

JAN 2023

# DELTA PLAN PERFORMANCE MEASURES

## 2022 YEAR IN REVIEW



**Delta  
Stewardship  
Council**

A CALIFORNIA STATE AGENCY

# Why Performance Measures

- Set measurable targets and track progress toward Delta Plan goals and objectives
- Evaluate outputs and outcomes of management actions
- Based on scientific information and best available data
- Inform decisions and adaptive management
- Required by the Delta Reform Act



# Performance Measures

[viewperformance.deltacouncil.ca.gov](http://viewperformance.deltacouncil.ca.gov)

By the numbers:

**158**

Delta Plan performance measures to track environmental and administrative changes

**38**

Quantitative, science-based performance measures with numeric targets and timelines.

**120**

Administrative measures for implementation status of Delta Plan strategies, polices and recommendations

**18**

Agencies coordinating under the DPIIC to achieve the coequal goals

# Ecosystem Performance Measures added in 2022



**Salmon Doubling Goal**



**Subsidence Reversal for Tidal Reconnection**



**Fish Passage**



**Funding for Restoring Ecosystem Function**



**Seasonal Inundation**



**Natural Communities Restored**

# Performance Measures in 2022

## Staff Panel:

**Martina Koller**, Program Manager

**Cory Copeland**, Senior Environmental Scientist

**Scott Navarro**, Environmental Scientist

**Chris Kwan**, PhD, Senior Environmental Scientist

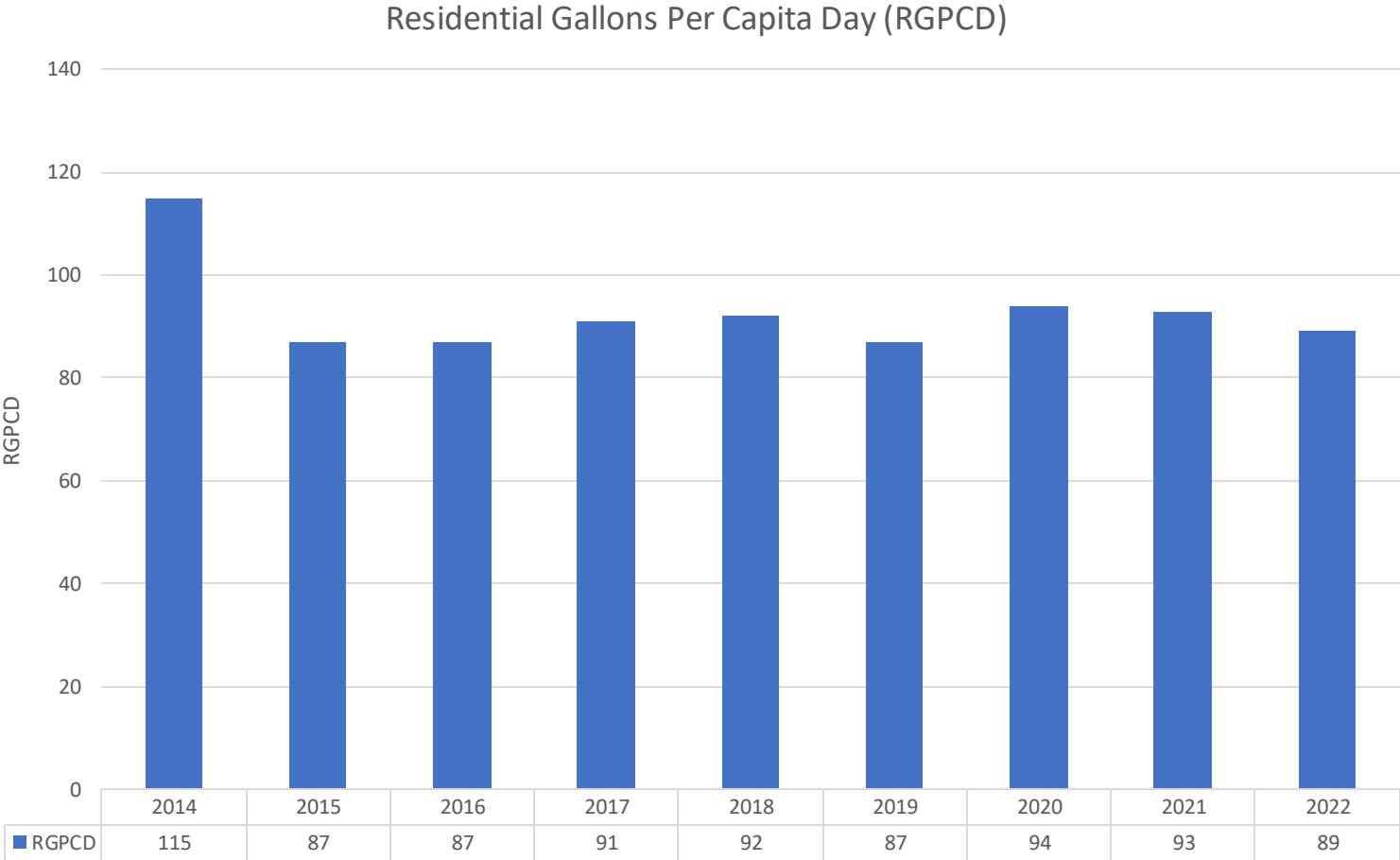
## Outline:

- Environmental and management setting
- Water supply
  - Urban water use
  - Reduced Delta reliance
- Delta as an evolving place
  - Delta tourism
- Water quality
  - Delta water quality
  - Harmful algal blooms
- Invasive species
- Delta ecosystem

