

1 *[Note to reviewers: This is the second iteration of this bullet list which provides a summary of the*
2 *BDCP covered activities under the eventual permits and authorizations for DWR/SWP Contractors,*
3 *USBR/CVP Contractors, Mirant Delta, LLC and the BDCP Management Entity. Updates/edits from*
4 *the last iteration (provided at the January 14, 2010 Steering Committee meeting) are shown in*
5 *tracked changes.]*

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Covered Activities

Existing SWP Facilities Operations and Maintenance

- 9 ▪ Clifton Court Forebay (CCF)
 - 10 ○ Near- and long-term operations criteria and adaptive range
- 11 ▪ Harvey O. Banks Pumping Plant
 - 12 ○ Near- and long-term operations criteria and adaptive range
- 13 ▪ Barker Slough Pumping Plant and North Bay Aqueduct
 - 14 ○ Up to 175 cfs, as authorized
- 15 ▪ State Water Project Diversions
 - 16 ○ DWR is currently (2010) obligated to make 4.167 MAF/year of water available to its
 - 17 contractors, except under certain conditions specified in the contract (obligation
 - 18 incrementally increases to reach the maximum amount of 4.173 MAF/year in 2021
 - 19 [quantity may be exceeded if DWR determines surplus water is available above and
 - 20 beyond that needed to satisfy all regulations, permits, and operational requirements])
 - 21 ○ Non-Project water for Drought Water Banks, the Environmental Water Account, Dry
 - 22 Water Purchase Programs, and individual transfers have been conveyed through SWP
 - 23 facilities in the past and are expected in the future
 - 24 ○ SWP facilities support groundwater banking programs, such as the Semitropic Water
 - 25 Banking and Exchange Program
 - 26 ○ Near- and long-term operations criteria and adaptive range
- 27 ▪ John E. Skinner Delta Fish Protective Facility
 - 28 ○ Large fish and debris directed away from the pumps by a 388-foot-long trash boom;
 - 29 smaller fish are diverted from the intake channel into bypasses by a series of metal
 - 30 louvers, while the main flow of water continues through the louvers and toward the
 - 31 pumps
 - 32 ○ Salvaged fish returned to the Delta in oxygenated tank trucks

- 1
- 2 ▪ **Temporary Barriers In The South Delta**
- 3 ○ Continued implementation of South Delta Temporary Barrier Project (annual
- 4 installation and removal of temporary barriers at Middle River, Old River, Grant Line
- 5 Canal, and at the Head of Old River)
- 6 ○ Rock barrier may be installed during the Fall at the Head of Old River to improve flow
- 7 quality for salmon migration in the San Joaquin River; a non-physical or physical
- 8 (rock) barrier may also be installed at the Head of Old River in the Spring
- 9 ▪ **Maintenance and Monitoring Activities**
- 10 ○ Routine activities that maintain the capacity and operational features of the existing
- 11 water diversion and conveyance facilities described above
- 12 ○ Monitoring activities include water quality and other SWP monitoring activities
- 13 including monitoring of chemical, physical and biological parameters to evaluate
- 14 conditions of concern for drinking water, recreation, and fish and wildlife

15 **CVP Existing Facilities Operations and Maintenance**

- 16 ▪ **Delta Cross Channel**
- 17 ○ Near- and long-term operations criteria and adaptive range
- 18 ▪ **C.W. Jones Pumping Plant**
- 19 ○ Near- and long-term operations criteria and adaptive range
- 20 ▪ **Tracy Fish Collection Facility**
- 21 ○ Uses behavioral barriers to guide entrained fish into holding tanks before transport
- 22 by truck to release sites within the Delta
- 23 ▪ **Contra Costa Water District Diversion Facilities**
- 24 ○ CCWD diverts water from the Delta for irrigation and M&I uses under CVP
- 25 contract; under its own permit and license at Mallard Slough; and under its own
- 26 Los Vaqueros water right permit at Old River near State Route 4
- 27 ○ CCWD's system includes intake facilities at Mallard Slough, Rock Slough, and
- 28 Old River near State Route 4; the Contra Costa Canal and shortcut pipeline; and the
- 29 Los Vaqueros Reservoir
- 30 ○ CCWD will be adding a fourth diversion point on Victoria Canal, the Alternative
- 31 Intake Project [AIP], scheduled to begin operations by the spring of 2010
- 32

