34NORTH

WEB · DATA · GIS




OpenNRM.ORG

OPEN RESOURCE MANAGEMENT FOUNDATION

# Open and Collaborative Natural Resource Management

Developed by 34 North


SAAS Model for Natural Resource Management

GeoServer

PostGIS

OpenLayers

# OpenNRM ENTERPRISE

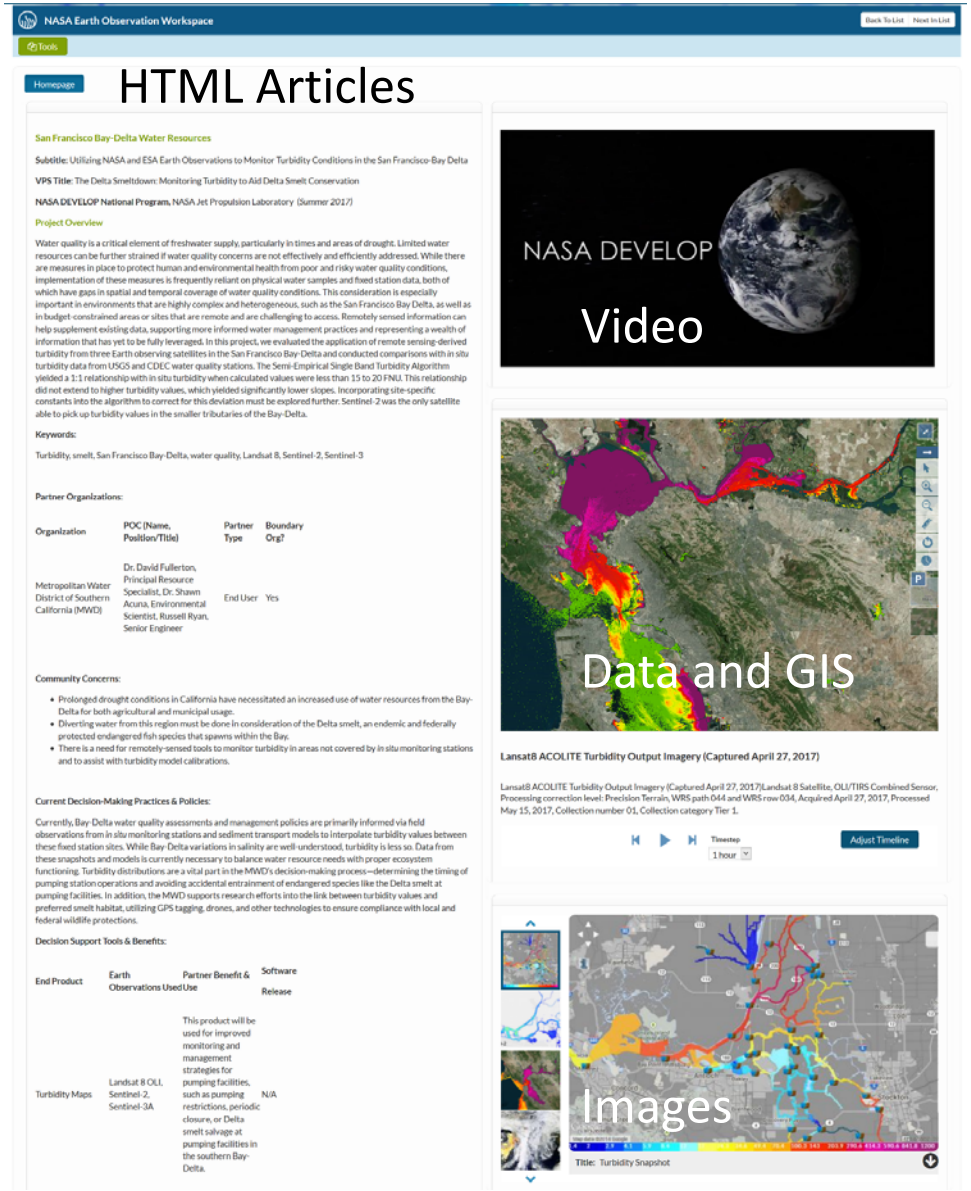
OpenNRM combines each module for a powerful managment and collaboration tool:

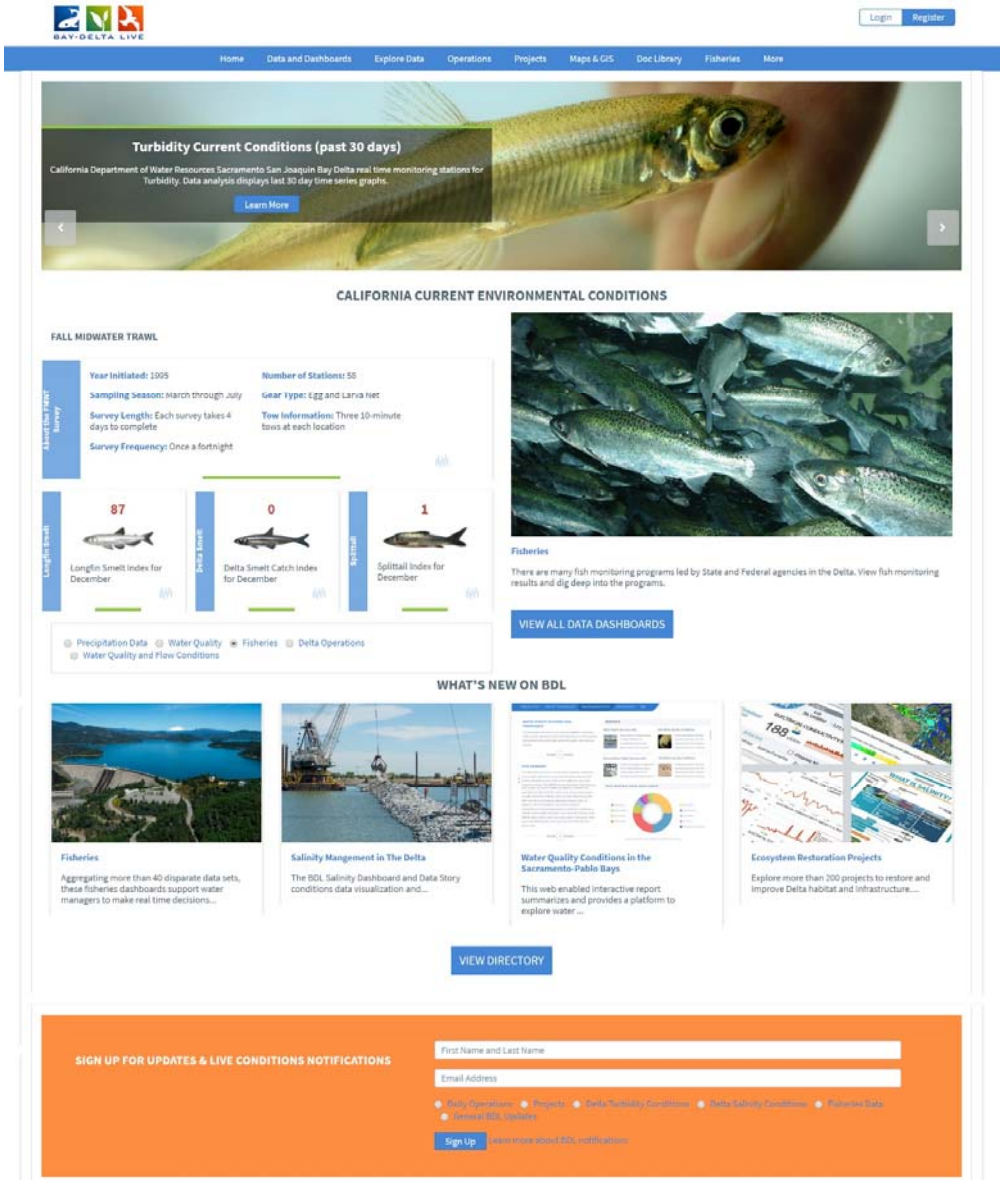
- Data Dashboards
- Real Time Monitoring
- GIS and Map Manager
- Document Library
- Project Collaborator
- Geo-Spatial and Science Application
- Model Simulation Engine

...or combine as many modules as you need for a custom application

Project Management application for data aggregation, analysis, reporting and visualization

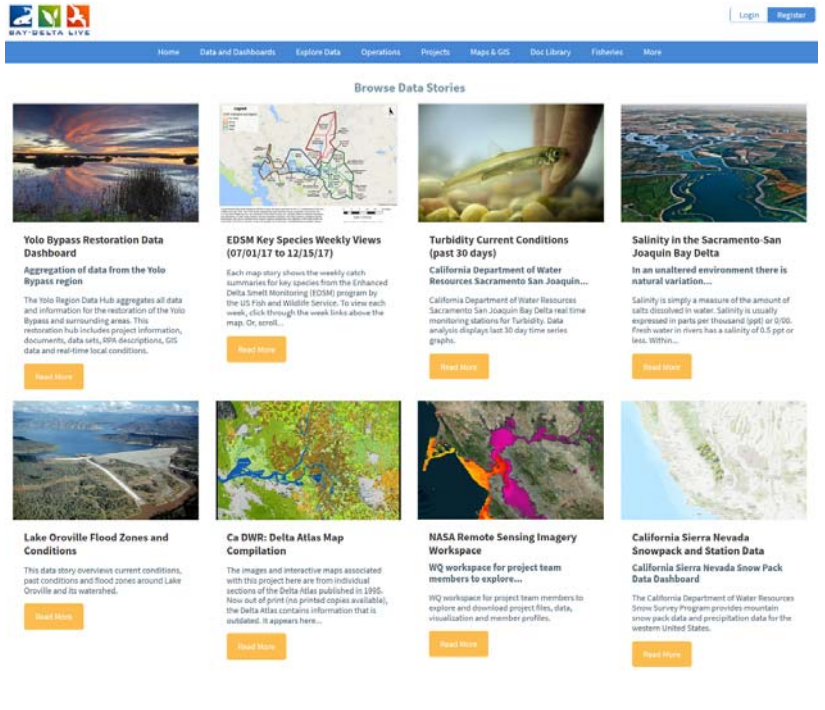
Admin application for Data Dashboard Development



