



South Delta **IMPROVEMENTS PROGRAM**



▶▶▶ The California Department of Water Resources

Project Overview



The South Delta Improvements Program is a series of proposed actions that improve water quality and protect salmon in the southern part of the Sacramento-San Joaquin Delta while allowing the State Water Project to operate more effectively to meet California's existing and future water needs.

As California's population and economy grow, so does the need for responsible water management policies that improve water quality, increase water supply, allow our water systems to operate efficiently, and promote good stewardship of our natural resources.

To help meet these challenges, the Department of Water Resources (DWR) and the United States Bureau of Reclamation (Reclamation) work together to improve the water quality and supplies for the southern part of the Sacramento-San Joaquin Delta, protect fish and wildlife, and enhance water deliveries for the State Water Project (SWP) and the Central Valley Project (CVP). In 2000, these efforts were incorporated into the CALFED Bay/Delta Program Plan, a state and federal multi-agency framework to improve water management for beneficial uses of the Bay-Delta system.

Consistent with the CALFED Plan and the overall goals of improved water management of the Bay-Delta system, DWR and Reclamation have now prepared a draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to implement the South Delta Improvements Program (SDIP). The SDIP is a series of proposed actions to improve water quality and protect salmon in the South Delta while allowing the SWP to operate more effectively. The proposed plan includes physical/structural improvements as well as operational changes. Together, these two components of the SDIP represent a balanced approach to meeting California's water needs.

Physical/Structural Component:

- Replace four seasonal rock barriers with permanent operable gates on Old River, Grantline Canal, Middle River and on Old River where it leaves the San Joaquin River. This will protect salmon and improve water levels and quality in the South Delta.
- Conduct limited dredging of Middle River and Old River and modify up to 24 local agricultural diversions. This will improve flows in Delta channels, provide better access to irrigation water, and limit the use of the operable gates at times that could harm fish.

Operational Component:

- Increase the maximum diversion limit at existing SWP facilities in the South Delta to provide more water for communities, businesses and agricultural users south of the Delta when it is environmentally sound to do so.



Looking south on Old River east of Coney Island.

Extensive Public Involvement and Review Process

In recent years, DWR has worked with a broad coalition of stakeholders to discuss project proposals for the SDIP. This extensive public participation effort, combined with a rigorous screening and selection process, led to the development of several project alternatives that are included in the draft EIS/EIR. The proposals reflect the continuing commitment of DWR and Reclamation to manage water project operations in a way that is beneficial to Delta water users, residents, and exporters, while protecting the flows and water quality needed to protect the Bay-Delta's valuable ecosystem.

The release of the draft EIS/EIR continues the public discussion of the SDIP in order to build a consensus on improved water management in the South Delta. Public meetings and hearings will be held in several locations throughout California to give people an opportunity to learn more about the proposed project and provide comments on the plan.

