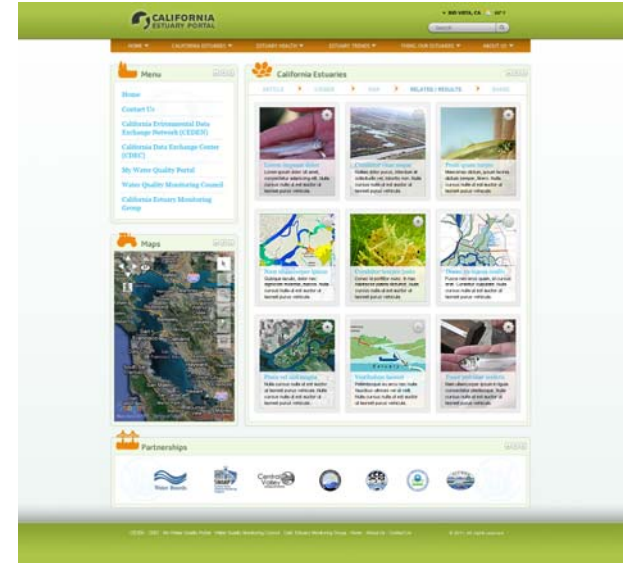
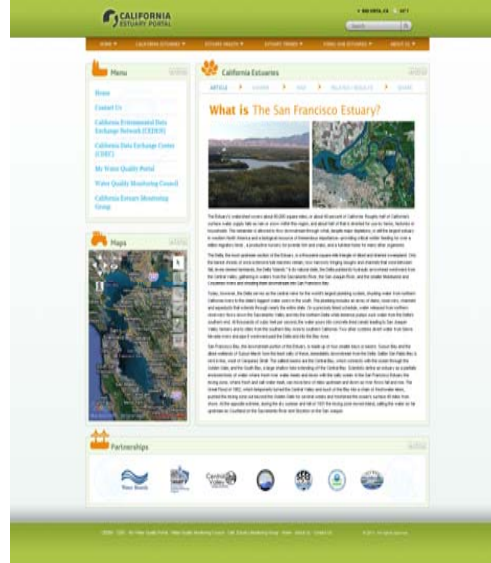
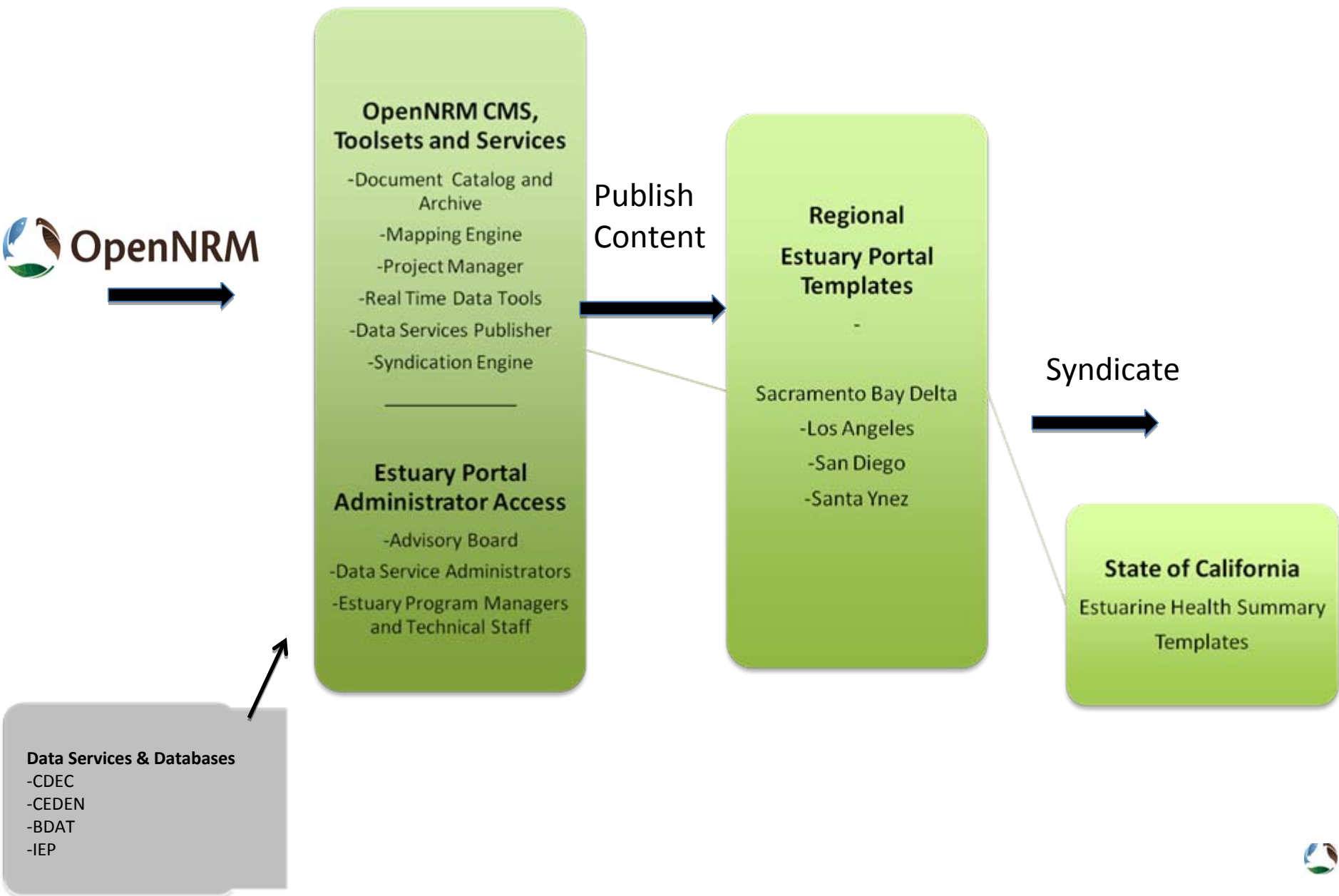


