South Delta IMPROVEMENTS PROGRAM

EIS/EIR

Volume I
Environmental Impact Statement/ Environmental Impact Report

Draft

The California Department of Water Resources
U.S. Department of the Interior, Bureau of Reclamation

Draft Environmental Impact Statement/Environmental Impact Report
South Delta Improvements Program

Prepared by the Bureau of Reclamation for the U.S. Department of the Interior and the Department of Water Resources for the State of California Resources Agency

This Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is prepared in compliance with the National Environmental Policy Act (NEPA) and the U.S. Bureau of Reclamation (Reclamation) policy and procedures for implementing NEPA. Additionally, this EIS/EIR is prepared in compliance with the California Environmental Quality Act (CEQA) and Guidelines.

Reclamation and the Department of Water Resources (DWR) are evaluating the impacts of implementing the South Delta Improvements Program (SDIP). The general purposes of the SDIP were identified by the Agencies, as follows:

(a) reduce the movement of San Joaquin River watershed Central Valley fall-/late fall–run Chinook salmon into the south Delta via Old River;

(b) maintain adequate water levels and, through improved circulation, water quality available for agricultural diversions in the south Delta, downstream of the head of Old River; and

(c) increase water deliveries and delivery reliability for State Water Project (SWP) and Central Valley Project (CVP) water contractors south of the Delta and provide opportunities to convey water for fish and wildlife refuge purposes by increasing the maximum permitted level of diversion through the existing intake gates at Clifton Court Forebay from 6,680 to 8,500 cubic feet per second.

This Draft EIS/EIR documents the assessment of a long-term comprehensive plan to improve water management for beneficial uses and coordination between state and federal water projects. The Draft EIS/EIR focuses on site specific and system-wide impacts of implementing actions that will improve water deliveries for south Delta agriculture, improve fish protection, and increase the amount and reliability of water deliveries for the SWP and CVP. The impact assessment focuses on benefits and impacts to hydrology, water quality, fish resources, recreation, vegetation and wildlife, visual resources, cultural resources, land use, geology, soils, seismicity, groundwater, traffic and circulation, air quality, noise, public health and safety, economics, and growth inducement. The Draft EIS/EIR also considers cumulative hydrologic and water service area impacts of reasonably foreseeable land and water resource actions.

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Draft

South Delta Improvements Program
Volume I: Environmental Impact Statement/ Environmental Impact Report

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Contents

Volume I **South Delta Improvements Program Environmental Impact Statement/Environmental Impact Report [Four Separate Volumes]**

Volume Ia **Executive Summary and Chapters 1–4**

Volume Ic **Chapter 6**

Volume Id **Chapters 7–13, Glossary, and Index**

Tables

Chapter 4 **Follows Page**

Section 5.1 **Follows Page**

Section 5.2 **On Page**

Section 5.3 **On Page**

Section 6.1 **Follows Page**

Section 6.2 **Follows Page**

Chapter 9		On Page

Chapter 10		On Page

Chapter 11		On Page

Figures

Section 5.3 **At End of Section**

Photographs

Acronyms and Abbreviations

µg/l	micrograms per liter
µS/cm	microSiemens per centimeter
1978 Delta Plan	Water Quality Control Plan for the Sacramento–San Joaquin Delta and Suisun Marsh
1991 Delta Plan	1991 Delta Water Quality Control Plan for Salinity, Temperature and Dissolved Oxygen
ACE	Altamont Commuter Express
ACHP	Advisory Council on Historic Preservation
af	acre-feet
af/day	acre-feet per day
AFRP	Anadromous Fish Restoration Program
AG-40	Permanent Agricultural Intensive Land Use Zone, minimum parcel size 40 acres
AG-80	Permanent Agricultural Extensive Land Use Zone, minimum parcel size 80 acres
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
APE	area of potential effects
ASIP	Action Specific Implementation Plan
ASTM	American Society for Testing and Material
AU-20	Agriculture–Urban Reserve, minimum parcel size 20 acres
Authority	California Bay-Delta Authority
B.P.	years before present
BA	biological assessment
BAAQMD	Bay Area Air Quality Management District
BART	San Francisco Bay Area Rapid Transit District
Bay-Delta	San Francisco Bay/Sacramento–San Joaquin River Delta
Bay-Delta Estuary	San Francisco Bay/Sacramento–San Joaquin River Delta Estuary
BDAC	Bay-Delta Advisory Council
BDPAC	Bay-Delta Public Advisory Committee
BIA	Bureau of Indian Affairs
BMPs	best management practices
BNSF	Burlington Northern and Santa Fe Railway
BO	biological opinion
Br^-	bromide
Business Plan Act	Hazardous Materials Release Response Plans and Inventory Act
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standards

CALFED Ops Group	California-Federal Operations Group
CALFED Program	CALFED Bay-Delta Program
CALFED ROD	CALFED Programmatic Record of Decision
CALSIM	joint water supply planning model
CALSIM II	DWR and Reclamation joint planning model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	San Joaquin Area Transit
CBDA	California Bay-Delta Authority
CCC	Contra Costa Canal
CCF	Clifton Court Forebay
CCIC	Central California Information Center
CCMP	Comprehensive Conservation and Management Plan
CCR	California Code of Regulations
CCWA	Central Coast Water Authority
CCWD	Contra Costa Water District
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
Cl^-	chloride
cm	centimeters
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
COA	Coordinated Operations Agreement
Corps	U.S. Army Corps of Engineers
CPM	Certified Property Manager
CRHR	California Register of Historic Resources
CSUS	California State University, Sacramento
CUPA	Certified Unified Program Agency
CVP	Central Valley Project
CVP Tracy	CVP Tracy Pumping Plant
CVPIA	Central Valley Project Improvement Act
CVP-OCAP	CVP Operating and Criteria Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	federal Clean Water Act of 1977
cy	cubic yards
D-1485	State Water Resources Control Board Decision-1485
D-1630	Water Right Decision 1630
D-1641	State Water Resource Control Board Decision 1641
D-893	Water Right Decision 893
DAT	Data Assessment Team
dB	Decibel
dBA	A-Weighted Decibel

DBW	California Department of Boating and Waterways
DCC	Delta Cross Channel
DEFT	Diversion Effects on Fisheries Team
Delta	Sacramento–San Joaquin River Delta
DFG	California Department of Fish and Game
DIDI	Delta Island Drainage Investigations
DIP	Delta Improvements Package
DMC	Delta-Mendota Canal
DO	dissolved oxygen
DOC	dissolved organic carbon
DOI	U.S. Department of the Interior
DPC	Delta Protection Commission
DPR	California Department of Parks and Recreation
DPS	dredge placement sites
DRERIP	Delta Regional Ecosystem Restoration Implementation Plan
DSA	depletion study area
DSM2	Delta Simulation Model 2
DSM2	State of California Delta Simulation Model
DSOD	Department of Safety of Dams
DSRAM	Delta Smelt Risk Assessment Matrix
DWR	California Department of Water Resources
DWSC	Deep Water Ship Channel
E/I	export/inflow
EBMUD	East Bay Municipal Utility District
EC	electrical conductivity
EDR	Environmental Data Report
EIS/EIR	environmental impact statement/environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Ecosystem Restoration Program
ESA	federal Endangered Species Act
ESU	evolutionarily significant unit
EWA	Environmental Water Account
EWP	Environmental Water Program
feet msl	feet above mean sea level
feet/sec	feet per second
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FPMP	fugitive PM10 management plan
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRSA	Feather River Service Area
FRWP	Freeport Regional Water Project
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FWCA	Fish and Wildlife Coordination Act
g	force of gravity
GIS	geographic information systems