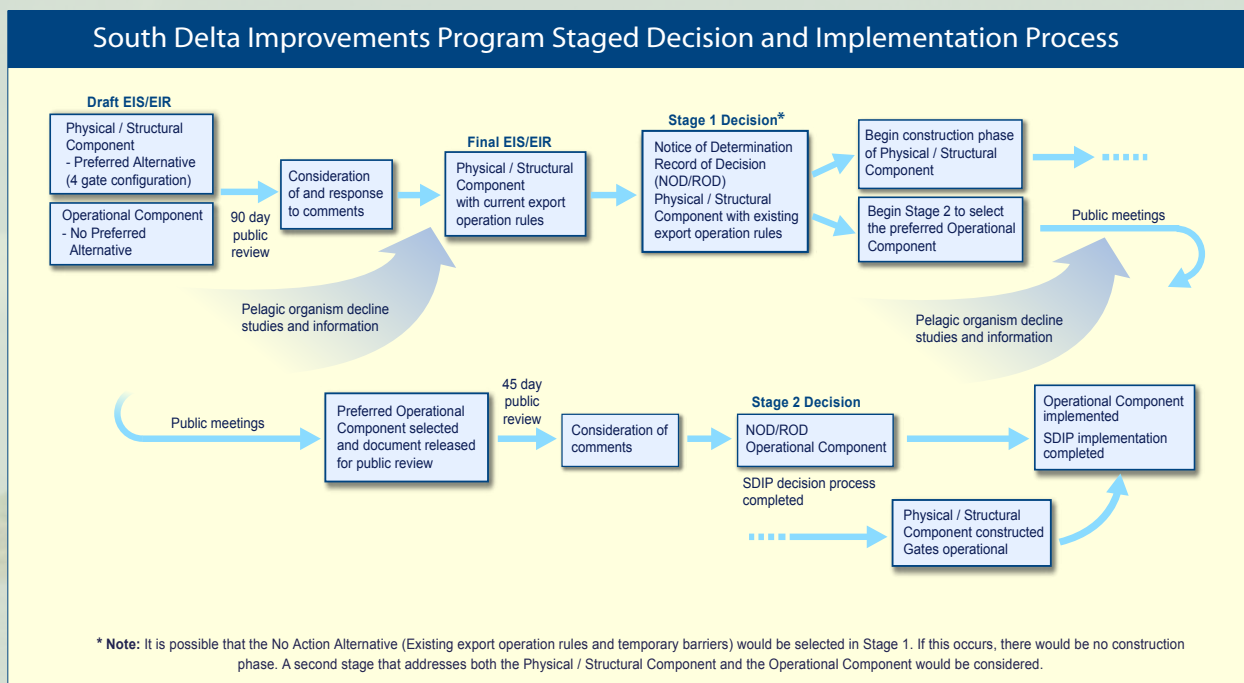
The SDIP has a two-stage decision-making process.

Stage 1 addresses the physical/structural improvements proposed in the SDIP. This includes the new operable gates, dredging and agricultural modifications.

After the 90-day public comment period, DWR and Reclamation will prepare a final EIS/EIR that responds to public and agency comments. At the end of Stage 1, a decision document (Notice of Determination/Record of Decision) will be issued for the physical/structural component.

Stage 2 addresses the proposed operational component to increase water deliveries south of the Delta, and begins after the Stage 1 decision is made. During Stage 2, new information about conditions that are impacting fish populations in the Delta may become available, and will be incorporated into the Stage 2 decision process. As Stage 2 nears completion, a supplemental document, consistent with environmental law, will be prepared and circulated for at least 45 days to provide an opportunity for the public to review and comment on the environmental analysis of the operational component. A second Notice of Determination/Record of Decision, which addresses the preferred operational component of the SDIP, will be issued to complete Stage 2.

Throughout the environmental review process, DWR will provide regular updates to the Delta Protection Commission and the Bay-Delta Authority.



The Proposed Project

The Sacramento-San Joaquin Delta is the largest estuary on the West Coast. It consists of many river tributaries, sloughs and islands that support more than 750 plant and animal species. The Bay-Delta watershed supplies drinking water for two-thirds of all Californians. It also provides irrigation for more than 738,000 acres of Delta farmland and seven million acres of agriculture in other parts of the state. Careful management of the Bay-Delta water system is critical to California's economy and environment.

The SDIP responds to important water management and environmental needs in the Delta:

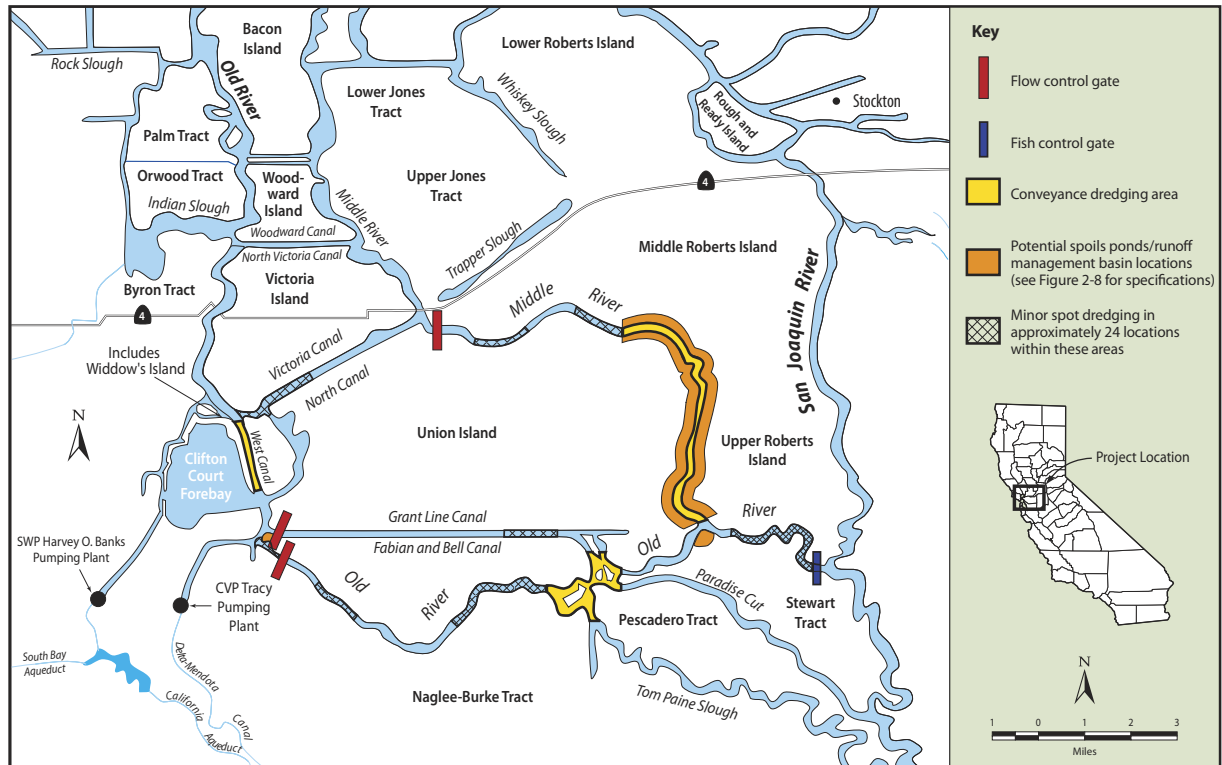
- Natural flow splits in the San Joaquin River direct about half the flow into Old River. The operation of the SWP and CVP facilities in the South Delta can change flow patterns in local channels. These factors can cause fall/late-fall Chinook salmon migrating down the San Joaquin River to move

into the south Delta, where they are threatened by predators and exposed to agricultural diversions and pumping facilities.

- South Delta water users downstream of the head of Old River are affected by water quality and water levels at each intake location. Water levels are influenced by many factors, including SWP and CVP diversions in the South Delta. In addition, there are opportunities to improve circulation and, as a result, water quality in the South Delta.
- Water supply needs are growing south of the Delta for agricultural, residential, industrial and environmental uses.

The SDIP addresses these challenges and will help meet California's diverse water needs by responding to the changing conditions in the Bay-Delta, and by providing a framework to address environmental, water supply and water quality issues.

Preferred Physical/Structural Component



Environmental Actions and Water Quality

Since the inception of CALFED, the Ecosystem Restoration Program has played a vital role in protecting threatened and endangered species of Delta fish.

California has invested over \$512 million for more than 400 ecosystem restoration efforts. More than 100,000 acres of Delta habitat have been protected or restored.

Since 2001, through the Environmental Water Account (EWA), CALFED agencies have worked to protect fish and reduce conflicts at Delta pumping facilities. Under the EWA, water is purchased from willing sellers or surplus water is diverted when safe for fish. Then it is banked, stored, transferred and released as needed to protect fish and compensate water users.

The proposed SDIP is designed to build on these efforts and respond to changes in Delta environmental conditions and fish populations. The proposal includes an additional \$24 million to protect and restore Delta fish habitat, wildlife habitat, and to study the effectiveness of mitigation measures for the protected animals.