CALIFORNIA ESTUARY PORTAL



California Estuary Portal Design Presentation
July 6, 2011

Presented By: 34 North





OpenNRM CMS



DATA SERVICES & DATABASES

- CDEC
- CEDEN
- BDAT
- IEP

OpenNRM CMS, Toolsets and Services

- Documents, Catalog and Archive
- Mapping Engine
- Project Manager
- Real Time Data Tools
- Data Services Publisher
- Syndication Engine

Estuary Portal Administrator Access

- Advisory Board
- Data Service Administrators
- Estuary Program Managers and Technical Staff

PUBLISH CONTENT



Regional Estuary Portal Templates

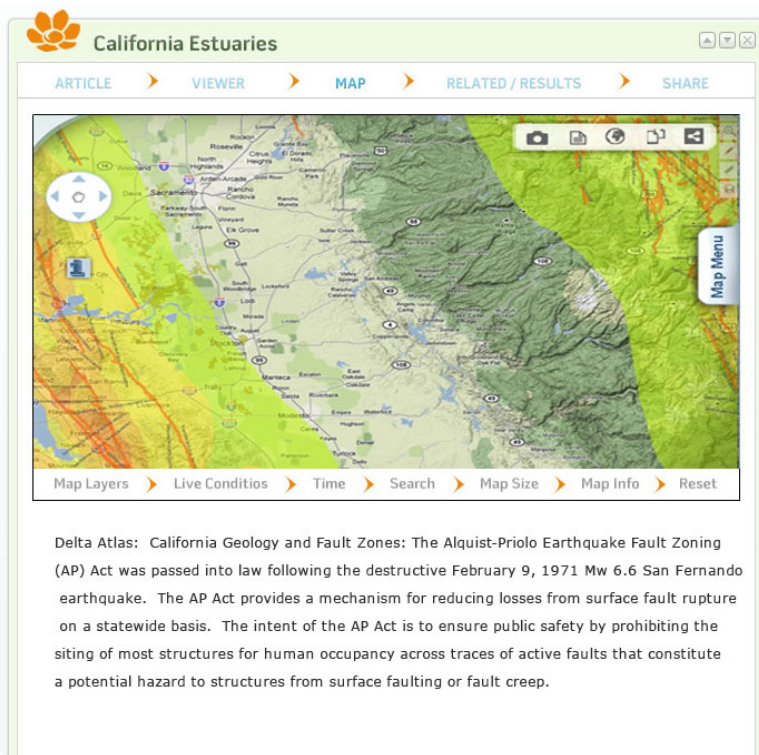
- Sacramento Bay Delta
- Los Angeles
- San Diego
- Santa Ynez

