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# Chapter 3

## Project Description

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### 3.1 Introduction

This chapter provides a description of the water conveyance features of the proposed project (the proposed modifications to the approved project). The proposed project, as described in this chapter and evaluated in the subsequent resource chapters of the Supplemental EIR/EIS, consists of the refinements to the footprint of the water conveyance facilities developed after DWR approved the project (as fully described in the certified Final EIR).

The following description and accompanying impact assessments rely in part on analyses previously conducted for the California WaterFix. These foundational documents include the Final EIR/EIS, the *Developments after Publication of the Proposal Final EIR* assessment, the January 2018 Addendum to the Final EIR/EIS, and the May 2018 Conceptual Engineering Report.

As discussed in Chapter 1, *Introduction*, DWR is proposing modifying the approved project to further avoid and minimize some of the environmental impacts disclosed in the Final EIR/EIS, including impacts on wetlands and sensitive aquatic resources habitat. Overall, the modification to the footprint of the water conveyance facilities would affect 448 fewer acres of wetlands than the approved project would affect.

The overall configuration of the proposed project would generally be the same as described for the approved project with the exception of a new forebay located on Byron Tract, modification to the configuration of reusable tunnel material (RTM) storage areas, and other smaller project refinements. As described for the approved project, water would be diverted from the Sacramento River through three fish-screened intakes on the east bank of the Sacramento River between Clarksburg and Courtland and then conveyed by tunnels to a to the State Water Project's (SWP's) California Aqueduct and the Central Valley Project's (CVP's) Delta-Mendota Canal.

The following discussion provides an overview of the project components that would be changed under the proposed project. For contextual purposes, the discussion includes a comparison of the proposed project with the approved project to allow the reader to understand how those components have changed. Figure 3-1 provides an overview of the alignments of the proposed project and the approved project. Figure 3-2 shows only the elements that have changed under the proposed project.

Major components of the approved water conveyance facilities which would be modified under the proposed project are:

- **Forebays:** A new forebay located on Byron Tract would be constructed instead of expanding Clifton Court Forebay. The Byron Tract Forebay would be constructed on the area that was proposed for RTM storage under the approved project.
- **RTM Storage:** The configuration and location of RTM storage areas would be changed under the proposed project. This includes the RTM storage sites on Byron Tract, Bouldin Island, and Glanville Tract.

- 1       • **Canals:** A canal would be constructed to link tunnels with the SWP and CVP pumping plants. The  
2 canal linking Clifton Court Forebay with the SWP and CVP pumping plants under the approved  
3 project would no longer be constructed.
- 4       • **Transmission Lines:** The area required for transmission lines would substantially decrease  
5 from that required for the approved project. Transmission line changes would occur primarily  
6 associated with the new Byron Tract Forebay.
- 7       • **Control Structures:** The location and footprint of the control structures on the inlet channels to  
8 the SWP and CVP pumping plants has changed. The control structure on the inlet channel to the  
9 SWP has been moved to just south of the Bryon Highway. The footprint of this structure has  
10 increased from 4.6 acres under the approved project to 14.8 acres. The location of the control  
11 structure on the inlet channel to the CVP has been moved slightly to the east of the site indicated  
12 for the approved project. The footprint of the structure has increased from 2.2 acres under the  
13 approved project to 14.8 acres.
- 14       • **Barge Unloading Sites:** The proposed project would require two fewer barge unloading sites.  
15 The locations of the five remaining barge unloading sites are not changing.

16 The focus of this chapter is on describing the changes to the approved project that are being  
17 considered under the proposed project. These changes are limited to modifications to the footprint  
18 or design of the ancillary water conveyance facilities. Construction activities, in general, and project  
19 operations (water diversions and deliveries) are not changing from those described for the  
20 approved project and, consequently, are not described in this chapter of the Supplemental EIR/EIS  
21 or evaluated in the Supplemental EIR/EIS resource chapters. Final EIR/EIS Chapter 3, *Description of*  
22 *Alternatives*, provides a detailed discussion of the construction and operation of the approved  
23 project.

