Appendix 10C. Special-status Wildlife Impacts Tables

This appendix contains the special-status wildlife impacts tables. To develop the tables, biologists overlaid GIS data for permanent and temporary impact areas from Project alternatives onto modeled habitat for each species or group of species (Appendix 10B, *Wildlife Habitat Models and Methods*). The acreages of permanent and temporary impact areas from Alternatives 1 and 3 are reported together because impacts from these alternatives would be similar, and those for Alternative 2 are reported separately. In addition, the acreage totals for indirect impact areas are included for vernal pool branchiopods.

Table 10C-1. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Conservancy Fairy Shrimp, Vernal Pool Fairy Shrimp, and Vernal Pool Tadpole Shrimp (Vernal Pool Branchiopods) by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Indirect Impacts	Alternative 2 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Indirect Impacts
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	--	0	0	--
Regulating Reservoirs and Conveyance Complex	17	0	--	16	0	--
Sites Reservoir Inundation Area	257	0	--	252	0	--
Inlet/Outlet Works	<1	0	--	<1	0	--
Dams and Dikes	13	0	--	10	0	--
Conveyance to Sacramento River	0	0	--	0	0	--
Roads	61	0	--	78	0	--
Recreation Areas	<1	0	--	0	0	--
Sites Reservoir and Related Facilities	19	0	--	1	0	--
Total Impacts	**366**	**0**	**120**	**358**	**0**	**123**

Table 10C-2. Acreages of Permanent and Temporary Impacts on Potential Antioch Dunes Anthicid Beetle and Sacramento Anthicid Beetle Habitat by Project Component

	Alternatives 1 and 3 Permanent Impacts[1]	Alternatives 1 and 3 Temporary Impacts[1]	Alternative 2 Permanent Impacts[1]	Alternative 2 Temporary Impacts[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0
Regulating Reservoirs and Conveyance Complex	0	0	0	0
Sites Reservoir Inundation Area	0	0	0	0
Inlet/Outlet Works	0	0	0	0
Dams and Dikes	0	0	0	0
Conveyance to Sacramento River	0	0	0	<1
Roads	0	0	0	0
Recreation Areas	0	0	0	0
Sites Reservoir and Related Facilities	0	0	0	0
Total Impacts	**0**	**0**	**0**	**<1**

[1] Potentially suitable habitat for Antioch Dunes anthicid beetle and Sacramento anthicid beetle consists of sandy banks and sand bars along the Sacramento River.

Table 10C-3. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Valley Elderberry Longhorn Beetle by Project Component

	Alternatives 1 and 3 Permanent Impacts[1]	Alternatives 1 and 3 Temporary Impacts[1]	Alternative 2 Permanent Impacts[1]	Alternative 2 Temporary Impacts[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	1	0	1
Regulating Reservoirs and Conveyance Complex	6	583	109	531
Sites Reservoir Inundation Area	11,764	0	11,020	0
Inlet/Outlet Works	25	9	26	0
Dams and Dikes	166	45	94	39
Conveyance to Sacramento River	1	36	1	58
Roads	852	154	708	236
Recreation Areas	295	0	272	0
Sites Reservoir and Related Facilities	427	156	455	99
Total Impacts	13,535	983	12,686	964

[1] Potentially suitable habitat for valley elderberry longhorn beetle consists of upland riparian, scrub-shrub wetland, forested wetland, blue oak woodland, oak savanna, annual grassland, and ruderal land cover types

Table 10C-4. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Monarch Butterfly by Project Component

	Alternatives 1 and 3 Permanent Impacts[1]	Alternatives 1 and 3 Temporary Impacts[1]	Alternative 2 Permanent Impacts[1]	Alternative 2 Temporary Impacts[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	2	0	2
Regulating Reservoirs and Conveyance Complex	8	841	114	786
Sites Reservoir Inundation Area	12,978	0	12,216	0
Inlet/Outlet Works	25	9	27	0
Dams and Dikes	182	47	106	41
Conveyance to Sacramento River	1	45	1	72
Roads	1,111	192	1,485	296
Recreation Areas	785	0	722	0
Sites Reservoir and Related Facilities	437	181	464	100
Total Impacts	**15,528**	**1,317**	**15,135**	**1,297**

[1] Potentially suitable monarch butterfly habitat consists of annual grassland, blue oak woodland, chamise chaparral, ditch, ephemeral stream, foothill pine, forested wetland, freshwater marsh, hayfield (includes alfalfa), intermittent stream, managed wetland, mixed chaparral, oak savanna, ornamental woodland, perennial stream, pond, reservoir, ruderal, scrub-shrub wetland, seasonal wetland, and upland riparian land cover types.

