

## 23.1 Summary Comparison of Proposed Project

A summary of noise and vibration impacts of the approved and proposed projects is shown in Figure 23-0. This figure summarizes information on the number of residential parcels affected by daytime and nighttime noise from construction and operations of each option.

**Figure 23-0. Comparison of Noise Impacts**

| Chapter 23 – Noise   |   | Approved Project                     | Proposed Project (Total)  | Proposed Project (Increment) |
|--|---|--------------------------------------|---|------------------------------|
| Impact NOI-1: Exposure of Noise-Sensitive Land Uses to Noise from Construction of Conveyance Facilities (number of residential parcels affected daytime/nighttime)   | Intakes, pumping plants, and barge unloading facilities | 254                                  | 235   | -19                          |
|  | Conveyance and Associated Facilities                    | 430                                  | 527   | +97                          |
|  | Truck trips and worker commutes                         | 401 <sup>a</sup>                     | 401 <sup>a</sup>  | No change                    |
|  |   | Significant and unavoidable/ adverse | Remains significant and unavoidable/ adverse. No change to the findings from the approved project |                              |
| Impact NOI-2: Exposure of Sensitive Receptors to Vibration or Groundborne Noise from Construction of Water Conveyance Facilities (number of residential parcels affected)  |   | 7                                    | 7   | No change                    |
|  |   | Significant and unavoidable/ adverse | Remains significant and unavoidable/ adverse. No change to the findings from the approved project |                              |
| Impact NOI-3: Exposure of Noise-Sensitive Land Uses to Noise from Operation of Water Conveyance Facilities (number of residential parcels affected daytime/nighttime)  |   | 1                                    | 0   | -1                           |
|  |   | Less than significant/ not adverse   | Remains less than significant/ not adverse. No change to the findings from the approved project   |                              |
| <sup>a</sup> Based on actual residential parcel counts for jurisdictions where parcel land use assignments were included in the dataset. An estimate of residential composition of parcels was added to the total for jurisdictions where land use type of parcels was not identified. |   |                                      |   |                              |

1 As depicted in Figure 23-0, the proposed project would not result in new impacts or a substantial  
2 increase in the severity of previously identified significant impacts related to noise. This chapter  
3 contains the information necessary to make the Final EIR/EIS adequate for the approved project as  
4 revised.

## 5 **23.2 Environmental Setting/Affected Environment**

### 6 **23.2.1 Affected Environment**

7 The existing noise-sensitive receptors and land uses that would be affected by noise and vibration  
8 during construction and operation of the proposed project are described in Final EIR/EIS Chapter  
9 23, *Noise*, Section 23.1, *Environmental Setting/Affected Environment*. The Final EIR/EIS provides a  
10 discussion of existing sources of noise and associated noise levels in the seven counties included in  
11 the Plan Area. The proposed project would be located entirely within the previously analyzed  
12 project area; therefore, the Existing Conditions would be the same as described in the Final EIR/EIS.

## 13 **23.3 Environmental Consequences**

14 This section describes the potential effects of the modifications to the approved project to noise  
15 levels at noise-sensitive uses within the study area. Noise effects due to construction of the proposed  
16 project are evaluated for severity and, where appropriate, mitigation measures are identified.  
17 Potential noise effects of changes in the new Byron Tract Forebay pumping plant is evaluated in this  
18 analysis but other operational effects are not because the operation of the approved and proposed  
19 north Delta intake facilities would be identical. Similarly, potential noise effects of Environmental  
20 Commitments are not addressed because Environmental Commitments for the approved and  
21 proposed project would be approximately the same and noise effects would be similar.

### 22 **23.3.1 Methods for Analysis**

23 The methods applied to the analysis of noise and vibration effects on sensitive land uses and  
24 receptors are the same as indicated in the Final EIR/EIS. This section considers impacts due to  
25 project modifications, which are analyzed in terms of types and numbers of sensitive uses that  
26 would be affected. Thresholds used in the analysis are discussed in Section 23.3.2 of the Final  
27 EIR/EIS. Noise contours for construction and operation of the project were developed in the Final  
28 EIR/EIS to illustrate the locations in the Plan Area where noise levels from the project are  
29 anticipated to equal or exceed noise impact thresholds for construction and operation. Figures  
30 depicting noise contours for construction have been updated to account for changes in noise levels  
31 from project modifications. These figures are located in Appendix 23A.