SYNDICATE



State of California

- Estuarine Health Summary Templates



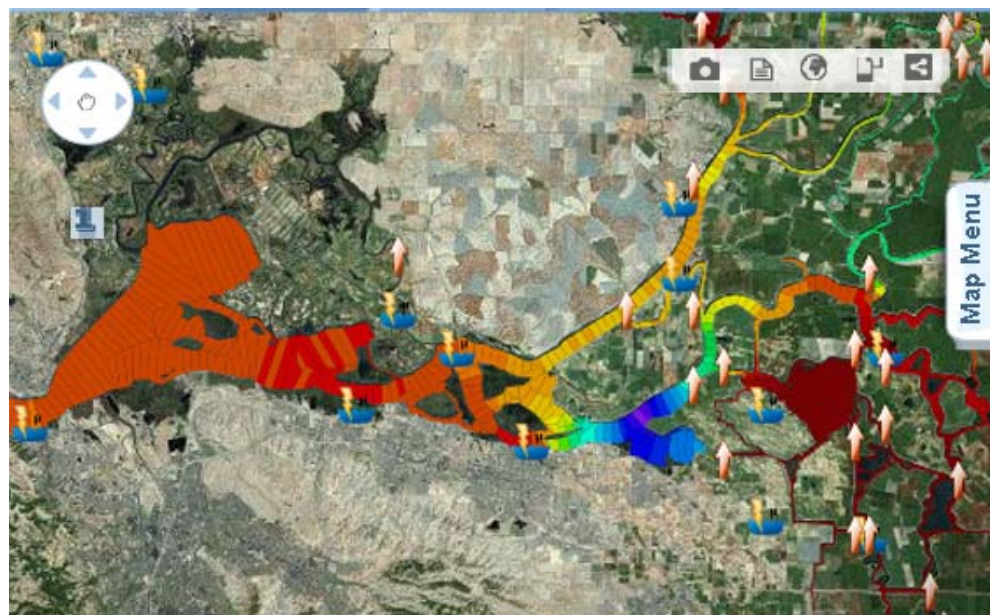
California Estuaries

ARTICLE > VIEWER > MAP > RELATED / RESULTS > SHARE

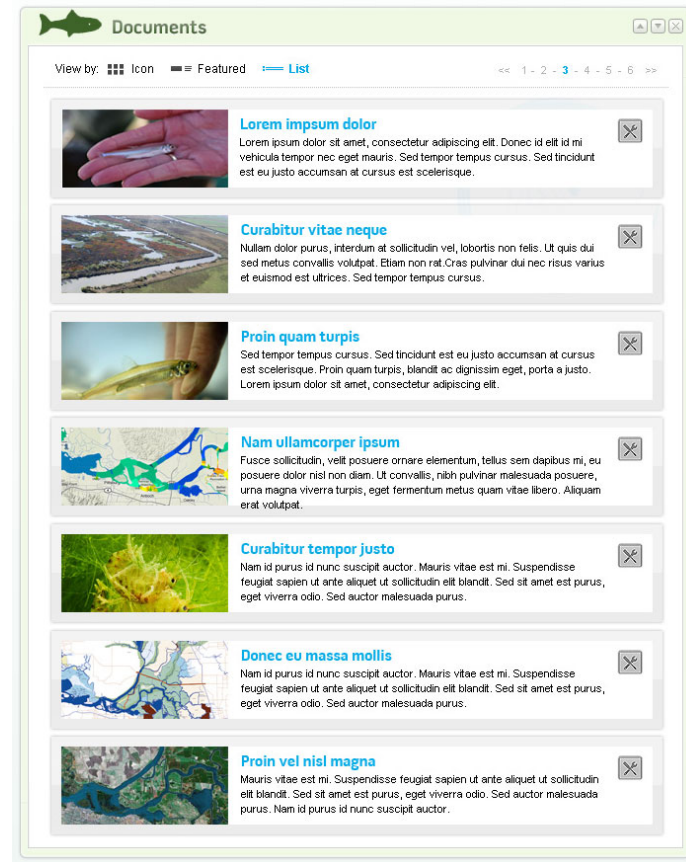
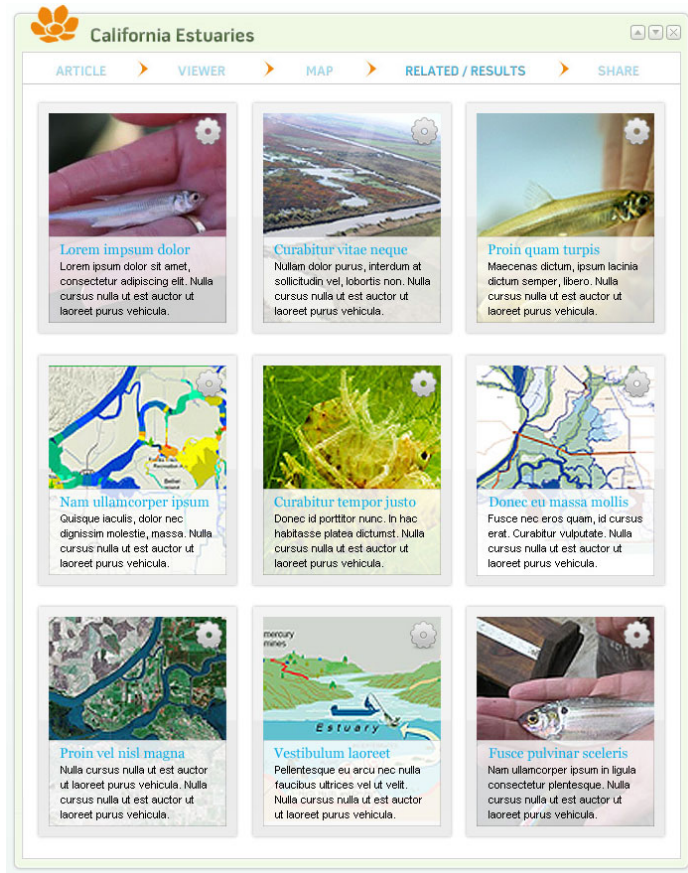
Map Layers > Live Conditions > Time > Search > Map Size > Map Info > Reset

