# Chapter 2
# Project Objectives and Purpose and Need

The BDCP sets out a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply reliability, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear collaboration between DWR, Reclamation, state and federal fish and wildlife agencies, state and federal water contractors, nongovernmental organizations, agricultural and fishing interests, and the general public. The project objectives and purpose and need described in this chapter were developed as a part of this process. Chapter 3, *Description of Alternatives*, sets out the range of reasonable alternatives to meet the project objectives and purpose and need for the BDCP EIR/EIS.

## 2.1 Overview

One of the primary challenges facing California is how to comprehensively address the increasingly significant and escalating conflict between the ecological needs of a range of at-risk Delta species and natural communities that have been and continue to be adversely affected by a wide range of human activities, while providing for more reliable water supplies for people, communities, agriculture, and industry.

This challenge must be addressed, in decisions of the California Department of Water Resources (DWR), the California Department of Fish and Wildlife (CDFW), and the State Water Resources Control Board (State Water Board), as they endeavor to strike a reasonable balance between these competing public policy objectives and various actions taken within the Delta, including the BDCP. State policy regarding the Delta is summarized in the Sacramento–San Joaquin Delta Reform Act of 2009, which states:

> it is the intent of the Legislature to provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that will direct efforts across state agencies to develop a legally enforceable Delta Plan." (California Water Code, Section 85001, subd. [c]). The Delta "serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of North and South America. (California Water Code, Section 85002).

As described in detail in Appendix 1A, *Primer on California Water Delivery Systems and the Delta*, and in the BDCP's Chapter 2, *Existing Ecological Conditions*, the ecological health of the Delta continues to be at risk, the conflicts between species protection and Delta water exports have become more pronounced, as amply evidenced by the continuing court decisions regarding the intersection of the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and the operations criteria of the State Water Project (SWP) and the federal Central Valley Project (CVP). Other factors, such as the continuing subsidence of lands within the Delta, increasing seismic risks and levee failures, and sea level rise associated with climate change, serve to further exacerbate these conflicts. Simply put, the system as it is currently designed and operated does not appear to be sustainable from either an environmental or an economic perspective, and so the proposal to implement a fundamental, systemic change to the current system is necessary. This change is necessary if California is to "[a]chieve the two coequal goals of providing a more reliable water

supply for California and protecting, restoring, and enhancing the Delta ecosystem." (California Public Resources Code, Section 29702, subd. [a]).

DWR and several state and federal water contractors, collectively referred to as the BDCP proponents, are applying for certain permits under state and federal endangered species laws and propose to implement the BDCP. The BDCP is a habitat conservation plan (HCP) and a natural community conservation plan (NCCP) developed in compliance with the ESA and the California Natural Community Conservation Planning Act (NCCPA), respectively. DWR acting as lead agency for compliance with CEQA, and the U.S. Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) acting as co-lead agencies for compliance with NEPA have prepared this joint EIR/EIS.

## 2.2 Regulatory Background

The CEQA project objectives are important to document the reasons the BDCP proponents are undertaking the proposal and what objectives they intend to achieve by that proposal. NEPA requires that an EIS include a statement of "purpose and need" to which the federal agency is responding in proposing the alternatives, including the proposed action (40 CFR 1502.13). The project objectives and purpose and need statement are the starting points for the state and federal agencies in developing the reasonable range of alternatives to be evaluated in detail in the EIR/EIS (State CEQA Guidelines Sections 15124[b], 15126.6[a]); 40 CFR 1502.14). The following sections present the Project Objectives for the BDCP in compliance with the requirements of CEQA and the Purpose Statement and Project Need for the BDCP in compliance with the requirements of NEPA.

## 2.3 Project Objectives

CEQA requires that an EIR contain a "statement of the objectives sought by the proposed project." Under CEQA, "[a] clearly written statement of objectives will help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations. The statement of objectives should include the underlying purpose of the project" (State CEQA Guidelines Section 15124[b])[1]. Here, as the CEQA lead agency, DWR is adopting project objectives separately from the federal agencies' Purpose Statement as set forth in Section 2.4, as well as the description of Project Need as set forth in Section 2.5.