### 32 **23.3.2 Determination of Effects**

33 The impact thresholds used to determine if impacts under CEQA are significant and effects under  
34 NEPA are adverse are the same as indicated in the Final EIR/EIS.

## 1    **23.3.3        Effects and Mitigation Approaches**

2        The Noise Abatement Plan (see Appendix 3B, *Environmental Commitments, AMMs, and CMs*) would  
3        be in place during construction to avoid or minimize adverse effects. *Supplementary Information for*  
4        *the EIR/EIS: Bay Delta Conservation Plan* (California Department of Water Resources 2010) includes  
5        approaches to designing mitigation which are taken into account in the discussion of mitigation  
6        measures in this chapter and are incorporated into the Noise Abatement Plan as appropriate.

### 7    **23.3.3.1        No Action Alternative**

8        Under the No Action Alternative, the new Byron Tract Forebay, reusable tunnel material (RTM)  
9        storage and other footprint changes described for the proposed project would not occur. For the  
10       purposes of this Supplemental EIR/EIS, the No Action Alternative, against which this proposed  
11       project is compared, is consistent with the No Action Alternative Early Long-Term in the Final  
12       EIR/EIS. No differing effects on noise conditions would occur along the proposed project alignment  
13       from what was previously described in the No Action Alternative Early Long-Term in the Final  
14       EIR/EIS if the No Action Alternative were to occur.

### 15   **23.3.3.2        Proposed Project**

16       The proposed project would result in temporary noise effects in the study area associated with  
17       construction of the conveyance facilities including the proposed Byron Tract Forebay and  
18       conveyance and relocation of RTM storage areas. Construction and storage sites would be altered  
19       which would require the use of construction equipment and heavy trucks. Heavy trucks and worker  
20       trips on local roads adjacent to the study area may result in increased levels of traffic noise that  
21       would be similar to the approved project. Access roads, and other incidental facilities would also be  
22       needed for operation of the project, and construction of these structures would result in temporary  
23       noise effects at nearby noise-sensitive uses such as residences and recreation areas. Implementation  
24       of the proposed project would also result in permanent noise effects due to operation of pumping  
25       plants, which would be similar to the approved project.

### 26    **Impact NOI-1: Exposure of Noise-Sensitive Land Uses to Noise from Construction of Water** 27    **Conveyance Facilities**

#### 28    ***RTM Storage***

29       Changes related to moving RTM storage on and near Zacharias Island, on Bouldin Island, and  
30       adjacent to Byron Tract Forebay under the proposed project would result in noise effects in  
31       different locations than under the approved project. Consolidation of RTM east of the intermediate  
32       forebay under the proposed project would result in noise effects similar to those of the approved  
33       project. Modification of the RTM storage areas on Bouldin Island under the proposed project would  
34       result in noise levels exceeding the daytime and nighttime noise thresholds at additional sensitive  
35       land uses in the densely-populated community of Terminous, including the Tower Park Marina and  
36       a nearby mobile home park located east of Bouldin Island. Noise related to relocation of the RTM  
37       storage area north of the Byron Tract Forebay would increase the potential for noise effects at  
38       residences east of the community of Byron. The RTM storage at this location would be  
39       approximately 4,200 feet from Discovery Bay located to the north, which would not result in  
40       daytime or nighttime noise effects in this area. The revised location of barge facilities under the  
41       proposed project is expected to result in a reduced construction noise effect on residences

1 compared with the effect of the approved project. Noise contours for the proposed project are  
2 shown in Figures 23A-04 (North and South).

### 3 ***Byron Tract Forebay and Conveyance***

4 Construction of the new Byron Tract Forebay and conveyance under the proposed project on the  
5 northwest and west side of Clifton Court Forebay would result in noise effects similar to effects of  
6 the approved project; however, these effects would occur in different locations. Noise contours for  
7 60 A-weighted decibels (dBA) daytime and 50 dBA nighttime thresholds indicate that although the  
8 new Byron Tract Forebay would be closer to residential developments in Byron and in Discovery  
9 Bay compared with the approved project, these areas would not fall within the daytime or nighttime  
10 noise contours shown in Figure 23A-04 South. Additionally, noise effects would be below daytime  
11 and nighttime thresholds at residences within and nearby the River's End Marina south of Clifton  
12 Court Forebay.

### 13 ***Truck Trips and Worker Commutes***

14 Project-generated heavy truck trips and worker commutes are predicted to result in increased  
15 traffic noise levels at noise-sensitive land uses adjacent to local roadways. Future noise levels due to  
16 truck trips and worker commutes under the proposed project would be similar to those of the  
17 approved project. The increase in noise levels under the proposed project would exceed the project  
18 threshold for traffic noise on local roadways in a manner similar to that described for the approved  
19 project in the Final EIR/EIS.