Map Menu

Delta Atlas: California Geology and Fault Zones: The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive February 9, 1971 Mw 6.6 San Fernando earthquake. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.



Possible Uses: Regional Exploration and Discovery of California Estuaries, Access to CDEC Stations, Data Visualization, DWR Delta Atlas, Map Access to Regional Report Cards



Possible Uses: Document, Image, Maps and Video Archive, Related Document Listings to Articles, Back-End Publishing Library to Public Interface, Public Library


California Estuaries
⌵ ⌵ ⌵

ARTICLE >
VIEWER >
MAP >
RELATED / RESULTS >
SHARE

Native Fish.

The Delta Smelt:

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Photo courtesy of USFWS San Diego Region

Possible Uses: Information Libraries

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- [California Estuary Monitoring Group](#)

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Estuaries are often known as bays, lagoons, harbors, inlets, or sounds, (note though that not all water bodies by those names are necessarily estuaries; the defining feature of an estuary is the mixing of fresh and salt water, not the name.) Some familiar examples of estuaries include San Francisco Bay, Puget Sound, Chesapeake Bay, and the New York/New Jersey Harbor.

Estuarine environments are among the most productive on earth, creating more organic matter each year than comparably sized areas of forest, grassland, or agricultural land. The tidal, sheltered... [Read More...](#)


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Lorem.org: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras at enim eu sapien porttitor consequat.
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Steve Buck: ras pellentesque mi urna, quis laoreet odio. Nullam dignissim, nisi non ornare interdum, felis lacus rhoncus justo
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UMARP Monitoring Framework



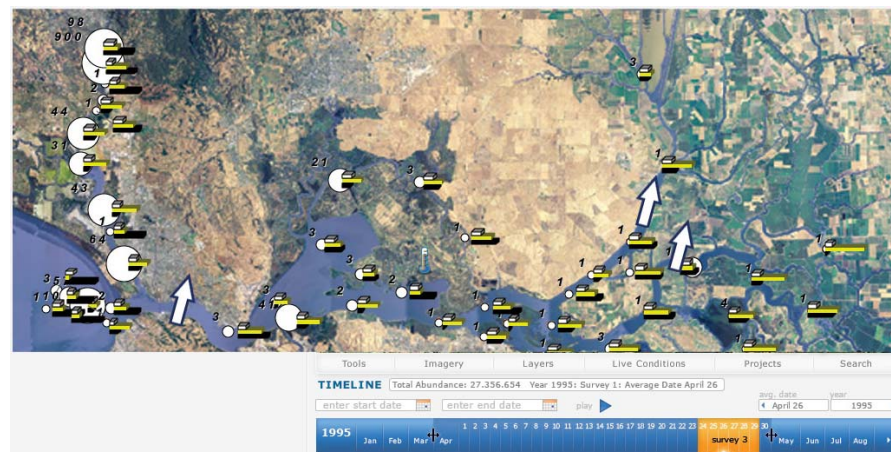
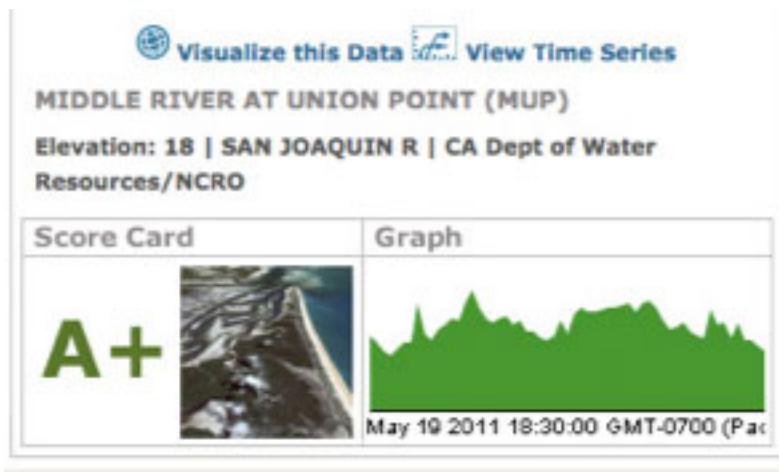
[Sam Luoma](#)

