

Science, Data, and Environmental Compliance and Permitting

Delta Conservancy Board Meeting

March 22, 2023

Sarah Lesmeister, PhD

Ecological and Community Programs Manager



SACRAMENTO - SAN JOAQUIN

DELTA CONSERVANCY

A California State Agency



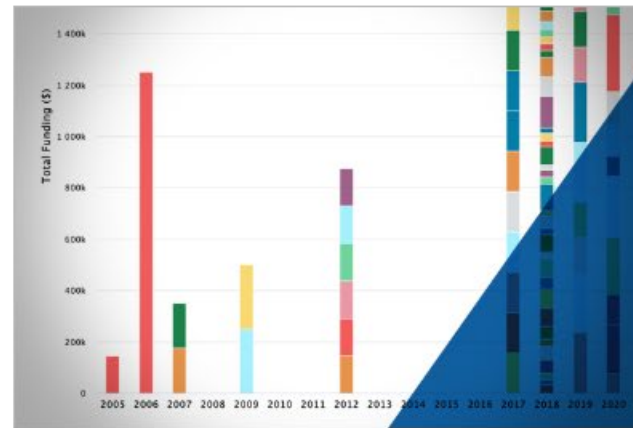
Science: Delta Science Tracker

Visualizations



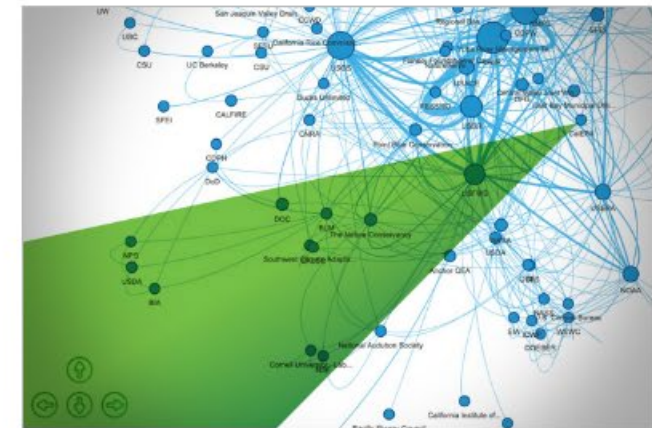
Science activities

Visualize the number of science activities taking place in a variety of categories.



Funding

See the distribution of funding to science activities, according to different sources, times, and topics.