GPS	Global Positioning System
HCP	habitat conservation plan
HM	Habitat Management
Hp	horsepower
I-5	Interstate 5
IDHAMP	Interagency Delta Health Aspects Monitoring Program
IEP	Interagency Ecological Program
IESP	Interagency Ecological Study Program
in/sec	inches per second
Intertie	Delta-Mendota Canal and California Aqueduct Intertie
ISDP	Interim South Delta Program
ITAs	Indian Trust Assets
JPE	juvenile production estimate
JPOD	joint point of diversion
KCWA	Kern County Water Agency
kV	kilovolts
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
L_{min}	Minimum Sound Level
LOD	level of development
LOS	levels of service
LRMP	Land and Resource Management Plan
LTEWA	Long-Term EWA
L_{xx}	Percentile-Exceeded Sound Level
M&I	municipal and industrial
m/sec	meter per second
maf	million acre-feet
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MAs	Management Agencies
MBK	Murray, Burns & Kienlen
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
Metropolitan	The Metropolitan Water District of Southern California
mg/l	milligrams per liter
mgd	million gallons per day
MLLW	mean lower low water
MOU	memorandum of understanding
µS/cm	microSiemens per centimeter
µg/l	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
mph	miles per hour
mS/cm	milliSiemens per centimeter
MSA	Metropolitan Statistical Area
MSCS	Multi-Species Conservation Strategy

MSSCG	Montezuma Slough salinity control gates
MTC	Metropolitan Transportation Commission
MWQI	Municipal Water Quality Investigations Program
MWT	Fall Midwater Trawl survey
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAVD 88	North American Vertical Datum of 1988
NCCA	and Natural Communities Conservation Act
NCCP	Natural Community Conservation Plan
NCCPA	Natural Communities Conservation Planning Act
NEPA	National Environmental Policy Act
NGVD	national geodetic vertical datum
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Marine Fisheries Service
NOC	Notice of Completion
NOD	Notice of Determination
NOP/NOI	Notice of Preparation/Notice of Intent
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRA	National Recreation Area
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTU	nephelometric turbidity unit
NWIC	Northwest Information Center
O&M	operations and maintenance
O^3	ozone
OCAP	CVP/SWP Operations Criteria and Plan
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
PAs	Project Agencies
PCL	Planning and Conservation League
PG&E	Pacific Gas and Electric Company
PL	Public Law
PM10	particulate matter 10 microns in diameter or less
Porter-Cologne	Porter-Cologne Water Quality Control Act
ppb	parts per billion
ppt	parts per thousand
PPV	Peak Particle Velocity
Programmatic EIS/EIR	CALFED Programmatic Environmental Impact Statement/Environmental Impact Report
Proposition 65	Safe Drinking Water and Toxic Enforcement Act of 1986
PTM	Particle Tracking Module
Public Notice	Public Notice 5820A, Amended
RBDD	Red Bluff Diversion Dam
Reclamation	U.S. Department of the Interior, Bureau of Reclamation

RMP	risk management plan
ROC	reactive organic compounds
ROD	Record of Decision
RPA	Reasonable Prudent Alternative
RT	round trip
RTOC	Regional Tribal Operations Committee
RWQCB	Regional Water Quality Control Board
RWWCF	Stockton Regional Wastewater Control Facility
SAP	sampling and analysis plan
SB	Senate Bill
SCVWD	Santa Clara Valley Water District
SCWA	Sacramento County Water Agency
SDIP	South Delta Improvements Program
SDWA	South Delta Water Agency
SET	standard elutriate tests
SFBAAB	San Francisco Bay Area Air Basin
SFEP	San Francisco Estuary Project
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVDIP	San Joaquin Valley Drainage Implementation Program
SJVUAPCD	San Joaquin Valley Unified Air Pollution Control District
SMART	San Joaquin Regional Transit District
SR	State Route
SRA	State Recreation Area
SRFCP	Sacramento River Flood Control Project
SS	suspended sediments
State Water Board	State Water Resources Control Board
Superfund	Comprehensive Environmental Response, Compensation, and Liability Act
SVWMA	Sacramento Valley Water Management Agreement
SVWMP	Sacramento Valley Water Management Plan
SWP	State Water Project
SWP Banks	SWP Harvey O. Banks Pumping Plant
SWPPP	stormwater pollution prevention plan
taf	thousand acre-feet
taf/yr	thousand acre-feet per year
TDF	Through-Delta Facility
TDS	total dissolved solids
THMs	trihalomethanes
TMDL	total maximum daily load
TNS	Summer Townet Survey
TOC	total organic carbon
tpy	tons per year
TRMFRP EIS	Trinity River Mainstream Fishery Restoration Program Environmental Impact Statement
UBC	Uniform Building Code
Union Island	Old River at the head of Middle River

USC	U.S. Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAMP	Vernalis Adaptive Management Plan
VELB	valley elderberry longhorn beetle
VOCs	volatile organic carbons
WAP	Water Acquisition Program
WAPA	Western Area Power Administration
WDRs	waste discharge requirements
Williamson Act	California Land Conservation Act of 1965
WMU	Waste Management Unit
WOMT	Water Operations Management Team
WQCP	Water Quality Control Plan
WTP	Water Treatment Plant
WY	water years
X2	the distance in kilometers of the 2-ppt isohaline from the Golden Gate Bridge
yds^3	cubic yards

South Delta Improvements Program
Executive Summary

Introduction

Dating back to 1991, actions have been proposed by the California Department of Water Resources (DWR) and the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) to improve water supply for south Delta agriculture, improve fish protection, and increase the amount and reliability of water supply for the State Water Project (SWP) and the Central Valley Project (CVP). In 2000, these proposed actions were incorporated into the State and Federal multi-agency CALFED Bay-Delta Program (CALFED Program) to improve the condition of all beneficial uses of water in the San Francisco Bay/Sacramento–San Joaquin River Delta (Bay-Delta) Estuary.

Consistent with the CALFED Program, DWR and Reclamation have now prepared a joint Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to implement the South Delta Improvements Program (SDIP). SDIP represents the next important step in meeting the objective of sound water management and coordination between state and federal water projects. This Draft EIS/EIR is designed to be fully consistent with CALFED's overall goals of water supply reliability, water quality, ecosystem restoration, and levee system integrity.

The SDIP alternatives consist of two major components: a physical/structural component and an operational component. The SDIP physical/structural component includes the construction and operation of permanent operable gates at up to four locations in south Delta channels to protect fish and meet the water level and, through improved circulation, water quality needs for local irrigation diversions; channel dredging to improve water conveyance; and modification of 24 local agricultural diversions (Figure ES-1). The operational component considers raising the permitted diversion limit into the SWP Clifton Court Forebay (CCF) from 6,680 cubic feet per second (cfs) to 8,500 cfs.