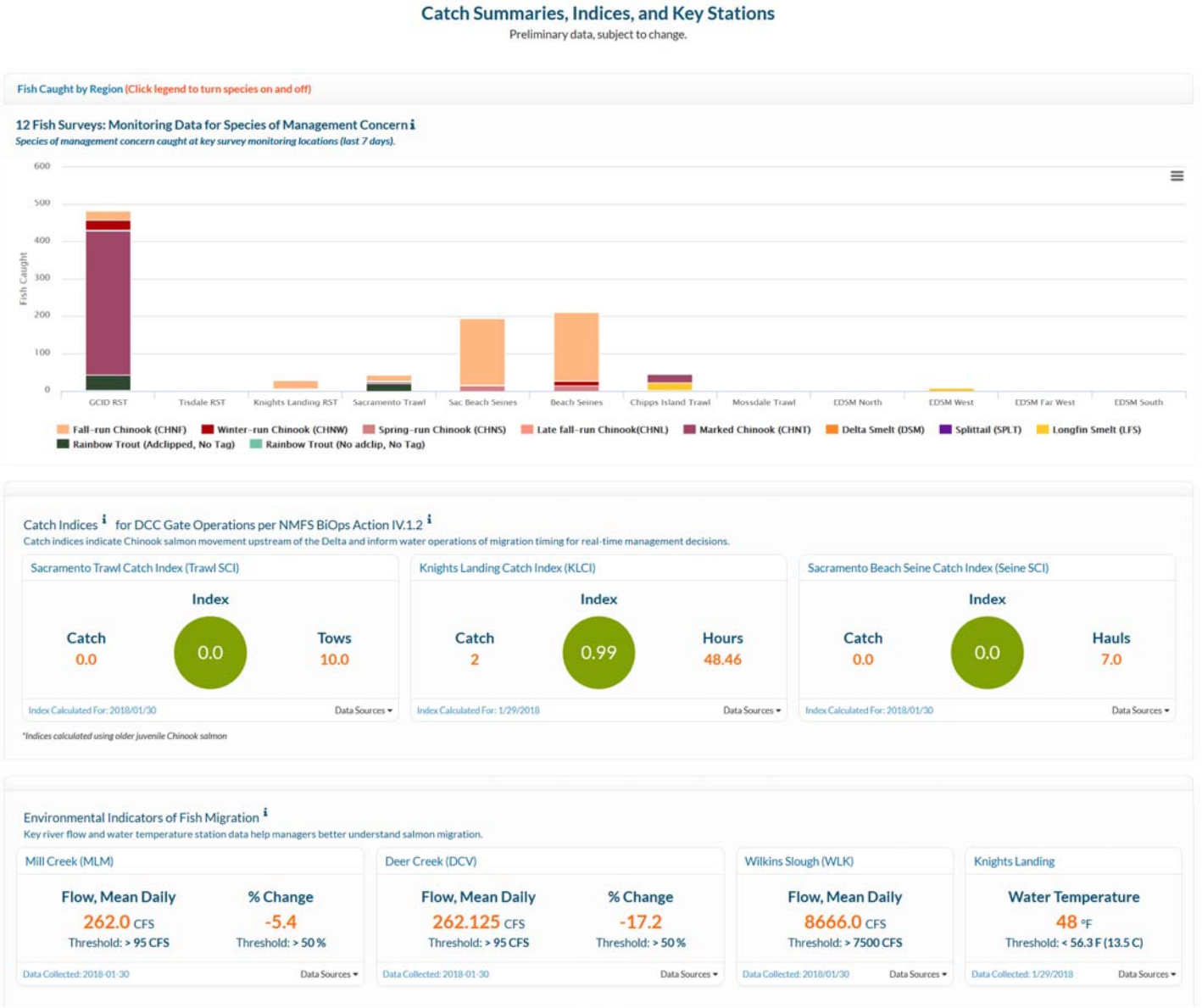




# Redesign of Baydeltalive.com website and iPhone / Android app Release coming soon – Next couple months



# The BDL Fisheries Data Dashboard: A Collaborative effort with SFCWA, NOAA, USFWS and the Delta Operations WG

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SFCWA State and Federal Contractors Water Agency

