

1 lines would not have an adverse effect on Suisun song sparrow and saltmarsh common  
2 yellowthroat.

3 **NEPA Effects:** The construction and presence of new transmission lines would not have an adverse  
4 effect on Suisun song sparrow and saltmarsh common yellowthroat because the location of the  
5 current populations, species ranges, and suitable habitat for the species make collision with the  
6 proposed transmission lines highly unlikely.

7 **CEQA Conclusion:** The construction and presence of new transmission lines would not be expected  
8 to have an adverse effect on Suisun song sparrow and saltmarsh common yellowthroat because the  
9 location of the current populations, species ranges, and suitable habitat for the species make  
10 collision with the proposed transmission lines highly unlikely. Therefore, the construction and  
11 presence of new transmission lines under Alternative 4A would have a less-than-significant impact  
12 on Suisun song sparrow and saltmarsh common yellowthroat.

### 13 **Swainson's Hawk**

14 This section describes the effects of Alternative 4A, including water conveyance facilities  
15 construction and implementation of environmental commitments, on Swainson's hawk. The habitat  
16 model used to assess impacts on Swainson's hawk includes plant alliances and land cover types  
17 associated with Swainson's hawk nesting and foraging habitat. Alternative 4A would result in both  
18 temporary and permanent losses of Swainson's hawk modeled habitat as indicated in Table 12-4A-  
19 34. The majority of the losses would occur from the construction of the water conveyance facilities.  
20 Although protection and restoration for the loss of nesting and foraging habitat would be initiated in  
21 the same timeframe as the losses, it could take one or more decades (for nesting habitat) for  
22 restored habitats to replace the functions of habitat lost. This time lag between impacts and  
23 restoration of habitat function would be minimized through specific requirements of *AMM18*  
24 *Swainson's Hawk*, including transplanting mature trees in the near-term time period. Full  
25 implementation of Alternative 4A would also include the following environmental commitments and  
26 Resource Restoration and Performance Principles which would benefit the Swainson's hawk.

- 27 ● Restore or create 251 acres of valley/foothill riparian natural community (Environmental  
28 Commitment 7).
- 29 ● Protect 103 acres of existing valley/foothill riparian natural community (Environmental  
30 Commitment 3).
- 31 ● Restore, maintain, and enhance riparian areas to provide a mix of early-, mid- and late-  
32 successional habitat types with a well-developed understory of dense shrubs (Resource  
33 Restoration and Performance Principles VFR1).
- 34 ● Maintain a single contiguous patch of 100 acres of mature riparian forest in either CZ 4 or CZ 7.  
35 The mature riparian forest intermixed with a portion of the early- to mid-successional riparian  
36 vegetation will be a minimum width of 330 feet (Resource Restoration and Performance  
37 Principles VFR1 and VFR2).
- 38 ● Conserve 1 acre of Swainson's hawk foraging habitat for each acre of lost foraging habitat in  
39 minimum patch sizes of 40 acres (Resource Restoration and Performance Principle SH1).
- 40 ● Protect Swainson's hawk foraging habitat above 1 foot above mean sea level with at least 50% in  
41 very high-value habitat (see Table 12-4A-35 for a definition habitat value) production (Resource  
42 Restoration and Performance Principle SH2).

- Maintain and protect the small patches of important wildlife habitats associated with cultivated lands within the reserve system including isolated valley oak trees, trees and shrubs along field borders and roadsides, remnant groves, riparian corridors, water conveyance channels, grasslands, ponds, and wetlands (Resource Restoration and Performance Principle CL1).

As explained below, with the restoration or protection of these amounts of habitat, in addition to management activities that would enhance habitat for the species and implementation of AMM1–AMM7, AMM10 *Restoration of Temporarily Affected Natural Communities*, and AMM18 *Swainson’s Hawk* to minimize potential effects, impacts on Swainson’s hawk would not be adverse for NEPA purposes and would be less than significant for CEQA purposes.