# **WATER SUPPLY**

# Urban Water Use

- Residential Water Use Reductions
- Governor released an executive order with a 15% reduction target from 2020
- The public responded and reduced usage but have not fully met the target





# Reduced Delta Reliance

- Urban and Agricultural Water Management Plans include Reduced Reliance Reporting for the first time
- DWR reported that out of 238 urban water suppliers that receive Delta water through the State Water Project (SWP) and submitted UWMPs, 162 (68%) of the UWMPs contained Delta reduced reliance reporting
- All 10 (100%) agricultural water suppliers that receive SWP water that submitted an Agricultural Water Management Plan (AWMP) to DWR included a reduced reliance component

## Appendix C

### Example Approach to Demonstrate Reduced Delta Reliance

#### C.1 Introduction

An urban water supplier (Supplier) that anticipates participating in or receiving water supply benefits from a proposed project (covered action<sup>1</sup>) such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta) should provide information in their 2015 and 2020 Urban Water Management Plans (UWMP's) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, *Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance* (California Code Reg., tit. 23, § 5003).

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Act). The law requires Suppliers, providing potable water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet annually, to adopt an Urban Water Management Plan (UWMP) every five years demonstrating water supply reliability in normal, single dry, and multiple dry years. Each UWMP must be adopted by the

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<sup>1</sup> Cal. Code Regs., tit. 23, § 5001, subd. (j): A "Covered action" is defined as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, or a reasonably foreseeable indirect physical change in the environment ... "directly undertaken by any public agency"" (Pub. Resources Code, § 21065) that (i) will occur, in whole or in part, within the boundaries of the Delta or Suisun Marsh, (ii) will be carried out, approved, or funded by the state or a local public agency, (iii) is covered by one or more provisions of the Delta Plan, and (iv) will have a significant impact on achievement of one or both of the coequal goals or the implementation of government-sponsored flood control programs to reduce risks to people, property, and state interest in the Delta."



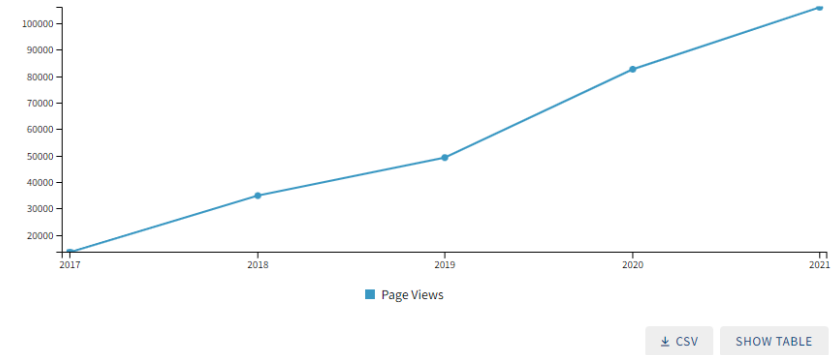
# DELTA AS AN EVOLVING PLACE

# Delta Tourism

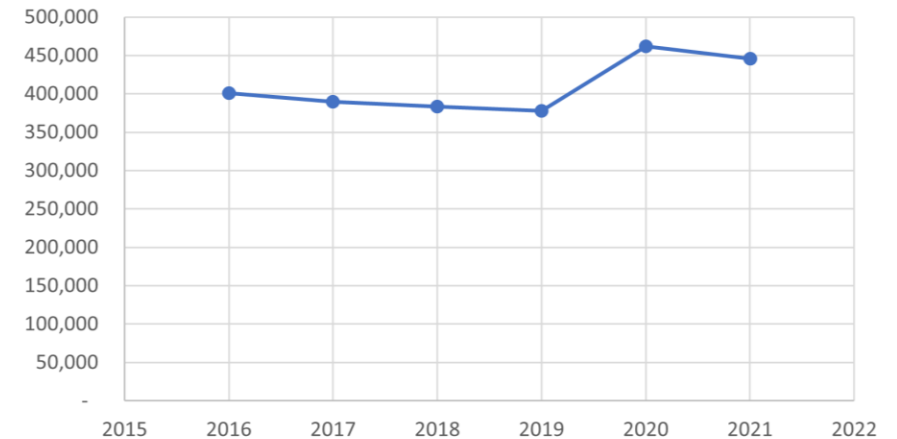
- Increased fishing license sales in 2020 and 2021
- Pandemic effects appear in the data, as people were more likely to seek outdoor recreation opportunities
- *Visit CA Delta*, a web resource for Delta tourism, has seen steady growth over the last 5 years
  - 106,000 page views in 2021

## Website Traffic: Visit CA Delta

[Visit CA Delta](#) is a resource for tourists in the Delta. It includes information on amenities, restaurants, lodging, events, and more for anyone interested in visiting the Delta region. This metric tracks page views. Page views are the number of times any users views any page within a website. The Year 2018 serves as the baseline for this metric.