CA.GOV Department of Water Resources CALIFORNIA DATA EXCHANGE CENTER

# The BDL Turbidity Model + Daily Operations Summary

- 40 + Stations loaded via web services
- Summary scrapped from email & Url's

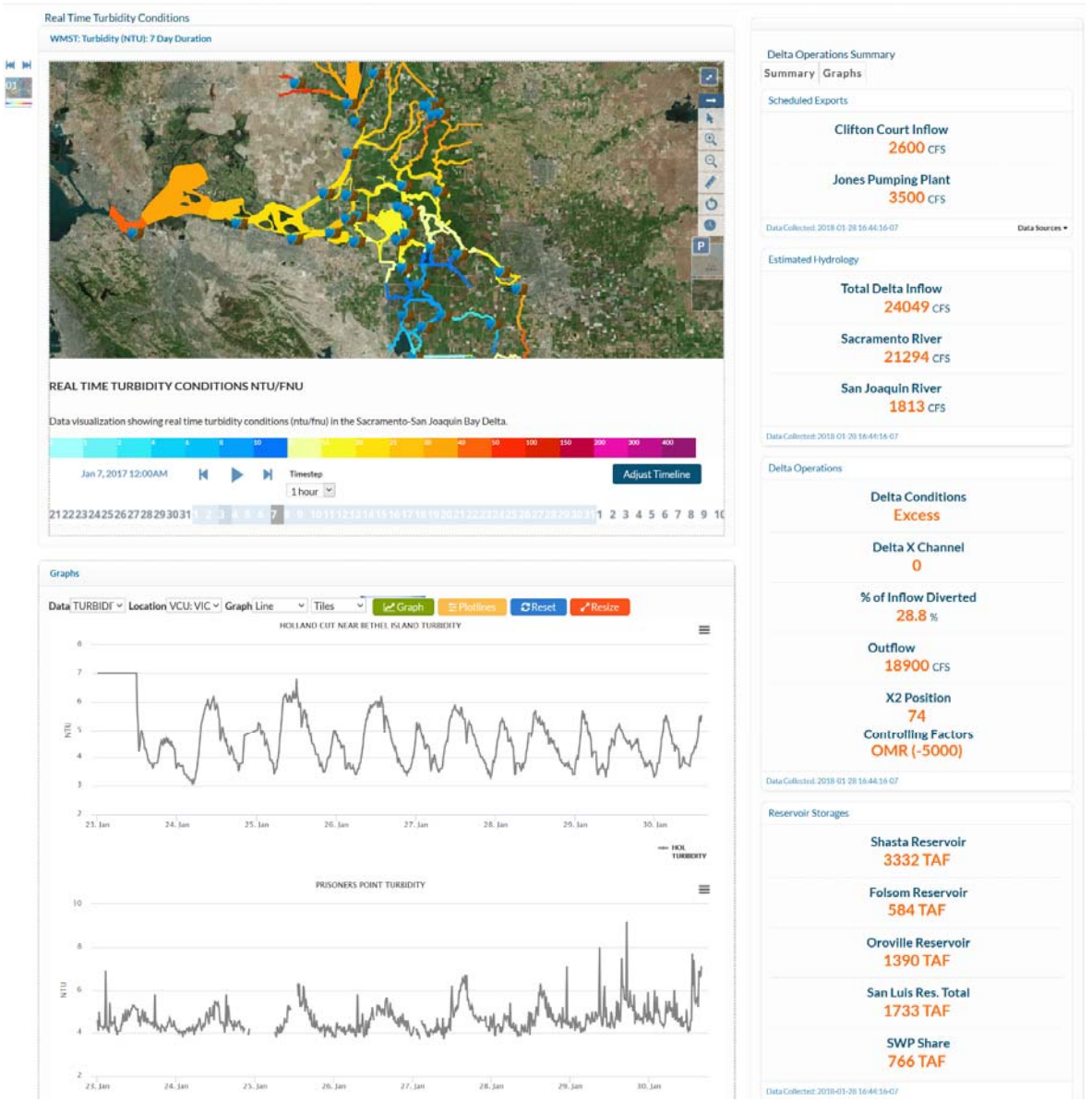
**Ending at midnight - 01/29/2018**

**For selected reservoirs in Northern and Southern California**

Report generated: 01/30/2018 09:04

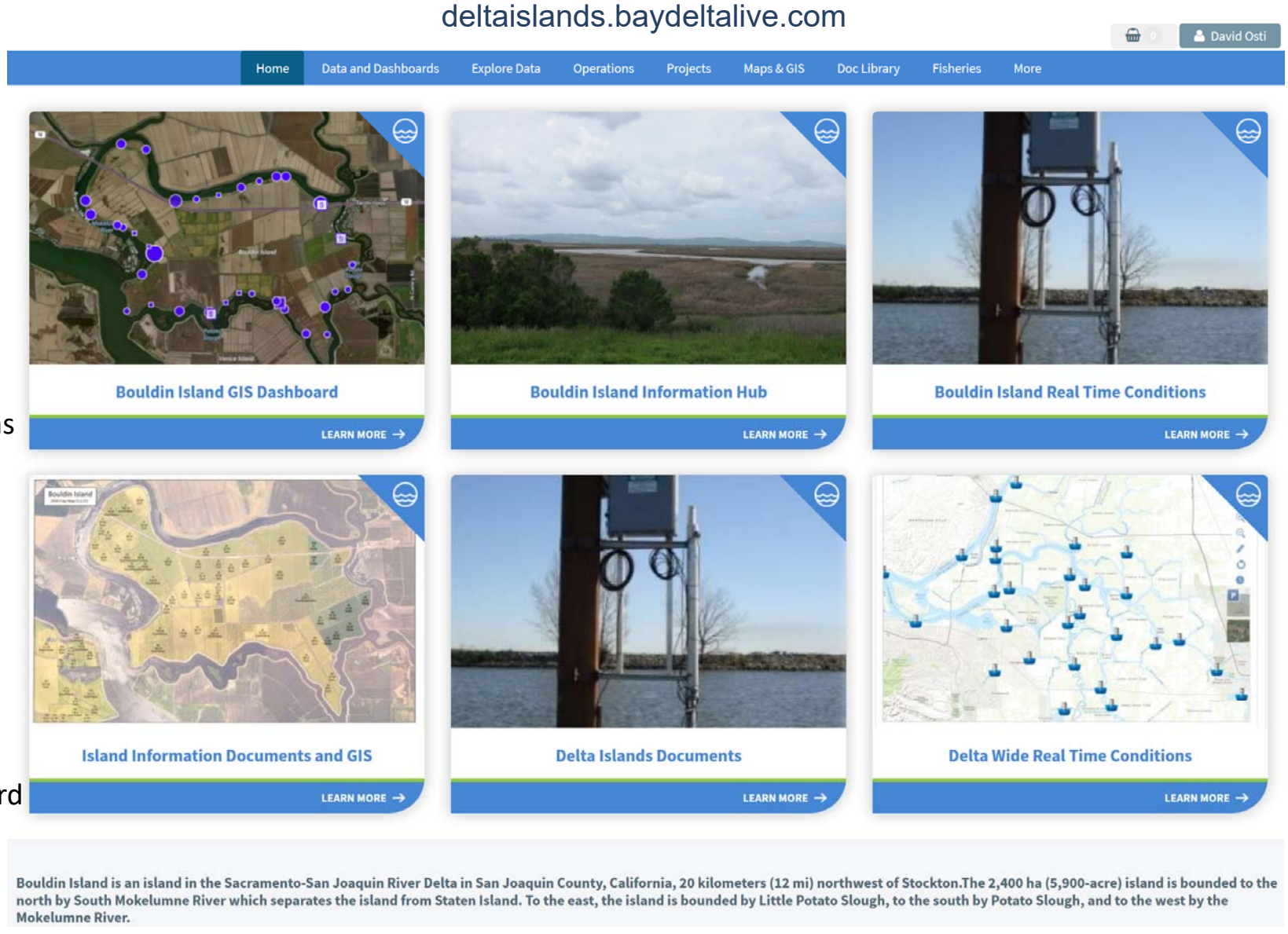
Water Storage

| Reservoir Name | StaID | Capacity (AF) | Elevation (FT) | Storage (AF) | Storage Change | % of Capacity | Average Storage | % of Average | Outflow(CFS) | Inflow (CFS) | Storage - Year Ago This Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRINITY RIVER*** | | | | | | | | | | | |
| TRINITY LAKE | CLE | 2,447,650 | 2,324.75 | 1,774,394 | 1,339 | 72 | 1,724,452 | 103 | 142 | 825 | 1,455,104 |
| WHISKEYTOWN | WHI | 241,100 | 1,198.41 | 205,417 | -,471 | 85 | 205,287 | 100 | 298 | 64 | 222,516 |
| LEWISTON | LEW | 14,660 | 1,900.80 | 13,764 | -,371 | 94 | 13,808 | 100 | 338 | 151 | 14,278 |
| ***RUSSIAN RIVER*** | | | | | | | | | | | |
| SONOMA(WARM SPRINGS) | WRS | 381,000 | 435.79 | 206,941 | 142 | 54 | 220,093 | 94 | 80 | 155 | 285,037 |
| MENDOCINO (COYOTE) | COY | 122,400 | 734.79 | 63,942 | 163 | 52 | 67,983 | 94 | 38 | 123 | 76,124 |
| ***SACRAMENTO RIVER*** | | | | | | | | | | | |
| SHASTA | SHA | 4,552,000 | 1,022.10 | 3,337,685 | 6,068 | 73 | 3,056,296 | 109 | 3,550 | 6,645 | 3,589,145 |
| KESWICK | KES | 23,772 | 581.78 | 20,557 | 82 | 86 | 21,626 | 95 | 3,846 | 3,888 | 21,386 |
| ***FEATHER RIVER*** | | | | | | | | | | | |
| OROVILLE | ORO | 3,537,577 | 717.80 | 1,395,550 | 5,899 | 39 | 2,308,167 | 60 | 1,866 | 4,900 | 2,867,669 |
| ANTELOPE | ANT | 22,566 | 4,996.08 | 17,437 | 9 | 77 | 16,977 | 103 | ---- | ---- | 23,580 |
| FRENCHMAN | FRD | 55,477 | 5,580.21 | 44,002 | 41 | 79 | 34,722 | 127 | ---- | ---- | 26,879 |
| LAKE DAVIS | DAV | 83,000 | 5,771.28 | 70,105 | -38 | 84 | 58,800 | 119 | ---- | ---- | 59,502 |
| ***YUBA RIVER*** | | | | | | | | | | | |
| BULLARDS BAR | BUL | 966,000 | 1,908.82 | 756,658 | 1,816 | 78 | 581,408 | 130 | 263 | 1,190 | 791,374 |