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Possible Uses: Build widgets promoting important topics throughout the website.
 Answered question widgets, Species, Estuary Data, Report Cards



Possible Uses: Answer questions, public access to important datasets

[MAIN](#)
[DATA SETS](#)
[+ TOOLS](#)
[+ NEW](#)

Amye Test Model for Comps
DATA SOURCE CEDEN (California Envir

SEARCH

METHOD NAME
--- all ---

REGIONS
Current Map Extent

ANALYTE
--- all ---

MAP IT

CLEAR PREVIOUS RESULTS

USE DATES

LOCATION --- all ---

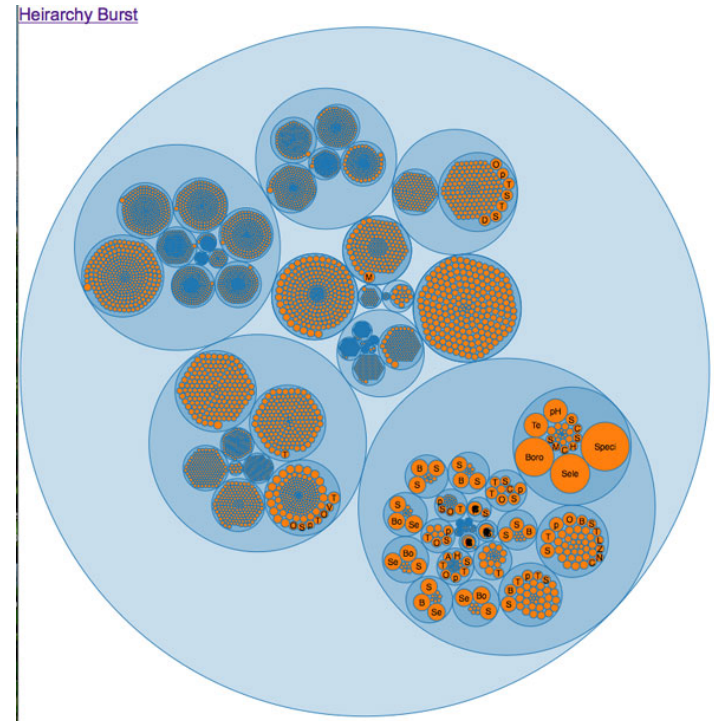
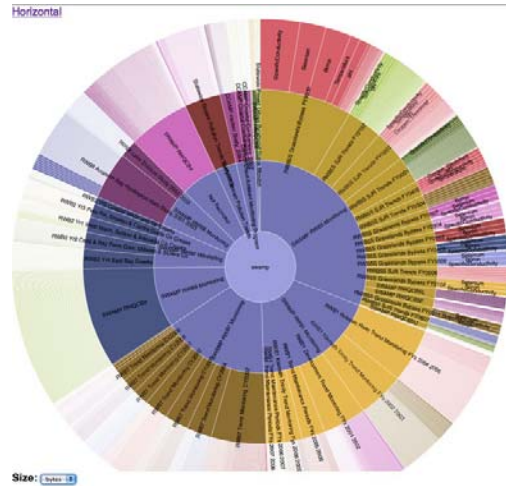
AGENCY --- all ---

PROJECT --- all ---

PARENT PROJECT --- all ---

[MAP ALL](#)
[GET DATA](#)
[GRAPH ALL](#)
[CLEAR ALL](#)

Data Range	Title / Info	Actions
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Possible Uses: CEDEN Analysis

What is The Status of Sf Estuary Health?