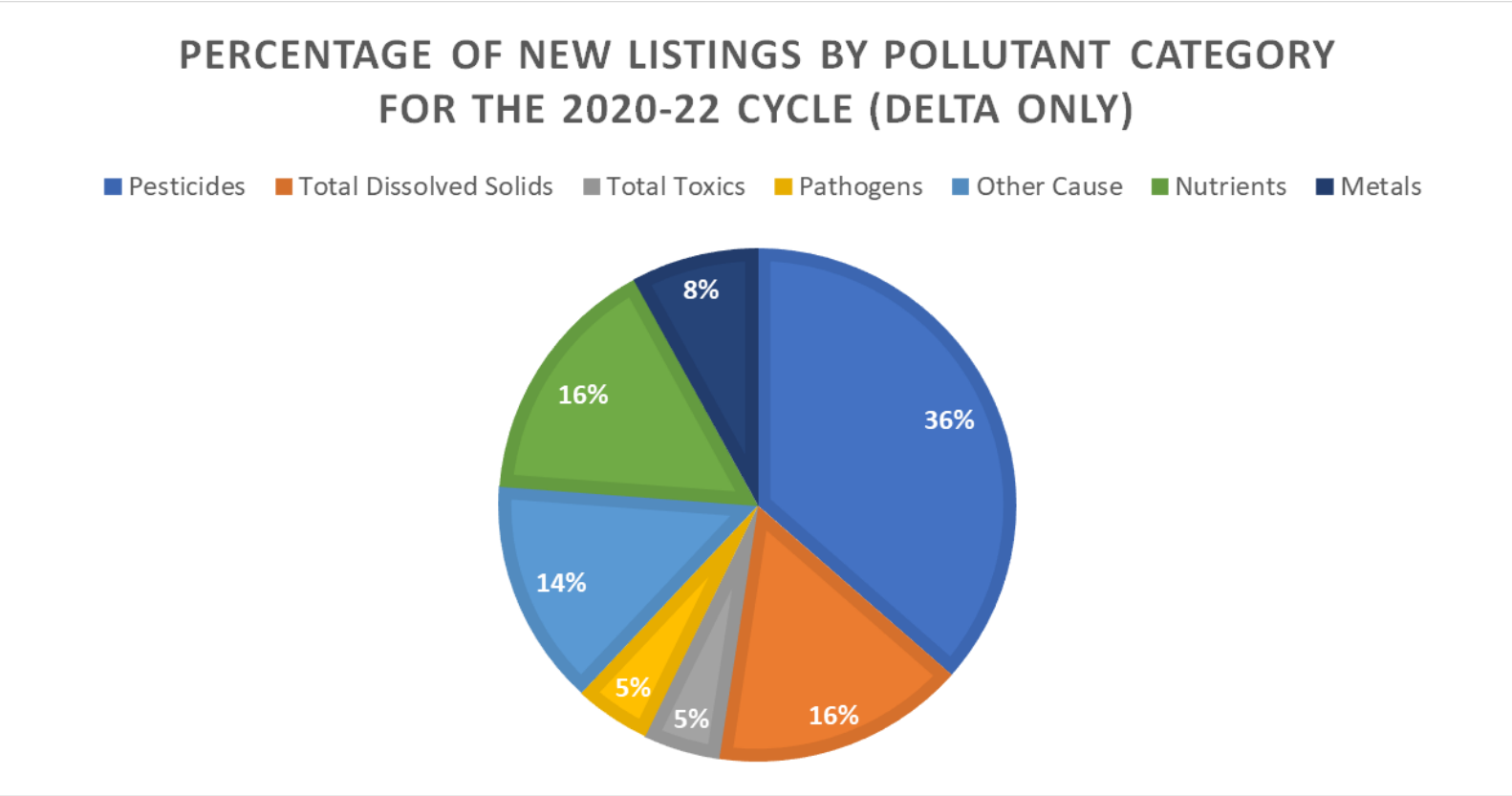
## Fishing License Sales in Delta Counties



# DELTA WATER QUALITY

# Delta Water Quality

- Overall, Delta water quality is declining
- 30% increase in toxins and pollutants in Delta waterbodies since the last update
  - Most pollutants were pesticides