# Delta Islands Data & Information Portal

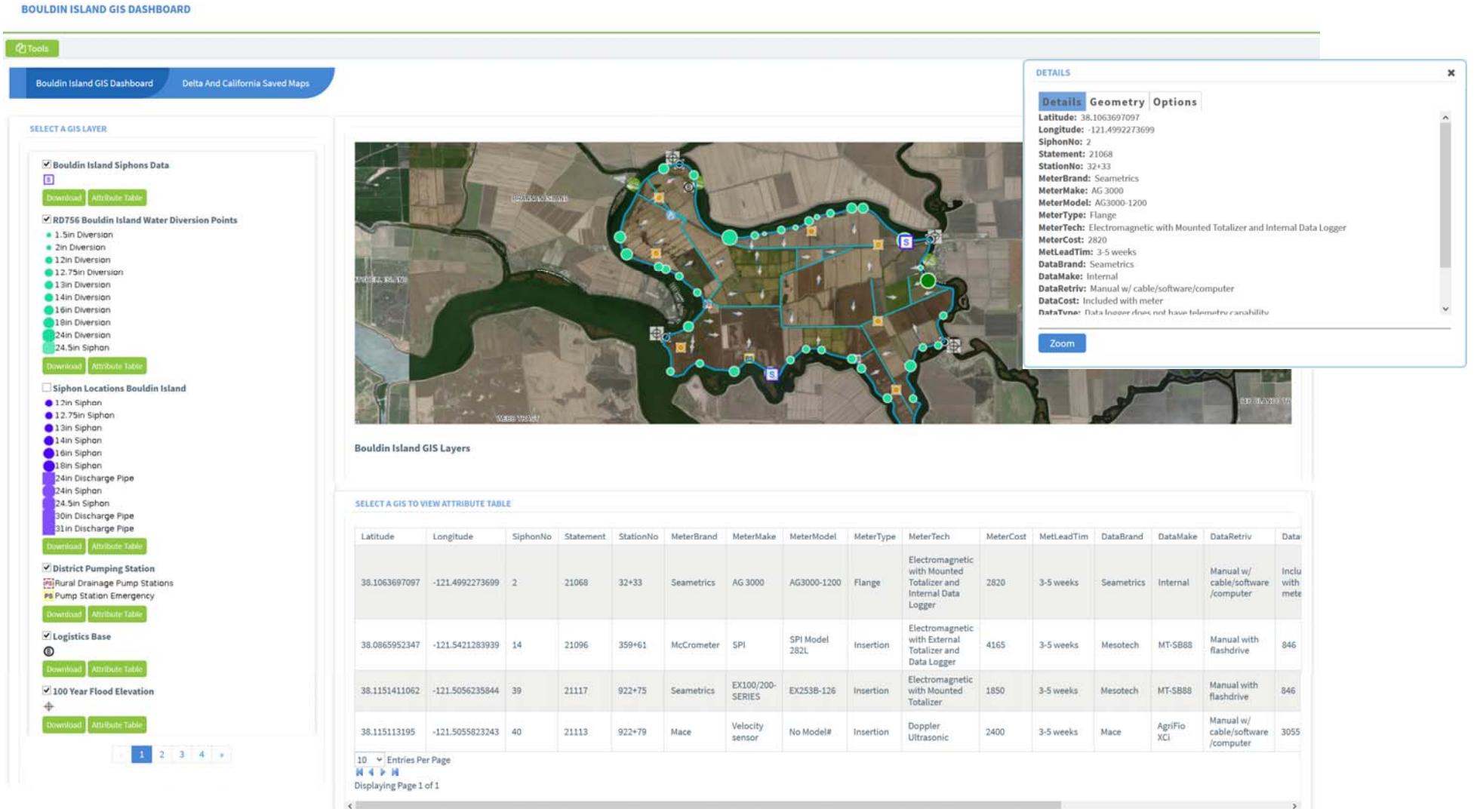
deltaislands.baydeltalive.com



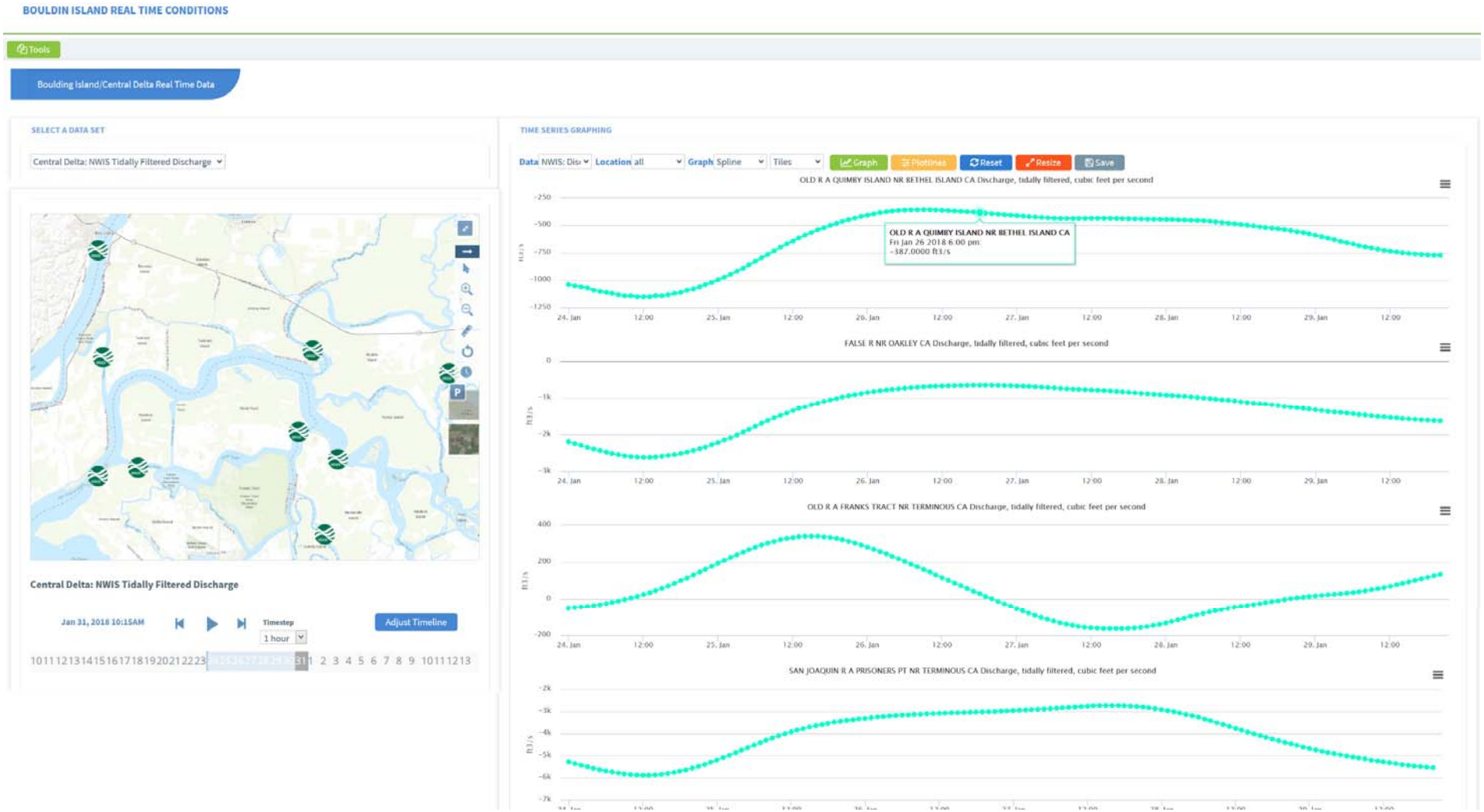

- Diversion Data
- Real Time Data
- Time Series Visualizations
- GIS Data
- Document Management
- Island Descriptions
- Levee Data

Password protected
Email david@34north.com
For a username and password

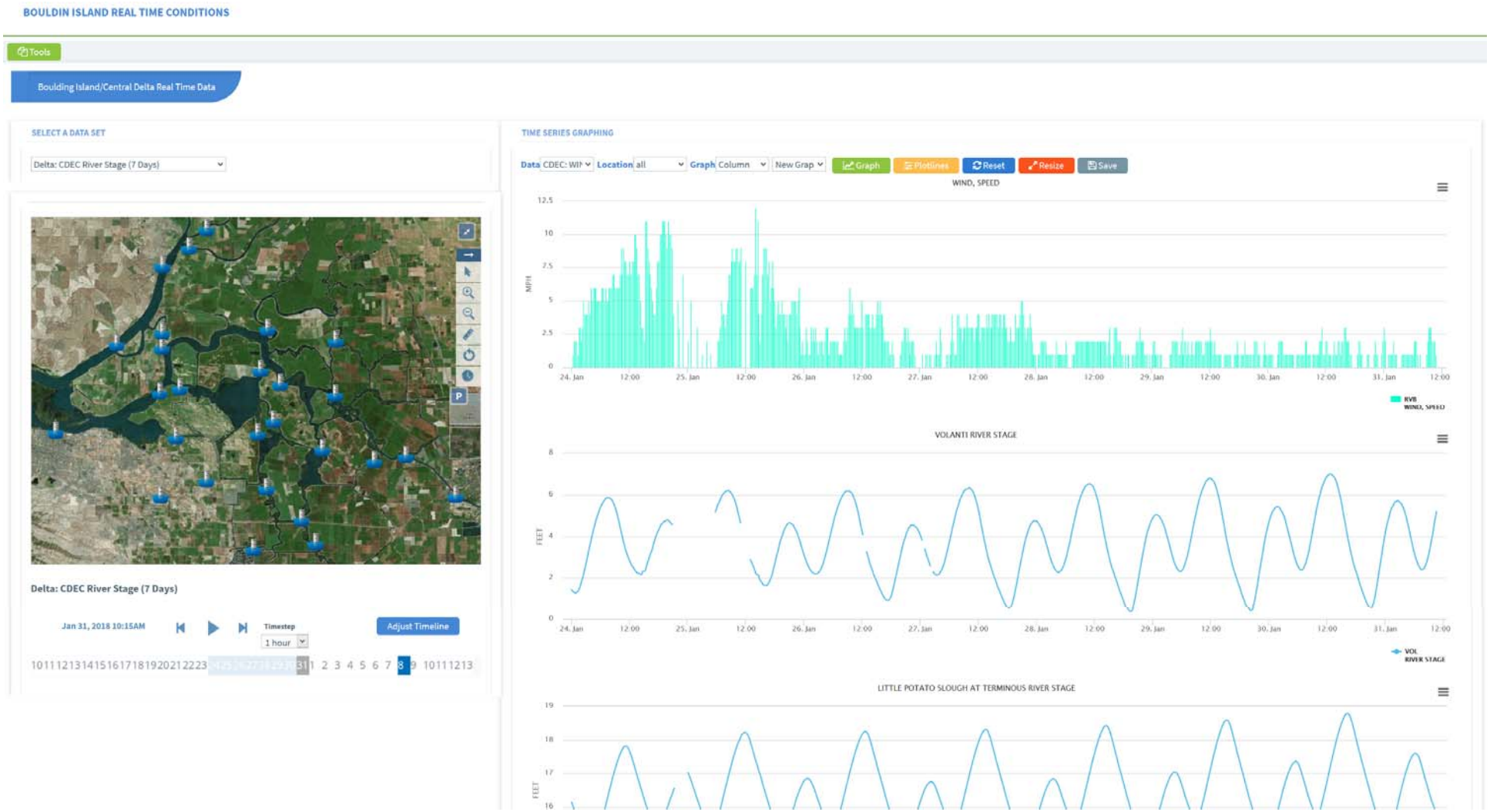
# Delta Islands Portal: GIS Data Dashboard – Siphon Location Data



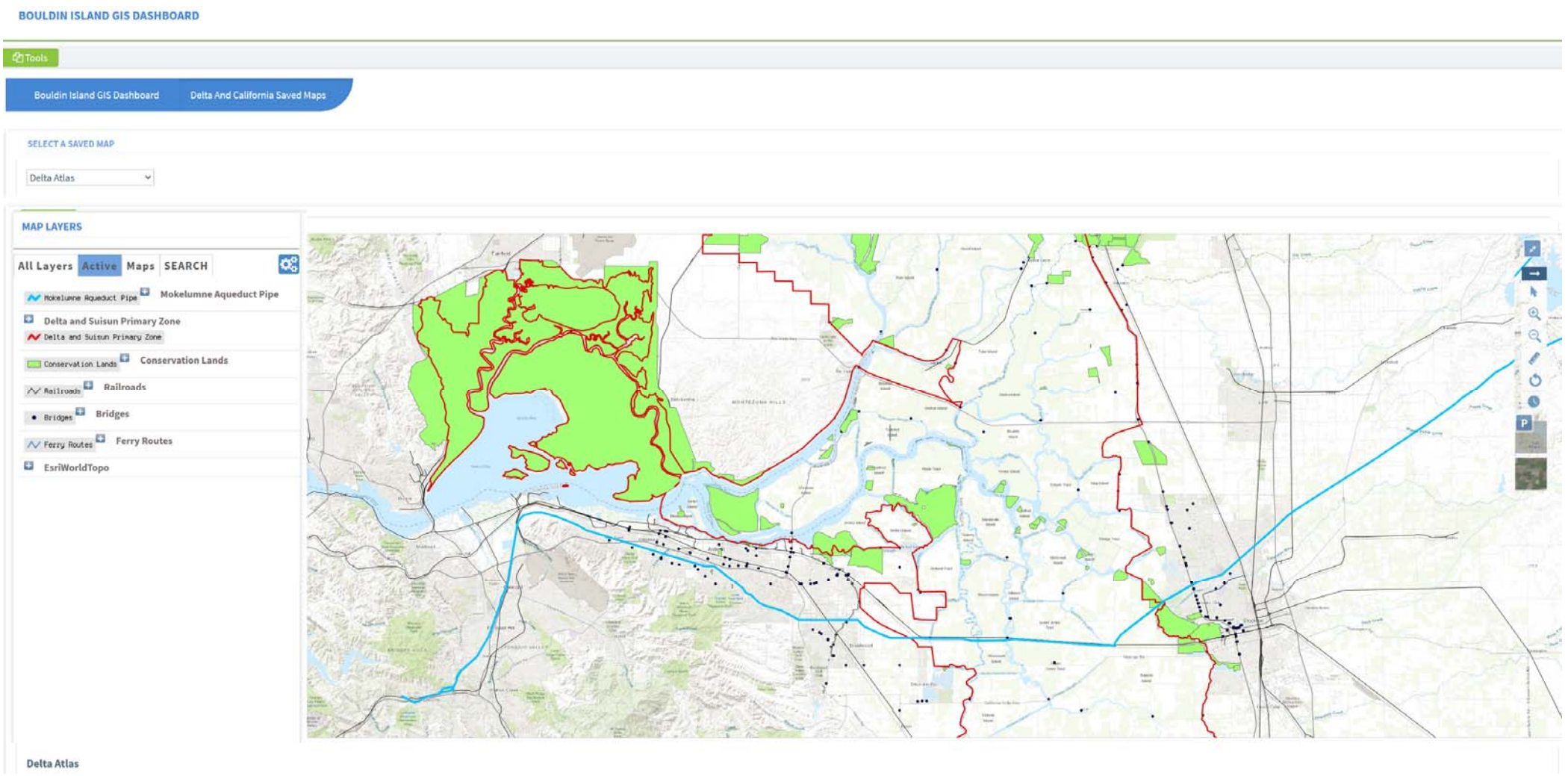
# Delta Islands Portal: Real Time Data: NWIS Tidally Filtered Discharge