DWR worked with a broad coalition of stakeholders including Reclamation to develop alternative operational scenarios for the SDIP operational component. This process, referred to as the 8,500 Stakeholders Process, included representatives of resource agencies, water agencies and districts, and environmental groups. Facilitated meetings were held through most of 2002 producing four operational component scenarios. One operational scenario was subsequently dropped because it did not provide the CVP with reliable capacity for exporting CVP supplies via CCF and SWP Banks Pumping Plant (SWP Banks). Of the remaining three, one was modified after discussions with CVP and SWP contractors in the summer of 2003 to improve integrated operation of the SWP and CVP. Each of these operational scenarios is evaluated in combination with at least one proposed physical/structural component in the Draft EIS/EIR.

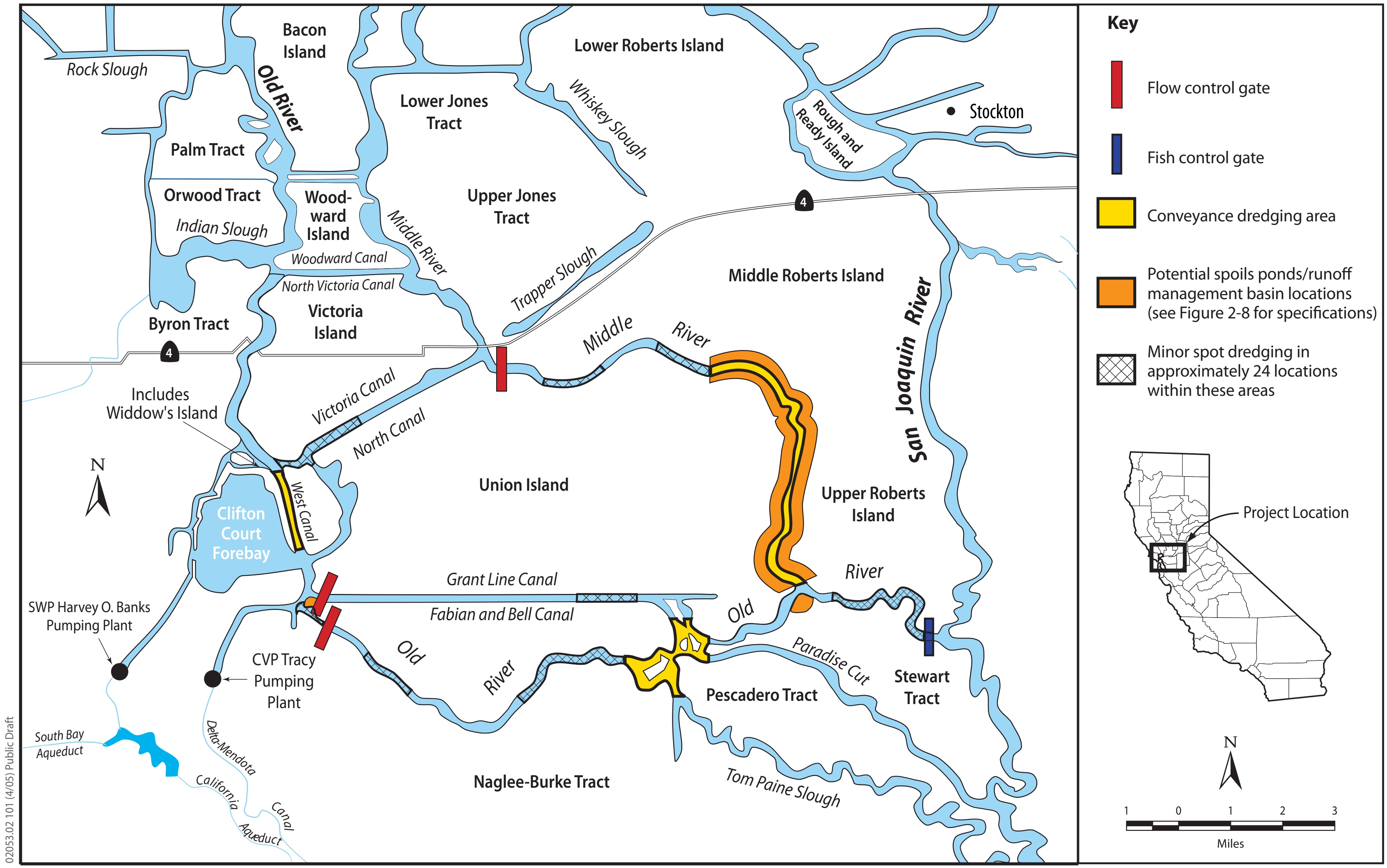
SDIP Decision Stages

After certifying and filing the Final EIS/EIR for the SDIP, DWR and Reclamation will each adopt a project and issue a decision during each of two stages of the SDIP decision-making process. Stage 1 will include making a decision on the physical/structural component. For this decision, DWR will assume the existing operational rules including the permitted limit for SWP diversions at CCF. DWR will issue a Notice of Determination (NOD) and Reclamation will issue a Record of Decision (ROD) for the decision regarding the actions and mitigation needed to implement any physical/structural component adopted during the Stage 1 decision-making process. The added flexibility and adaptability provided by the physical/structural component alone will achieve, to some extent, each of the SDIP objectives, regardless of the operational decision made during Stage 2.

The decision-making process for Stage 2 will begin after the Stage 1 decision is made. Assuming a physical/structural component is selected in Stage 1, Stage 2 will include the selection of the preferred operational component, based upon the operational scenarios presented in the Draft EIS/EIR and incorporating public input, and additional information collected on the condition of pelagic organisms in the Delta. During this stage, and prior to the selection of the preferred operational component, the public will be provided the opportunity to comment on the preferred operational component. A supplemental document for NEPA and CEQA compliance describing the preferred operational component will be made available for public review for at least 45 days prior to finalizing the decision on the operational component. A second NOD from DWR and an ROD from Reclamation regarding the selection of the preferred operational component will complete the environmental analysis for Stage 2 of the SDIP. More information about this process is presented below in the 'Public Involvement and Next Steps' section.

The Need, Purpose, and Objectives of the SDIP

The SDIP is being pursued to address the needs of the Delta aquatic environment, as well as longstanding statewide, regional, and local water supply needs. Flows into and out of the Delta can have a major effect on these resources. Fish survival as well as water quality and quantity in the south Delta is affected by the natural split of San Joaquin River flow at the head of Old River; tidal fluctuation; local diversions; local agricultural return flows; channel capacity resulting in



Jones & Stokes

Figure ES-1
Preferred Physical/Structural Component

restricted circulation; and water exports. The SDIP is proposed in response to three important water management needs:

- Under natural conditions, about half the flow in the San Joaquin River flowed down Old River. The operations of the SWP and CVP export facilities in the south Delta can change flow patterns in the local channels. These factors can cause migrating San Joaquin River fall-/late fall–run Chinook salmon, a candidate for listing under the federal Endangered Species Act, to move into the south Delta, primarily through Old River where fish mortality increases due to predators and higher levels of exposure to export facilities and agricultural diversions. Keeping fall-/late fall–run Chinook salmon in the main channel of the San Joaquin River until they reach the central Delta may increase survival.
- Local 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, one of which is diversions in the south Delta by the SWP and CVP. In addition, there are opportunities to improve circulation and therefore water quality in the south Delta.
- There are unmet water supply needs, with respect to quantity and reliability of deliveries, south of the Delta for agriculture, municipal and industrial, and environmental uses.