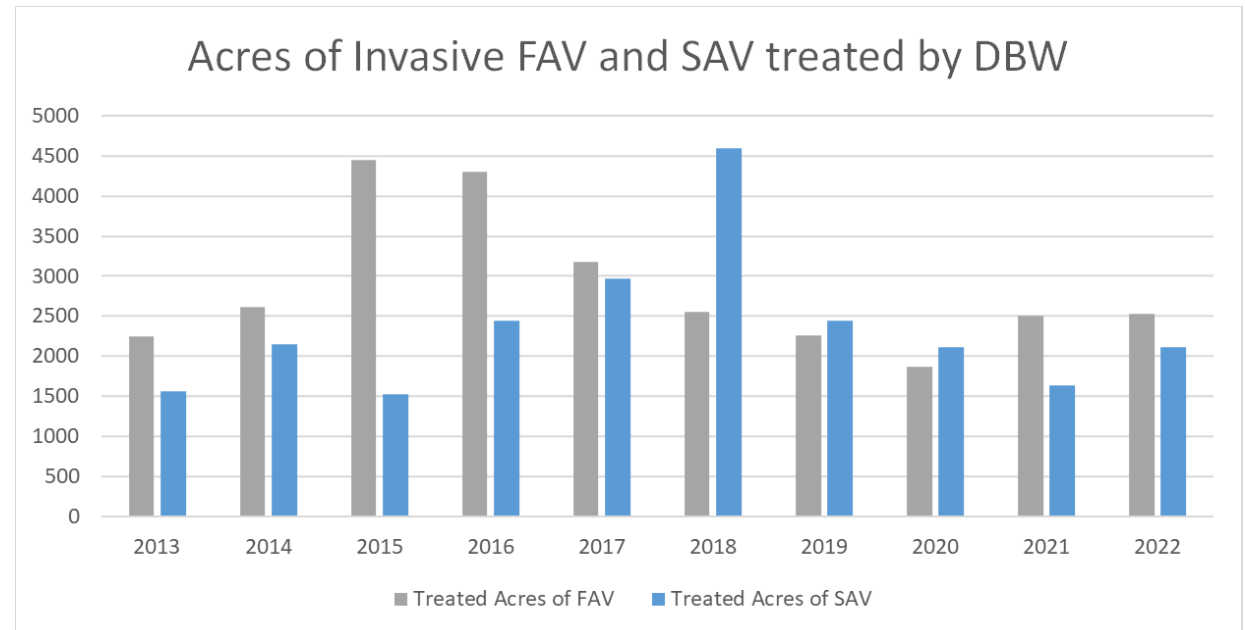
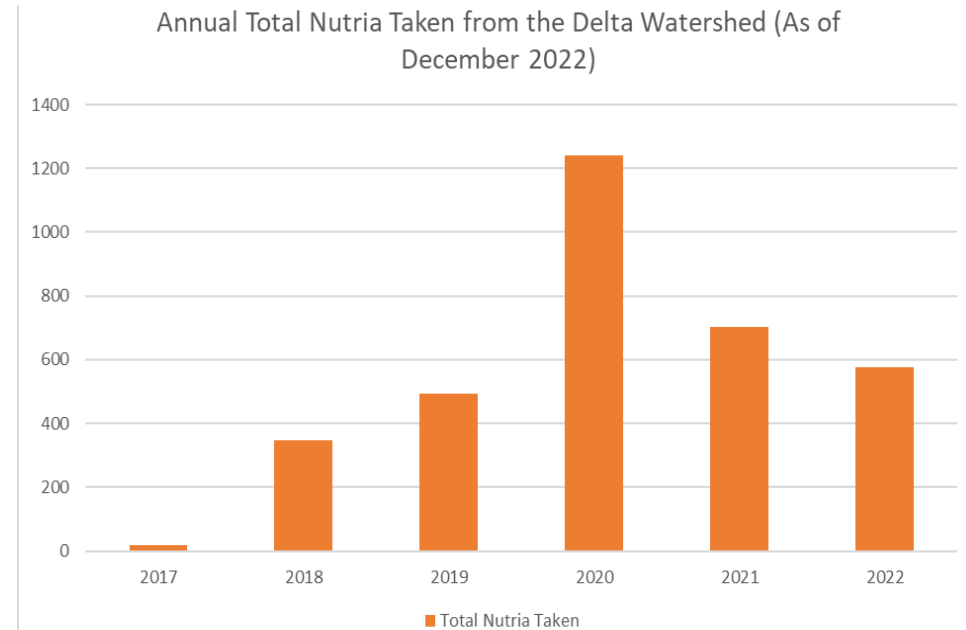




# DELTA ECOSYSTEM

# Invasive Species

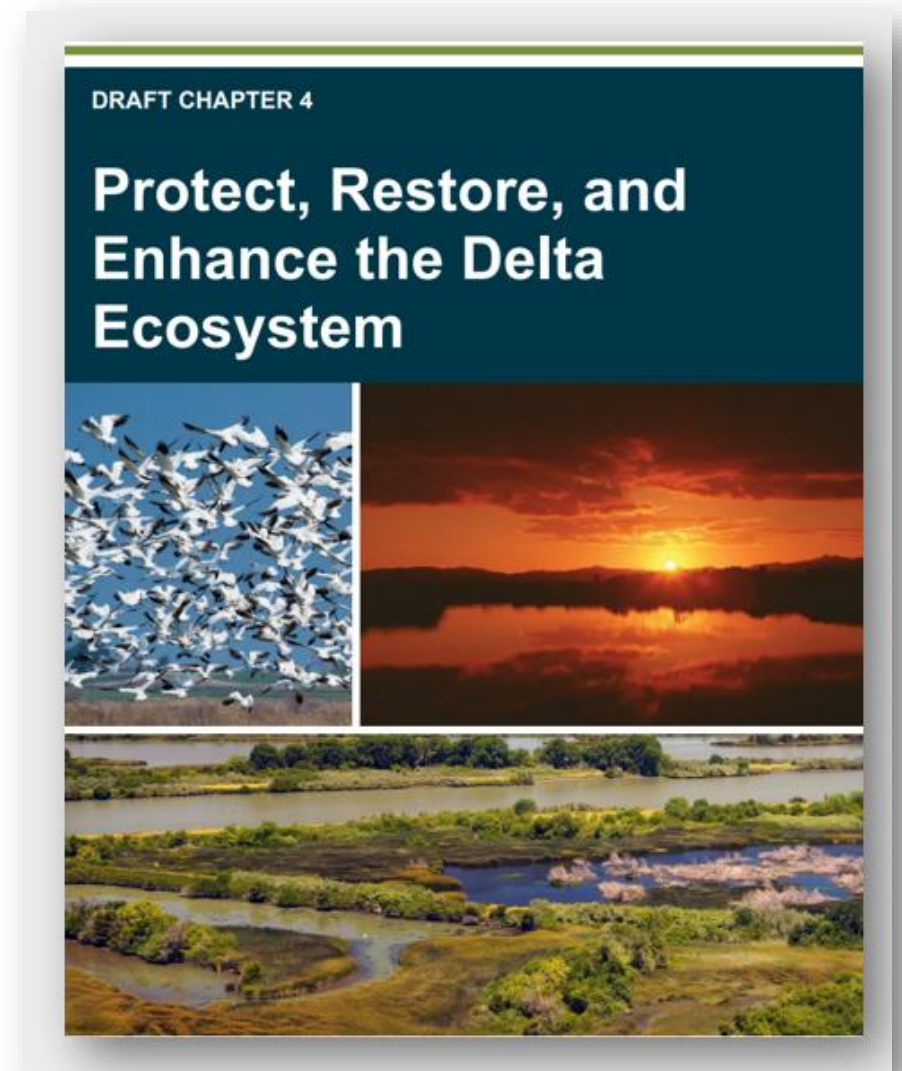
- Nutria was found in the west Delta -- 8 taken within the legal Delta in the past year
  - Continued decline in total Nutria take in the watershed
- Invasive Aquatic Vegetation management
  - Increase in SAV acres treated compared to 2021
  - Similar acres of FAV treated