20 ***NEPA Effects:*** Construction of the proposed project would result in increased noise levels at  
21 residences, recreational uses and schools in the Delta, due to construction equipment in work areas.  
22 Traffic noise due to project-related truck trips would result in an increase in noise levels at receiver  
23 locations near truck routes similar to the approved project. The effect of increased noise levels due  
24 to construction is considered to be adverse. Noise analysis results for the proposed project are  
25 similar to results for the approved project, except for changes associated with RTM storage, the  
26 Byron Tract Forebay and conveyance, and barge unloading facilities. The proposed project  
27 construction noise could result in noise levels exceeding daytime and nighttime thresholds at up to  
28 527 residential receptors. This would be an increase of 97 residences compared with the approved  
29 project. Mitigation Measures NOI-1a and NOI-1b have been adopted to reduce this effect. These  
30 measures are discussed in detail in the Final EIR/EIS.

31 ***CEQA Conclusion:*** The proposed conveyance facility modifications would result in an increased  
32 number of noise impacts at residences compared with the approved project. The impact of exposing  
33 noise-sensitive land uses during construction to noise levels above daytime and nighttime  
34 thresholds for the proposed project would be considered significant for the same reasons identified  
35 for the approved project in the Final EIR/EIS. Compared with the approved project, the proposed  
36 project conveyance facility modifications would result in a greater number of residences affected  
37 near RTM storage areas because facility changes under the proposed project would locate project  
38 facilities toward a net higher number of residences. Effects related to roadway noise associated with  
39 the proposed project modifications would be similar to those of the approved project because the  
40 magnitude of construction would be similar in both cases.

41 As part of the proposed project, DWR would implement the noise abatement plan as outlined in  
42 Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Mitigation Measures NOI-1a and NOI-1b  
43 would further reduce noise impacts on sensitive land uses. Although implementation of these

1 measures would reduce the impact, it is not anticipated that feasible measures would be available in  
2 all situations to reduce construction noise to levels below the applicable thresholds. This conclusion  
3 would be the same as identified for the approved project; the impact would be significant and  
4 unavoidable.

5 **Incremental Impact:** A total of 97 more residences would be affected by daytime and nighttime  
6 noise during construction in RTM areas and of the conveyance and associated facilities. A total of  
7 19 fewer residences would be affected by daytime and nighttime noise during construction of  
8 other conveyance facilities, barge unloading facilities, and pumping plants. This impact is  
9 considered to be significant, as it was for the approved project and Mitigation Measures NOI-1a  
10 and b as well as noise abatement environmental commitments would partially reduce this effect  
11 but not to a less-than-significant level; therefore this impact would be significant and  
12 unavoidable, the same as for the approved project.

13 **Mitigation Measure NOI-1a: Employ Noise-Reducing Construction Practices during**  
14 **Construction**

15 Please see Mitigation Measure NOI-1a in Chapter 23 of the Final EIR/EIS.

16 **Mitigation Measure NOI-1b: Prior to Construction, Initiate a Complaint/Response**  
17 **Tracking Program**

18 Please see Mitigation Measure NOI-1b in Chapter 23 of the Final EIR/EIS.

19 **Impact NOI-2: Exposure of Sensitive Receptors to Vibration or Groundborne Noise from**  
20 **Construction of Water Conveyance Facilities**

21 ***RTM Storage***

22 RTM storage changes under the proposed project would not result in vibration or groundborne  
23 noise, similar to the approved project, because RTM storage would not require pile driving and noise  
24 associated with tunnel boring machines (TBMs) and tunnel locomotives is not associated with RTM  
25 storage areas.

26 ***Byron Tract Forebay and Conveyance***

27 Construction at the proposed Byron Tract Forebay would not involve use of impact pile driving or  
28 drilled piles. Groundborne noise associated with TBMs at this location would not affect sensitive  
29 receptors because tunnel-boring activities would be underground and sensitive land uses are not  
30 located near the new consolidated pumping plant location. There would be no vibration effects due  
31 to modifications of the forebay and conveyance under the proposed project.