## 24    **3.2    Proposed Project Modifications**

### 25    **3.2.1    Physical Components**

26       The proposed project would include most of the major components included as part of approved  
27 project. For informational purposes, Table 3-1 provides an overall summary of the physical  
28 characteristics of the proposed project which includes those elements of the approved project that  
29 are not changing.

1 **Table 3-1. Summary of Physical Characteristics of the Proposed Project, Including Elements of the**  
 2 **Approved Project that Would Not Change**

Feature Description/Surface Acreage <sup>a</sup>	Approximate Characteristics	Proposed Project
<b>Conveyance</b>		
Conveyance capacity (cfs)	9,000	No Change
Overall length (miles)	45	No Change
<b>Intake Facilities/Approximately 90 Acres Average per Site</b>		
Number of on-bank fish-screened intakes	3	No Change
Maximum diversion capacity at each intake (cfs)	3,000	No Change
<b>Tunnels</b>		
<b>North Tunnels</b>		
<i><b>Tunnel connecting Intakes 2 and 3 to the intermediate forebay</b></i>		
Tunnel length (miles)	8.73	No Change
Number of tunnel bores; number of shafts (total)	1; 4	No Change
Tunnel finished inside diameter (feet)	28 (between Intakes 2 and 3); 40 (between Intake 3 and the intermediate forebay)	No Change No change
<i><b>Tunnel connecting Intake 5 to the intermediate forebay</b></i>		
Tunnel length (miles)	4.77	No Change
Number of tunnel bores; number of shafts (total)	1; 3	No Change
Tunnel finished inside diameter (feet)	28	No Change
<b>Main Tunnels</b>		
<i><b>Tunnels connecting intermediate forebay to Byron Tract Forebay</b></i>		
Tunnel length for each bore (miles)	29.9	+0.2
Number of tunnel bores; number of shaft sites (total per bore)	2; 5	No Change; -4
Tunnels finished inside diameter (feet)	40	No Change
<b>South Tunnels</b>		
<i><b>Tunnels connecting Byron Tract Forebay with outlet structure</b></i>		
Tunnel length for each bore (miles)	1.6	+1.6
Number of tunnel bore; number of shaft sites (total per bore)	2;2	+2;+2
Tunnels finished inside diameter (feet)	40	40
<b>Intermediate Forebay</b>		
Forebay (acres)	204	-39
Water surface area, at elevation 0 feet (acres)	37	No Change
Active storage volume (acre-feet)	750	No Change
Emergency spillway inundation area (acres)	131	No Change
<b>Byron Tract Forebay Pumping Plants</b>		
Total number of pumps (both pumping plants)	12	No Change <sup>b</sup>
8 large pumps, capacity per pump (cfs)	1,125	No Change
4 small pumps, capacity per pump (cfs)	563	No Change
Total dynamic head (feet)	37	No Change

Feature Description/Surface Acreage <sup>a</sup>	Approximate Characteristics	Proposed Project
<b>Bryon Tract Forebay</b>		
Forebay area (acres)	1,127	+1,127
Water surface area (acres)	820	+ 820
Active storage volume (acre-feet)	5,950	+ 5,950
<b>Canal (South Tunnel Outlet to SWP and CVP)</b>		
South tunnel outlet to SWP intake channel (feet)	2,800	+10,670
South tunnel outlet to CVP intake channel (feet)	4,800	+ 4,600
<b>Power Requirements</b>		
Estimated pumping electric load (megawatt)	36	36 <sup>b</sup>

cfs = cubic feet per second.  
 CVP = Central Valley Project.  
 SWP = State Water Project.

<sup>a</sup> Acreage estimates represent the permanent surface footprints of selected facilities. The total permanent and temporary footprint of the proposed project would be 4,437 acres and 1,352 acres, respectively.

<sup>b</sup> Same pumping plant configuration as for the Clifton Court Forebay Pumping Plant described for the approved project.