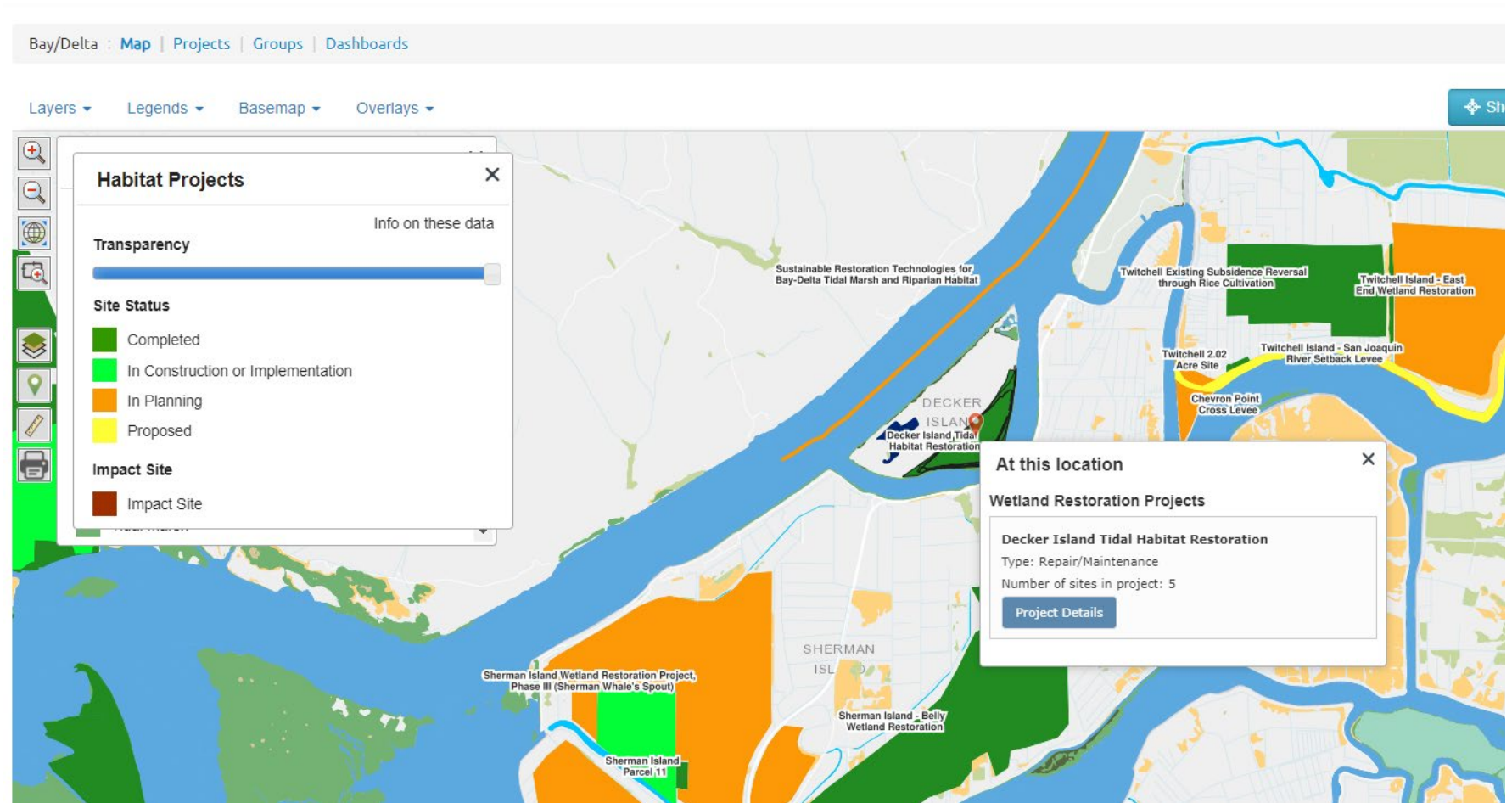


Collaboration

See the networks of people and organizations working together on different science challenges.

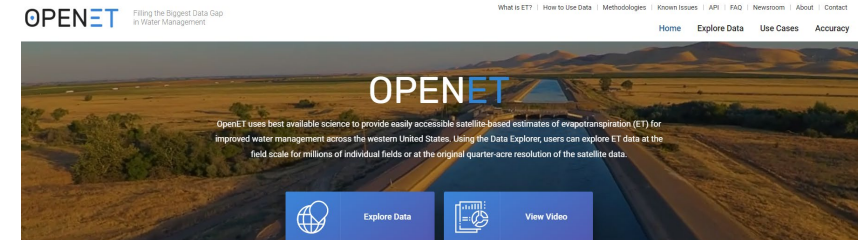
Data: Restoration Projects

- [EcoAtlas](#)



Data

- Terrestrial Conditions
 - [California Irrigation Management Information System](#)
 - Evapotranspiration [Open ET](#)
- Real Time Water Conditions
 - [California Data Exchange Center](#)
 - USGS [National Water Information System for California](#)
- Aquatic
 - [California Environmental Data Exchange Network](#)
 - [IEP](#)
 - [Environmental Data Initiative](#)
 - [Delta Aquatic Resource Inventory](#)
- Terrestrial
 - [Statewide Crop Mapping](#)
 - [CDFW Conservation Planning Data and Tools](#)
 - [CDFW Species Management](#)
 - [Swainson Hawk](#)
- Other
 - [CA Open Data Platform](#)
 - [CNRA Open Data Platform](#)
 - [SFEI Delta Landscape Scenario Planning tool](#)
 - [CalEnviroScreen](#)



Share: [f](#) [t](#)

CALIFORNIA DATA EXCHANGE CENTER
 CALIFORNIA DEPARTMENT OF WATER RESOURCES

Home Query Tools Precipitation River Forecast River

SACRAMENTO RIVER AT RIO VISTA BRIDGE (RVB)

Elevation: 0' - SACRAMENTO R basin - Operator: CA Dept of Water Resources/Div of Environmental Services

Datum 0 = 0.0' NAVD
 River Stage Definitions: Monitor stage 7.4' Flood stage 11.9' Danger stage 12.9'
 Peak Stage of Record 11.5' on 02/20/1986 00:00

Station comments:
12/15/2020 Data is preliminary and subject to revision. For QA/QC'd data, contact the Division of Environmental Servi
Query executed Monday at 16:12:47
 Provisional data, subject to change.
 Select a sensor type for a plot of data.