DWR and Reclamation have, therefore, identified the following project objectives and purpose:

- reduce the movement of San Joaquin River watershed Central Valley fall-/late fall–run juvenile Chinook salmon into the south Delta via Old River;
- maintain adequate water levels and, through improved circulation, water quality available for agricultural diversions in the south Delta, downstream of the head of Old River; and
- increase water deliveries and delivery reliability for SWP and CVP water contractors south of the Delta and provide opportunities to convey water for fish and wildlife purposes by increasing the maximum permitted level of diversion through the existing intake gates at CCF to 8,500 cfs.

Meeting these objectives by implementing the SDIP will provide increased operational flexibility and the ability to respond to real-time fish conditions while improving water supply reliability.

SDIP Alternatives

The SDIP consists of a physical/structural component combined with an operational component designed to meet the purpose and objectives of the project. Alternatives, along with the No Action alternative, have been evaluated in the Draft EIS/EIR and are shown in Table ES-1. The alternative physical/structural components are shown as 2, 3, and 4. The preferred physical/structural component is identified as 2. The alternative operational components are shown in Table ES-1 as A, B, and C. There is no preferred operational component identified in the Draft EIS/EIR. The selected physical/structural component combined with the existing operational rules, including the permitted limit for SWP diversions at CCF, will be used to develop appropriate mitigation measures for the Stage 1 decision. The preferred operational component and any additional appropriate mitigation measures will be developed during Stage 2 and will not be selected until after the Stage 1 decision is made.

The following describes the basic actions related to the physical/structural component and the operational component of the SDIP:

Physical/Structural Component Actions

- *Replace the seasonal barrier with a permanent operable fish control gate on Old River*

  Where Old River splits from the San Joaquin River, a permanent operable fish control gate will be constructed and operated to keep young salmon in the San Joaquin River as they migrate to the ocean in the spring. In the fall, and in coordination with other water management needs in the south Delta, the gate will be operated to improve dissolved oxygen in the San Joaquin River for adult salmon in the river as they migrate upstream.

- *Replace inefficient seasonal barriers with permanent operable flow control gates on Middle River, Grant Line Canal and Old River*

  Up to three permanent operable flow control gates will be constructed and operated to allow water to flow during times of high water and flooding, while maintaining water levels in Delta channels for local water users during the irrigation season. The flow control gates will also improve water circulation, helping to manage water quality in the south Delta.

- *Dredge portions of Middle River, Old River, and West, Grant Line, Victoria and North Canals to improve flows in the south Delta channels*

  Portions of Middle River, Old River, and West Canal would be dredged to improve conveyance and the operation of private local agricultural siphons and pumps for irrigation. Siphons and pumps in Old River, Grant Line, North, and Victoria Canals would be extended and dredged around to ensure diversion capability.

Operational Component Action

- *Increase permitted limit for diversions into Clifton Court Forebay*

  SWP Banks Pumping Plant (SWP Banks) has an existing installed pumping capacity of 10,300 cfs. Flow diverted from the Delta into Clifton Court Forebay, which is pumped by SWP Banks, is limited by permit to 6,680 cfs except in July-September when an additional 500 cfs is allowed for the Environmental Water Account (EWA) and during winters when the San

Table ES-1. South Delta Improvements Program Alternatives

		Operational Components			Physical/Structural Components						
						Flow Control Gates					
Alternative	Existing Temporary Barriers and 6,680 cfs	8,500 cfs (A)	8,500 cfs (B)	8,500 cfs (C)	Head of Old River Fish Control Gate[3]	Middle River	Old River at DMC	Grant Line Canal	Conveyance Dredging[1]	Spot Dredging[2]	Agricultural Diversions Extension
No Action	X										
2A		X			X	X	X	X	X	X	X
2B			X		X	X	X	X	X	X	X
2C				X	X	X	X	X	X	X	X
3B			X		X	X	X		X	X	X
4B			X		X				X	X	X

Notes:

1 In Middle River, West Canal, and Old River.

2 In Victoria, North, and Grant Line Canals, and in Old River and Middle River.

3 Construction of Head of Old River fish control gate is required by CVPIA.

Joaquin River flow is above 1000 cfs. Increasing the permitted limit for diversions into CCF from 6,680 cfs to 8,500 cfs will provide opportunities to increase water deliveries to SWP and CVP contractors and for environmental uses south of the Delta by improving the operational flexibility of SWP Banks. The additional permitted capacity could also be used by those seeking to transfer water. This Draft EIS/EIR evaluates three proposed scenarios for the operational component using this increased capacity for a range of exports.

While the permitted capacity for diversions into CCF could increase by up to 27%, the ability to use this capacity is extremely limited by water availability and environmental conditions. The operational scenarios analyzed in the Draft EIS/EIR would increase the average amount of water diverted for SWP and CVP contract deliveries and environmental uses from less than 1% to 3%. Figure ES-2 shows how each of the operational scenarios evaluated for the operational component would affect Delta exports compared to the No Action alternative.

Water transfers can vary significantly from year to year. Historically during wet years, transfers are minimal and during dry years, transfers can reach 600,000 acre-feet. If 600,000 acre-feet of transfers were sought every year, wet or dry, analysis shows the average amount of water diverted would increase by about 2% as a result of implementing any of the operational scenarios. This additional amount of water is approximately 100,000 acre-feet per year for each operational scenario (Figure ES-2). Therefore, the total average increase in water diverted for SWP and CVP contract deliveries, environmental uses, and transfers would be less than 3% to 5% depending upon the specific operational scenario.

Impacts and Mitigation Measures

DWR and Reclamation are proposing SDIP as a self-mitigating project where each significant impact identified in the EIS/EIR has a corresponding mitigation measure that reduces the potentially significant impact to a less-than-significant level. The impacts identified in the EIS/EIR as significant, and corresponding mitigation that will reduce impacts to less than significant levels, are presented in Table ES-2. Mitigation needed for impacts that would occur due to implementing the Stage 2 decision would not be adopted until the Stage 2 decision is made.

Approximately 14 acres of nonjurisdictional riparian habitat, 1 acre of tule and cattail tidal emergent wetland, and 6 acres of tidal perennial aquatic habitat would be purchased to offset impacts to terrestrial biological resources resulting from the construction and operation of the gates, dredging, and other construction activities during the implementation of the Stage 1 decision. Depending on the results of preconstruction surveys, DWR and Reclamation may also need to purchase Mason’s lilaeopsis habitat at a ratio of 5–10 acres per acre affected by the project.

An expanded Environmental Water Account (EWA) program as described in the CVP/SWP Operation Criteria and Plan (OCAP), or the implementation of an avoidance-and-crediting system augmenting the current EWA program, would be implemented to avoid diversion effects on fish resulting from implementing the Stage 2 decision. Therefore, these measures would be adopted if necessary during the Stage 2 decision-making process.

Bottom-hinged lift gates, the preferred design, allow an array of permanent gate operations to regulate water flows to benefit water quality and environmental conditions. The CCF intake gates would be operated to allow flushing of south Delta channels. The Middle River and Old River flow control gates would be operated to maintain a higher water elevation for a longer period of time, and the head of Old River gate would only be fully closed during the Vernalis Adaptive Management Period (VAMP) in April and May.