**Table 12-4A-34. Changes in Swainson’s Hawk Modeled Habitat Associated with Alternative 4A (acres)**

Project Component	Habitat Type	Permanent	Temporary
Water Conveyance Facilities	Nesting	20	13
	Foraging	3,415	1,178
<b>Total Impacts Water Conveyance Facilities</b>		<b>3,435</b>	<b>1,191</b>
Environmental Commitments 4, 6–7, 9–11 <sup>a</sup>	Nesting	5	0
	Foraging	2,212	0
<b>Total Impacts Environmental Commitments 4, 6–9–11<sup>a</sup></b>		<b>2,217</b>	<b>0</b>
<b>Total Nesting</b>		<b>25</b>	<b>13</b>
<b>Total Foraging</b>		<b>5,627</b>	<b>1,178</b>
<b>TOTAL IMPACTS</b>		<b>5,652</b>	<b>1,191</b>

<sup>a</sup> See discussion below for a description of applicable environmental commitments.

**Impact BIO-83: Loss or Conversion of Habitat for and Direct Mortality of Swainson’s Hawk**

Alternative 4A would result in the combined permanent and temporary loss of up to 6,843 acres of modeled habitat (38 acres of nesting habitat and 6,805 acres of foraging habitat) for Swainson’s hawk (Table 12-4A-34). Project measures that would result in these losses are water conveyance facilities and transmission line construction, and establishment and use of reusable tunnel material areas, tidal habitat restoration (Environmental Commitment 4), riparian restoration, (Environmental Commitment 7), grassland restoration (Environmental Commitment 8), and nontidal marsh restoration (Environmental Commitment 10). Habitat enhancement and management activities (Environmental Commitment 11), which include ground disturbance or removal of nonnative vegetation, could result in local habitat effects. In addition, maintenance activities associated with the long-term operation of the water conveyance facilities and other physical facilities could affect Swainson’s hawk modeled habitat. Each of these individual activities is described below.

- *Water Facilities Construction:* Construction of Alternative 4A water conveyance facilities would result in the combined permanent and temporary loss of up to 33 acres of Swainson’s hawk nesting habitat (20 acres of permanent loss habitat and 13 acres of temporary loss). In addition, 4,593 acres of foraging habitat would be removed (3,415 acres of permanent loss, 1,178 acres of temporary loss; Table 12-4A-34). Activities that would impact modeled Swainson’s hawk habitat consist of tunnel, forebay, and intake construction, temporary access roads, and construction of

1 transmission lines. Most of the permanent loss of nesting habitat would occur where Intakes 2,  
 2 3, and 5 impact the Sacramento River’s east bank between Freeport and Courtland. The riparian  
 3 areas here are very small patches, some dominated by valley oak and others by nonnative trees.  
 4 Some nesting habitat would be lost due to construction of a permanent access road from the  
 5 new forebay west to a reusable tunnel material disposal area and where the realigned SR 160  
 6 would cross Snodgrass Slough. Permanent losses would also occur along Lambert Road where  
 7 permanent utility lines would be installed and from the construction of an operable barrier at  
 8 the confluence of Old River and the San Joaquin River. Temporary losses of nesting habitat  
 9 would result from the construction of a barge unloading facility west of the intermediate forebay  
 10 in Snodgrass Slough and where temporary work areas surround intake sites. The riparian  
 11 habitat in these areas is also composed of very small patches or stringers bordering waterways,  
 12 which are composed of valley oak and scrub vegetation. There are at least 12 occurrences of  
 13 nesting Swainson’s hawk that overlap with the construction footprint of water conveyance  
 14 facilities, primarily from the construction of intakes 2, 3, and 5, and the construction footprint  
 15 for the permanent and temporary transmission lines. The implementation of *AMM18 Swainson’s*  
 16 *Hawk*, would minimize the effects of construction on nesting Swainson’s hawks if present in the  
 17 area (see Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS). Impacts on foraging  
 18 habitat would occur throughout the central Delta in CZs 3–6, and CZ 8. Permanent foraging  
 19 habitat impacts would include 883 acres of very high-value habitat (Table 12-4A-35). Refer to  
 20 the Terrestrial Biology Mapbook in Appendix A of this RDEIR/SDEIS for a detailed view of  
 21 Alternative 4A construction locations. Impacts from water conveyance facilities would occur  
 22 within the first 10–14 years of Alternative 4A implementation.