## Performance Measures Added by the Ecosystem Amendment

- Focus on ecosystem perspective rather than single species view
- Tracking six new performance measures
- Updated performance measures for protecting, restoring, and enhancing the Delta ecosystem



## Salmon Doubling Goal

- Central Valley Chinook salmon populations depend heavily on hatcheries
- Larger naturally-spawned salmon populations:
  - Indicates a healthier ecosystem
  - Better supports fisheries, recreation, and Tribal communities
- Tracks the doubling of naturally-spawned Chinook salmon





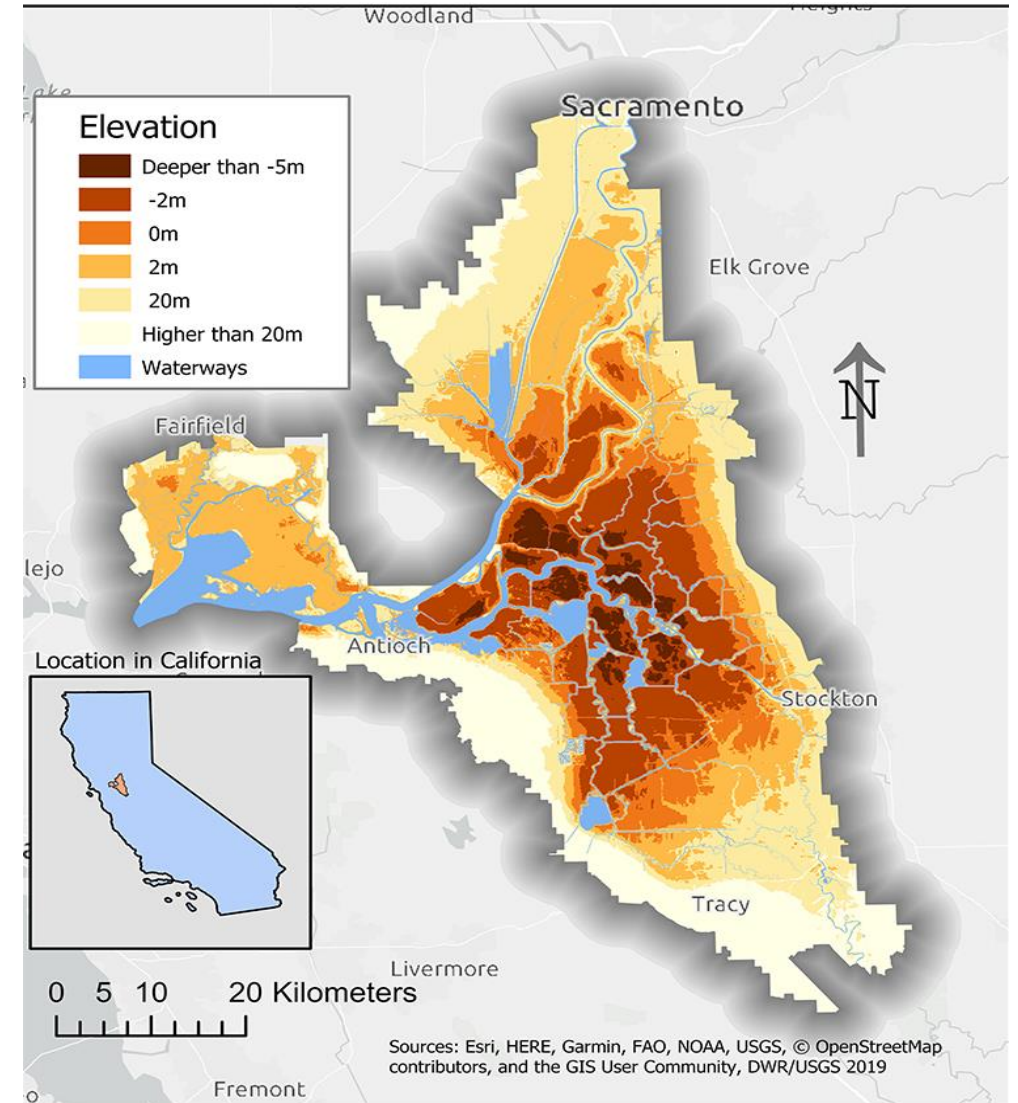
## Fish Passage

- Delta serves as a migration corridor for all anadromous fish species
- Barriers and diversions in the watershed limit migration
- CDFW and DWR prioritize most critical barriers and diversions for removal
- Tracks progress in remediating priority fish barriers, rim dams, and unscreened diversions