In addition, DWR and Reclamation will work to identify and implement additional actions that may be needed to provide for the continuous improvement in water quality called for in the CALFED Program. DWR and Reclamation will also jointly develop criteria to address any stage deficiencies at the Tracy Pumping Plant due to transfers through the SWP Banks Pumping Plant prior to the transfers occurring.

Environmental Commitments

As part of the project planning and environmental assessment process, DWR and Reclamation will incorporate certain environmental commitments and best management practices (BMPs) into the SDIP to avoid or minimize potential impacts when implementing the applicable components of the SDIP. DWR and Reclamation will also coordinate planning, engineering, design, construction, operation, and maintenance of the project with the appropriate agencies when implementing the applicable components of the SDIP. These commitments will be incorporated into the project and include:

- certain studies recommended by the California Department of Fish and Game,
- adaptive management of gate operations,
- coordination with south Delta water users,
- coordination with marinas and other recreational facilities,
- erosion and sediment control plan
- stormwater pollution prevention plan,
- dredging sampling and analysis plan,
- traffic and navigation control plan and emergency access plan,
- hazardous materials management plan, and
- appropriate dredged material disposal.

Table ES-2. Summary of Significant Impacts, Mitigation Measures, and Mitigation Costs for the South Delta Improvements Program

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Geology, Seismically, and Soils						
GEO-1: Potential Structural Damage and Injury From Ground Shaking.	X		2A–2C, 3B, 4B	Potentially significant	None required. Incorporate requirements for standard UBC and general plan construction standards into the project design.	Less than significant
GEO-2: Potential Structural Damage and Injury from Development on Materials Subject to Liquefaction.	X		2A–2C, 3B, 4B	Potentially significant	None required. Incorporate requirements for standard UBC and general plan construction standards into the project design.	Less than significant
Air Quality						
Air-2: Short-Term Increase in Nitrogen Oxides Emissions in San Joaquin County.	X		2A–2C, 3B, 4B	Significant	Air-MM-1: Incorporate Air Quality Mitigation Measures designed to limit emissions of NO_x as Part of the SDIP Construction Management Plan. Air-MM-2: Acquire NO_x emission reduction credits to offset the emission increases that exceed the 50 tons per year conformity thresholds.	Less than significant
Air-3: Short-Term Increase in PM10 Emissions in San Joaquin County.	X		2A–2C, 3B, 4B	Significant	Air-MM-3: Implement Control Measures for Fugitive PM10.	Less than significant
Air-5: Potential Increase in PM10 Emissions from Drying Dredge Spoils in San Joaquin and Contra Costa Counties.	X		2A–2C, 3B, 4B	Significant	Air-MM-3: Regulation VIII Control Measures for Fugitive PM10 (San Joaquin County).	Less than significant
Fisheries						
Fish-46: Operations-Related Increases in Entrainment-Related Losses of Fall-/Late Fall–Run Chinook Salmon from the San Joaquin River Basin.		X	2A, 2C	Significant	Fish-MM-1: Minimize Entrainment-Related Losses of Juvenile Fall-/Late Fall–Run Chinook Salmon from the San Joaquin River Basin That May Be Caused by Increased SWP Pumping from May 16 through May 31.	Less than significant
Fish-47: Operations-Related Increases in Entrainment-Related Losses of Chinook Salmon from the Sacramento River Basin.		X	2A, 2C	Significant	Fish-MM-2: Minimize Entrainment-Related Losses of Juvenile Winter- and Spring-Run Chinook Salmon That May Be Caused by Increased SWP Pumping from March 1 through April 14 and May 16 through May 31.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Fish-58: Operations-Related Increases in Entrainment Losses of Steelhead.		X	2A, 2C	Significant	Fish-MM-1: Minimize Entrainment-Related Losses of Juvenile Fall-/Late Fall–Run Chinook Salmon from the San Joaquin River Basin That May Be Caused by Increased SWP Pumping from May 16 through May 31. Fish-MM-2: Minimize Entrainment-Related Losses of Juvenile Winter- and Spring-Run Chinook Salmon That May Be Caused by Increased SWP Pumping from March 1 through April 14 and May 16 through May 31.	Less than significant
Fish-63: Operations-Related Increases in SWP Pumping and Resulting Entrainment Losses of Delta Smelt.		X	2A, 2C	Significant	Fish-MM-3: Minimize Entrainment Losses of Delta Smelt Associated with Increased SWP Pumping.	Less than significant
Fish-64: Operations-Related Reduction in Food Availability for Delta Smelt.		X	2A, 2C	Significant	Fish-MM-3: Minimize Entrainment Losses of Delta Smelt Associated with Increased SWP Pumping.	Less than significant
Fish-73: Operations-Related Increases in SWP Pumping and Resulting Entrainment Losses of Striped Bass.		X	2A, 2C	Significant	Fish-MM-1: Minimize Entrainment-Related Losses of Juvenile Fall-/Late Fall–Run Chinook Salmon from the San Joaquin River Basin That May Be Caused by Increased SWP Pumping from May 16 through May 31. Fish-MM-2: Minimize Entrainment-Related Losses of Juvenile Winter- and Spring-Run Chinook Salmon That May Be Caused by Increased SWP Pumping from March 1 through April 14 and May 16 through May 31. Fish-MM-3: Minimize Entrainment Losses of Delta Smelt Associated with Increased SWP Pumping.	Less than significant
Fish-74: Operations-Related Reduction in Food Availability for Striped Bass.		X	2A, 2C	Significant	Fish-MM-3: Minimize Entrainment Losses of Delta Smelt Associated with Increased SWP Pumping.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Vegetation and Wetlands						
VEG-1: Loss or Alteration of Nonjurisdictional Woody Riparian Communities as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-2: Compensate for Unavoidable Temporary and Permanent Loss of Riparian Habitats.	Less than significant
VEG-4: Spread of Noxious Weeds as a Result of Gate Construction and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-3: Avoid Introduction and Spread of New Noxious Weeds during Project Construction and Dredging.	Less than significant
VEG-5: Loss or Disturbance of Mason's Lilaeopsis Stands or Potential Habitat as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-4: Conduct Preconstruction Surveys for Special-Status Plants. VEG-MM-5: Minimize Impacts on and Compensate for Loss of Mason's Lilaeopsis. VEG-MM-6: Monitor Existing Stands of Mason's Lilaeopsis during Gate Operations.	Less than significant
VEG-6: Loss or Disturbance of Delta Mudwort Stands as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-4: Conduct Preconstruction Surveys for Special-Status Plants. VEG-MM-5: Minimize Impacts on and Compensate for Loss of Mason's Lilaeopsis. VEG-MM-6: Monitor Existing Stands of Mason's Lilaeopsis during Gate Operations.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
VEG-7: Loss of Rose-Mallow Stands as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-4: Conduct Preconstruction Surveys for Special-Status Plants. VEG-MM-7: Avoid and Minimize Impacts on Special-Status Plants. VEG-MM-8: Compensate for Unavoidable Impacts on Tule and Cattail Tidal Emergent Wetlands.	Less than significant
VEG-8: Filling of Tule and Cattail Tidal Emergent Wetland and Jurisdictional Riparian Communities as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-2: Compensate for Unavoidable Temporary and Permanent Loss of Riparian Habitats. VEG-MM-7: Avoid and Minimize Impacts on Special-Status Plants. VEG-MM-9: Monitor Existing Stands of Tidal Emergent Wetland and Riparian Wetland Vegetation during Gate Operation.	Less than significant