Hourly Data

Earlier

DATE / TIME PST	RIV STG FEET	TEMP DEG F	WIND SP MPH	WIND DR DEG	EL COND uS/cm	CHLORPH ug/L	PH VAL	TEMP W DEG F	TURB W NTU	DIS OXY MG/L	SOLAR R WJM^2
02/27/2023 05:00	5.04	43	9	68	227	3.02	7.8	47.6	8.96	11.0	0.00
02/27/2023 06:00	5.58	43	13	76	223	2.93	7.8	47.6	9.15	11.1	0.00
02/27/2023 07:00	6.04	43	11	64	219	2.91	7.8	47.6	8.66	11.1	20.00
02/27/2023 08:00	6.39	42	12	65	224	2.54	7.8	47.6	9.19	11.0	54.00
02/27/2023 09:00	6.56	43	12	43	224	2.40	7.9	47.6	9.31	11.0	93.00
02/27/2023 10:00	6.47	45	13	108	223	2.44	7.9	47.6	8.92	11.1	28.00
02/27/2023 11:00	6.31	42	7	139	223	2.55	7.9	47.6	8.93	11.1	37.00
02/27/2023 12:00	5.59	43	13	90	224	2.53	7.9	47.6	9.02	11.1	59.00
02/27/2023 13:00	4.94	41	16	77	218	2.56	7.8	47.5	8.76	11.1	175.00

California Department of Fish and Wildlife

Home Fishing Hunting Licensing Conservation Learning

Home | Conservation | Birds | Swainson Hawks

Swainson's Hawks in California

The Swainson's hawk (*Buteo Swainsoni*) was listed as a threatened species in 1983 by the California Fish and Game Commission. This listing was based on loss of habitat and decreased numbers across the state.

Distribution and Abundance

It is thought that the historic population of Swainson's hawks in California was as many as 17,136 pairs. In 1980 a report developed by Bloom (PDF) estimated 375 (+50) breeding pairs of Swainson's hawks remaining in California. Bloom's report noted number to the greatest in the Central Valley and in the Great Basin area of northeastern California, with a few Swainson's hawk territories located in Shasta Valley, the Owens Valley, and the Mohave Desert. In 1988 a Department led survey effort revealed no change in Swainson's hawk distribution from the 1980. The 1988 effort led to an estimate of 430 pairs in the Central Valley and a state-wide estimate of 550 breeding pairs. In 2005 a state-wide survey was conducted in the known range. The results showed a state-wide estimate for the number breeding pairs at 2081. Surveys conducted in Butte to San Joaquin counties during the period 2002-2009 showed numbers of breeding pairs of Swainson's hawks at 593 in 2002, 1008 in 2003 and 941 in 2009.

Related Info

- [Five-Year Status Review of the Swainson's Hawk \(Buteo swainsoni\) in California - 2016 \(PDF\)](#)
- [California Partners in Flight Swainson's Hawk Species Profile 1998](#)
- [Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley - Swainson's Hawk Tech. Advis.](#)

Biology

The Swainson's hawk is a medium-sized buteo with relatively long, pointed wings which curve up somewhat in a slight dihedral while the bird is in flight. The most distinctive identifying feature of adults is dark head and breast band distinctive from the lighter colored belly, and the underside of the wing with the linings lighter than the dark gray flight

Environmental Compliance

- Board Approved Projects
 - Conservancy Files
 - Contact Conservancy Staff
- Other Projects
 - Repository of CEQA forms
 - State Clearinghouse [CEQAnet](#)
 - CEQA IS/EIRs: Lead Agencies often host documents
 - Examples:
 - CDFW: [Suisun Marsh Habitat Management, Preservation and Restoration](#)
 - City of Fairfield: [Pacific Flyway Center](#)
 - [Delta Plan Covered Actions](#)
 - Some agency webpages host approved permits
 - Example: CA Water Boards
 - [Public notices for Clean Water Act Section 401](#)

381 document(s) found

SCH Number	Type	Lead/Public Agency	Received	Title
2023030054	NOE	California State Lands Commission (SLC)	3/1/2023	Issuance of a General Lease - Recreational Use - Lease 4141
2023030053	NOE	California State Lands Commission (SLC)	3/1/2023	Issuance of a General Lease - Recreational Use - Lease 4121
2023030052	NOE	California State Lands Commission (SLC)	3/1/2023	Issuance of a General Lease - Recreational Use - Lease 3683
2023030051	NOE	California State Lands Commission (SLC)	3/1/2023	Issuance of a General Lease - Recreational Use - Lease 3675
2023030050	NOE	California State Lands Commission (SLC)	3/1/2023	Amendment of Lease - Lease 3661
2021030038	NOD	City of San Diego	3/1/2023	Paseo Monrill
2023030049	NOE	California State Lands Commission (SLC)	3/1/2023	Issuance of a General Lease - Recreational Use - Lease 3546