- 1 ▪ **Central Valley Project Diversions**
- 2 ○ Reclamation delivers water transported through facilities in the Delta to senior
- 3 water rights contractors, long-term CVP water service contractors, refuges and
- 4 waterfowl areas, and temporary water service contractors south of the Delta (total
- 5 volume under contract, including Level 2 refuge supplies, is approximately 3.3
- 6 MAF per year)
- 7 ○ Additionally, the CVP provides Level 4 refuge water totaling approximately
- 8 100,000 AF
- 9 ○ In addition, as part of the San Joaquin River Restoration Program implementation,
- 10 Reclamation anticipates submitting a petition of permits to allow re-diversion of
- 11 the restoration flows either upstream of or in the Delta as Friant CVP water
- 12 ○ In wet hydrologic conditions when CVP storage is not available, water is made
- 13 available under temporary contracts - the volume of water available for conveyance
- 14 through the Delta is a result of hydrologic conditions, upstream reservoir
- 15 operations, upstream demands, regulatory constraints on CVP operations, and from
- 16 transfers of water from upstream water users to south of Delta water users
- 17 ○ Near- and long-term operations criteria and adaptive range
- 18 ○ Non-Project water for Drought Water Banks, the Environmental Water Account,
- 19 Dry Water Purchase Programs, and individual transfers have been conveyed
- 20 through CVP facilities in the past and are expected in the future
- 21 ○ Water passing through the Delta associated with water transfers
- 22 ▪ **Associated Maintenance and Monitoring Activities**
- 23 ○ Routine activities that maintain the capacity and operational features of the existing
- 24 water diversion and conveyance facilities
- 25 ○ Include canal maintenance, placement of riprap for bankline protection and erosion
- 26 control; vegetation management and weed control; O&M of electrical power
- 27 supply facilities; and routine maintenance as needed to ensure continued operations
- 28 and replacement of facility or system components when necessary to maintain
- 29 system capacity and operational capabilities
- 30 ○ Monitoring activities refers to those actions necessary for monitoring water quality
- 31 and fisheries as conditioned by water rights permits and biological opinions, and
- 32 those actions undertaken as a result of the CVPIA and agreements and includes
- 33 routine daily, annual or other periodic sampling of water quality constituents as
- 34 well as trawls for various fish species in the Delta
- 35 ○ Reclamation supports and participates in the Interagency Ecological Program
- 36 through which significant monitoring efforts are implemented

1 Coordinated Operations

2 ▪ Joint Point Of Diversion Operations

- 3 ○ Stage 1 – for water service to Cross Valley Canal contractors, Tracy Veterans
- 4 ○ Cemetery and Musco Olive, and to recover export reductions taken to benefit fish
- 5 ○ Stage 2 – for any purpose authorized under the current Project water right permits
- 6 ○ Stage 3 – for any purpose authorized up to the physical capacity of the diversion
- 7 ○ facilities

8 ▪ Transfers

- 9 ○ Water passing through the Delta associated with water transfers

10 ▪ Suisun Marsh Facilities Operations¹

- 11 ○ Existing facilities include: Suisun Marsh Salinity Control Gates; Morrow Island
- 12 ○ Distribution System; Roaring River Distribution System; Goodyear Slough Outfall;
- 13 ○ and various salinity monitoring and compliance stations throughout the Marsh
- 14 ○ Maintenance activities for existing facilities include: levee repairs, vegetation
- 15 ○ removal, fish screen cleaning or installation of new screens, mechanical repairs,
- 16 ○ structural repairs, removal or replacement of monitoring and compliance stations
- 17 ○ (can involve in-water work) and instrumentation installation on or near existing
- 18 ○ facilities

19 Power Generation (Mirant)

20 ▪ Operation of Existing Mirant Plants

- 21 ○ Cooling water is drawn into the plants (Pittsburg and Contra Costa plants) through
- 22 ○ 9.5 mm (3/8 inch) screens, pumped to condensers, used to cool spent steam and
- 23 ○ then discharged immediately back into the San Joaquin-Sacramento Delta
- 24 ○
- 25 ○ The total current design flow for all Contra Costa Power Plant operations is
- 26 ○ approximately 1,418 AF/day and 1,686.2 AF/day for all Pittsburg Power Plant
- 27 ○ operations
- 28 ○
- 29 ○ In addition to once-through cooling flows, Mirant discharges process wastewater
- 30 ○ and stormwater (quantity and quality of discharges are subject to permits issued by

¹ *[Note to reviewers: This section on Suisun Marsh facilities may be subject to change since BDCP includes water operations conservation measures that address the salinity control facility. Additionally, BDCP habitat restoration measures would alter the environment in Suisun Marsh and Bay. Such changes will need the attention of the SWRCB for resolution.]*

1 the State Water Resources Control Board and San Francisco and Central Valley
2 Regional Water Quality Control Boards)