Table 10C-5. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Crotch Bumble Bee and Western Bumble Bee by Project Component

	Alternatives 1 and 3 Permanent Impacts[1]	Alternatives 1 and 3 Temporary Impacts[1]	Alternative 2 Permanent Impacts[1]	Alternative 2 Temporary Impacts[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0
Regulating Reservoirs and Conveyance Complex	6	595	109	544
Sites Reservoir Inundation Area	11,815	0	11,114	0
Inlet/Outlet Works	25	9	26	0
Dams and Dikes	170	44	95	38
Conveyance to Sacramento River	<1	6	<1	6
Roads	961	165	1163	262
Recreation Areas	699	0	662	0
Sites Reservoir and Related Facilities	428	173	456	99
Total Impacts	**14,104**	**992**	**13,626**	**949**

[1] Potentially suitable Crotch bumble bee and western bumble bee habitat consists of annual grassland, chamise chaparral, mixed chaparral, oak savanna, and seasonal wetland land cover types, as well as ruderal areas that are adjacent to these land cover types.

Table 10C-6. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Western Spadefoot by Project Components

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0	0	0	0	0
Regulating Reservoirs and Conveyance Complex	<1	6	18	467	1	59	18	441
Sites Reservoir Inundation Area	420	11,420	0	0	411	10,724	0	0
Inlet/Outlet Works	<1	24	0	9	<1	26	0	0
Dams and Dikes	14	161	2	43	11	92	2	38
Conveyance to Sacramento River	0	0	3	0	0	0	3	0
Roads	69	946	4	173	82	1,273	24	255
Recreation Areas	1	746	0	0	1	684	0	0
Sites Reservoir and Related Facilities	6	426	23	156	6	453	1	99
Total Impacts	**511**	**13,730**	**50**	**848**	**512**	**13,311**	**48**	**832**

[1] Potentially suitable western spadefoot aquatic habitat consists of intermittent stream and seasonal wetland land cover types.

[2] Potentially suitable western spadefoot upland habitat consists of annual grassland, blue oak woodland, chamise chaparral, foothill pine, mixed chaparral, and oak savanna within 1,200 feet of modeled aquatic habitat.

Table 10C-7. Acreages of Permanent and Temporary Impacts on Modeled Habitat for California Red-legged Frog by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0	0	0	0	0
Regulating Reservoirs and Conveyance Complex	1	5	238	240	1	5	238	240
Sites Reservoir Inundation Area	260	5,792	0	0	6	306	1	63
Inlet/Outlet Works	<1	7	0	1	256	5,496	0	0
Dams and Dikes	5	82	1	17	<1	6	0	0
Conveyance to Sacramento River	0	0	0	0	4	50	1	14
Roads	14	396	2	77	0	0	0	0
Recreation Areas	2	219	0	0	12	342	9	143
Sites Reservoir and Related Facilities	6	292	2	124	2	198	0	0
Total Impacts	**288**	**6,793**	**249**	**460**	**280**	**6,403**	**249**	**460**

[1] Potentially suitable California red-legged frog aquatic habitat consists of freshwater marsh, perennial stream, intermittent stream, pond, and reservoir.
[2] Potentially suitable California red-legged frog upland habitat consists of annual grassland, blue oak woodland, ephemeral stream, foothill pine, forested wetland, oak savanna, ruderal, scrub-shrub wetland, seasonal wetland, and upland riparian land cover types within 300 feet of aquatic habitat.

Table 10C-8. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Western Pond Turtle by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	<1	15	4	<1	<1	15	4
Regulating Reservoirs and Conveyance Complex	3	16	266	577	8	113	257	522
Sites Reservoir Inundation Area	525	11,758	0	0	515	11,013	0	0
Inlet/Outlet Works	<1	25	0	9	<1	26	0	0
Dams and Dikes	16	165	3	45	12	94	3	38
Conveyance to Sacramento River	<1	1	9	41	2	1	106	71
Roads	80	1,028	5	184	94	1,385	27	267
Recreation Areas	2	782	0	0	2	719	0	0
Sites Reservoir and Related Facilities	9	426	25	156	8	455	1	99
Total Impacts	**635**	**14,201**	**323**	**1,016**	**641**	**13,806**	**408**	**1,001**

[1] Potentially suitable western pond turtle aquatic habitat consists of ditch, canal, perennial stream, intermittent stream, forested wetland, freshwater marsh, managed wetland, pond, reservoir, rice, scrub-shrub wetland, and seasonal wetland land cover types.
[2] Potentially suitable western pond turtle upland habitat consists of annual grassland, blue oak woodland, chamise chaparral, disturbed, foothill pine, mixed chaparral, oak savanna, ruderal, and upland riparian that is within 1,640 feet of modeled aquatic habitat.

Table 10C-9. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Giant Gartersnake by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]	Aquatic Habitat[1]	Upland Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	<1	14	3	<1	<1	14	3
Regulating Reservoirs and Conveyance Complex	1	8	1	2	<1	2	0	0
Sites Reservoir Inundation Area	0	0	0	0	0	0	0	0
Inlet/Outlet Works	0	0	0	0	0	0	0	0
Dams and Dikes	0	0	0	0	0	0	0	0
Conveyance to Sacramento River	0	0	0	0	0	0	0	0
Roads	<1	<1	6	13	2	1	103	42
Recreation Areas	<1	18	0	0	<1	17	0	0
Sites Reservoir and Related Facilities	0	0	0	0	0	0	0	0
Total Impacts	**2**	**26**	**21**	**18**	**2**	**20**	**117**	**45**

[1] Potentially suitable giant gartersnake aquatic habitat consists of canal, ditch, freshwater marsh, managed wetland, pond, and rice land cover types east of the GCID Main Canal, and east and west of the GCID Main Canal south of Stone Corral Creek.