## Subsidence Reversal for Tidal Reconnection

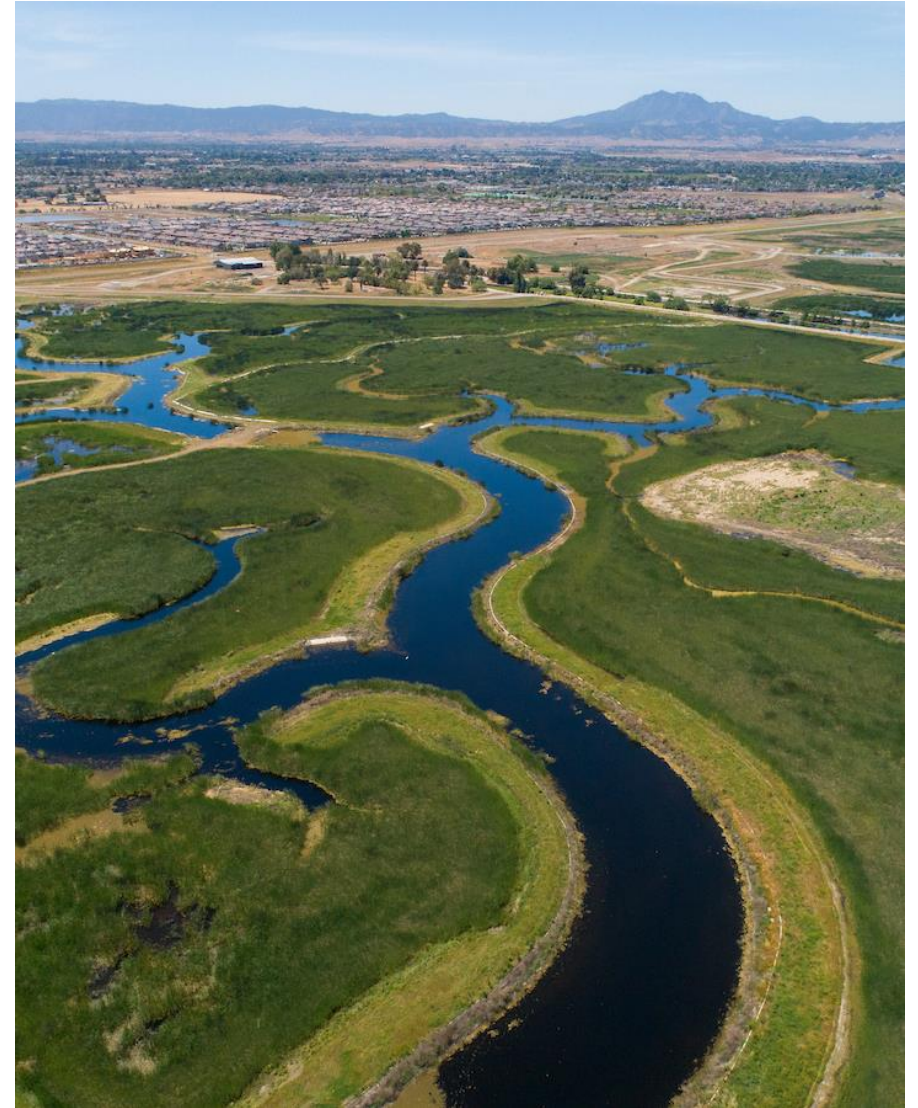
- Large areas of the Delta well below sea level
  - Agricultural practices contribute to soil oxidation and subsidence
- Natural tidal wetlands require higher elevations to be restored
- Tracks projects reversing subsidence in areas that would allow for future natural wetland restoration





## Ecosystem Restoration Funding

- New approach for achieving a healthy and resilient Delta ecosystem
- Tracks funding of restoration projects filing a certification of consistency
- Promotes more funding for projects that:
  - Restore ecosystem processes
  - Are large scale
  - Improves connectivity
  - Increase native vegetation
  - Contribute to recovery of special-species