DWR's fundamental purpose in proposing the BDCP is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south-of-Delta, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations.

The fundamental purpose is informed by past efforts taken within the Delta and the watersheds of the Sacramento and San Joaquin Rivers, including those undertaken through the CALFED Bay-Delta

[1] "Although a lead agency may not give a project's purpose an artificially narrow definition, a lead agency may structure its EIR alternatives analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal." (*In Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1166.)

Program and Delta Risk Management Strategy. The fundamental purpose, in turn, gives rise to the following project objectives, which were presented in the Notice of Preparation for this EIR:

- Respond to the applications for incidental take permits[2] for the covered species that authorize take related to:
    1. The operation of existing SWP Delta facilities and construction and operation of facilities for the movement of water entering the Delta from the Sacramento Valley watershed to the existing State Water Project (SWP) and Central Valley Project (CVP) pumping plants located in the southern Delta;
    2. The implementation of any conservation actions that have the potential to result in take of species that are or may become listed under the ESA, pursuant to the ESA at §10(a)(1)(B) and its implementing regulations and policies;
    3. The diversion and discharge of water by Mirant LLC for power generation in the Western Delta[3]
- To improve the ecosystem of the Delta by:
    1. Providing for the conservation and management of covered species through actions within the BDCP Planning Area that will contribute to the recovery of the species; and
    2. Protecting, restoring, and enhancing certain aquatic, riparian, and associated terrestrial natural communities and ecosystems.
    3. Reducing the adverse effects to certain listed species of diverting water by relocating the intakes of the SWP and CVP;[4]
- Restore and protect the ability of the SWP and CVP to deliver up to full contract amounts, when hydrologic conditions result in the availability of sufficient water, consistent with the requirements of State and federal law and the terms and conditions of water delivery contracts and other existing applicable agreements.

In addition to the project objectives enumerated above, the following additional project objectives that guide the development of the proposed project and alternatives are:

- To ensure that the BDCP meets the standards for an NCCP by, among other things, protecting, restoring, and enhancing aquatic and terrestrial natural communities and ecosystems that support covered species within the Plan Area.
- To make physical improvements to the conveyance system in anticipation of rising sea levels and other reasonably foreseeable consequences of climate change.
- To make physical improvements to the conveyance system that will minimize the potential for public health and safety impacts resulting from a major earthquake that causes breaching of Delta levees and the inundation of brackish water into the areas in which the SWP and CVP pumping plants operate in the southern Delta.
- To develop projects that restore and protect water supply and ecosystem health and reduce other stressors on the ecological functions of the Delta in a manner that creates a stable regulatory framework under the ESA and NCCPA.

[2] In this instance, "incidental take permits" should also be understood to include the NCCP permit for the purposes of CDFW.

[3] Since publication of the NOP, Mirant LLC is no longer an active participant in the BDCP.

[4] Subsequent to publication of the NOP, this was revised to refer to adding additional intakes, instead of relocating intakes.

- To identify new operations and a new configuration for conveyance of water entering the Delta from the Sacramento River watershed to the existing SWP and CVP pumping plants in the southern Delta by considering conveyance options in the north Delta that can reliably deliver water at costs that are not so high as to preclude, and in amounts that are sufficient to support, the financing of the investments necessary to fund construction and operation of facilities and/or improvements.

## 2.4 Purpose Statement

Just as CEQA requires an EIR to include a statement of "project objectives" as described above, NEPA requires that an EIS include a statement of "purpose and need" to which the federal agency is responding in proposing the alternatives, including the proposed action (40 CFR 1502.13). This purpose statement of the proposed action, and project need described below, are consistent with the above project objectives in Section 2.3.[5]

The purposes of the proposed actions are to achieve the following.

