Sacramento-San Joaquin River Delta

Background
The Sacramento-San Joaquin River Delta (Delta) is the hub of California's water supply system. The Delta supplies a portion of the drinking water for 24 million Californians and water for more than 1,800 agricultural users, who produce half the nation's fruits and vegetables. The Delta is also important habitat for fish, wildlife, and waterfowl, including several threatened and endangered fish species. Concerns about the decline of Delta fisheries, levee instability, increasing urbanization and risks posed by climate change and earthquakes, combined with endangered species litigation related to water project operations, led State policy makers to initiate new processes to "fix the Delta". With the change in federal administration, the State hopes to increase engagement with the federal government.

The Delta is formed by the confluence of the state's two largest rivers: the Sacramento flowing south from its headwaters near Mt. Shasta and the San Joaquin flowing north from its origins high in the southern Sierra Nevada. The 1100 square mile Delta is a web of 60 reclaimed islands and approximately 700 miles of waterways. The Bay-Delta watershed drains nearly 50% of the state's runoff and supports 80% of California's commercial salmon fishery. Pumps operated by the State and federal government divert 20 to 70% of natural flow to the Central Valley and Southern California. Water that is not diverted locally flows through San Francisco Bay to the Pacific Ocean.

EPA activities
CalFed and Delta Vision: EPA has long been involved in many efforts to protect and restore San Francisco Bay- Delta water quality. One of the more ambitious was the CALFED Bay Delta Program, a state-federal partnership initiated in 1995 (following the Bay Delta Accord and EPA's promulgation of Delta water quality standard) to address water management and ecosystem protection in the entire watershed. Having come to the end of its first phase (2000-2007) of a 30-year program and having spent over $3 billion, CALFED lost much of its legislative and public support in the face of the Delta's ecosystem decline. In response, in 2006, the Governor commissioned a blue-ribbon panel which recently delivered a "Delta Vision Strategic Plan", containing many of the same recommendations as the CALFED Program, including a recommendation to pursue a water conveyance facility around the Delta (i.e., peripheral canal). As Delta Vision was a State-led effort, EPA's contribution was limited to presenting scientific findings to the panel related to the Delta fisheries decline.

Bay Delta Conservation Plan: As the Delta Vision process was underway, major water districts dependent on the Delta began a Habitat Conservation Planning effort (the Bay Delta Conservation Plan, or BDCP) with the California Department of Fish and Game, US DOI (FWS and BOR) and NOAA Fisheries to address endangered species concerns. The BDCP aims to make sufficiently large changes in the Delta to reverse the decades of decline of several beneficial uses and add stability to water operations in the delta. The State and Federal agencies are preparing a DEIR/S on the BDCP; EPA has agreed to be a cooperating agency. Our involvement to date has been largely to promote and support scientific review of the various actions proposed. We will become more involved as the EIS is drafted and projects are designed (which will need CWA 404 permits).

Pelagic Organism Decline: Long-term sampling identified a dramatic decline of a number of fish populations beginning in 2001, including both endangered species and sport fisheries. EPA played a key role, working with the Interagency Ecological Program, in a new and broad scientific effort to identify causes of the crash. The POD investigation is in its 4th year and has been supported by over $20 million in State and federal monies. A number of water quality and habitat degradation concerns have been identified that are now being addressed by the State and Regional Boards. Ammonia discharges from wastewater treatment plants combined with low and constant flow regimes appear to have favored the spread of toxic blue-green alga, invasive clams and jellyfish over the former highly-valued fish community.

Water Quality Standards and TMDLs: We are supporting the State and Regional Board on a number of activities to review and/or develop new water quality standards and to develop and implement TMDLs. In 2008, the State Water Resources Control Board and the Central Valley and Bay Regional Water Quality Control Boards developed a Bay Delta Strategic Workplan which encompasses their ongoing efforts, as well as new work deemed necessary to address the Delta ecosystem decline. Some of the more significant efforts include: (1) Review of the 2006 Water Quality Control Plan; (2) Development of a Central Valley Drinking Water Policy; (3) TMDLs to address impairments in the Delta from mercury, in the Central Valley from pesticides, in the San Joaquin River from dissolved oxygen and salinity; and (4) implementation of TMDLs throughout the watershed.

Monitoring: There currently is no coordinated system for collecting and managing water quality data for the Delta and the Central Valley. EPA has been an advocate for a system similar to those in the Bay and on the South Coast in order to improve the quality, efficiency, access and use of information for planning and management. There are three monitoring initiatives that together cover the full Bay-Delta watershed: the Delta Regional Monitoring Program (directed by the Central Valley Regional Board); the Sacramento River Watershed RMP, initiated a decade ago through EPA earmarks; and the San Joaquin Basin Monitoring Strategy (underway through an EPA grant, in conjunction with the Regional Board). Technical coordination comes through shared support of the State's Surface Water Ambient Monitoring Program. All three efforts have inventoried existing monitoring and are aligning monitoring and assessment within the Delta watershed to address key issues.

San Joaquin River Restoration: Congress recently enacted significant legislation that directs restoration of the San Joaquin River from Friant Dam to the confluence of the Merced River, to implement the historic agreement reached by water users and environmental groups in 2006. Restoration of such magnitude will have ramifications for Delta water management. The Bureau of Reclamation is preparing a DEIS for this program and we are participating as a cooperating agency, working to both leverage the effort for improved water quality monitoring as well as ensure the downstream water quality regulatory regime supports the planned reintroduction of fisheries.

Upcoming issues

EPA will play some role in several key decisions that are under consideration by various state and federal agencies, as well as members of the State legislature and Congress:

- In the near-term, what additional regulatory requirements under ESA and the CWA are needed to reverse the decline of pelagic and salmonid species?

- In the long-term, how much water is conveyed from north to south through the Delta vs. through a new conveyance facility around the Delta. How should this new facility be designed and operated in light of predictions for sea level rise?

- Given the changing weather and Sierra runoff patterns, what new storage is needed, where, how ought it be operated and who ought to pay for it?

- Given concerns regarding impacts within the Delta and upstream of poor San Joaquin River water quality, can CWA tools, such as TMDLs, be used in coordination with the San Joaquin River Restoration Program to make San Joaquin River flows and water quality benefit the Delta?

- Should urban development continue to be permitted below sea level around the Delta, given the state of the levee system and the risk of flooding, as well as the future rise in sea level?

- California is contemplating options for improved governance of the Delta water management system. The long-term role of the federal government overall and EPA in particular with respect to any new governance scheme is uncertain.

Key Message
EPA has a long history in efforts to protect and restore Delta water quality. We will continue to work cooperatively with our agency partners and stakeholders to restore the critical Bay-Delta ecosystem while recognizing the competing needs of all stakeholders. In the next year, our activities will focus on supporting the efforts of the State and Regional Boards. We will also be a participant and a reviewer on several major NEPA documents. In all forums, we will continue to work with the fishery agencies to ensure an integrated approach (CWA and ESA) to water quality restoration.

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