VEG-9: Filling or Disturbance of Tidal Perennial Aquatic Habitat as a Result of Gate Construction, Gate Operation, and Channel Dredging.	X		2A–2C, 3B, 4B	Significant	VEG-MM-1: Minimize Impacts on Sensitive Biological Resources. VEG-MM-10: Compensate for Loss of Tidal Perennial Aquatic Habitat.	Less than significant
Wildlife						
WILD-2: Loss of Riparian-Associated Wildlife Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-1: Replace Riparian Land Cover Types WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
WILD-3: Loss of Tidal Emergent Wetland–Associated Wildlife Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B	Significant	WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-4: Replace Wetland Land Cover Types	Less than significant
WILD-4: Loss of Tidal Perennial Aquatic–Associated Wildlife Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-5: Compensate for Loss of Tidal Perennial Aquatic Habitat.	Less than significant
WILD-5: Loss of Agricultural Land and Ruderal-Associated Wildlife Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Potentially significant	No mitigation is required. WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources.	Less than significant
WILD-8: Loss of Valley Elderberry Longhorn Beetle or Suitable Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-6: Perform Preconstruction and Postconstruction Surveys for Elderberry Shrubs. WILD-MM-7: Avoid and Minimize Impacts on Elderberry Shrubs. WILD-MM-8: Compensate for Unavoidable Impacts on Elderberry Shrubs.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
WILD-9: Loss or Disturbance of Swainson's Hawk Nests or Foraging Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C	Significant	WILD-MM-1: Replace Riparian Land Cover Types. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-9: Perform Preconstruction Surveys for Nesting Swainson's Hawks Prior to Construction and Maintenance. WILD–MM-10: Avoid and Minimize Construction-Related Disturbances within ½ Mile of Active Swainson's Hawk Nest Sites. WILD-MM-11: Replace or Compensate for the Loss of Swainson's Hawk Foraging Habitat. WILD-MM-12: Avoid Removal of Occupied Nest Sites.	Less than significant
WILD-9: Loss or Disturbance of Swainson's Hawk Nests or Foraging Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		3B, 4B	Significant	WILD-MM-1: Replace Riparian Land Cover Types. WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-9: Perform Preconstruction Surveys for Nesting Swainson's Hawks Prior to Construction and Maintenance. WILD–MM-10: Avoid and Minimize Construction-Related Disturbances within ½ Mile of Active Swainson's Hawk Nest Sites. WILD-MM-11: Replace or Compensate for the Loss of Swainson's Hawk Foraging Habitat. WILD-MM-12: Avoid Removal of Occupied Nest Sites.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
WILD-10: Loss or Disturbance of San Joaquin Kit Fox or Suitable Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-13: Perform Preconstruction Surveys for San Joaquin Kit Fox. WILD-MM-14: Minimize Construction-Related Disturbances near Active Den Sites. WILD-MM-15: Replace Lost San Joaquin Kit Fox Habitat.	Less than significant
WILD-11: Loss of Giant Garter Snake or Suitable Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-4: Replace Wetland Land Cover Types. WILD-MM-16: Conduct Preconstruction Surveys for Giant Garter Snake. WILD-MM-17: Minimize Construction-Related Disturbances in the Vicinity of Occupied Habitat.	Less than significant
WILD-12: Loss of Western Pond Turtle or Suitable Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-4: Replace Wetland Land Cover Types. WILD-MM-18: Avoid and Minimize Construction-Related Disturbances in the Vicinity of Occupied Habitat.	Less than significant
WILD-13: Loss or Disturbance of Raptor Nest Sites as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
WILD-14: Loss of Tricolored Blackbirds or Suitable Nesting Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-1: Replace Riparian Land Cover Types. WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-4: Replace Wetland Land Cover Types. WILD-MM-19: Conduct Preconstruction Surveys for Tricolored Blackbird. WILD-MM-20: Minimize Construction-Related Disturbances in the Vicinity of Active Tricolored Blackbird Colonies.	Less than significant
WILD-15: Loss or Disturbance of Nesting or Wintering Western Burrowing Owls as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-21: Conduct Preconstruction Surveys for Burrowing Owls. WILD-MM-22: Minimize Construction-Related Disturbances near Occupied Nest Sites. WILD-MM-23: Avoid or Minimize Disturbance to Active Nest and Roost Sites. WILD-MM-24: Mitigation of Impacts on Occupied Burrows. WILD-MM-25: Replace Lost Burrowing Owl Foraging Habitat.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
WILD-16: Loss or Disturbance of California Black Rail or Suitable Nesting Habitat as a Result of Gate Construction, Channel Dredging, and Siphon Extensions.	X		2A–2C, 3B, 4B	Significant	WILD-MM-2: Avoid and Minimize Effects on Nesting Birds during Construction and Maintenance. WILD-MM-3: Minimize Impacts on Sensitive Biological Resources. WILD-MM-4: Replace Wetland Land Cover Types. WILD-MM-26: Conduct Preconstruction Surveys for California Black Rail. WILD-MM-27: Minimize Construction-Related Disturbances in the Vicinity of Active California Black Rail Nest Sites.	Less than significant
Visual/Aesthetic						
VR-3: Changes in Views at the Head of Old River Fish Control Gate Site.	X		2A–2C, 3B, 4B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant
VR-4: Changes in Light and Glare at Head of Old River.	X		2A–2C, 3B, 4B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion. VR-MM-2: Incorporate Lighting Design Specifications for Minimum Maintenance and Access Safety Standards	Less than significant
VR-9: Changes in Light and Glare at the Middle River Gate Site.	X		2A–2C, 3B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion. VR-MM-2: Incorporate Lighting Design Specifications for Minimum Maintenance and Access Safety Standards.	Less than significant
VR-12: Changes in Local Scenic Character at the Grant Line Canal Gate Site.	X		2A–2C	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant
VR-14: Changes in Light and Glare at the Grant Line Canal Gate Site.	X		2A–2C	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion. VR-MM-2: Incorporate Lighting Design Specifications for Minimum Maintenance and Access Safety Standards.	Less than significant
VR-15: Inconsistency with Local Visual Policies at the Grant Line Canal Gate Site.	X		2A–2C	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant

Resource Topic/Impact	Stage 1	Stage 2	Applicable Alternative	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
VR-17: Changes in Local Scenic Character at the Old River at DMC Flow Control Gate Site.	X		2A–2C, 3B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant
VR-18: Changes in Views at the Old River at DMC Flow Control Gate Site.	X		2A–2C, 3B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant
VR-19: Changes in Light and Glare at the Old River at DMC Flow Control Gate Site.	X		2A–2C, 3B	Significant	VR-MM-2: Incorporate Lighting Design Specifications for Minimum Maintenance and Access Safety Standards.	Less than significant
VR-20: Inconsistency with Local Visual Policies at the Old River at DMC Flow Control Gate Site.	X		2A–2C, 3B	Significant	VR-MM-1: Implement Measures to Reduce Visual Intrusion.	Less than significant
Cultural Resources						
CR-2: Inadvertent Damage to or Destruction of Buried Archaeological Sites and Human Remains.	X		2A–2C, 3B, 4B	Significant	CR-MM-1: Stop Work If Archaeological Materials Are Discovered during Construction or Dredging. CR-MM-2: Stop Work If Human Remains Are Discovered during Construction or Dredging.	Less than significant