Permitting

- Federal
 - US Army Corp of Engineers
 - Clean Water Act Section 404, Section 10 Rivers and Harbors Act
 - US Fish Wildlife Services and National Marine Fisheries Services
 - Biological Opinion
- California (State)
 - Department of Fish and Wildlife
 - Lake or Stream Bed Alteration Agreement, Incidental Take Permit, Consistency Determination, Habitat Restoration and Enhancement Act
 - Department of Transportation
 - Encroachment
 - Coastal Conservancy
 - Letter of Consistency
 - Water Boards (State, Regional)
 - 401 General Water Quality Certification of Small Habitat Restoration, Construction Activities Storm Water General, 401 Water Quality Certification of Waste Discharge, Permission to Encroach on Waterways within Floodways
- Regional
 - BCDC Marsh Development Permit
 - CEQA NOD if project falls under EIR for Suisun Marsh Habitat Management, Preservation and Restoration Plan
- City/County
 - Grading Permit, Environmental Health Department, Road Use
- Others
 - Flood and Hydrological Analysis

Science: Strategies

Delta Conservancy Strategic Plan

- [2022-2027 Strategic Plan](#)

Delta Stewardship Council

- [Delta Plan](#)
 - [Chapter 4: Protect, Restore and Enhance the Delta Ecosystem](#)
- Delta Science Program
 - [2019 Science Plan](#)
 - [2022-2026 Science Action Agenda](#)
 - [2023 State of Bay-Delta Science](#)
- [Delta Independent Science Board](#)
- Inter-agency Ecological Program
 - [2020-2024 Science Strategy](#)



Science: Climate Change

- [CA Climate Resilience Strategy](#)
- [Natural and Working Lands Climate Smart Strategy](#)
- [CA Water Resilience Portfolio](#)
- [San Francisco Estuary Blueprint](#)
- [Delta Adapts](#)
- [Adapting to Rising Tides](#)
- [CDFA Climate Smart Ag Programs](#)

Primary Climate Stressors



Precipitation and Hydrologic Patterns



Air Temperature



Sea Level Rise



Frequency of Extreme Events

Secondary Climate Stressors



Wildfire



Wind



Fog

Science: Publications and Reports

- Publications
 - [San Francisco Estuary and Watershed Sciences \(SFEWS\)](#)
 - [Ecological Restoration](#)
 - [Invasive Plant Science and Management](#)
- Reports/Newsletters
 - [CDFW Delta Conservation Network](#)
 - [Delta Public Lands Strategy](#)
 - [SFEI Delta Landscapes Project](#)
 - [IEP Newsletter](#)
 - [Delta Breeze](#)
 - [Estuary News \(Archive\)](#)

Delta Breeze
 A newsletter by the Delta Science Program
 OCTOBER 2022

Delta Lead Scientist "Dear Colleagues"

Recently, I shared a drink with an academic colleague who candidly

SAN FRANCISCO ESTUARY & WATERSHED SCIENCE
 Sponsored by the Delta Science Program and UC Davis Institute for the Environment

SPECIAL ISSUE: STATE OF BAY-DELTA SCIENCE

Carbon Sequestration and Subsidence Reversal in the Sacramento-San Joaquin Delta and Suisun Bay: Management Opportunities for Climate Mitigation and Adaptation

Lisamarie Windham-Myers*¹, Patty Oikawa², Steve Deverel³, Dylan Chapple⁴, Judith Z. Drexler⁵, Dylan Stern⁶

We assessed nature-based solutions to climate mitigation and adaptation in the Sacramento-San Joaquin Delta and Suisun Bay and made the

• The largest uncertainties in 40-year (market-based) climate mitigation estimates derive from uncertainties in flow and water operations

IEP Newsletter
 Vol. 41 Issue 2, 2022
 INTERAGENCY ECOLOGICAL PROGRAM FOR THE SAN FRANCISCO ESTUARY

In this Issue:

Of Interest to Managers	3
Research Note	5
Feasibility of formalin-fixed Delta Smelt for genetic identification test	5
2021 Delta Juvenile Fish Monitoring Program Nearshore Fishes Annual Report	9

Freshwater-to-Marine Gradient in the San Francisco Bay-Delta System
 Kudela, Raphael M.; Howard, Meredith D. A.; Monismith, Stephen; Paerl, Hans W.

Invasive Aquatic Vegetation in the Sacramento-San Joaquin Delta and Suisun Marsh: The History and Science of Control Efforts and Recommendations for the Path Forward
 Conrad, J. Louise; Thomas, Madison; Jetter, Karen; Madsen, John; Pratt, Paul; Moran, Patrick; Takekawa, John; Darin, Gina Skurka; K...