3
4 o On April 30, 2013, Mirant Delta will permanently retire Contra Costa Power Plant
5 Units 6-7, the only remaining once-through cooled units at the Contra Costa Power
6 Plant

7
8 o The remaining Pittsburg Power Plant units (Units 5-7, of which Units 5-6 use once-
9 through cooling and Unit 7 uses closed-cycle cooling) are currently contracted
10 through a tolling agreement with PG&E through the end of 2010. Over the course
11 of 2010, Mirant Delta will determine whether the units (1) will be retired, (2)
12 continue to operate for a certain term in their existing configuration followed by
13 retirement (as at CCPP Units 6-7), or (3) continue to operate for a certain term with
14 retrofits to reduce or eliminate the use of once-through cooling.

15 **▪ Recurrent Mirant Plant Maintenance and Modification Activities and Monitoring**
16 **Activities**

17 **o Maintenance Dredging, Equipment Maintenance and Modifications, and Levee and**
18 **Flood Control Maintenance**

19 **o Aquatic Studies & Covered Species Monitoring**

20 **New Water Facilities Construction, Operations and Maintenance**

21 **▪ Isolated Conveyance Facility Construction and Operations²**

22 **o Conveyance facility - 49 miles; potential export capacity of 15,000 cfs; eight**
23 **inverted culvert siphons to convey flow under existing sloughs and a railroad; four**
24 **tunnels to convey flow under rivers and floodways; an intermediate pumping plant**

25 **o A new geographic location for the CVP and SWP intake facilities on the**
26 **Sacramento River**

27 **o Intake facilities equipped with fish screens, pumping plants, and pipelines**

28 **o A new regulating forebay adjacent to the existing Clifton Court Forebay**

29 **o Other facilities such as bridges, drainage system improvements, utility**
30 **improvements, powerlines**

31 **o Near- and long-term operations criteria and adaptive range**

² [Note to reviewers: While this write-up describes an eastside canal conveyance, alternatives including an all tunnel option are being evaluated. A change in the conveyance approach may result in a major change to this section.]

1 ▪ In-Delta Conveyance Improvements

2 *[Note to reviewers: The Two-Gates Demonstration Project is under consideration by Reclamation and*
3 *will be addressed under a separate regulatory process from BDCP. If this project is carried forward,*
4 *it will be included in BDCP and a description will be provided by Reclamation.]*

5 ▪ Fremont Weir Gates Construction and Operations

- 6 ○ Construction and operations of the Fremont Weir Operable Gates
- 7 ○ Any powerlines needed to operate facilities

8 ▪ North Bay Aqueduct Alternative Intake Project

- 9 ○ A new alternative intake structure and pump station on the Sacramento River with
10 positive barrier fish screens, a new pipeline segment to convey the water from the
11 alternative intake to a point of connection with the existing NBA, and other project-
12 related support facilities
- 13 ○ Designed to accommodate the projected future peak demand of up to 240 cfs
14

15 **Habitat Restoration, Enhancement, and Management Activities**

- 16 ▪ Restore 80,000 acres of tidal habitat, riparian habitat, and new floodplain (65,000 acres of tidal
17 habitat, 5,000³ acres of riparian habitat, and 10,000 acres of new floodplain)⁴ including the
18 following actions:
 - 19 ○ Grading, excavation, and placement of fill material
 - 20 ○ Breaching, modification, or removal of existing levees and dikes and construction of
21 new levees and dikes
 - 22 ○ Modification, demolition, and removal of existing infrastructure (e.g., buildings, roads,
23 fences, electric transmission and gas lines, irrigation infrastructure)
 - 24 ○ Construction of new infrastructure (e.g., buildings, roads, fences, electric transmission
25 and gas lines, irrigation infrastructure)
 - 26 ○ Removal of existing vegetation and planting/seeding of vegetation
 - 27 ○ Controlling the establishment of non-native vegetation to encourage the establishment
28 of target native plant species
 - 29 ○ Control of non-native predator and competitor species (e.g., feral cats, rats, and non-
30 native foxes)
 - 31 ○ Minor grading, excavation, and filling to maintain infrastructure and habitat functions
32 (e.g., levee and dike maintenance; grading or placement of fill to eliminate fish
33 stranding locations)

³ Portions of the 5,000 acres of riparian would be included within the 10,000 acres of floodplain and 65,000 acres of tidal habitat.

⁴ The 10,000 acre target for new floodplain restoration does not include floodplain habitat enhanced in the Yolo Bypass under WOCML2.