Despite its urban and industrial character, San Francisco Bay and the Sacramento-San Joaquin Delta remain perhaps California's most important ecological habitats. California's Dungeness crab, California halibut, and Pacific salmon fisheries rely on the bay as a nursery. The few remaining salt marshes now represent most of California's remaining salt marsh, supporting a number of endangered species and providing key ecosystem services such as filtering pollutants and sediments from the rivers. San Francisco Bay is recognized for protection by the California Bays and Estuaries Policy. [More info](#)



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Scorecard

SUMMARY STATION DATA GRAPH

SAN JOAQUIN RIVER AT GARWOOD BRIDGE SDC
Elevation: 12 | San Joaquin R | USGS

TURBIDITY Station Sensors

Current: **6.50**

RIV STD	g/m
VELOCITY	g/m
TEMP IV	g/m
TURB IV	g/m
CHLOROPH	g/m
SL COND	g/m
FLOW	g/m

Use Map | Zoom to Station | Add to Favorites

Healthy Waterways

Learning from our friends down under:

The Ecosystem Health Monitoring Program (EHMP) is one of the most comprehensive marine, estuarine and freshwater monitoring programs in Australia. It delivers a regional assessment of the ambient ecosystem health (or pulse) for each of South East Queensland's (SEQ) 19 major catchments, 18 river estuaries, and Moreton Bay, highlighting where the health of our waterways is getting better or worse.

<http://www.healthwaterways.org/ehmp/home.aspx>

Partnerships

California Estuaries

San Francisco Bay is a shallow, productive estuary, through which water drains from approximately forty percent of California, flowing in the Sacramento and San Joaquin rivers from the Sierra Nevada mountains, enters the Pacific Ocean. Specifically, both rivers flow into Suisun Bay, which flows through the Carquinez Strait to meet with the Napa River at the entrance to San Pablo Bay, which connects at its south end to San Francisco Bay. However, the entire group of interconnected bays is often referred to as the "San Francisco Bay".

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Scorecard

SUMMARY STATION DATA GRAPH

SAN JOAQUIN RIVER AT GARWOOD BRIDGE 59C
Elevation: 13 | San Joaquin R | USGS

TURBIDITY	Station Sensors
Current: 6.50	RIV STD graph
A	VELOCITY graph
	TEMP IV graph
	TURB IV graph
	CHLOROPH graph
	SL COND graph
	FLOW graph

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Partnerships

Native Fish. The Delta Smelt:

Delta smelt, *Hypomesus transpacificus*, are an endangered slender-bodied smelt, about 5 to 7 cm (2.0 to 2.8 in) long, of the Osmeridae family. Endemic to the upper Sacramento-San Joaquin estuary of California, they largely inhabit the freshwater-saltwater mixing zone of the estuary, except during their spawning season, which primarily takes place during the early spring months from March until May.

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The Delta, the most upstream section of the Estuary, is a thousand-square-mile triangle of diked and rained swampland. Only the barest shreds of once-extensive tule marshes remain, now narrowly fringing sloughs and channels that wind between flat, levee-rimmed farmlands, the Delta "islands." In its natural state, the Delta pointed its hydraulic arrowhead westward from the Central Valley, gathering in waters from the Sacramento River, the San Joaquin River, and the smaller Mokelumne and Cosumnes rivers and shooting them downstream into San Francisco Bay. [Read More...](#)

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Elevation: 13 | San Joaquin R | US-98

TURBIDITY	Station Sensors
Current: 6.50	RIV STD graph
A	VELOCITY graph
	TEMP IV graph
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	SL COND graph
	FLOW graph

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HEALTHY WATERWAYS

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ARTICLE VIEWER MAP RELATED / RESULTS SHARE

Native Fish. The Delta Smelt:

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The Estuary's watershed covers about 60,000 square miles, or about 40 percent of California. Roughly half of California's surface water supply falls as rain or snow within this region, and about half of that is diverted for use by farms, factories or households. The remainder is allowed to flow downstream through what, despite major depletions, is still the largest estuary in western North America and a biological resource of tremendous importance—providing critical winter feeding for over a million migratory birds, a productive nursery for juvenile fish and crabs, and a full-time home for many other organisms.