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2 The following discussion first describes the changes in temporary construction-related features and  
 3 activities that would occur under the proposed project. That discussion is then followed by a  
 4 description of the changes in the ancillary water conveyance features that would occur under the  
 5 project. The description builds upon the summary information provided in Table 3-1.

6 **3.2.1.1 Construction-Related Activities and Refinements**

7 **Geotechnical Exploration Areas**

8 Geotechnical exploration would be conducted in a fashion similar to that described for the approved  
 9 project. The extent of geotechnical exploration is driven by the size and location of the project  
 10 components and would occur throughout the project area. Because the modifications under the  
 11 proposed project would result in a smaller overall project footprint when considering both  
 12 temporary and permanent impacts, the extent of geotechnical exploration would be slightly less  
 13 when compared with the approved project. The area required for geotechnical exploration under  
 14 the proposed project would total approximately 346 acres, or about 5 fewer acres than required for  
 15 the approved project.

16 **Temporary Barge Unloading Sites**

17 Construction of the proposed project would include the transportation of equipment and materials  
 18 through Delta channels. Equipment and materials would be offloaded at barge unloading sites  
 19 located at or near major construction sites. The proposed project would require two fewer  
 20 temporary barge unloading sites than would the approved project. The previously proposed  
 21 temporary barge unloading sites at Glanville Tract and Clifton Court Forebay have been eliminated.

22 The footprint of temporary barge unloading sites under the proposed project would total  
 23 approximately 32 acres, or approximately the same as the approved project. Eliminating the  
 24 Glanville Tract and Clifton Court Forebay sites would reduce the area impacted by 0.7 acres and 3

1 acres, respectively. However, this reduction would be offset by refinements in the configurations of  
2 the remaining barge sites.

3 The construction, operation, and removal of the temporary barge unloading sites under the  
4 proposed project would be the same as described in Final EIR/EIS Chapter 3, *Description of*  
5 *Alternatives*. Generally, the barge unloading facilities would be designed to maximize continuous  
6 waterway access and maintain a minimum water depth of 6 feet. The barge unloading facilities  
7 would be constructed to meet applicable permit requirements and as well as the requirement of the  
8 Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and local districts with  
9 jurisdiction over specific levees.

### 10 **Concrete Batch Plants**

11 Construction of the proposed project would require three concrete batch plants. Under the proposed  
12 project the concrete batch plant located at Clifton Court Forebay would no longer be required and  
13 would be relocated north of the new Byron Tract Forebay. In addition, the concrete batch plants  
14 proposed at the Intakes 2, 3, and 5 work sites have been eliminated and would be replaced by a  
15 single batch plant located within the previously designated work area located immediately north of  
16 Intake 2. A single batch plant to supply concrete to the three intakes is proposed as a means to  
17 reduce adverse air quality impacts. The combined footprint of concrete batch plants under the  
18 proposed project would total approximately 131 acres. Thirteen additional acres would be required  
19 for batch plants compared with the approved project.

### 20 **Tunnel Work Areas**

21 The design of the proposed project has allowed reconfiguration of the surface footprint required  
22 during the construction phase of the project. Overall, the proposed project would temporarily affect  
23 344 acres, or 25 fewer acres than would be affected by the approved project.

### 24 **Other Construction-Related Refinements**

25 Refinements to tunnel work areas and launch and retrieval shaft footprints also are proposed. The  
26 footprint for tunnel work areas would total 344 acres, or 25 fewer acres than needed for the  
27 approved project. The footprint for the launch and retrieval shaft would total 98 acres, or 4 fewer  
28 acres than needed for the approved project.

### 29 **3.2.1.2 Project Component Refinements**

30 This section describes the proposed project refinements to the features as described for the  
31 approved project. A detailed discussion of each of the project components that are not being  
32 changed or refined is provided in Final EIR/EIS Chapter 3, *Description of Alternatives*. The  
33 refinements include constructing a forebay at Byron Tract (in replacement for the approved project  
34 modifications to Clifton Court Forebay), a canal linking the forebay with the SWP and CVP,  
35 modifications to the configuration of some of the RTM storage sites, changes in the configuration of  
36 the pumping plants at the southern end of the tunnels, and changes in portions of the tunnel  
37 alignments.