Notes:

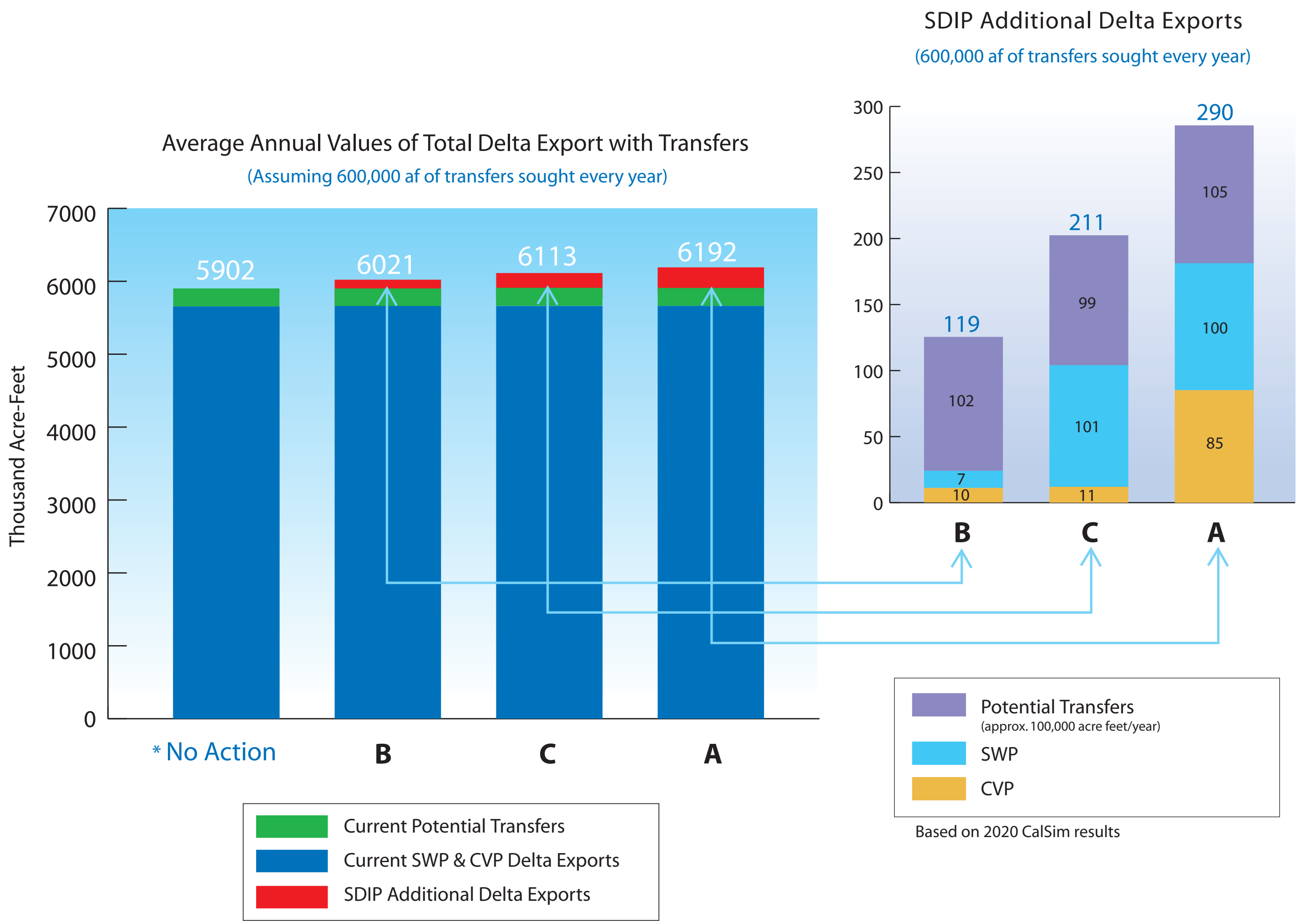
cfs = cubic feet per second.

CVP = Central Valley Project.

NOx = oxides of nitrogen.

PM10 = particulate matter 10 microns or less in diameter.

SWP = State Water Project.



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

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Figure ES-2
Delta Exports Under No Action and SDIP Operational Scenarios (2020 Conditions)

SDIP Costs

In total, up to $24 million is proposed to fund protection and restoration of fish habitat in the Delta and wildlife habitat, and to study the effectiveness of mitigation for the special-status fish and wildlife species. Of this $24 million, $2 million would be allocated to the indirect effects conservation measure only applicable to the Stage 2 decision, and the $6 million allocated for fishery investigations would be applicable to both the Stage 1 and Stage 2 decisions. Table ES-3 shows the estimated cost of constructing and operating the SDIP physical/structural and operational components, and the estimated cost for mitigation, enhancement, and conservation actions.

Table ES-3. SDIP Estimated Costs for Construction, Operations and Maintenance, and Mitigation, Enhancement, and Conservation

Action	Estimated Cost ($)	Yearly Estimated Cost ($)
Construction		
Permanent operable gates	75 million	
Dredging	9 million	
Agricultural Extensions	2.5 million	
Operations & Maintenance		Up to 1 million
Mitigation, Enhancement, and Conservation		
Acquire and Restore Habitats in the South Delta	10 million	
Mitigation for other project impacts (e.g., dredging impacts)	Up to 6 million	
Fishery Investigations[1]	6 million[1]	
Indirect Effects Conservation Measure[2]	2 million[2]	
Total	110.5 million	Up to 1 million

Notes:

[1] This amount includes the total mitigation necessary for implementing both Stage 1 and Stage 2 decisions.

[2] This measure applies to the implementation of the Stage 2 decision.

Response to Delta Fish Conditions

During the past three years, there have been significant declines in pelagic (open-water) fish populations in the Delta that demand immediate attention. This unexpected decline cannot be explained by relationships that have been developed in the past among environmental conditions, such as Delta flows, export rates, and fish populations. Efforts to identify the causes for the declines are being coordinated by the Interagency Ecological Program, an estuary monitoring and research program conducted by six federal and three state agencies with assistance from the CALFED Science Program. Staffing and funding have been redirected and augmented to provide the necessary resources to aggressively and fully evaluate whether and how pesticides, invasive species, food sources, and changes in state and federal water project operations might contribute to this serious situation.

The staged decision-making process for SDIP has, in part, been selected in recognition of the uncertainties regarding the causes of the pelagic organism decline. This staged process allows time to take advantage of additional information on the pelagic organism decline that will be expeditiously developed prior to making a decision regarding the operational component. This staged decision-making process allows the actions contained in the physical/structural component to proceed in the near term and construction to be completed by early 2009. Changes in Delta operations that may be possible when SDIP is fully operational will not take place until after construction is completed and the permanent gates are operational (early 2009).

The scientific studies currently underway will not only generate information needed to better understand and address the pelagic fish conditions, but will provide additional guidance for future water management activities in the Delta. The implementation of SDIP would provide greater physical and operational flexibility in responding to changes in Delta environmental conditions and fish populations in the future.