To mitigate for the potential effects on fish from the increased water diversions, an “avoidance and crediting system” is proposed to augment the current EWA. This system would be in effect until an expanded EWA is in place, or until improvements to SWP and CVP fish salvaging facilities and procedures are found to provide alternative cost-effective mitigation.

In addition to providing more reliable supplies of water and protecting salmon in the San Joaquin River, the SDIP will result in measurable water quality benefits. The preferred physical/structural component to install four new permanent operable gates results in a significant improvement in salinity levels in South Delta channels. Dissolved oxygen levels in the San Joaquin Deep Water Ship Channel will also improve during the summer months as a result of operating the gate at the head of Old River to reduce San Joaquin flow into the South Delta.

Decreases in water quality for Delta municipal water deliveries will be offset by projects already underway to modify agricultural drainage conditions near Veale and Byron Tracts. In addition, DWR and Reclamation will work with water agencies to identify and implement additional actions that may be needed to provide for the continuous improvement in water quality called for in CALFED.



SDIP includes specific measures to protect San Joaquin River Salmon.

Response to Changes in Delta Fish Populations

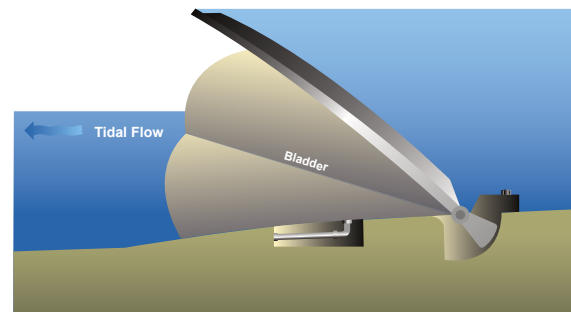
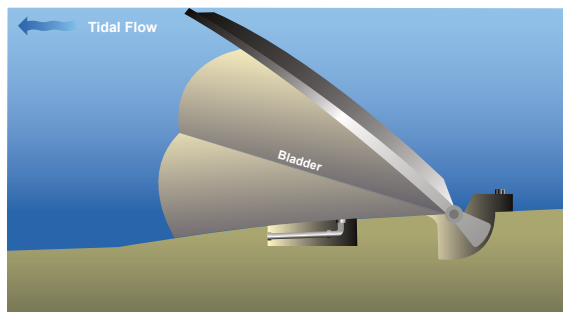
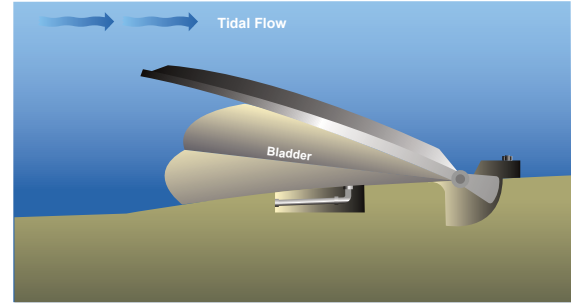
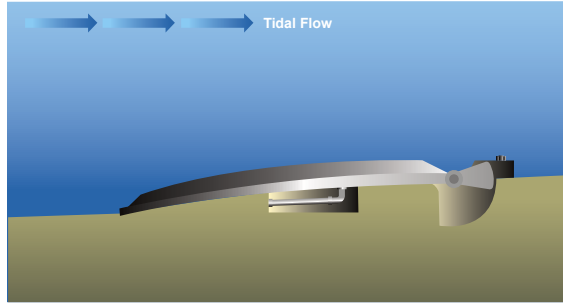
During the past three years, there have been significant and unexpected declines in the fish populations of several pelagic (open-water) fish species in the Bay-Delta region. In cooperation with scientists from across the country, the Interagency Ecological Program (IEP), an estuary monitoring and research program comprised of federal and state agencies, has responded with an aggressive program of focused research and sampling to help determine the causes of declining fish populations.