1        **Byron Tract Forebay and South Tunnels**

2        **Byron Tract Forebay**

3        Byron Tract Forebay would serve as a storage facility for water diverted by the north intakes. The  
4        forebay would be located northwest of the existing Clifton Court Forebay (Figure 3-1). The Byron  
5        Tract Forebay would not be connected to Clifton Court Forebay, as both would be separated by  
6        Italian Slough. The forebay would have a surface area of approximately 820 acres and a total  
7        footprint of approximately 1,081 acres. The forebay would have an active storage capacity of 5,950  
8        acre-feet.

9        The addition of the Byron Tract Forebay would eliminate the need to make modifications to Clifton  
10       Court Forebay that were included in the approved project. The approved project modifications  
11       included expanding the footprint of Clifton Court Forebay to the south and building a dike across the  
12       forebay to create an area for storage of water diverted from the north Delta. The new Byron Tract  
13       Forebay and south tunnels would avoid impacts on wetlands and waters that would have resulted  
14       from the modifications to Clifton Court Forebay under the approved project.

15       **South Tunnels and Canal**

16       Water would be conveyed from the Byron Tract Forebay to the SWP and CVP by two tunnels  
17       approximately 1.6 miles long (Figure 3-1). The two tunnels would be similar to the main tunnels,  
18       each 40 feet in diameter. The tunnels would begin at the southern end of the Byron Tract Forebay  
19       and end at an outlet structure located south of the Byron Highway and between the entrance  
20       channels to the Banks and Jones Pumping Plants. Water would be diverted from the Byron Tract  
21       Forebay through a tunnel inlet facility and flow by gravity between the forebay and the outlet  
22       structure. Constructing the tunnels would be accomplished in a fashion similar to that employed for  
23       constructing the main tunnels including tunnel boring machines and installation of precast tunnel  
24       liners. RTM produced by the tunneling would be stored adjacent to Byron Tract Forebay.

25       Once reaching the outlet structure, water would be directed to either the Banks or Jones Pumping  
26       Plant inlet channels through an open canal (Figure 3-1). The total footprint of the canal would be  
27       approximately 126 acres, with a temporary canal work area of an additional 39 acres. The segment  
28       of the canal between the outlet structure and the Banks Pumping Plant inlet channel would be  
29       approximately 2,800 feet long with a maximum capacity of 10,670 cubic feet per second (cfs). The  
30       segment of the canal linking the outlet structure with the Jones Pumping Plant inlet channel would  
31       be approximately 4,800 feet long with a maximum capacity of 4,600 cfs.

32       Two water control structures would also be constructed. The purpose of the water control  
33       structures is to allow water to be diverted either from the new Byron Tract Forebay or Clifton Court  
34       Forebay for the SWP or from Byron Tract Forebay or the Delta channels for the CVP. One structure  
35       would be located on the California Aqueduct just south of the Byron Highway between Clifton Court  
36       Forebay and the point where the new canal would discharge to the California Aqueduct. A second  
37       control structure would be constructed on the entrance channel to the Jones Pumping Plant  
38       upstream from the point where the new canal would discharge to the entrance channel. The control  
39       structures would total approximately 30 acres.

## 1       **Reusable Tunnel Material Storage Areas**

2       Areas used for the storage of RTM would be located on Glanville Tract, Bouldin Island, and Byron  
3       Tract. The configuration of these RTM areas is proposed to be modified either to avoid sensitive  
4       resources or to accommodate changes in the footprint of water conveyance facilities. The total  
5       acreage of RTM sites for the proposed project would total approximately 2,382 acres. This is  
6       approximately 171 fewer acres than under the approved project. The decrease in acreage is  
7       primarily a result of reconfiguring the RTM storage sites on Bryon Tract to accommodate the  
8       footprint of the new forebay. The RTM storage site near the immediate forebay would be  
9       reconfigured. RTM would not be stored on Zacharias Island or on existing water features on  
10      Glanville Tract. The Bouldin Island RTM storage site would be moved from the southern half of the  
11      island to the northern half. The Byron Tract RTM storage site would be moved from the southern  
12      portion of the tract to the northern portion to accommodate the new Byron Tract Forebay.