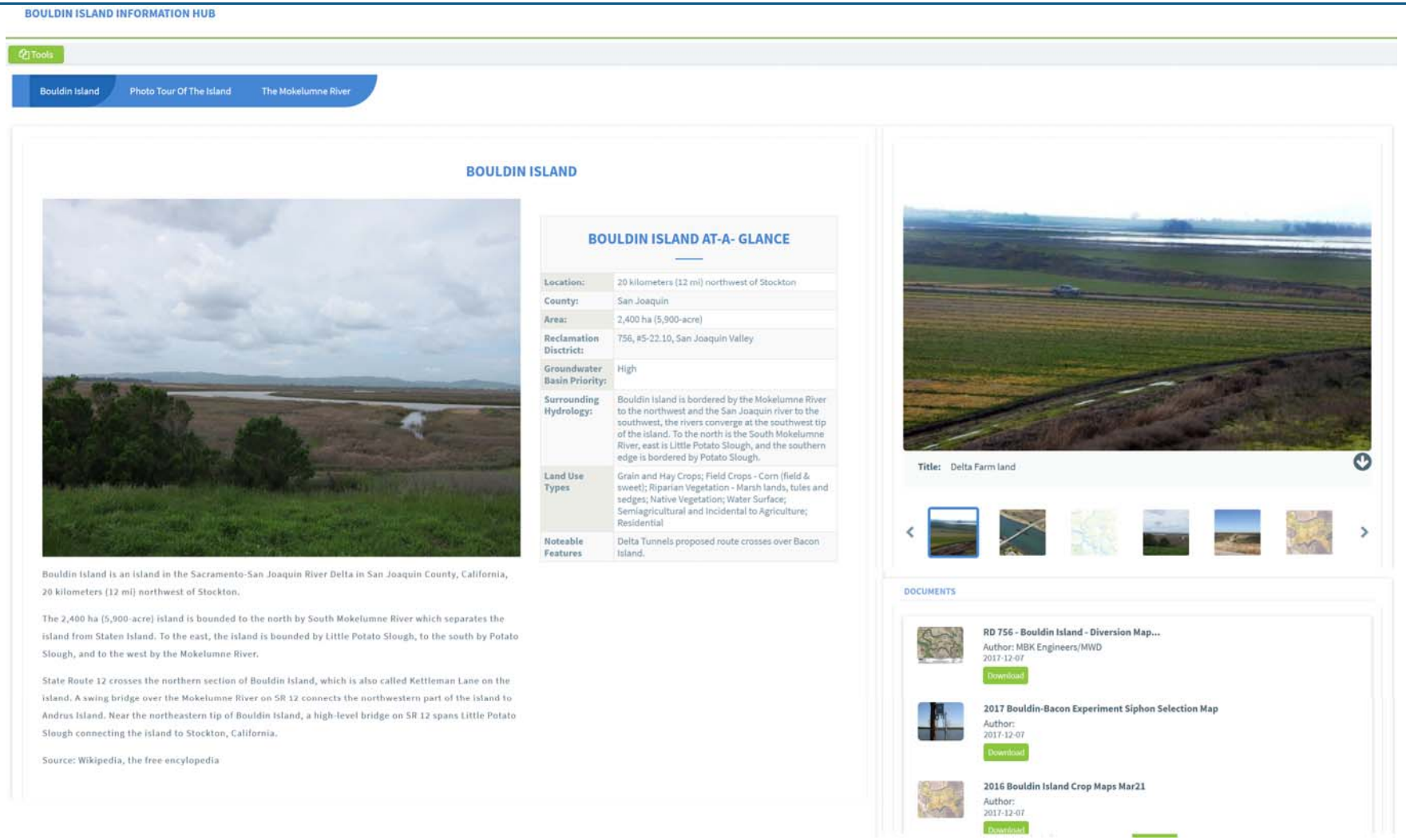
# Delta Islands Portal: Real Time Data: Wind Speed + River Stage



# Delta Islands Portal:  GIS Data Dashboard – Saved Maps



# Delta Islands Portal:  Island Information Hub



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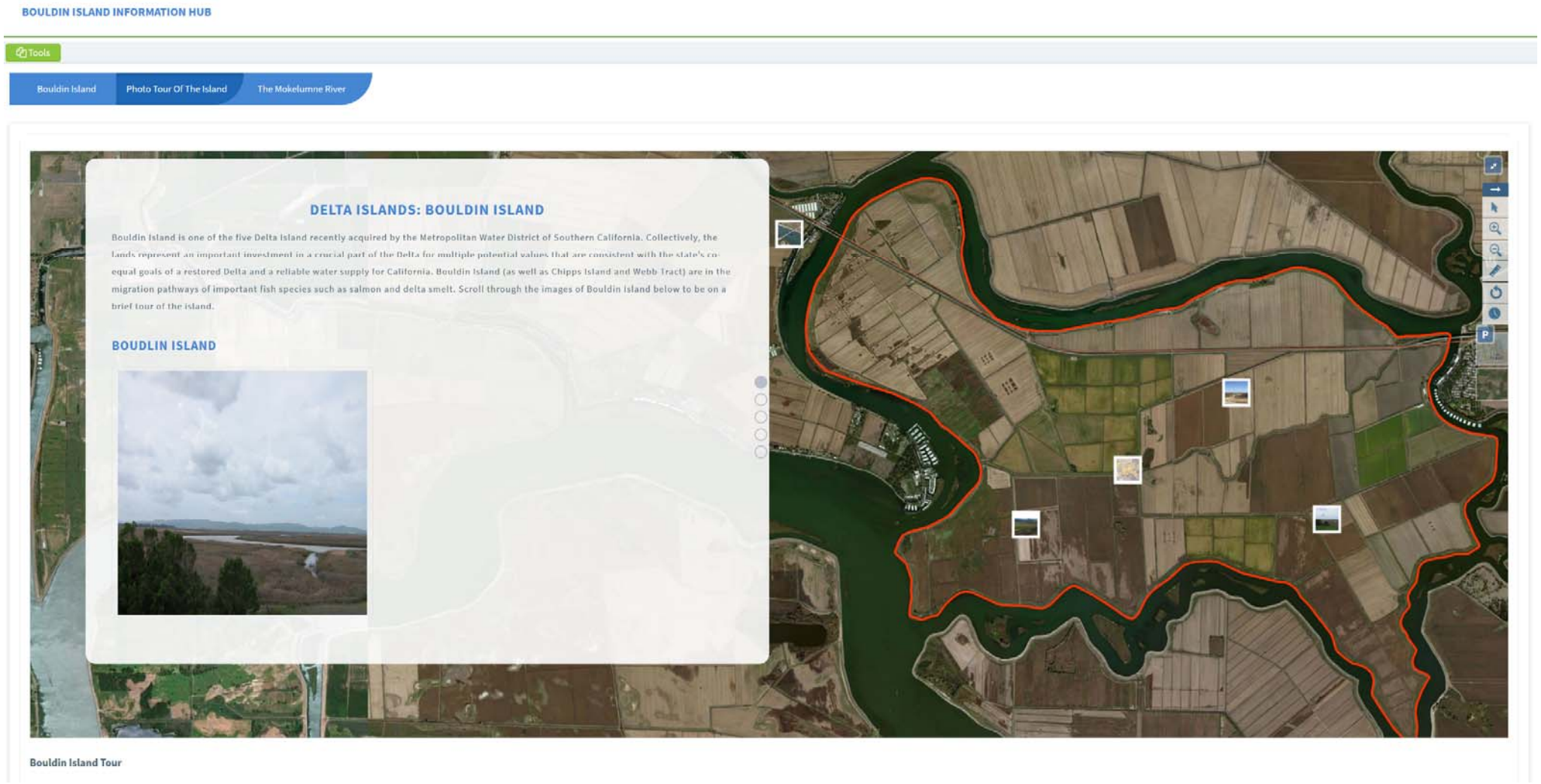
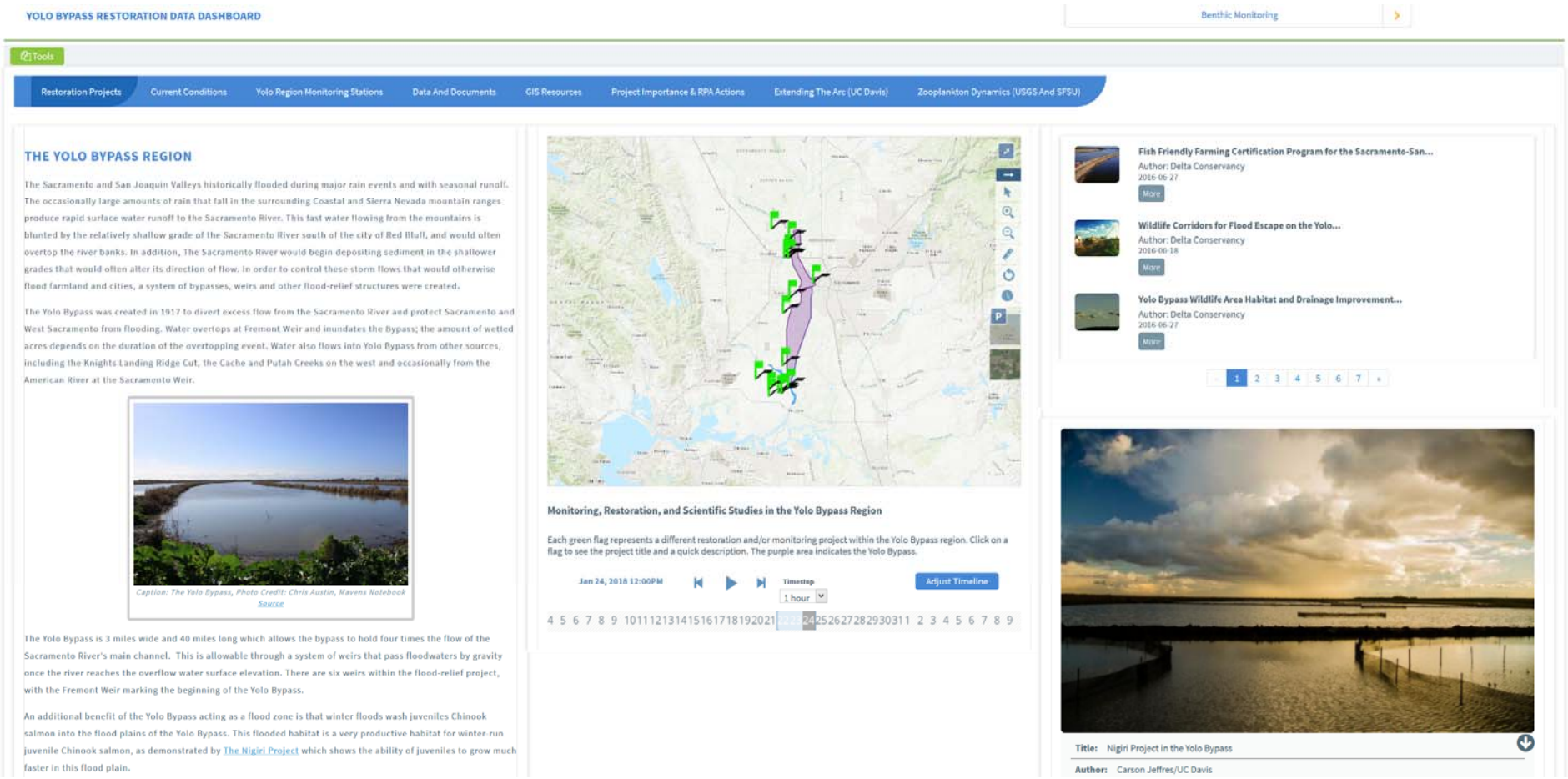