23 **Table 12-4A-35. Acres of Impacted Foraging Habitat by Value Classes for Swainson’s Hawk**

Foraging Habitat Value Class	Cultivated Land and Other Land Cover Types	Water Conveyance Facilities	Environmental Commitments
		Permanent (temporary)	permanent (temporary)
Very high	Alfalfa hay	883 (174)	549 (0)
Moderate	Irrigated pasture, other hay crops	1,456 (529)	1,121 (0)
Low	Other irrigated field and truck/berry crops	92 (67)	256 (0)
Very low	Safflower, sunflower, corn, grain sorghum	986 (408)	286 (0)

- 24
- 25 ● *Environmental Commitment 4 Tidal Natural Communities Restoration*: Tidal habitat restoration  
 26 site preparation and inundation would permanently remove an estimated 5 acres of Swainson’s  
 27 hawk nesting habitat and 54 acres of foraging habitat. Because the species is highly mobile and  
 28 wide-ranging, habitat fragmentation is not expected to reduce the use of remaining cultivated  
 29 lands or preclude access to surrounding lands. Trees would not be actively removed but tree  
 30 mortality would be expected over time as areas became tidally inundated.
  - 31 ● *Environmental Commitment 7 Riparian Natural Community Restoration*: Riparian restoration  
 32 would permanently remove approximately 251 acres of Swainson’s hawk foraging habitat.
  - 33 ● *Environmental Commitment 8 Grassland Natural Community Restoration*: Grassland restoration  
 34 would convert approximately 1,070 acres of cultivated lands that provide Swainson’s hawk  
 35 foraging habitat to grassland.

- 1       ● *Environmental Commitment 10 Nontidal Marsh Restoration:* Restoration and creation of nontidal  
2 freshwater marsh would result in the permanent removal of 832 acres of Swainson’s hawk  
3 foraging habitat.
- 4       ● *Environmental Commitment 11 Natural Communities Enhancement and Management:* Habitat  
5 management- and enhancement-related activities could disturb Swainson’s hawk nests if they  
6 were present near work sites. A variety of habitat management actions that are designed to  
7 enhance wildlife values in Alternative 4A-protected habitats may result in localized ground  
8 disturbances that could temporarily remove small amounts of Swainson’s hawk habitat and  
9 reduce the functions of habitat until restoration is complete. Ground-disturbing activities, such  
10 as removal of nonnative vegetation and road and other infrastructure maintenance, are  
11 expected to have minor effects on available Swainson’s hawk habitat and are expected to result  
12 in overall improvements to and maintenance of habitat values. These effects cannot be  
13 quantified, but are expected to be minimal and would be avoided and minimized by the AMMs  
14 listed below (AMMs are described in detail in Appendix 3.C, *Avoidance and Minimization*  
15 *Measures*, of the Draft BDCP. *AMM18 Swainson’s Hawk* and updated versions of *AMM2*  
16 *Construction Best Management Practices and Monitoring* and *AMM6 Disposal and Reuse of Spoils,*  
17 *Reusable Tunnel Material and Dredged Material* are described in Appendix D, *Substantive BDCP*  
18 *Revisions*, of this RDEIR/SDEIS). Environmental Commitment 11 would also include the  
19 construction of recreational-related facilities including trails, interpretive signs, and picnic  
20 tables (see Draft BDCP Chapter 4, *Covered Activities and Associated Federal Actions*). The  
21 construction of trailhead facilities, signs, staging areas, picnic areas, bathrooms, etc. would be  
22 placed on existing, disturbed areas when and where possible.
- 23       ● Permanent and temporary nesting habitat losses from the above environmental commitments,  
24 would primarily consist of small, fragmented riparian stands. Temporarily affected nesting  
25 habitat would be restored as riparian habitat within 1 year following completion of construction  
26 activities as described in *AMM10 Restoration of Temporarily Affected Natural Communities*. The  
27 restored riparian habitat would require 1 to several decades to functionally replace habitat that  
28 has been affected and for trees to attain sufficient size and structure suitable for nesting by  
29 Swainson’s hawks. *AMM18 Swainson’s Hawk* contains actions described below to reduce the  
30 effect of temporal loss of nesting habitat, including the transplanting of mature trees and  
31 planting of trees near high-value foraging habitat. The functions of cultivated lands and  
32 grassland communities that provide foraging habitat for Swainson’s hawk are expected to be  
33 restored relatively quickly (within 10–14 years of Alternative 4A implementation).
- 34       ● *Water Facilities Operations and Maintenance:* Postconstruction operation and maintenance of  
35 the above-ground water conveyance facilities and restoration infrastructure could result in  
36 ongoing but periodic disturbances that could affect Swainson’s hawk use of the surrounding  
37 habitat. Maintenance activities would include vegetation management, levee and structure  
38 repair, and re-grading of roads and permanent work areas. These effects, however, would be  
39 reduced by AMM1–AMM7 and *AMM18 Swainson’s Hawk* described below.
- 40       ● *Injury and Direct Mortality:* Construction-related activities would not be expected to result in  
41 direct mortality of adult or fledged Swainson’s hawk if they were present in the study area,  
42 because they would be expected to avoid contact with construction and other equipment.  
43 However, if Swainson’s hawk were to nest in the construction area, construction-related  
44 activities, including equipment operation, noise and visual disturbances could affect nests or  
45 lead to their abandonment, potentially resulting in mortality of eggs and nestlings. These effects