## 13      **Tunnel Pumping Plants**

14      The proposed project would include two separate pumping plants located at the southern end of the  
15      tunnels. Water reaching the end of the tunnels would be discharged directly to the new Byron Tract  
16      Forebay. The number of pumps and pumping capacity would be the same as described for the  
17      proposed project. The pumping plant previously proposed at Clifton Court Forebay would no longer  
18      be constructed as the main tunnels will now terminate the proposed Byron Tract Forebay

## 19      **Tunnel Alignments**

20      The proposed alignment of the tunnels would change slightly from that described for the approved  
21      project. In general, the tunnel alignments are identical for the proposed project and the approved  
22      project with the exception of the alignment near the community of Hood, under the southern  
23      portion of Staten Island, Bouldin Island and the northern portion of Venice Island, and at the  
24      southern portion of Victoria Island. The portion of the tunnel alignment near Hood would be moved  
25      to the east to avoid crossing under the community and to avoid affecting municipal water wells. The  
26      portion of the tunnel alignment under Staten, Bouldin, and Venice Islands would be moved to the  
27      east of the alignment of the approved project. This segment would be approximately 4.7 miles long,  
28      or approximately 0.5 mile shorter than for the approved project, and would result in a change in the  
29      location of the launch shaft on Bouldin Island and access roads. The alignment was changed to  
30      address issues with constructing the water conveyance facilities on peat soils.

31      The change to the southern end of the tunnel alignment was required to allow discharge of water  
32      from the tunnels to the new Byron Tract Forebay. This realignment would be approximately 2 miles  
33      long. As indicated above, the realigned tunnels would terminate at separate shafts and would be  
34      served by two pump stations.

35      The construction methods for the tunnels would be the same as described in Final EIR/EIS Chapter  
36      3, *Description of Alternatives*.

## 37      **Summary**

38      The overall proposed project footprint would permanently affect approximately 60 fewer acres  
39      when compared with the footprint of the water conveyance facilities under the approved project. As  
40      discussed above, the change in the footprint of the facilities would include a decrease in the acreage  
41      required for electric transmission facilities and RTM storage sites. The modifications to the water

1 conveyance facilities under the proposed project combined with the elements of the footprint that  
2 would not change from the approved project would total approximately 4,437 acres. Similarly, the  
3 total area that would be temporarily affected during construction of the modified facilities under the  
4 proposed project combined with the approved project would total approximately 1,352 acres.  
5 However, as noted above, the impact assessments in the Supplemental EIR/EIS resource chapters  
6 are only addressing the incremental change in the acreage and configuration of water conveyance  
7 facilities for the proposed project as compared with the approved project.

## 8 **3.2.2 Construction**

9 The water conveyance features for the proposed project would be constructed in a fashion similar to  
10 that of the approved project. Final EIR/EIS Chapter 3, *Description of Alternatives*, provides a detailed  
11 description of the construction process.

### 12 **3.2.2.1 Project Schedule**

13 Construction of the proposed project is estimated to commence in late 2018 and be completed in  
14 2031. Geotechnical explorations, construction of temporary utilities, and implementation of certain  
15 mitigation would precede construction of the water conveyance facilities. This initial phase of the  
16 proposed project would be completed in 2021. Construction of the water conveyance facilities (e.g.,  
17 intakes, forebays, tunnels) would begin in 2021 and be completed in 2031. Table 22B-1 in Appendix  
18 22B, *Air Quality Assumptions*, provides detailed construction schedules for the proposed project.

## 19 **3.2.3 Operations**

20 The proposed project would not modify the project operations discussed and evaluated for the  
21 approved project. Therefore, this Supplemental EIR/EIS does not address the operation-related  
22 impacts, which are described in Final EIR/EIS Chapter 3 *Description of Alternatives* and which are  
23 evaluated in the respective resource chapters of the Final EIR/EIS.