The Delta, the most upstream section of the Estuary, is a thousand-square-mile triangle of diked and drained swampland. Only the barest shreds of once-extensive tule marshes remain, now narrowly fringing sloughs and channels that wind between flat, levee-rimmed farmlands, the Delta "islands." In its natural state, the Delta pointed its hydraulic arrowhead westward from the Central Valley, gathering in waters from the Sacramento River, the San Joaquin River, and the smaller Mokelumne and Cosumnes rivers and shooting them downstream into San Francisco Bay.

Today, however, the Delta serves as the central valve for the world's largest plumbing system, shunting water from northern California rivers to the state's biggest water users in the south. The plumbing includes an array of dams, reservoirs, channels and aqueducts that extends through nearly the entire state. On a precisely timed schedule, water released from northern reservoirs flows down the Sacramento Valley and into the northern Delta while immense pumps suck water from the Delta's southern end. At thousands of cubic feet per second, the water pours into concrete-lined canals leading to San Joaquin Valley farmers and to cities from the southern Bay Area to southern California. Two other systems divert water from Sierra Nevada rivers and pipe it westward past the Delta and into the Bay Area.

San Francisco Bay, the downstream portion of the Estuary, is made up of four smaller bays or basins. Suisun Bay and the diked wetlands of Suisun Marsh form the least salty of these, immediately downstream from the Delta. Saltier San Pablo Bay is next in line, west of Carquinez Strait. The saltiest basins are the Central Bay, which connects with the ocean through the Golden Gate, and the South Bay, a large shallow lobe extending off the Central Bay. Scientists define an estuary as a partially enclosed body of water where fresh river water meets and mixes with the salty ocean. In the San Francisco Estuary the mixing zone, where fresh and salt water meet, can move tens of miles upstream and down as river flows fall and rise. The Great Flood of 1862, which temporarily turned the Central Valley and much of the Bay into a chain of freshwater lakes, pushed the mixing zone out beyond the Golden Gate for several weeks and freshened the ocean's surface 40 miles from shore. At the opposite extreme, during the dry summer and fall of 1931 the mixing zone moved inland, salting the water as far upstream as Courtland on the Sacramento River and Stockton on the San Joaquin.

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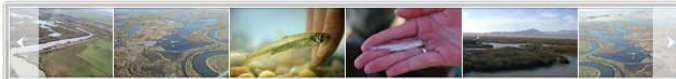
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MIDDLE RIVER AT UNION POINT (MUP)
Elevation: 18 | SAN JOAQUIN R | CA Dept of Water Resources/NCRO

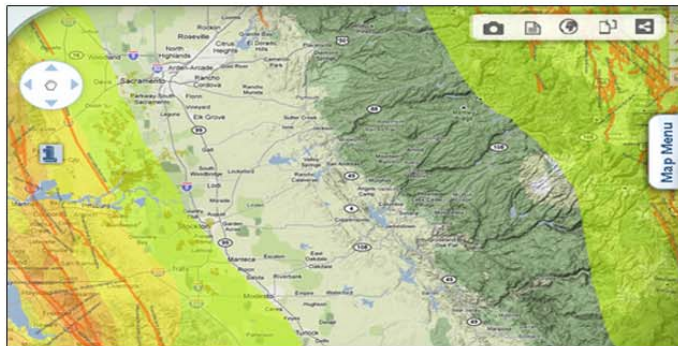
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Delta Atlas: California Geology and Fault Zones: The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive February 9, 1971 Mw 6.6 San Fernando earthquake. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.

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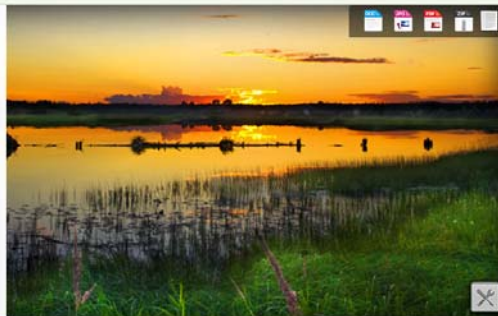


GREEN/BLACK COLOR

Native Fish. The Delta Smelt:

Delta smelt, *Hypomesus transpacificus*, are an endangered slender-bodied smelt, about 5 to 7 cm (2.0 to 2.8 in) long, of the Osmeridae family. Endemic to the upper Sacramento-San Joaquin estuary of California, they largely inhabit the freshwater-saltwater mixing zone of the estuary, except during their spawning season, which primarily takes place during the early spring months from March until May.