1 would be avoided and minimized with the incorporation of *AMM18 Swainson's Hawk* into the  
2 Alternative 4A.

3 The following paragraphs summarize the combined effects discussed above and describe  
4 environmental commitments and Resource Restoration and Performance Principles that offset or  
5 avoid these effects. NEPA and CEQA conclusions are also provided at the end of the section.

6 The study area supports approximately 9,796 acres of modeled nesting habitat and 477,879 acres of  
7 modeled foraging habitat for Swainson's hawk. Alternative 4A as a whole would result in the  
8 permanent loss of and temporary effects on 38 acres of potential nesting habitat (<1% of the  
9 potential nesting habitat in the study area) and 6,805 acres of foraging habitat (1% of the foraging  
10 habitat in the study area).

11 Typical NEPA and CEQA project-level mitigation ratios for those natural communities affected would  
12 be 1:1 for restoration/creation and 1:1 protection of valley/foothill riparian habitat for nesting  
13 habitat, and 1:1 protection for foraging habitat. Using these ratios would indicate that 38 acres of  
14 nesting habitat should be restored/ created and 38 acres should be protected to compensate for the  
15 losses of Swainson's hawk nesting habitat. In addition, 6,805 acres of foraging habitat should be  
16 protected to mitigate the losses of Swainson's hawk foraging habitat.

17 Project proponents would commit to conserving 1 acre of Swainson's hawk foraging habitat for  
18 every acre of lost foraging habitat (Resource Restoration and Performance Principle SH1). These  
19 acres of cultivated lands and grasslands would be located above 1 foot above sea level, and at least  
20 50% would be in very high-value production (Resource Restoration and Performance Principle  
21 SH2). These Resource Restoration and Performance Principles would be associated with  
22 Environmental Commitment 3 and would occur in the same timeframe as the construction and early  
23 restoration losses.

24 Alternative 4A includes conservation commitments through *Environmental Commitment 7 Riparian*  
25 *Natural Community Restoration* and *Environmental Commitment 3 Natural Communities Protection*  
26 *and Restoration* to restore or create 251 acres and protect 103 acres of valley/foothill riparian  
27 woodland, which would provide nesting habitat for Swainson's hawk. Riparian areas would be  
28 restored, maintained, and enhanced to provide a mix of early-, mid- and late-successional habitat  
29 types with a well-developed understory of dense shrubs. A single, contiguous patch of 100 acres of  
30 mature riparian forest would be maintained in either CZ 4 or CZ 7, ensuring that acres of restored  
31 and protected habitat provide habitat for nesting raptors. In addition, small but essential nesting  
32 habitat for Swainson's hawk associated with cultivated lands would also be maintained and  
33 protected such as isolated trees, tree rows along field borders or roads, or small clusters of trees in  
34 farmyards or at rural residences (Environmental Commitment 3).