## 24 **3.3 Environmental Commitments**

25 To achieve the applicable regulatory standards under federal Endangered Species Act Section 7 and  
26 California Endangered Species Act Section 2081(b) while also complying with NEPA and CEQA and  
27 requirements anticipated for compliance with Section 404 of the Clean Water Act, the  
28 Environmental Commitments discussed for the approved project in Final EIR/EIS Chapter 3,  
29 *Description of Alternatives*, would remain applicable to the proposed project. The applicable  
30 Environmental Commitments are 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, and 16. These commitments consist  
31 primarily of habitat restoration, protection, enhancement, and management activities necessary to  
32 mitigate adverse effects from construction of the water conveyance facilities and from the  
33 conversion of some habitats due to restoration. The implementation process for each of the  
34 Environmental Commitments is described in Final EIR/EIS Chapter 3, *Description of Alternatives*,  
35 Section 3.6.2, *Conservation Components*.



## 1 **3.4 Other Options Considered**

2 This section provides an overview of the other options considered in developing the revised RTM  
3 storage areas as well as the water conveyance facilities connecting the new Byron Tract Forebay  
4 with the SWP and CVP pumping plants.

### 5 **3.4.1 RTM Areas**

6 All RTM storage sites proposed under the approved project were evaluated to determine the  
7 feasibility of changing their footprints in addition to the modified RTM storage sites brought  
8 forward for detailed assessment in this Supplemental EIR/EIS. After careful consideration, it was  
9 determined reconfiguring some of the RTM storage sites would not result in avoiding significant  
10 environmental impacts or cost savings and the locations of these sites have not changed from those  
11 described in the Final EIR/EIS. The RTM storage sites that have been reconfigured are evaluated in  
12 this Supplemental EIR/EIS and are described in Section 3.2.1.2, *Project Component Refinements*.

### 13 **3.4.2 Clifton Court Forebay Options**

14 As part of the process for developing the proposed project, DWR assessed optional methods for  
15 storing water diverted from the north Delta in Clifton Court Forebay and other methods for moving  
16 water from the forebay to the SWP and CVP. Each of the options described below includes a new  
17 forebay located on Byron Tract. The new Byron Tract Forebay is a major component of the proposed  
18 project and is evaluated in detail in each of the resource sections included in this Supplemental  
19 EIR/EIS.

20 A range of methods for conveying water from the new Byron Tract Forebay was evaluated to  
21 minimize the environmental impacts of connecting the new forebay with the SWP and CVP. This  
22 section provides a brief overview of the options considered and the reasons why those options were  
23 not brought forward for detailed consideration in the Supplemental EIR/EIS.

#### 24 **Option 1—Tunnels and Open Canal**

25 In addition to the new Byron Tract Forebay, this option would include tunnels and an open canal  
26 connecting the forebay with the existing SWP and CVP south Delta facilities. Two parallel 40-foot-  
27 diameter tunnels would extend from the southern end of the proposed Byron Tract Forebay directly  
28 south to a canal linking the entrance channel to the Banks Pumping Plant with the entrance channel  
29 to the Jones Pumping Plant. Option 1 would also include water control structures on both entrance  
30 channels. Each tunnel would be approximately 1.5 miles long and the open canal linking the two  
31 entrance channels would be approximately 1.25 miles long.

32 Option 1 would reduce permanent impacts on natural communities, grasslands, and tidal perennial  
33 aquatic habitat, valley foothill riparian habitat, and vernal pool complexes when compared with the  
34 modification to Clifton Court Forebay evaluated in the Final EIR/EIS. On careful consideration of the  
35 environmental impacts DWR has decided to bring this optional configuration forward for detailed  
36 evaluation in the Supplemental EIR/EIS.