# Questions?


Contact: Dave Osti, 34 North
Email david@34north.com
For a username and password

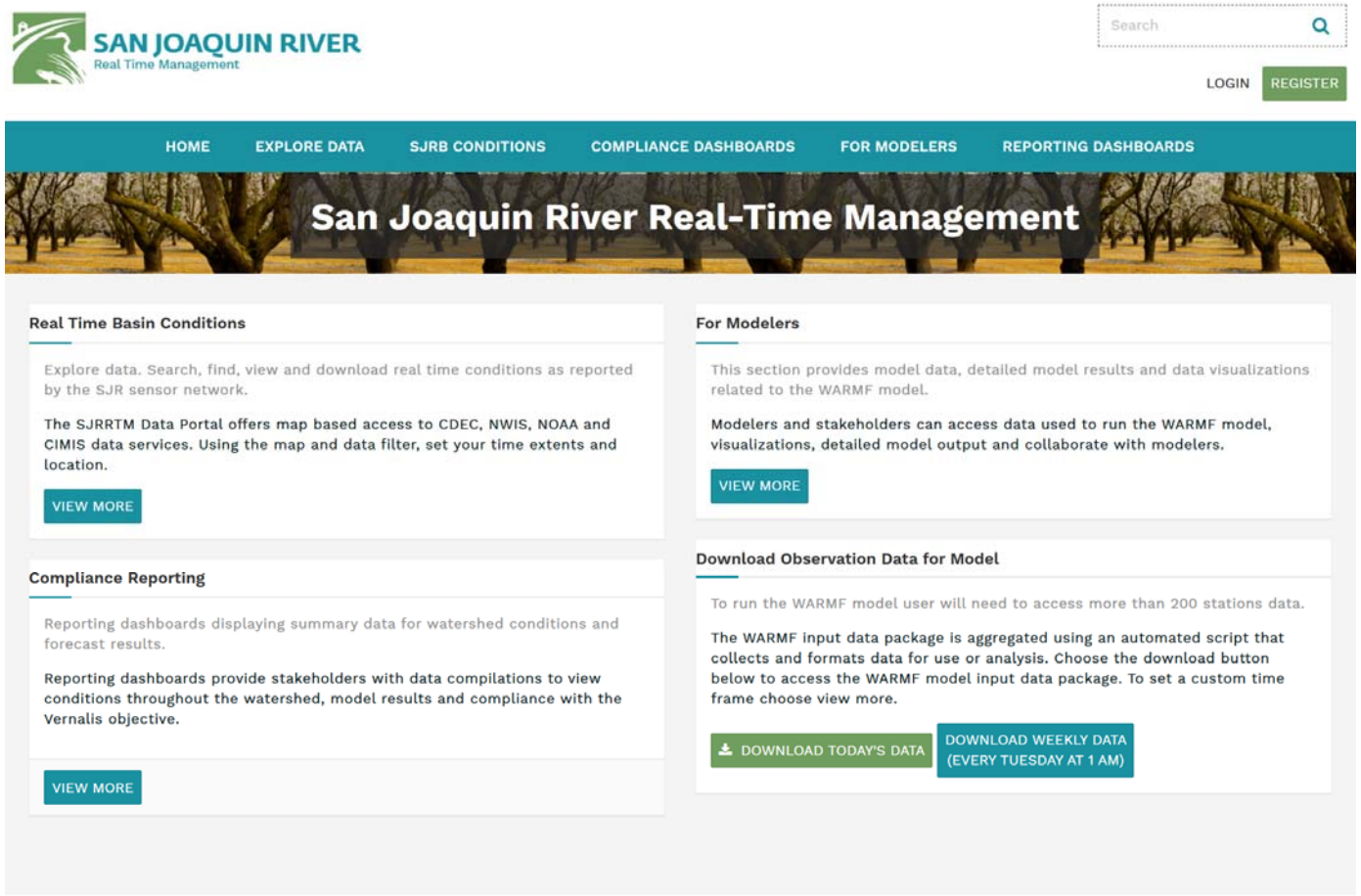
# Extra Slides

# Data Stories



# San Joaquin River Real Time Management: Funding by USBR

- Automated data packages for WARMF model input
- Visualize Real Time and Forecast Data