1. Consider the applications for incidental take permits[6] for the covered species that authorize take related to the actions listed below.
    a. The operation of existing SWP Delta facilities.
    b. The construction and operation of facilities and/or improvements for the movement of water entering the Delta from the Sacramento Valley watershed to the existing SWP and CVP pumping plants located in the southern Delta.
    c. The implementation of any conservation actions that have the potential to result in take of species that are or may become listed under the ESA, pursuant to the ESA at section 10(a)(1)(B) and its implementing regulations and policies.
2. Improve the ecosystem of the Delta by implementing the actions listed below.
    a. Providing for the conservation and management of covered species through actions within the BDCP Planning Area that will contribute to the recovery of the species.
    b. Protecting, restoring, and enhancing certain aquatic, riparian, and associated terrestrial natural communities and ecosystems.
    c. Reducing the adverse effects on certain listed species due to diverting water.
3. Restore and protect the ability of the SWP and CVP to deliver up to full contract amounts, when hydrologic conditions result in the availability of sufficient water, consistent with the requirements of state and federal law and the terms and conditions of water delivery contracts held by SWP contractors and certain members of San Luis Delta Mendota Water Authority, and other existing applicable agreements.

[5] In Section 2.3, activities associated with Mirant LLC were included under the Project Objectives. Since publication of the NOP, however, Mirant LLC is no longer an active participant in the BDCP.

[6] In this instance, "incidental take permits" should also be understood to include the NCCP permit for the purposes of CDFW.

The above Purpose Statement reflects the intent to advance the coequal goals set forth in the Sacramento–San Joaquin Delta Reform Act of 2009 of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The above phrase—*restore and protect the ability of the SWP and CVP to deliver up to full contract amounts*—is related to the upper limit of legal CVP and SWP contractual water amounts and delineates an upper bound for development of EIR/EIS alternatives, not a target. It is not intended to imply that increased quantities of water will be delivered under the BDCP. As indicated by the "up to full contract amounts" phrase, alternatives need not be capable of delivering full contract amounts on average in order to meet the project purposes. Alternatives that depict design capacities or operational parameters that would result in deliveries of less than full contract amounts are consistent with this purpose.

## 2.5 Project Need

The need for the action is derived from the multiple, and sometimes conflicting, challenges currently faced within the Delta.[7] The Delta has long been an important resource for California, providing municipal, industrial, agricultural and recreational uses, fish and wildlife habitat, and water supply for large portions of the state. However, by several key criteria, the Delta is now widely perceived to be in crisis. There is an urgent need to improve the conditions for threatened and endangered fish species within the Delta. Improvements to the conveyance system are needed to respond to increased demands upon and risks to water supply reliability, water quality, and the aquatic ecosystem.

### 2.5.1 Delta Ecosystem Health and Productivity

Variability in the location and timing of flows, salinity, and habitat was common in the pre-European Delta.[8] But for the past 70 years, the Delta has been managed as a tidal/freshwater system. During the same period, the ecological productivity for Delta native species and their habitats has been in decline. Removal of much of the variable pre-European heterogeneous mix of fresh and brackish habitats, necessary to support various life stages of some of the Delta native species, has had a limiting effect on the diversity of native habitat within the Delta. In addition, urban development, large upstream dams and storage reservoirs, diversions, hydraulic mining, and the development of a managed network of navigation, flood control, and irrigation canals have all affected water flow patterns and altered fish and wildlife habitat availability. Most of the original tidal wetlands and many miles of sloughs in the Delta were removed by channelization and levee construction between the 1850s and 1930s. These physical changes, coupled with higher water exports and declines in water quality from urban and agricultural discharges and changes in constituent dilution capacity from managed inflows and diversions, have stressed the natural system and led to a decline in ecological productivity.

[7] The BDCP's Chapter 2, *Existing Ecological Conditions*, describes existing environmental conditions in the Plan Area, providing the context in which the BDCP and its various elements have been developed, and is hereby incorporated by reference.

[8] For this document, the term pre-European Delta refers to the period prior to the 1840s, when the streams and rivers began being modified by European immigrants with hydraulic mining and dredging, and the construction of diversion dams and levees in the Delta and along the rivers.

Significant declines have been reported in economically important fish species such as Chinook salmon. Delta smelt, considered by many to be an indicator species for the health of the Delta ecosystem, is just one component species in the community-wide Pelagic Organism Decline. Fishery resource changes may be attributable to numerous factors, including water management systems and facilities, water quality/chemistry alterations, and nonnative species introductions.