## **Option 2—Three Tunnels**

Option 2 would include the new Byron Tact Forebay and tunnels connecting the forebay with the existing SWP and CVP south Delta facilities. Two parallel 40-foot-diameter tunnels would extend from the southern end of the new Byron Tract Forebay to the entrance channel to the SWP. Each tunnel would be approximately 1.5 miles long and would terminate at an interconnection structure constructed between the tunnels and the entrance channel to the Banks Pumping Plant. The third tunnel would extend from the southern end of the new forebay and end at an interconnection structure located on the entrance channel to the Jones Pumping Plant. This single 40-foot diameter tunnel would be approximately 2.25 miles long. This option would also include water control structures on both entrance channels.

Option 2 would reduce permanent impacts on natural communities, grasslands, and tidal perennial aquatic habitat, valley foothill riparian habitat, and vernal pool complexes when compared with the modification to Clifton Court Forebay evaluated in the Final EIR/EIS. On careful consideration of the environmental impacts and costs associated with constructing three tunnels, DWR has decided not to bring this option configuration forward for detailed evaluation in the Supplemental EIR/EIS.

## **Option 3—Shorter Canal**

Option 3 would include the new Byron Tact Forebay and a canal system connecting the new forebay with the entrance channels to the SWP Banks Pumping Plant and the CVP Jones Pumping Plant. The canal would generally trend in a southerly direction from the forebay to the entrance channel to the SWP Banks Pumping Plant. This segment of the canal would require a siphon to convey water under Italian Slough and a second siphon to convey water under the Byron Highway. This segment would be approximately 1.75 miles long. The second segment of the canal would connect the entrance channel to the Banks Pumping Plant with that of the Jones Pumping Plant. This second segment would be approximately 1.25 miles long. This alternative would also include water control structures on both entrance channels.

Of the four options considered, this would result in the greatest impacts on natural communities, vernal pools, alkali seasonal wetlands, and wetlands/waters of the United States. On careful consideration of the environmental impacts associated with constructing the open canals and in particular impacts on wetlands and waters of the United States, DWR has decided not to bring this optional configuration forward for detailed evaluation in the Supplemental EIR/EIS.

## **Option 4—Canal**

Option 4 would include the new Byron Tact Forebay and an open canal system connecting the new forebay with the entrance channels to the SWP Banks Pumping Plant and the CVP Jones Pumping Plant. The canal would generally trend in an easterly direction from the forebay, cross under the Byron Highway and then generally parallel the highway in a southeastern direction and end at the entrance channel to the Banks Pumping Plant. This segment of the canal would be approximately 2.5 miles long. A second canal would connect the entrance channel to the Banks Pumping Plant with that of the Jones Pumping Plant. This second segment would be approximately 1.25 miles long. This alternative would also include water control structures on both entrance channels.

Option 4 would reduce permanent impacts on natural communities, grasslands, tidal perennial aquatic habitat, valley foothill riparian habitat, and vernal pool complexes when compared with the modification to Clifton Court Forebay evaluated in the Final EIR/EIS. However, this option would

1 also redirect impacts onto other sensitive species, including red-legged frog. Because it would  
2 introduce a major linear feature into the landscape, it could also isolate habitat and potentially  
3 sensitive species habitats. On careful consideration of the new environmental impacts resulting  
4 from constructing the canal, DWR has decided not to bring this optional configuration forward for  
5 detailed evaluation in the Supplemental EIR/EIS.

## 6 **Conclusion**

7 Of the four options considered, Option 1 would result in fewer environmental impacts on natural  
8 communities than Options 3 and 4 but greater impacts than Option 2. However, Option 2 is expected  
9 to be more costly than Option 1 because more tunneling would be necessary. Option 1 would also  
10 result in fewer impacts on vernal pool complexes as well as wetlands and waters of the United States  
11 when compared with Options 3 and 4. On careful consideration of the environmental impacts  
12 associated with constructing the open channels and, in particular, impacts on wetlands and waters  
13 of the United States, DWR decided to bring Option 1 forward for detailed evaluation in the  
14 Supplemental EIR/EIS.

## 15 **3.5 References Cited**

16 California WaterFix. 2018. *Conceptual Engineering Report: California WaterFix Byron Tract Forebay*  
17 *Option (WaterFix BTO)*. May 2018. Sacramento, CA.