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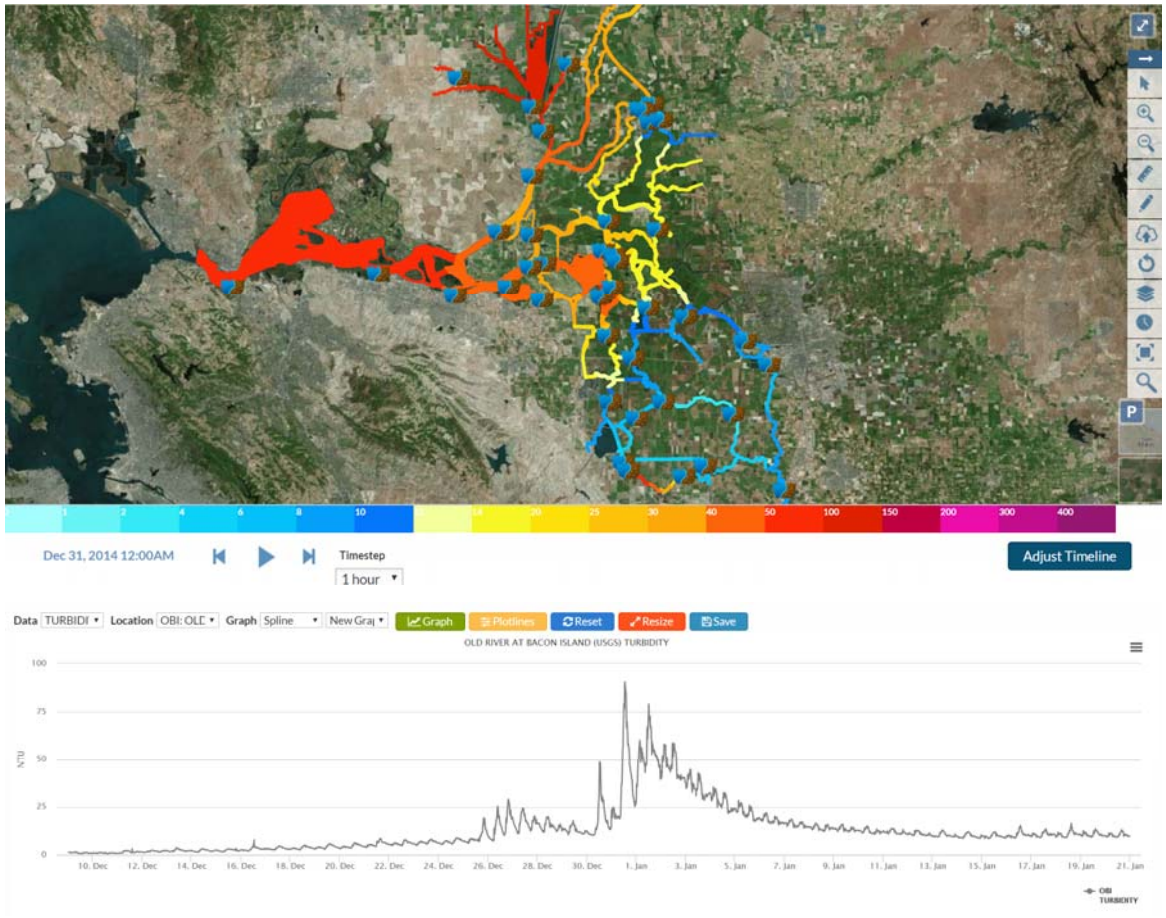
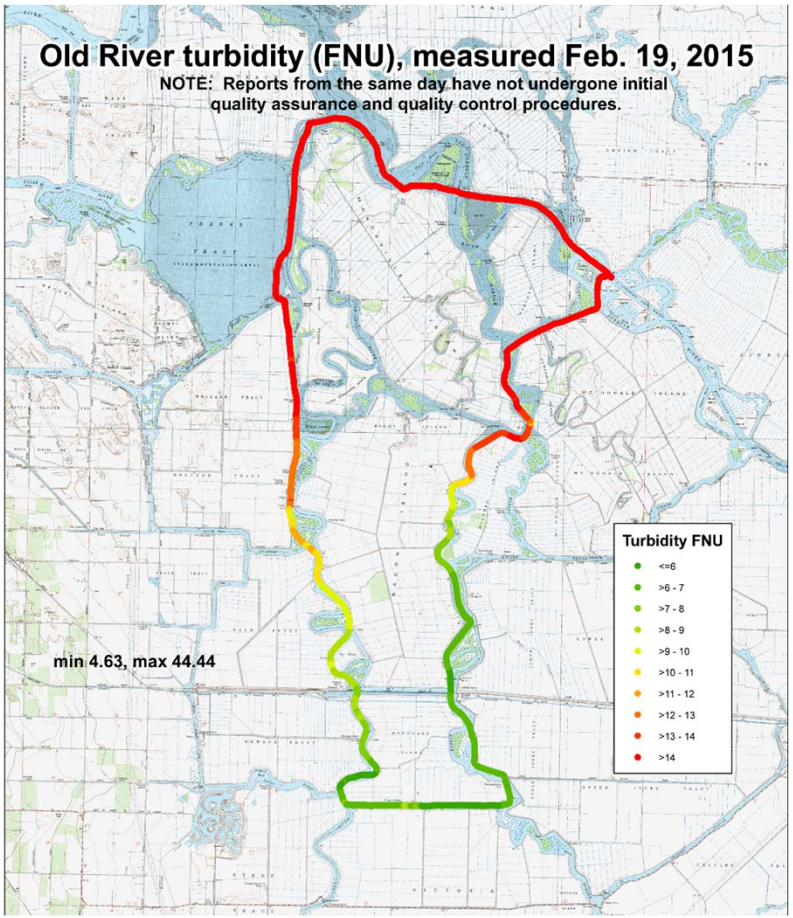
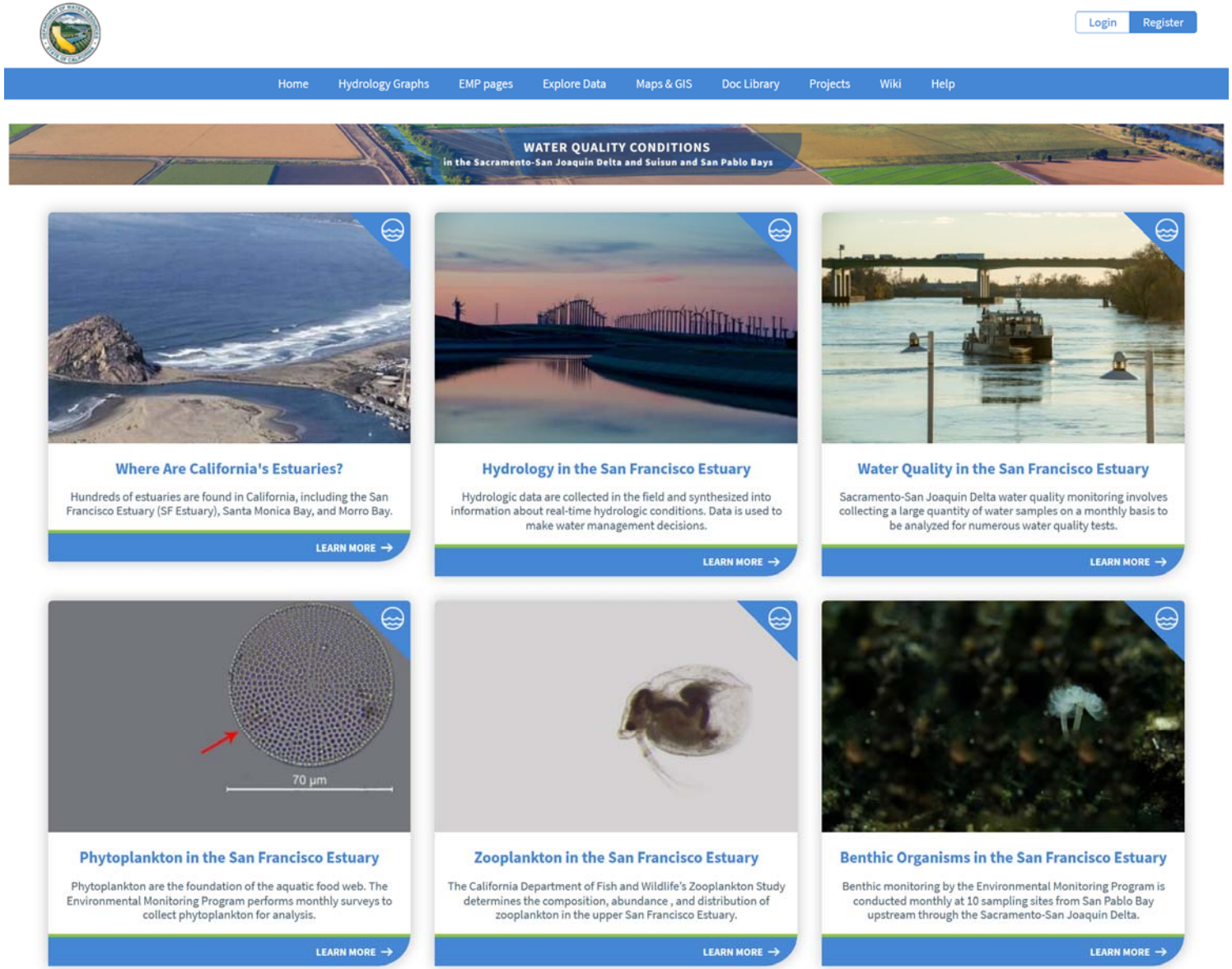
## Constituent Tracker: Collaboration with USGS, DWR, SFCWA

- Two steps: Find (a) common point in tide (b) use advection equation using web services from CDEC.
- Identifying common point in using velocity. Once we find the slacks. Associated with the max flood/ebb sets
- We affiliate a given WQ reading with the distance from the station at each time step