35 The 251 acres of restored riparian habitat would be initiated in the near-term to offset the loss of  
36 modeled nesting habitat, but would require one to several decades to functionally replace habitat  
37 that has been affected and for trees to attain sufficient size and structure suitable for nesting by  
38 Swainson's hawks. This time lag between the removal and restoration of nesting habitat could have  
39 a substantial impact on Swainson's hawk in the near-term time period. Nesting habitat is limited  
40 throughout much of the study area, consisting mainly of intermittent riparian, isolated trees, small  
41 groves, tree rows along field borders, roadside trees, and ornamental trees near rural residences.  
42 The removal of nest trees or nesting habitat would further reduce this limited resource and could  
43 reduce or restrict the number of active Swainson's hawk nests within the study area until restored  
44 riparian habitat is sufficiently developed.

1 *AMM18 Swainson's Hawk* would implement a program to plant large mature trees, including  
2 transplanting trees scheduled for removal. These would be supplemented with additional saplings  
3 and would be expected to reduce the temporal effects of loss of nesting habitat. The plantings would  
4 occur prior to or concurrent with (in the case of transplanting) the loss of trees. In addition, at least  
5 5 trees (five gallon container size) would be planted for every tree anticipated to be removed by  
6 construction during the near-term period that was suitable for nesting by Swainson's hawks (20 feet  
7 or taller). A variety of native tree species would be planted to provide trees with differing growth  
8 rates, maturation, and life span. Trees would be planted in areas that support high-value foraging  
9 habitat in clumps of at least 3 trees each at appropriate sites within or adjacent to conserved  
10 cultivated lands, or they could be incorporated as a component of the riparian restoration  
11 (Environmental Commitment 7) where they are in close proximity to suitable foraging habitat.  
12 Replacement trees that were incorporated into the riparian restoration would not be clustered in a  
13 single region of the study area, but would be distributed throughout the lands protected as foraging  
14 habitat for Swainson's hawk. To enhance Swainson's hawk and reproductive output until the  
15 replacement nest trees become suitable for nesting, 100 acres of high-quality foraging habitat  
16 (alfalfa rotation) would be protected in the near-term for each potential nest site removed (a nest  
17 site is defined as a 125-acre block in which more than 50% of nest trees are 20 feet or greater in  
18 height) as a result of construction activity during the near-term. The foraging habitat to be protected  
19 would be within 6 kilometers of the removed tree within an otherwise suitable foraging landscape  
20 and on land not subject to threat of seasonal flooding, construction disturbances, or other conditions  
21 that would reduce the foraging value of the land.

22 The project also includes commitments to implement *AMM1 Worker Awareness Training*, *AMM2*  
23 *Construction Best Management Practices and Monitoring*, *AMM3 Stormwater Pollution Prevention*  
24 *Plan*, *AMM4 Erosion and Sediment Control Plan*, *AMM5 Spill Prevention, Containment, and*  
25 *Countermeasure Plan*, *AMM6 Disposal and Reuse of Spoils, Reusable Tunnel Material, and Dredged*  
26 *Material*, *AMM7 Barge Operations Plan*, and *AMM10 Restoration of Temporarily Affected Natural*  
27 *Communities*. All of these AMMs include elements that would avoid or minimize the risk of affecting  
28 individuals and species habitats adjacent to work areas. The AMMs are described in detail in  
29 Appendix 3.C, *Avoidance and Minimization Measures*, of the Draft BDCP, and updated versions of  
30 AMM2 and AMM6 are described in Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS.

31 **NEPA Effects:** The loss of Swainson's hawk nesting and foraging habitat from Alternative 4A would  
32 not be adverse under NEPA because project proponents have committed to avoiding and minimizing  
33 effects from and to restoring and protecting an acreage that meets or exceeds the typical mitigation  
34 ratios described above. This habitat protection, restoration, management, and enhancement would  
35 be guided by Resource Restoration and Performance Principles VFR1, VFR2, SH1, SH2, and CL1, and  
36 by AMM1-AMM7, *AMM10 Restoration of Temporarily Affected Natural Communities*, and *AMM18*  
37 *Swainson's Hawk*, which would be in place during all project activities. Considering these  
38 commitments, losses and conversions of Swainson's hawk habitat under Alternative 4A would not  
39 be adverse.