## 2.5.2 Water Supply Reliability

The distribution of precipitation and water demand in California is unbalanced. Most of the state's precipitation falls in the north, yet substantial amounts of water demand are located south and west of the Delta, including irrigation water for southern Central Valley agriculture, and municipal and industrial uses in southern California and the Bay Area. This supply/demand imbalance led to development of two major water projects: the SWP and the CVP.

Together, the SWP and CVP systems are two of the largest and most complex water projects in the nation and provide the infrastructure for the movement of water throughout much of California. They function under a suite of Congressional authorizations, interagency agreements, regulatory requirements, and contractual obligations that govern daily operations and seasonal performance. These include various authorizing legislation, the USFWS and NMFS Biological Opinions, including the Reasonable and Prudent Alternatives, and the water right permits issued by the State Water Board, among others. Regulations for the combined SWP and CVP operations are intended to protect the beneficial uses of Delta water, which include municipal, industrial, and agricultural water uses, fish and wildlife uses, environmental protection, flood management, navigation, water quality, power, and recreation.

The water rights of the SWP and CVP are conditioned by the State Water Board to protect the beneficial uses of water within the Delta under each respective project's water rights. In addition, under the Coordinated Operations Agreement, DWR and Reclamation coordinate their reservoir releases and Delta exports to enable each project to achieve benefit from their water supplies and to operate in a manner protective of beneficial uses as required by their water right permits. It is the responsibility of the SWP and CVP to meet these obligations regardless of hydrologic conditions. In 2006, Governor Schwarzenegger's Executive Order S-17-06 created the Delta Vision Task Force to address some of the issues facing the Delta. In the closing days of the Task Force's work, the State Water Board presented information indicating that quantities totaling several times the average annual unimpaired flows in the Delta watershed could be available to water users based on the face value of water permits already issued. However, the hydrology, the SWP and CVP water contracts, and environmental regulations control actual quantities that could be made available for use and diversion.

The current and projected future inability of the SWP and CVP to deliver water to meet the demands of certain south of Delta CVP and SWP water contractors is a very real concern. More specifically, there is an overall declining ability to meet defined water supply delivery volumes and water quality criteria to support water users' needs for human consumption, manufacturing uses, recreation, and crop irrigation.

## 2.5.3 Delta Hydrology and Water Quality

Generally, Delta hydrodynamics are defined by complex interactions between tributary inflows, tides, in-Delta diversions, and SWP and CVP operations, including conveyance, pumping plants, and

operations of channel barriers and gates. The degree to which each variable impacts the overall hydrology of the Delta varies daily, seasonally, and from year to year, depending on the magnitude of inflows, the tidal cycle, and the extent of pumping occurring at the SWP and CVP pumping plants. Changes in water inflow and outflow throughout the Delta affect the water quality within the Delta, particularly with regard to salinity. It has been estimated that seawater is pushing 3 to 15 miles farther inland since development began in the Delta over 150 years ago (Contra Costa Water District 2010).

Additionally, other water constituents of concern in the Delta have been identified through ongoing regulatory, monitoring, and environmental planning processes such as CALFED, planning functions of the State Water Board, and the Clean Water Act Section 303(d) list of state water bodies that do not meet applicable water quality standards. In June 2007 (with updates in February and May 2009), the U.S. Environmental Protection Agency gave final approval of a list of 18 chemical constituents identified in the Section 303(d) list for impaired Delta waters (State Water Resources Control Board 2007). Included in this list are dichlorodiphenyltrichloroethane (DDT) and other pesticides, mercury, polychlorinated biphenyls (PCBs), and selenium.

To further compound these challenges, fundamental changes to the Delta are certain to occur; the Delta is not a static ecological system. The anticipated effects of climate change will result in elevated sea levels, altered annual and inter-annual hydrological cycles, changed salinity and water temperature regimes in and around the Delta, and accelerated shifts in species composition and distribution. These changes add to the difficulty of resolving the increasingly intensifying conflict between the ecological needs of a range of at-risk Delta species and natural communities and the need to provide adequate and reliable water supplies for people, communities, agriculture, and industry. Anticipating, preparing for, and adapting to these changes are key underlying drivers for the BDCP.

## 2.6 References Cited

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