Ecology and Ecosystem Effects of Submerged and Floating Aquatic Vegetation in the Sacramento-San Joaquin Delta
 Christman, Maigaret A.; Khanna, Shruti; Drexler, Judith Z.; Young, Matthew J.

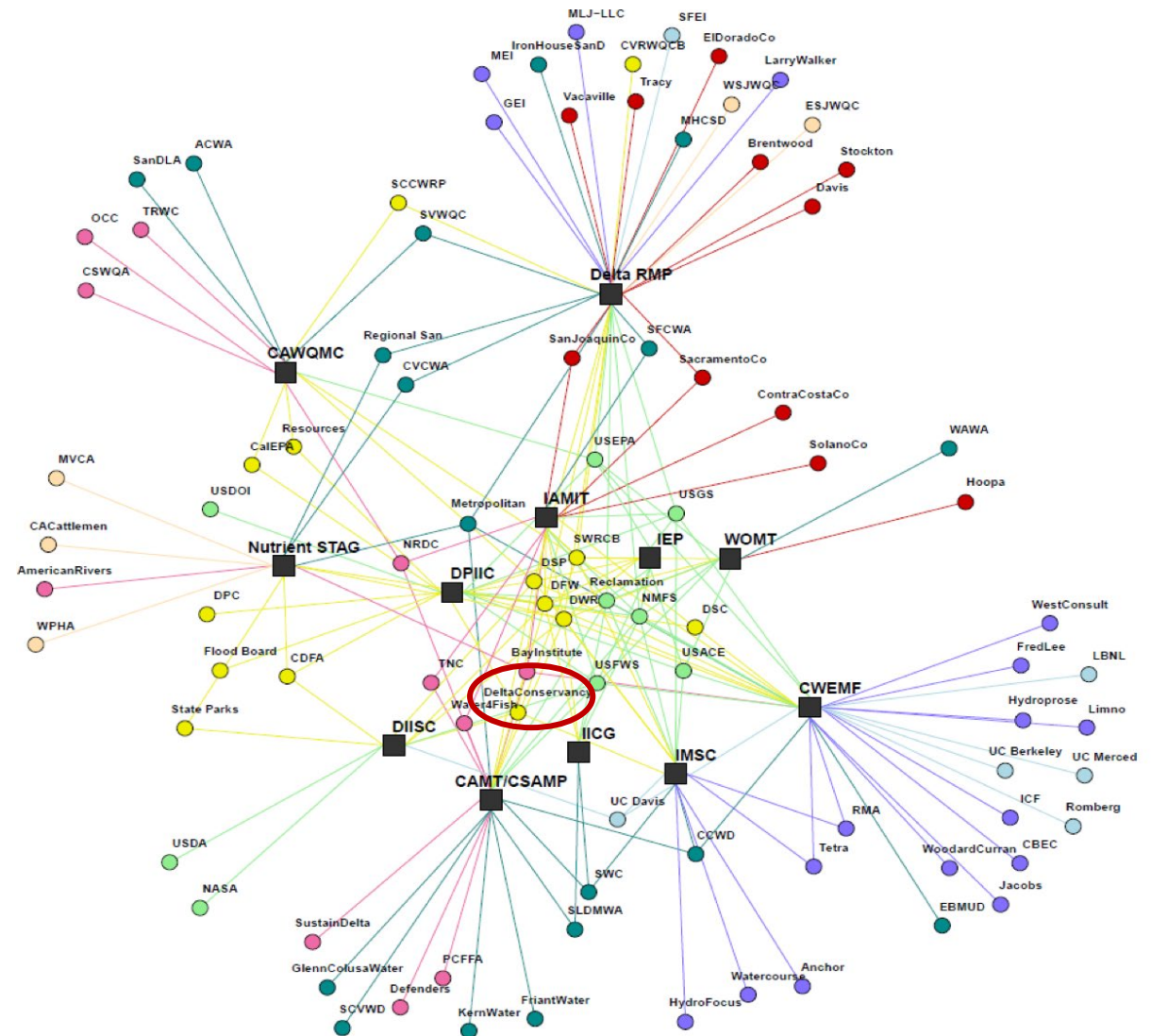
Remote Sensing of Primary Producers in the Bay-Delta
 Hestir, Erin; Dronova, Iryna

Landscape Transformation and Variation in Invasive Species Abundance Drive Change in Primary Production of Aquatic Vegetation in the Sacramento-San Joaquin Delta
 Boyer, Kathryn E.; Safran, Samuel M.; Khanna, Shruti; Patten, Melissa V.



Conclusion

- Complex
- Collaboration
- Contact Us



Contact Us!

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