40 **CEQA Conclusion:** The effects on Swainson's hawk habitat from Alternative 4A would represent an  
41 adverse effect as a result of habitat modification of a special-status species and potential for direct  
42 mortality in the absence of environmental commitments and AMMs. However, project proponents  
43 have committed to habitat protection, restoration, management, and enhancement associated with  
44 Environmental Commitment 3, Environmental Commitment 7, and Environmental Commitment 11  
45 that meet or exceed the typical mitigation ratios described above. These conservation activities  
46 would be guided by Resource Restoration and Performance Principles VFR1, VFR2, SH1, SH2, and

1 CL1s, and by AMM1–AMM6, *AMM10 Restoration of Temporarily Affected Natural Communities*, and  
2 *AMM18 Swainson’s Hawk*, which would be in place during all project activities. Considering these  
3 commitments, Alternative 4A would not result in a substantial adverse effect through habitat  
4 modifications and would not substantially reduce the number or restrict the range of Swainson’s  
5 hawk. Therefore, Alternative 4A would have a less-than-significant impact on Swainson’s hawk  
6 under CEQA.

#### 7 **Impact BIO-84: Effects on Swainson’s Hawk Associated with Electrical Transmission Facilities**

8 New transmission lines would increase the risk that Swainson’s hawks could be subject to power  
9 line strikes, which could result in injury or mortality of Swainson’s hawks. However, this species  
10 would be at low risk of bird strike mortality based on factors assessed in the bird strike vulnerability  
11 analysis (BDCP Attachment 5.J-2, *Memorandum: Analysis of Potential Bird Collisions at Proposed*  
12 *BDCP Transmission Lines*). Factors analyzed include the height of the new transmission lines and the  
13 flight behavior of the species. The existing network of transmission lines in the study area currently  
14 poses the same small risk for Swainson’s hawk, and any incremental risk associated with the new  
15 power line corridors would also be expected to be low. Marking transmission lines with flight  
16 diverters that make the lines more visible to birds has been shown to dramatically reduce the  
17 incidence of bird mortality (Brown and Drewien 1995). Yee (2008) estimated that marking devices  
18 in the Central Valley could reduce avian mortality by 60%. All new project transmission lines would  
19 be fitted with flight diverters. Bird flight diverters would make transmission lines highly visible to  
20 Swainson’s hawks and would further reduce any potential for powerline collisions.

21 **NEPA Effects:** New transmission lines would minimally increase the risk for Swainson’s hawk power  
22 line strikes. All new transmission lines constructed as a result of the project would be fitted with  
23 bird diverters, which have been shown to reduce avian mortality by 60%. By implementing *AMM20*  
24 *Greater Sandhill Crane*, the construction and operation of transmission lines would not result in an  
25 adverse effect on Swainson’s hawk.

26 **CEQA Conclusion:** New transmission lines would minimally increase the risk for Swainson’s hawk  
27 power line strikes. All new transmission lines constructed as a result of the project would be fitted  
28 with bird diverters, which have been shown to reduce avian mortality by 60%. By implementing  
29 *AMM20 Greater Sandhill Crane*, the construction and operation of transmission lines would result in  
30 a less-than-significant impact on Swainson’s hawk.

