.

Regional-level adaptation strategies

Agriculture Strategies:

Equitable food system

Climate-smart farming

Diversification of revenue
on agricultural land

Strategic land retirement

Ecosystem Strategies:

Improve capacity of ecosystems to
adapt and thrive

Build capacity and partnerships for
ecosystem resilience

Protect ecosystems by halting and
reversing subsidence

Enhance urban ecosystem health

Regional-level adaptation strategies continued

Water Supply Strategies:

Reduce reliance on the Delta through conservation local water supply development

Increase storage of surface and groundwater supplies

Modify reservoir operations

Modify water quality standards

Modify water infrastructure

Flood Risk Reduction Strategies:

Develop climate-informed understanding Delta flood dynamics

Strengthen and upgrade Delta levee system

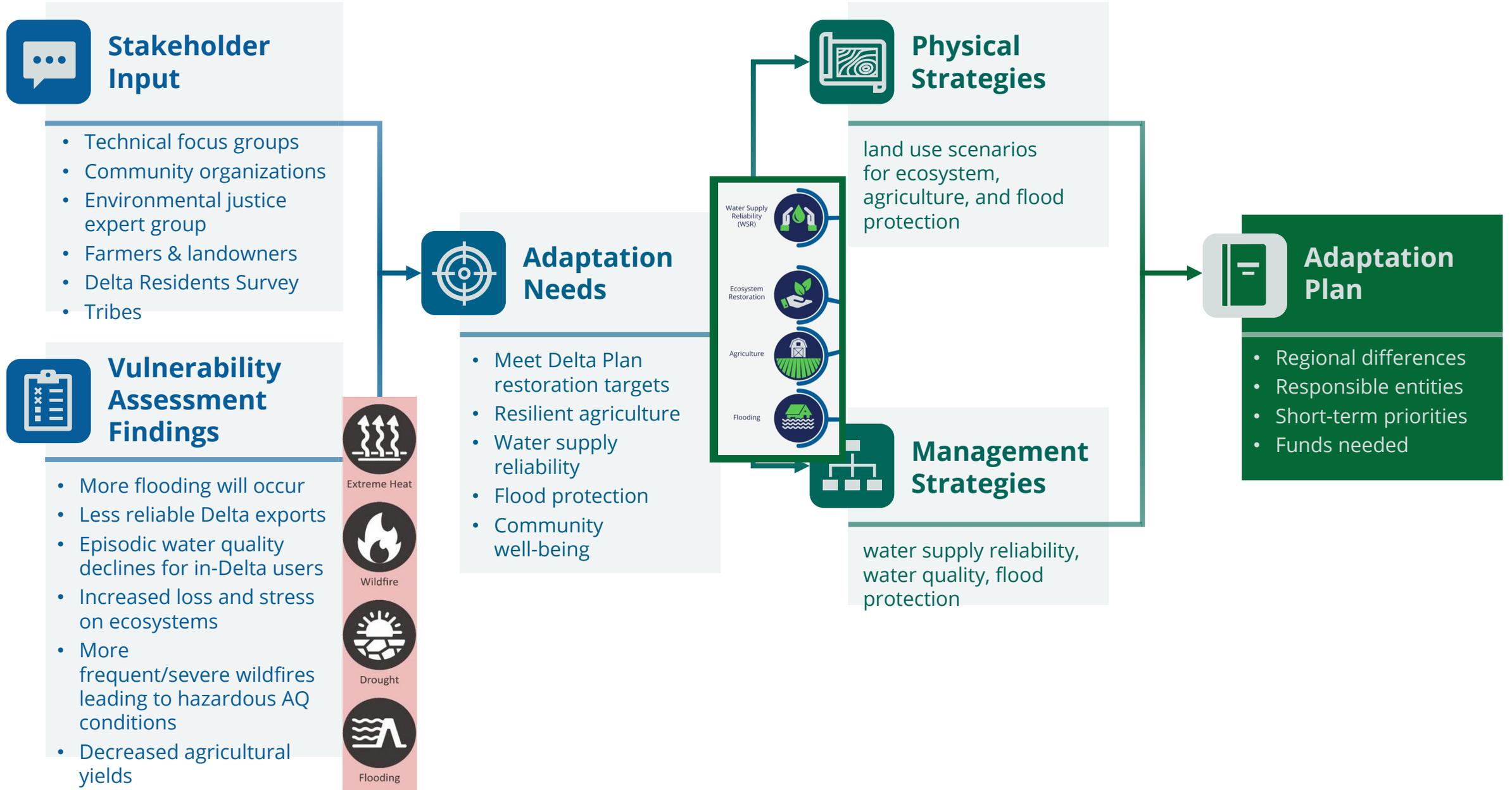
Restore ecosystems for flood mitigation

Improve emergency preparedness and risk communication

Manage and expand upstream water storage capability

Use adaptive urban planning and farming practices to reduce risk

Delta Adapts Adaptation Plan



Discussion Questions

- What are your initial reactions to the information presented?
- Are there other concerns or priorities related to climate change & EJ in Bethel Island that you'd like to see reflected in the final Adaptation Plan and/or TEJ issue paper?

Thank you!

climatechange@deltacouncil.ca.gov



Delta Stewardship Council
A CALIFORNIA STATE AGENCY

Enter your email below to receive updates from the Delta Stewardship Council

Email

[SUBSCRIBE NOW](#)

Subscribe to the Council's listserv to receive updates at rb.gy/kzlh4



[@DeltaCouncil](https://twitter.com/DeltaCouncil)



[@deltastewardshipcouncil](https://www.instagram.com/deltastewardshipcouncil)



[Delta Stewardship Council](https://www.linkedin.com/company/delta-stewardship-council)



[@deltastewardshipcouncil](https://www.facebook.com/deltastewardshipcouncil)



Scan the QR code to visit the Delta Adapts webpage: deltacouncil.ca.gov/delta-plan/climate-change



Scan the QR code to visit the Council's EJ webpage: deltacouncil.ca.gov/environmental-justice