# DWR Environmental Monitoring Program: D1641 online reports

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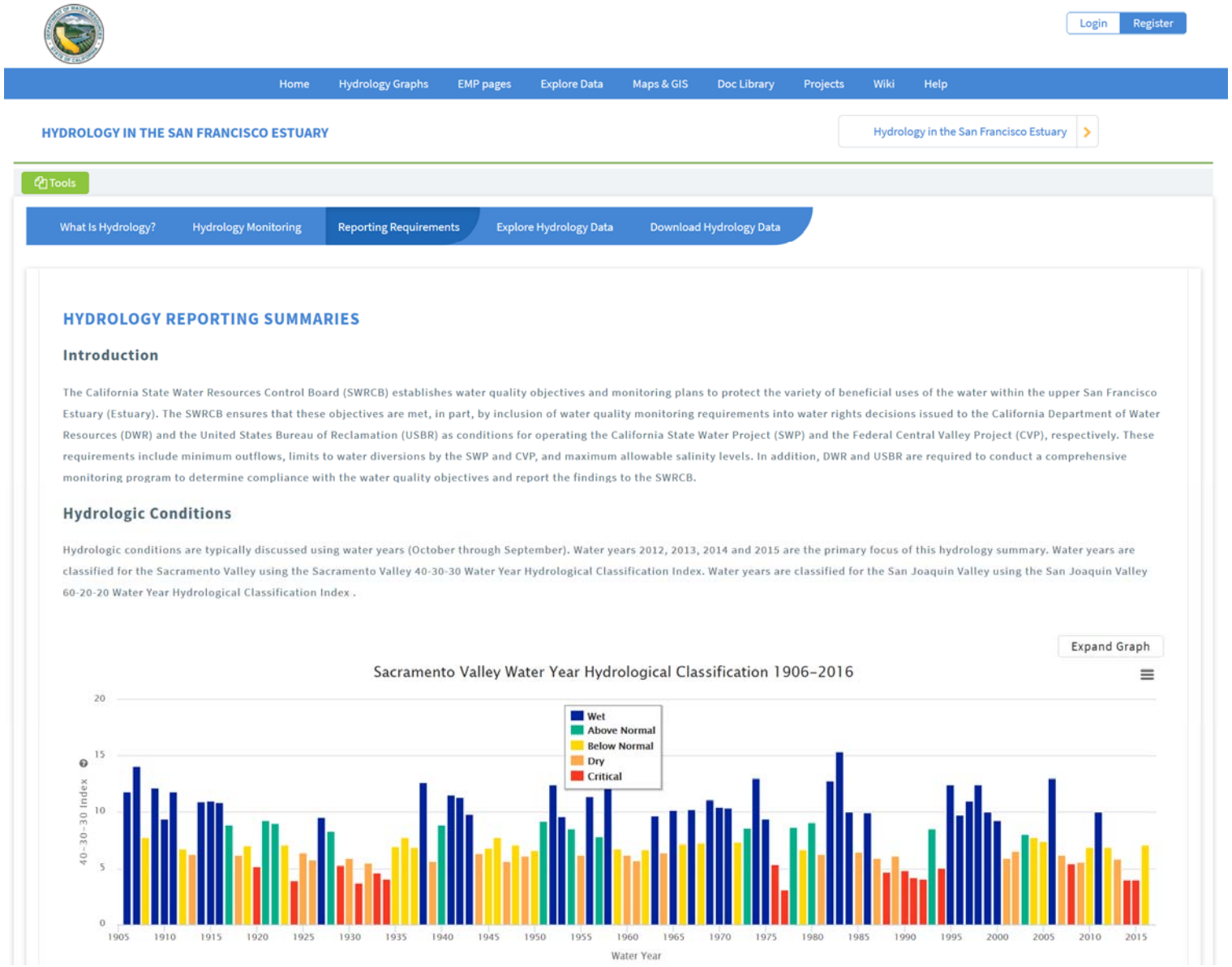
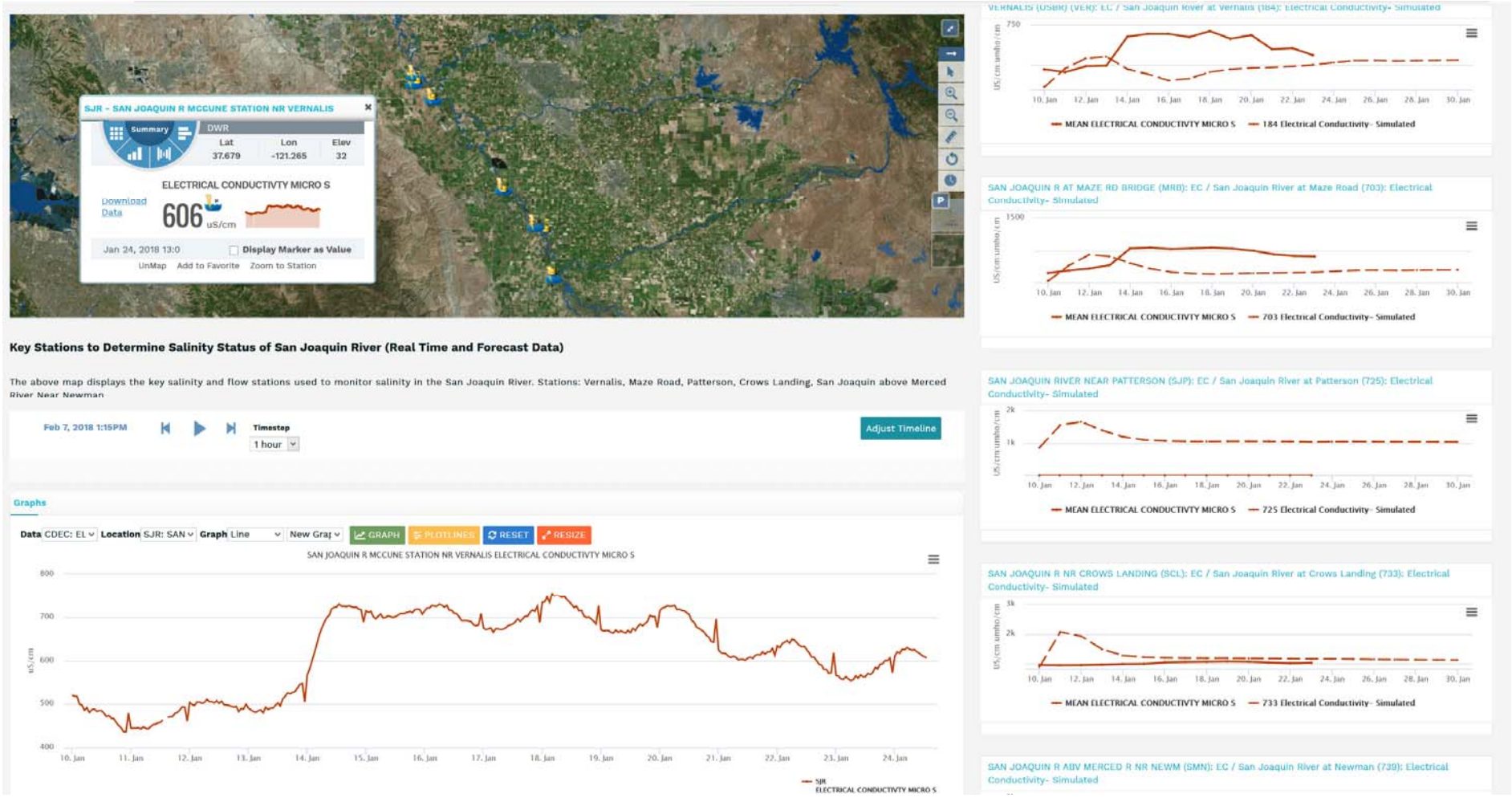
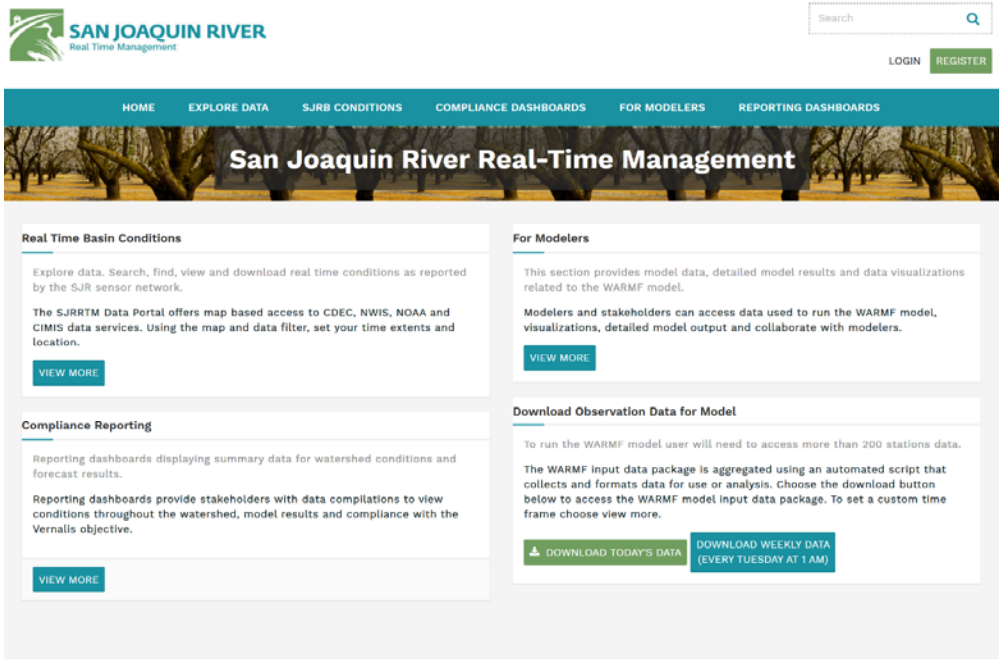


# SJR Real Time Management:  Compliance Dashboard

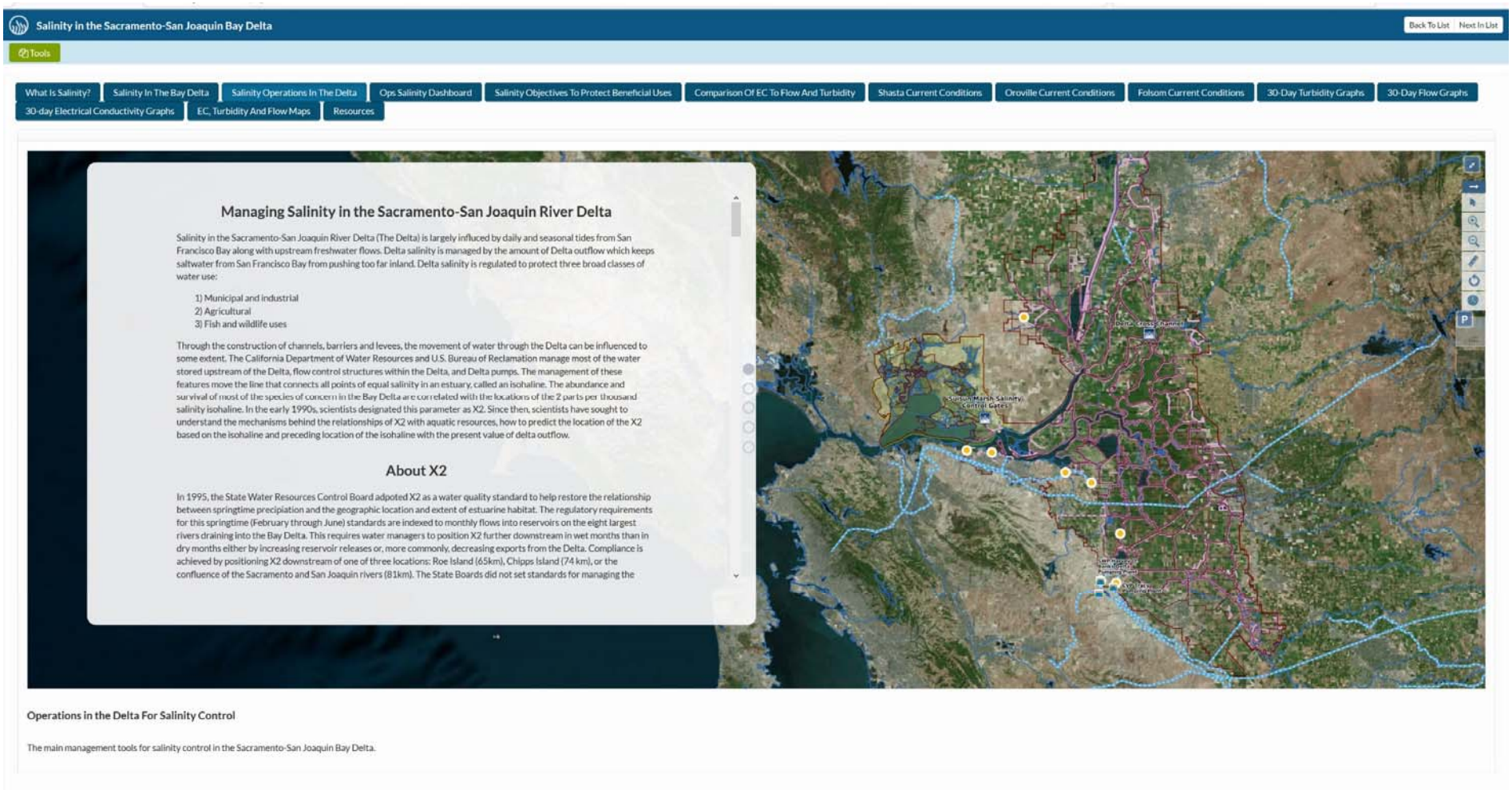


# Sacramento River & San Joaquin River Watershed Portals





# Data Stories



# Data Stories