California Estuary Portal Design Presentation
July 6, 2011

Presented By: 34 North
OpenNRM CMS

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

Regional Estuary Portal Templates
Sacramento Bay Delta
- Los Angeles
- San Diego
- Santa Ynez

State of California
- Estuarine Health Summary Templates
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
Possible Uses: Information Libraries
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
Possible Uses: CEDEN Analysis
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What is the Status of SF Estuary Health?

Despite its urban and industrial character, San Francisco Bay and its tributaries are one of California’s most important ecological habitats. California’s largest estuary, San Francisco Bay, is a vital link in the Pacific Rim, providing habitats for marine species and supporting a variety of important species, including many that are endangered or threatened.

What is an estuary?

An estuary is a partially enclosed body of water along the coast where freshwater from rivers and streams mixes with saltwater from the ocean. California's estuaries, including the San Francisco Bay, are home to a diverse array of plants and animals. Estuaries are critical for the health of the ocean and the coast, providing a vital link between land and sea.

What is UMARP Monitoring Framework?

The UMARP Monitoring Framework is a comprehensive monitoring program that helps to address the challenges of managing and protecting the San Francisco Bay. The framework includes a variety of monitoring methods, including water quality, sediment, and biological monitoring.

Healthy Waterways

Healthy Waterways is a program that helps to monitor the health of San Francisco Bay. The program includes a variety of monitoring methods, including water quality, sediment, and biological monitoring.

Partnerships

The California Estuary Journal is supported by a network of partners, including government agencies, non-profit organizations, and individual scientists. These partnerships help to support the Journal’s efforts to monitor and protect the health of San Francisco Bay.
Native Fish.
The Delta Smelt:

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What is The San Francisco Estuary?

The Estuary's watershed covers about 40,000 square miles, or about 40 percent of California. Roughly half of Californians get their surface water supply from rivers or streams 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 wetlands, despite major depletion, to still the largest estuary in North America and a biologically important ecosystem. Fostering critical winter feeding for over a million migratory birds, a productive nursery for juvenile fish and crabs, and a turning home for many other organisms.

The Delta, the most upriver section of the Estuary, is a thousand-square-mile triangle of delta and drained swamps. Only the broad streets of once-extensive farmland remain, now narrowly fringed by sloughs and channels that wind between the levees and rivers. The Delta "islands" in its natural state, the Delta's principal freshwater flows enter from the Central Valley, gathering waters from the Sacramento River, the San Joaquin River, and the smaller Mokelumne and Cosumnes rivers and spreading them downstream into San Francisco Bay.

Today, however, the Delta serves as the central valve for the world's largest pumping system, shutting water from northern California rivers to the Delta's biggest water users in the south. The planting includes an array of dairy, reservoirs, canals and aqueducts that extends through nearly the entire state. On a precise daily schedule, water released from northern reservoirs flows down the Sacramento Valley and into the northern Delta while large pumps suck water from the Delta's southern end. All thousands of cubic feet per second, the water pours into concentrated canals leading to San Joaquin Valley farmers and cities from the southern Bay Area to southern California. Two other systems divert water from Sierra Nevada rivers and send it westward across 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: San Francisco Bay; and the diabolo-shaped Suisun Marsh from the least salty of these, immediately downstream from the Delta. Suisun Slough, San Pablo Bay, is next in size, followed by Carquinez Strait. The smallest section is the Carquinez Strait, which connects with the ocean through the Golden Gate, and the San Francisco Bay, a large shallow lagoon extending off the Central Bay. Scientists define an estuary as a partially enclosed body of water with a freshwater source and exits within the salty ocean. In the San Francisco Estuary the mixing zone, where fresh and salt water meet, constitutes a third of the estuary's surface area. The Great Flood of 1982, which happened only twice in the Central Valley and much of the Bay Area in a chain of freshwater lakes, pushed the mixing zones out beyond the Golden Gate for several weeks and reshaped the estuary's surface 40 miles from shore. At the opposite extreme, during the dry summer and fall of 1991 the mixing zones moved inland, shifting the water's far upstream as Courtland on the Sacramento River and Stockton on the San Joaquin.
Delta Allis: 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.
GREEN/BLACK COLOR
Native Fish. The Delta Smelt.
Delta smelt (Hypomesus transpacificus), an endangered[] species, is a saltwater fish found in the San Joaquin River and the Sacramento Delta. It is a small, silvery fish, about 4 to 6 inches long. The Delta smelt is an important part of the Delta's ecosystem, providing food for many larger species. However, its population has declined significantly due to habitat loss, pollution, and overfishing. In recent years, efforts have been made to protect and restore the Delta smelt, including the establishment of hatcheries and the implementation of strict management plans. The future of the Delta smelt remains uncertain, but ongoing conservation efforts hold promise for its survival.

What is an estuary?
An estuary is a body of water where freshwater from the land and seawater from the ocean mix. Estuaries are found where rivers flow into the ocean. They are important ecologically because they provide a habitat for a variety of plants and animals. Estuaries are also important economically because they support commercial and recreational fishing.

UMARP Monitoring Framework
Rock star Scientist Forges New Monitoring Framework Path.
The goal of the coordinated conservation effort is to address the need for comprehensive monitoring of the Delta ecosystem. The UMARP (Unified Monitoring and Reporting Program) is an important component of this effort. It provides a framework for monitoring the health of the Delta ecosystem and for evaluating the effectiveness of conservation actions.

Healthy Waterways
Learning from Our Variations
Healthy Waterways is a program of the Bay Delta Conservation Plan (BDP), which is one of the most comprehensive and far-reaching efforts to restore and protect the Bay-Delta ecosystem. Healthy Waterways aims to improve the health of the Delta ecosystem by identifying and addressing the factors that contribute to its degradation. The program includes a range of activities, such as research, monitoring, and stakeholder engagement, and is designed to help achieve the goals of the BDP.

Partnerships

[Image: Various logos and names of organizations associated with the Bay Delta Conservation Plan and related initiatives]

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