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What is an estuary?

An estuary is a partially enclosed body of water along the coast where freshwater from rivers and streams meet and mix with salt water from the ocean. Estuaries and the lands surrounding them are places of transition from land to sea, and although influenced by the tides, they are protected from the full force of ocean waves, winds, and storms by such landforms as barrier islands or peninsulas.

Estuaries are often known as bays, lagoons, harbors, inlets, or sounds, (note though that not all water bodies by those names are necessarily estuaries; the defining feature of an estuary is the mixing of fresh and salt water, not the name.) Some familiar examples of estuaries include San Francisco Bay, Puget Sound, Chesapeake Bay, and the New York/New Jersey Harbor.

Estuarine environments are among the most productive on earth, creating more organic matter each year than comparably sized areas of forest, grassland, or agricultural land. The tidal, sheltered waters of estuaries also support unique communities of plants and animals, specially adapted for life at the margin of

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UMARP Monitoring Framework

Sam Lorenz

Rock star Scientist Forges New Monitoring Framework Path.

The goal of the assessment activities that might stem from the framework would be to address "Grand Challenges" for monitoring/assessments in the Bay Delta. Three of the Grand Challenges are:

- To understand how the ecosystem is changing in response to changes in infrastructure and water management designed to improve water supply reliability;
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- To understand how the ecosystem is changing in response to variability and unidirectional changes in natural processes (driven by climate change or ocean processes, for example).

Scorecard

SUMMARY STATION DATA GRAPH

SAN JOAQUIN RIVER AT GARWOOD BRIDGE 59C
Elevation: 13 | San Joaquin R | USGS

TURBIDITY	Station Sensors
Current: 6.50	RIV STD graph
A	VELOCITY graph
	TEMP W graph
	TURB W graph
	CHLOROPH graph
	SL COND graph
	FLOW graph

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Learning from our friends down under:
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<http://www.healthwaterways.org/ehmp/home.aspx>

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What Is The San Francisco Estuary?

San Francisco Bay is a shallow, productive estuary through which water drains from approximately forty percent of California, flowing in the Sacramento and San Joaquin rivers from the Sierra Nevada mountains, enters the Pacific Ocean. Specifically, both rivers flow into Suisun Bay, which flows through the Carquinez Strait to meet with the Napa River at the entrance to San Pablo Bay, which connects at its south end to San Francisco Bay. However, the entire group of interconnected bays is often referred to as the "San Francisco Bay."

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Scorecard

SUMMARY STATION DATA GRAPH

SAN JOAQUIN RIVER AT GARWOOD BRIDGE (SJG)
Elevation: 12 | San Joaquin R | USGS

TURBIDITY

Current: **6.50**

Station Sensors	Value	Unit	Status
WV 2102			good
VELOCITY			good
TEMP 10			good
TURB 10			good
CHLOROPHYL			good
BLU CONG			good
FLOW			good

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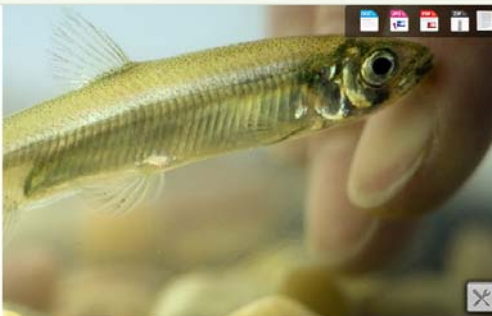
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What is The Status of Sf Estuary Health?

Despite its urban and industrial character, San Francisco Bay and the Sacramento-San Joaquin Delta remain perhaps California's most important ecological habitats. California's Dungeness crab, California halibut, and Pacific salmon fisheries rely on the bay as a nursery. The few remaining salt marshes now represent most of California's remaining salt marsh, supporting a number of endangered species and providing key ecosystem services such as filtering pollutants and sediments from the rivers. San Francisco Bay is recognized for protection by the California Bays and Estuaries Policy. [More info](#)



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Scorecard

SAN JOAQUIN RIVER AT GARWOOD BRIDGE (SJG)
Elevation: 12 | San Joaquin R | USGS

Turbidity 6.50

Station Sensors	Value	Unit	Status
WV 210			good
VELOCITY			good
TEMP W			good
TURB W			good
CHLOROPHYLL			good
BILCOG2			good
FLOW			good

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