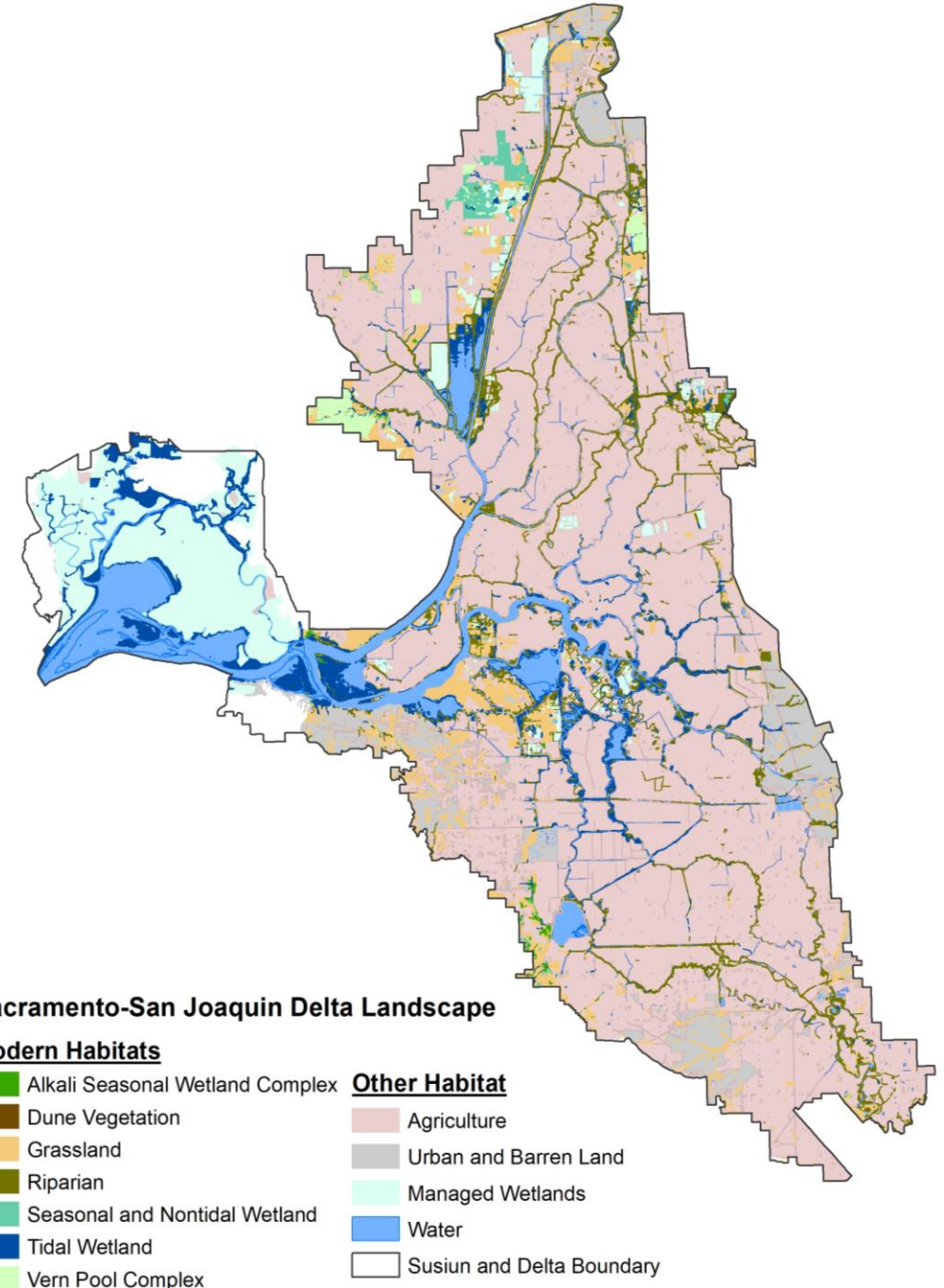
## Seasonal Inundation

- Important to reconnect land-water and inundate wetlands for more effective habitat restoration
- Measure tracks projects that reconnect land and water
  - Weir modifications, tidal marsh restoration
- Tracks floodplains that are inundated at least once every two years



## Natural Communities Restored

- More than 90% of natural communities have been lost
- Increased diversity of natural communities creates suitable habitat and better supports native species
- Tracks restoration of different natural community types





# COMMUNICATING PERFORMANCE MEASURES

# Performance Measures Dashboard

Interactive visual tracking of performance data

Access to source data, methods, findings and key takeaways

Engagement to improve understanding

[viewperformance.deltacouncil.ca.gov](http://viewperformance.deltacouncil.ca.gov)

## Delta Plan Performance Measures

Measuring progress in achieving the coequal goals of a reliable water supply for California and a healthy Delta ecosystem.



### Water Supply

- Urban Water Use
- Alternative Water Supply
- Water Supply Reliability
- Agricultural Water Planning
- Sustainable Groundwater
- Water Exports



### Delta as an Evolving Place

- Subsidence Reversal and Carbon Sequestration
- Farmland Loss
- Legacy Communities
- Recreation Opportunities
- Delta Tourism
- Delta Economy



### Protect People and Property

- Multi-Hazard Coordination Task Force
- Flood Casualties and Damages
- Delta Levees
- Delivery Interruptions
- Sea Level Rise Planning
- Flood Insurance Community Ratings



### Delta Ecosystem

- Yolo Bypass Inundation
- Peak Flow
- Recession Flow
- In-Delta Flow
- Salmon Doubling Goal
- Terrestrial and Aquatic Invasive Species
- Subsidence Reversal for Tidal Reconnection
- Fish Passage
- Increased Funding for Restoring Ecosystem Function
- Seasonal Inundation
- Acres of Natural Communities Restored



### Water Quality

- Delta Water Quality
- Salinity
- North Bay Aqueduct
- Protect Groundwater
- Dissolved Oxygen
- Critical Pesticides
- Inorganic Nutrients
- Measurable Toxicity
- Harmful Algal Blooms
- Administrative Measures