#### 31 **Impact BIO-85: Indirect Effects of The Project on Swainson’s Hawk**

32 Noise and visual disturbances from the construction of water conveyance facilities and other  
33 environmental commitments could reduce Swainson’s hawk use of modeled habitat adjacent to  
34 work areas. Construction noise above background noise levels (greater than 50 dBA) could extend  
35 500 to 5,250 feet from the edge of construction activities (Appendix 5.J, Attachment 5J.D, *Indirect*  
36 *Effects of the Construction of the BDCP Conveyance Facility on Sandhill Crane*, Table 5J.D-4). However,  
37 there are no available data to determine the extent to which these noise levels could affect  
38 Swainson’s hawk. Moreover, operation and maintenance of the water conveyance facilities,  
39 including the transmission facilities, could result in ongoing but periodic postconstruction  
40 disturbances that could affect Swainson’s hawk use of the surrounding habitat. Swainson’s hawks  
41 are seasonally abundant across much of the study area wherever adequate nest trees occur within a  
42 cultivated landscape that supports suitable foraging habitat. There would be a potential for noise  
43 and visual disturbances associated with Alternative 4A actions to temporarily displace Swainson’s

1 hawks and temporarily reduce the use of suitable habitat adjacent to construction areas. These  
2 adverse effects would be minimized with the implementation of *AMM18 Swainson's Hawk*.

3 The use of mechanical equipment during water conveyance facilities construction could cause the  
4 accidental release of petroleum or other contaminants that could affect Swainson's hawk foraging in  
5 the surrounding habitat. The inadvertent discharge of sediment or excessive dust adjacent to  
6 suitable habitat could also have an adverse effect on these species. *AMM2 Construction Best  
7 Management Practices and Monitoring* would minimize the likelihood of such spills and ensure that  
8 measures are in place to prevent runoff from the construction area and negative effects of dust on  
9 habitat.

10 **NEPA Effects:** Noise and visual disturbances from the construction of water conveyance facilities  
11 could reduce Swainson's hawk use of modeled habitat adjacent to work areas. Moreover, operation  
12 and maintenance of the water conveyance facilities, including the transmission facilities, could result  
13 in ongoing but periodic postconstruction disturbances that could affect Swainson's hawk use of the  
14 surrounding habitat. Noise, the potential for hazardous spills, increased dust and sedimentation, and  
15 operations and maintenance of the water conveyance facilities would not have an adverse effect on  
16 Swainson's hawk with the implementation of AMM1–AMM7, and *AMM18 Swainson's Hawk*.

17 **CEQA Conclusion:** Noise and visual disturbances from the construction of water conveyance  
18 facilities could reduce Swainson's hawk use of modeled habitat adjacent to work areas. Moreover,  
19 operation and maintenance of the water conveyance facilities, including the transmission facilities,  
20 could result in ongoing but periodic postconstruction disturbances that could affect Swainson's  
21 hawk use of the surrounding habitat. The effects of noise, the potential for hazardous spills,  
22 increased dust and sedimentation, and operations and maintenance of the water conveyance  
23 facilities would result in a less-than-significant impact on Swainson's hawk with the implementation  
24 of AMM1–AMM7, and *AMM18 Swainson's Hawk*.

#### 25 **Impact BIO-86: Periodic Effects of Inundation of Swainson's Hawk Nesting and Foraging** 26 **Habitat as a Result of Implementation of Alternative 4A**

27 No Alternative 4A components would result in periodic effects on Swainson's hawk.

28 **NEPA Effects:** No effect.

29 **CEQA Conclusion:** No impact.

#### 30 **Tricolored Blackbird**

31 This section describes the effects of Alternative 4A, including water conveyance facilities  
32 construction and implementation of environmental commitments, on tricolored blackbird. The  
33 habitat model used to assess effects for tricolored blackbird is based on breeding habitat and  
34 nonbreeding habitat. Although nesting colonies have been documented along the fringe of Suisun  
35 Marsh, in the Yolo Bypass, along the southwestern perimeter of the study area, and in the southeast  
36 corner of the study area near the San Joaquin River, breeding colonies are uncommon in the study  
37 area. Modeled breeding habitat includes bulrush/cattail wetlands and shrub communities that may  
38 provide suitable nesting substrate, and adjacent high-value foraging areas that occur within 5 miles  
39 of nesting colonies documented in the study area. The nesting component consists of nontidal  
40 freshwater perennial emergent marsh, and valley foothill riparian natural communities that occur  
41 within 5 miles of breeding colonies documented between 1998 and 2012. The foraging component  
42 includes cultivated lands and noncultivated land cover types known to support abundant insect