1 Activities to Reduce Predators and Other Sources of Direct Mortality

- 2 ~~▪ **Funding to Support Actions to Reduce Non-natives from Recreational Watercraft:**~~
3 ~~Providing funding over the term of the BDCP to support implementation of actions to reduce~~
4 ~~the risk of future introductions of non-native aquatic organisms from recreational watercraft~~
- 5 ~~▪ **Funding to Support Actions for Early Detection of Invasives and Rapid Response:**~~ Funding
6 the DFG Oil Spill Prevention and Response (OSPR) aquatic species monitoring program and a
7 DFG volunteer invasive early detection network to increase non-native early detection
8 capability in the Bay-Delta, and funding the DFG Invasive Species Program to support their
9 rapid response program
- 10 ▪ **Funding to Support Removal of Non-native Aquatic Vegetation in BDCP Restoration**
11 **Sites:** ~~Funding the r~~Removal of Brazilian waterweed, water hyacinth, and other non-native
12 submerged and floating aquatic vegetation from ~~Delta waterways~~BDCP restoration sites.
- 13 ~~▪ **Funding to Reduce Size Limits/Increase Bag Limits of Recreational Harvest of Non-native**~~
14 ~~**Predators:**~~ Funding development of a pilot program to reduce the size limits and increase the
15 bag limits of recreational harvest of non-native predatory species in two specific locations in
16 the Delta “hot spots”
- 17 ▪ **Funding to Increase Enforcement of Regulations and Reduce Illegal Harvest of Covered**
18 **Species:** Providing funding to increase the enforcement of fishing regulations in the Delta and
19 Bays to reduce illegal harvest of covered salmonids and sturgeon
- 20 ~~▪ **Funding to Reduce Non-project Diversions Entrainment:**~~ Providing funding to reduce
21 ~~entrainment at non-project diversions~~
- 22 ▪ **Reduce Effects of Predators:** Reducing the effects of predators on covered fish species by
23 conducting localized predator control using a variety of methods in locations in the Delta that
24 are known to have high densities of predators (“predator hot spots”)
- 25 ▪ **Install Non-Physical Barriers:** Installing non-physical barriers at the junction of channels
26 with low survival of outmigrating juvenile salmonids to deter fish from entering these
27 channels

28 Monitoring and Research Programs

- 29 ▪ Activities such as preconstruction surveys, construction monitoring, compliance monitoring,
30 effectiveness monitoring, and system monitoring
- 31 ▪ Focused research may be undertaken or contracted to develop information necessary to better
32 inform BDCP implementation

33 Other Conservation Actions

- 34 ▪ **Operating and Maintaining Oxygen Diffuser (s):** Operating and maintaining an oxygen
35 diffuser(s) in the Stockton Deep Water Ship Channel

1 ~~▪Support Efforts to Limit Recreational and Commercial Splittail Harvest: Developing a~~
2 ~~study of, and draft regulations for limits on recreational and commercial splittail harvest~~

- 3 ▪ **Supporting Development/Implementation of HGMPs:** Minimizing potential adverse
4 effects of hatchery reared salmonids on wild salmonid stocks by supporting the accelerated
5 development and implementation of Hatchery and Genetic Management Plans (HGMPs) for
6 all state Chinook salmon and steelhead hatcheries in the Central Valley of California

7 ~~▪Supporting Development of a Mark-select Fishery Program: Reducing harvest of wild~~
8 ~~stocks of Chinook salmon by producing a proposal by July 2011 for a full scale mark select~~
9 ~~fishery program that may be implemented by the California Department of Fish and Game~~
10 ~~(DFG) and the Pacific Fishery Management Council (PFMC)~~

- 11 ▪ **Support Smelt Conservation Hatchery and Establishment/Expansion of Refugial**
12 **Population:** Supporting: (1) the development of a delta and longfin smelt conservation
13 hatchery by the USFWS to house a delta smelt refugial population and provide a source of
14 delta and longfin smelt for supplementation or reintroduction, if deemed necessary by Fishery
15 Agencies, and (2) the expansion of the refugial population of delta smelt and establishment of
16 a refugial population of longfin smelt at the University of California, Davis Fish Conservation
17 and Culture Laboratory to serve as a population safeguard in case of a catastrophic event in the
18 wild

19 Emergency Actions

- 20 ▪ Repairs of imperiled or broken utility lines, or utility failures; repairs of structures damaged by
21 floods; repair, replacement, and/or removal of failed structures and associated facilities; repair
22 of structures that are in imminent danger of serious damage or failure; protection of structures
23 and property from flooding; fire suppression; response to accidents; cleanup of tree blow
24 downs; repair of gates; repair of levees; cleanup of spilled hazardous materials and/or waste;
25 emergency sedimentation and erosion control activities