Public Involvement and Next Steps

CEQA and NEPA require that state and federal agencies, respectively, evaluate the environmental effects of their actions. This Draft EIS/EIR satisfies the requirement to issue a draft analysis for public review prior to implementing an action. In 2002, DWR and Reclamation held public scoping meetings to solicit public comments. In addition, DWR has held two public outreach meetings (December 2004 and April 2005) to introduce the SDIP physical/structural and operational components and some important results of the preliminary analysis. The release of this Draft EIS/EIR continues the open, public debate on the proposed SDIP. This Draft EIS/EIR will undergo public review for 90 days. Public forums and hearings will be held during that time in several locations throughout California to answer questions and to engage in an open dialog on implementing SDIP. Also, regular updates on the SDIP will be provided to both the Delta Protection Commission and the California Bay-Delta Authority (CBDA).

The SDIP is a single project that will be carried out in a two-staged decision process. DWR and Reclamation have identified a preferred physical/structural component of SDIP as gates at four locations in the south Delta. After public comment period for the Draft EIS/EIR, a Final EIS/EIR will be prepared that will include responses to public and agency comments. DWR and Reclamation will issue a Notice of Determination/Record of Decision for the decision regarding the physical/structural component actions at the end of the Stage 1 decision-making process. No decision regarding the operational component of the SDIP will be made during the Stage 1 process.

For the Stage 1 decision of SDIP, DWR and Reclamation will assume that the current regulatory limits apply regarding SWP export operations. Proposed changes to these operating conditions will be finalized during the Stage 2 decision-making process of SDIP. DWR and Reclamation acknowledge that during the time before Stage 2 is completed, new information may become available about conditions affecting pelagic organisms in the Delta. DWR and Reclamation will complete the additional environmental analysis necessary to select and implement the operational component for Stage 2 pursuant to CEQA and NEPA using the best available information. Figure ES-3 shows the various steps of the decision-making process.

CEQA and NEPA compliance for the decision made under Stage 2 will follow the preparation and circulation of supplemental information as directed by the CEQA Guidelines (see Article 11) and CEQ NEPA Regulations (40 CFR 1502.9(c)). DWR and Reclamation will issue the necessary supplemental document for CEQA and NEPA compliance explaining the preferred operational component, the rationale for its selection, and any additional environmental effects. This document would be available for public comment and review for a period of at least 45 days, consistent with CEQA and NEPA, and will provide opportunity for the public to submit additional comments on the environmental analysis of the operational component of the SDIP. A second Notice of Determination from DWR and an ROD from Reclamation regarding the selection of the preferred operational component will be filed to complete the environmental compliance requirements for Stage 2 of the SDIP. Parties concerned about the operational component in Stage 2 should participate early in the EIS/EIR process and review and comment on this Draft EIS/EIR. With respect to the future decision for Stage 2 that relies upon the SDIP EIS/EIR certified at the time of the NOD for Stage 1, and any supplements to the EIS/EIR, a new CEQA challenge period will commence at the time of the Stage 2 decision for parties to request judicial review of DWR's decision based on any cause of action under CEQA related to the Stage 2 decision. In any decision for Stage 2, DWR will state in the Notice of Determination that DWR has relied in part upon the SDIP EIS/EIR certified in Stage 1 and intends that those aspects of the SDIP EIS/EIR relied upon in the Stage 2 decision will be subject to further judicial review.

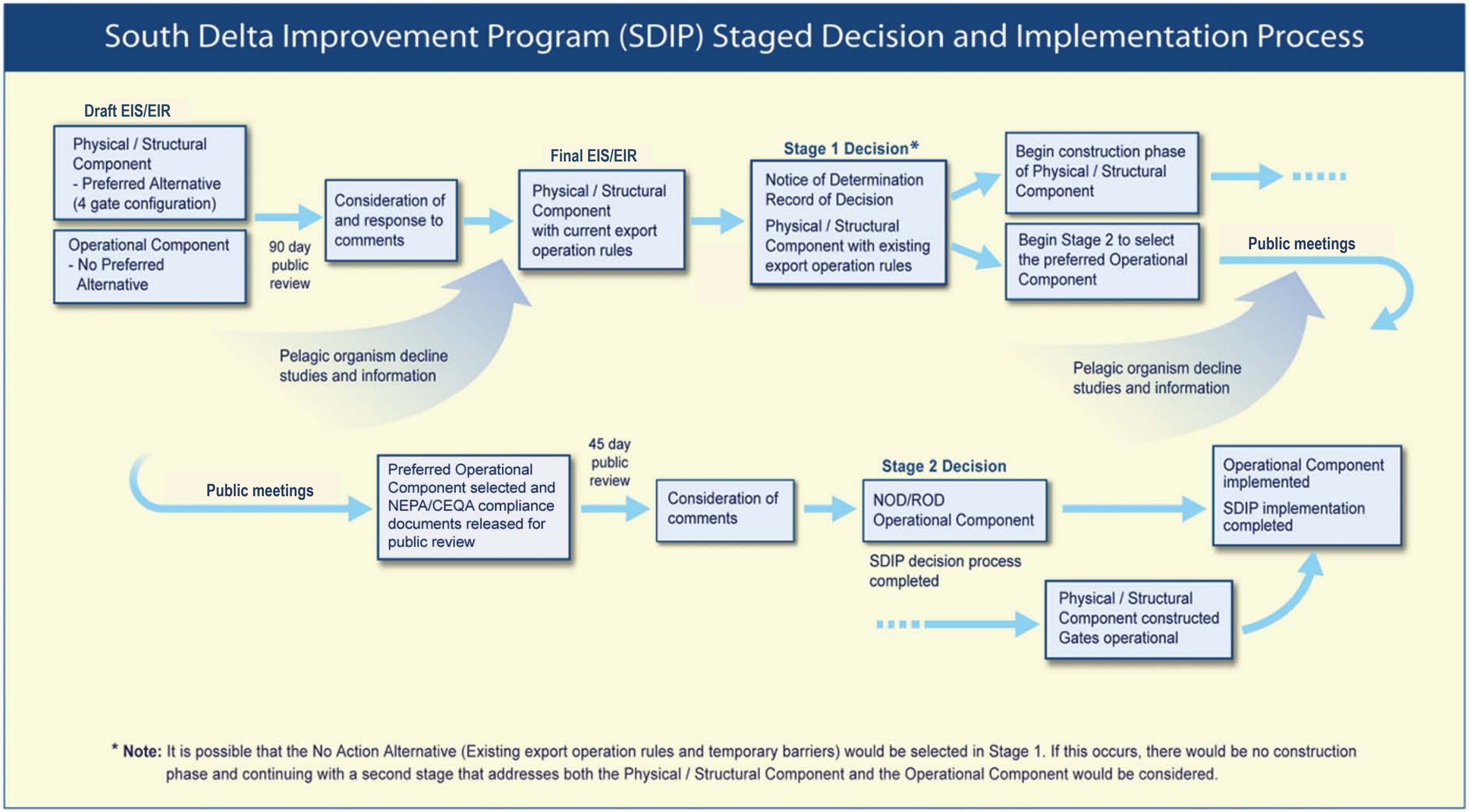

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Figure ES-3
Staged Decision and Process Implementation