State and federal agencies have redirected staff, and DWR and Reclamation have provided increased funding to the IEP’s current efforts to aggressively and fully evaluate whether pesticides, invasive species, food sources, and/or changes in state and federal water project operations may be contributing to this serious situation.

Initial information is being developed, but final answers as to the cause or causes for the decline in fish populations may take several years to fully assess. In the interim, programs to implement aspects of the CALFED Program will proceed cautiously and adapt to the critical factors affecting biological resources in the Bay-Delta estuary.

Physical/Structural Improvements

Permanent operable gate



Bottom hinged lift gates will maintain water levels and improve water quality in the South Delta.

Physical/Structural Component Proposed in the SDIP

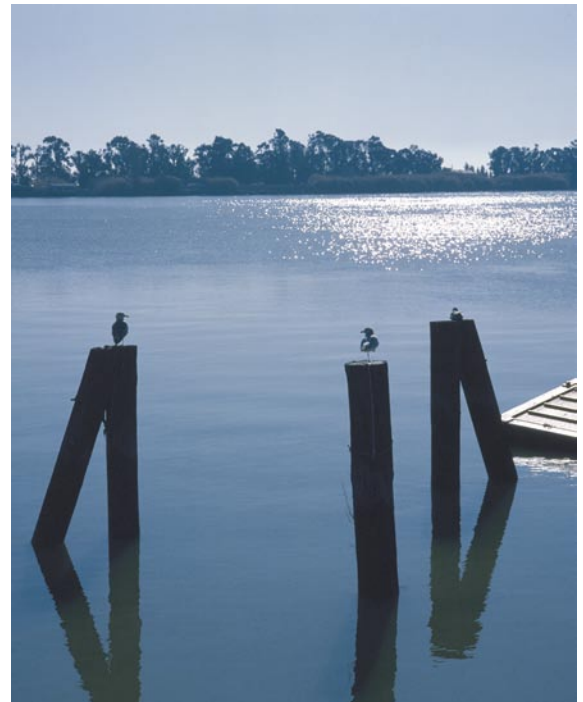
Preferred Alternative: Replace Temporary Rock Barriers with Four Permanent Operable Gates

The South Delta Temporary Barriers Project began in 1991 as an effort to improve water levels, circulation patterns and fish protection in the South Delta. The Head of Old River barrier protects salmon in the San Joaquin River during the spring and fall. Three other temporary rock barriers in the South Delta are used to improve conditions for local agriculture. Currently, hundreds of tons of rock are dumped into these four channels for a part of the year and then removed for the remainder of the year.

The draft EIS/EIR for the SDIP proposes replacing the temporary rock barriers with four permanent operable gates as a more efficient and effective way to protect migrating salmon and meets water needs for local agriculture.

The gates will be operated with tides to capture flow and improve circulation for agricultural water supplies. The gates can be raised and lowered as needed for fish passage and improved water levels and quality. Since they are permanently installed on the

bottom of the channels, the gates can be in place and operable, when San Joaquin River flows are high. The temporary barriers can not be installed under high-flow conditions.