32 ***NEPA Effects:*** Construction of the proposed project would result in perceptible vibration similar to  
33 that of the approved project during periods of impact pile driving at barge unloading facilities. No  
34 incremental effects would result from proposed project RTM storage and Byron Tract Forebay  
35 construction because no pile driving or TBM and tunnel locomotives would be associated with these  
36 modifications. The same number of residential parcels would be affected under the proposed project  
37 and the approved project. The overall effect of increased vibration and groundborne noise levels due  
38 to construction of the proposed project would be adverse. Mitigation Measure NOI-2 have been  
39 adopted to reduce this effect. This measure is discussed in detail in the Final EIR/EIS.

1 **CEQA Conclusion:** The proposed conveyance facility modifications would not result in new vibration  
2 impacts. The impact of exposing residential structures to groundborne noise and vibration during  
3 proposed project construction would be significant for the same reasons identified for the approved  
4 project. Although Mitigation Measure NOI-2 would reduce the impact, it is not anticipated that  
5 feasible measures will be available in all situations to reduce vibration to levels below the applicable  
6 thresholds. This impact would therefore remain significant and unavoidable, as described for the  
7 approved project.

8 **Incremental Impact:** No change associated with vibration or groundborne noise would occur  
9 compared with the approved project. This impacts is considered significant. Mitigation Measure  
10 NOI-2 would partially reduce this impact but not to a less-than-significant level; therefore this  
11 impact is significant and unavoidable, the same as for the approved project.

12 **Mitigation Measure NOI-2: Employ Vibration-Reducing Construction Practices during**  
13 **Construction of Water Conveyance Facilities**

14 Please see Mitigation Measure NOI-2 in Chapter 23 of the Final EIR/EIS.

15 **Impact NOI-3: Exposure of Noise-Sensitive Land Uses to Noise from Operation of Water**  
16 **Conveyance Facilities**

17 The proposed project modifications include locating the pumping plant at the proposed Byron Tract  
18 Forebay instead of Clifton Court Forebay. The proposed location of the pumping plant is not  
19 expected to result in noise levels that exceed daytime or nighttime noise thresholds. Operation noise  
20 contours are shown in Figure 23B-04 in Appendix 23B. The nearest residences are in the community  
21 of Kings Island, located about 1 mile east of the proposed Byron Tract Forebay location of the  
22 pumping plant, greater than the 2,800-foot distance indicated for nighttime impacts from operation  
23 of pumping plants under the proposed project.

24 **NEPA Effects:** The proposed project's noise levels associated with the operation of consolidated  
25 pumping plants at Byron Tract Forebay would not exceed daytime or nighttime thresholds.  
26 Therefore, this impact would not be adverse. This would be a change from the approved project,  
27 which indicated adverse effects that could be mitigated through Mitigation Measure NOI-3.

28 **CEQA Conclusion:** The impact of exposing noise-sensitive land uses during pumping plant  
29 operations to noise levels above the daytime (50 dBA equivalent sound level) or nighttime (45 dBA  
30 equivalent sound level) noise thresholds would be less than significant. No mitigation is required.

31 **Incremental Impact:** There would be one less residence impacted by pump station operational  
32 noise compared with the approved project. This impact is less than significant. No mitigation is  
33 required.

## 1   **23.3.4    Cumulative Analysis**

### 2       **Impact NOI-5: Cumulative Effects of Increased Noise and Vibration from Construction** 3       **Activities and Operation of Conveyance Facilities Occurring within the Delta**

4       The cumulative discussion in Chapter 23 of the Final EIR/EIS concluded that the project’s  
5       incremental contribution to adverse noise and vibration effects would be cumulatively considerable.  
6       As stated in the impact discussion above, construction activities would generate noise and vibration.  
7       Operation of pumping facilities related to the extraction and transport of water would also generate  
8       noise. The analysis of cumulative effects for noise remains the same as described in the Final  
9       EIR/EIS with consideration of the proposed project modifications.

10       Implementation of best management practices, environmental commitments, and Mitigation  
11       Measures NOI-1a, NOI-1b, and NOI-2 for project-specific effects would reduce noise and vibration  
12       impacts from construction. However, there may be situations where construction noise and  
13       vibration effects would remain adverse under NEPA, and significant and unavoidable under CEQA. If  
14       these situations occur concurrently or in proximity to other noise- and vibration-generating  
15       projects, the proposed project’s incremental contribution to adverse noise and vibration effects  
16       would be cumulatively considerable.

## 17   **23.4    References Cited**

18       California Department of Water Resources. 2010. *Supplementary Information for EIR/EIS: Bay Delta*  
19       *Conservation Plan*. Sacramento, CA.