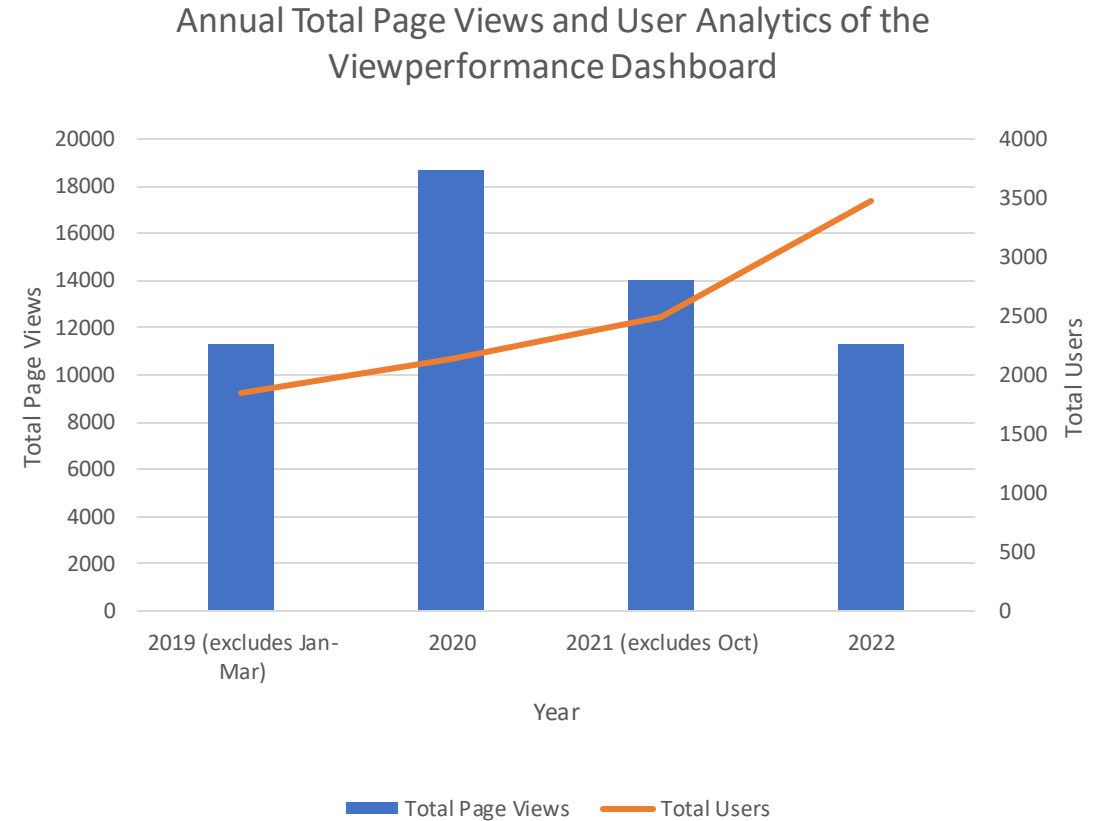


### Administrative Measures

- Governance
- Water Supply
- Delta Ecosystem
- Delta as an Evolving Place
- Water Quality
- Protect People and Property
- Funding Principles

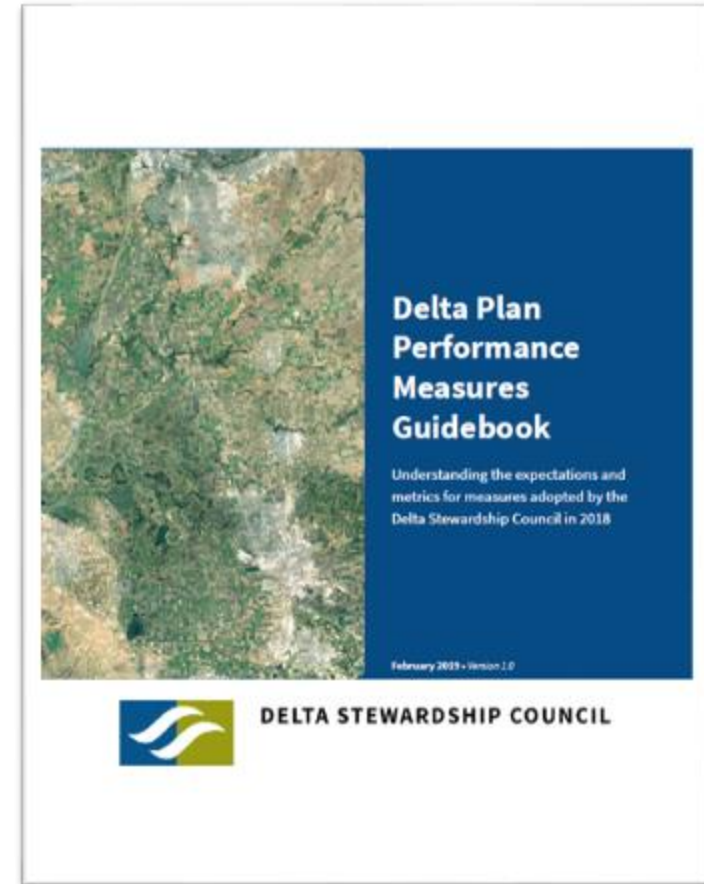
# Performance Measures Dashboard Users Statistics

- Total page views:
  - 11,000 annually
  - 950 average monthly
- Total number of users:
  - 3,400 annually
  - 290 users monthly



# Next Steps in 2023

- Expand guidebook with new ecosystem performance measures
- Perform annual performance measures data updates
- Feature partner agencies accomplishments
- Incorporate emerging science
- Engage with agencies and stakeholders to inform decisions
- Evaluate multiyear performance measures to inform the 2023 Five-Year Review of the Delta Plan



**Delta Plan Performance Measures:**  
Using data to track the health of California's Delta

**Learn more on  
YouTube**

In a new YouTube video, our staff explains how Delta Plan Performance Measures use data to track the health of California's Delta.

*Watch the video*



An aerial photograph showing a winding river with several meanders. The river flows from the top left towards the bottom right. The surrounding landscape is a mix of green grassy areas, a large rectangular agricultural field with rows of crops, and a residential area with many houses in the background. The text "Thank you!" is overlaid in the center of the image.

**Thank you!**