San Joaquin River

Operational Improvements

Operational Component Proposed in the SDIP

No Preferred Alternative at this Time

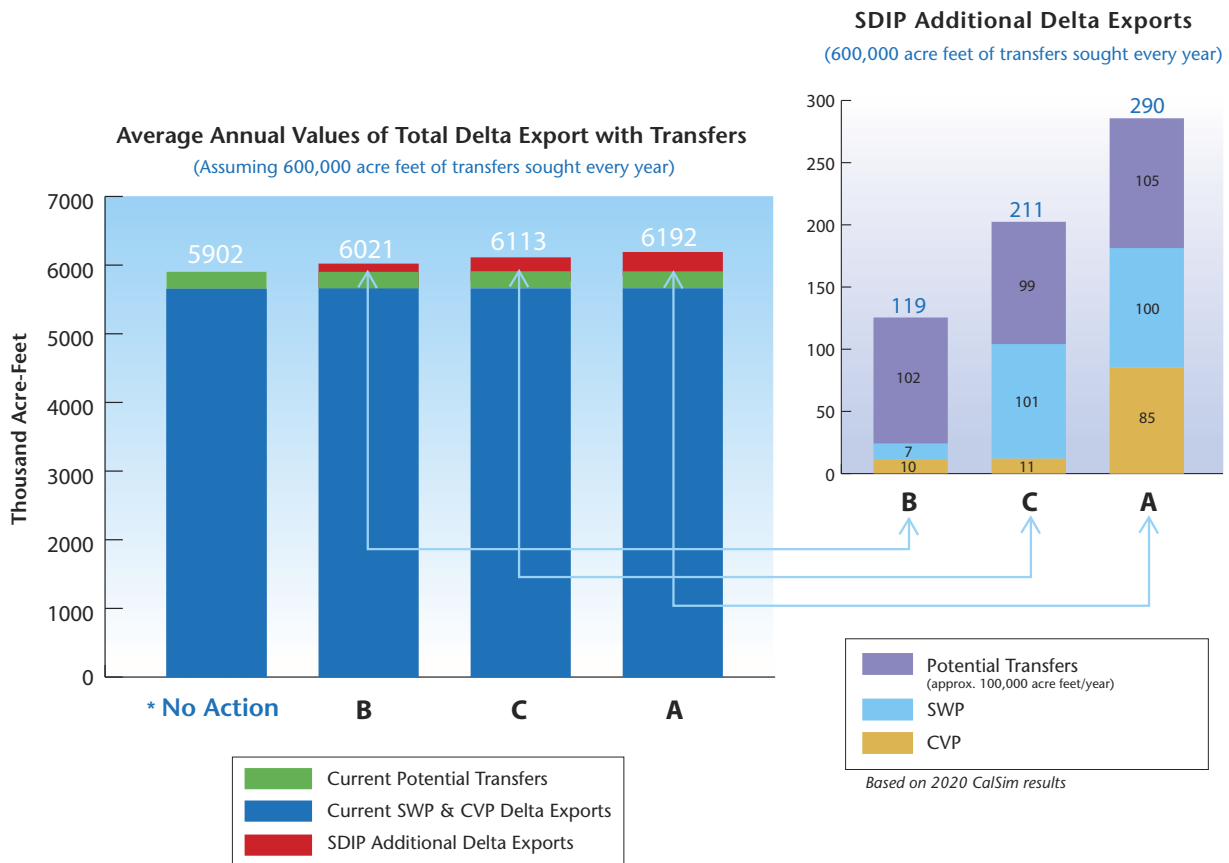
Although a goal of the SDIP is to increase water supplies south of the Delta, the draft EIS/EIR does not recommend a preferred operational alternative for the proposed change in the permitted diversion limit for the SWP. Because of the high level of public interest in this issue and the complexities involved in managing Delta water, the preferred operational component will be determined only after thorough public participation in which recommendations, ideas and comments on the draft EIS/EIR are received and fully considered.

To meet the needs of a growing population and dynamic economy, statewide water management systems must be improved to manage water supplies efficiently. The actions proposed in the SDIP would increase the permitted diversion limit for the SWP facilities in the South Delta from 6,680 cubic feet-per-second (cfs) to 8,500 cfs.

This proposed change does not require construction of any new facilities, but will define the conditions under which the existing diversion capacity can be used for more efficient and flexible project operations and increased deliveries.

While the total diversion capacity would appear to increase by 27 percent under the proposed changes, the three alternatives in the draft EIS/EIR would only increase the total water diverted for state and federal deliveries, environmental uses, and water transfers by about 3 percent to 5 percent. Even these increased exports would not be fully implemented until the permanent operable gates are constructed and operating, several years from now.

This increased capacity will be further restricted to those times when conditions allow increased diversions without adversely affecting local water users or the environment.



* No Action allows an average annual transfer of 250,000 acre feet/year.

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Contact Information:

Copies of the draft EIS/EIR for the SDIP and additional information about the project is available at:

<http://sdip.water.ca.gov/>

or by contacting:

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