[2] Potentially suitable giant gartersnake upland habitat consist of annual grassland, disturbed, and ruderal land cover types within 200 feet of suitable aquatic habitats.

Table 10C-10. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Northern Harrier by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	18	<1	18
Regulating Reservoirs and Conveyance Complex	51	614	117	556
Sites Reservoir Inundation Area	12,262	0	11,633	0
Inlet/Outlet Works	23	7	24	0
Dams and Dikes	167	45	92	36
Conveyance to Sacramento River	<1	79	3	199
Roads	894	149	951	247
Recreation Areas	461	0	451	0
Sites Reservoir and Related Facilities	413	173	440	98
Total Impacts	**14,273**	**1,084**	**13,711**	**1,154**

[1] Potentially suitable nesting and foraging habitat for northern harrier consists of annual grassland, disturbed, ephemeral stream, freshwater marsh, hayfield (includes alfalfa), managed wetland, rice, row crops, ruderal, and seasonal wetland land cover types.

Table 10C-11. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Golden Eagle by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0	0	0	0	0
Regulating Reservoirs and Conveyance Complex	0	6	0	580	0	108	0	529
Sites Reservoir Inundation Area	442	11,271	0	0	317	10,648	0	0
Inlet/Outlet Works	2	23	1	7	2	24	0	0
Dams and Dikes	9	154	2	42	10	83	4	34
Conveyance to Sacramento River	0	0	0	0	0	0	0	0
Roads	218	773	38	145	333	981	38	227
Recreation Areas	318	460	0	0	266	450	0	0
Sites Reservoir and Related Facilities	17	409	1	155	17	437	1	98
Total Impacts	**1,006**	**13,096**	**43**	**929**	**946**	**12,731**	**43**	**889**

[1] Potentially suitable nesting habitat for golden eagle consists of blue oak woodland, foothill pine, and oak savanna land cover types.

[2] Potentially suitable foraging habitat for golden eagle consists of annual grassland, oak savanna, chamise chaparral, and mixed chaparral land cover types.

Table 10C-12. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Bald Eagle by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	1	0	1
Regulating Reservoirs and Conveyance Complex	<1	225	1	224
Sites Reservoir Inundation Area	230	0	175	0
Inlet/Outlet Works	<1	0	<1	0
Dams and Dikes	8	2	8	2
Conveyance to Sacramento River	<1	2	<1	2
Roads	105	23	261	23
Recreation Areas	83	0	57	0
Sites Reservoir and Related Facilities	>1	>1	<1	0
Total Impacts	**427**	**253**	**502**	**253**

[1] Potentially suitable nesting and foraging habitat for bald eagle consists of blue oak woodland, foothill pine, forested wetland, perennial stream, reservoir, and upland riparian land cover types.

Table 10C-13. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Swainson's Hawk and White-tailed Hawk by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	1	<1	0	0	1	<1
Regulating Reservoirs and Conveyance Complex	<1	40	2	595	<1	109	1	544
Sites Reservoir Inundation Area	504	12,206	0	0	376	11,578	0	0
Inlet/Outlet Works	2	23	1	7	2	24	0	0
Dams and Dikes	11	166	2	44	12	91	4	36
Conveyance to Sacramento River	<1	<1	2	69	<1	1	2	91
Roads	226	865	40	148	292	924	40	245
Recreation Areas	322	460	0	0	269	450	0	0
Sites Reservoir and Related Facilities	17	411	1	172	17	438	1	98
Total Impacts	**1,083**	**14,171**	**50**	**1,036**	**969**	**13,615**	**50**	**1,015**

[1] Potentially suitable nesting habitat for these two species consists of blue oak woodland, forested wetland, oak savanna, ornamental woodland, and upland riparian land cover types.

[2] Potentially suitable foraging habitat for these two species consists of annual grassland, hayfield, managed wetland, oak savanna, row crops, ruderal, and seasonal wetland land cover types.

Table 10C-14. Acreages of Permanent and Temporary Impacts on Potential Mountain Plover Foraging Habitat by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Foraging Habitat[1]	Foraging Habitat[1]	Foraging Habitat[1]	Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	<1	0	<1
Regulating Reservoirs and Conveyance Complex	40	595	109	544
Sites Reservoir Inundation Area	12,201	0	11,573	0
Inlet/Outlet Works	23	7	32	3
Dams and Dikes	165	44	89	25
Conveyance to Sacramento River	0	29	0	29
Roads	852	220	914	242
Recreation Areas	460	0	450	0
Sites Reservoir and Related Facilities	411	98	441	98
Total Impacts	**14,152**	**994**	**13,608**	**942**

[1] Potentially suitable foraging habitat for mountain plover consists of annual grassland, hayfield (includes alfalfa), row crops, and seasonal wetland land cover types.

Table 10C-15. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Western Yellow-billed Cuckoo by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	0
Regulating Reservoirs and Conveyance Complex	0	0	0	0
Sites Reservoir Inundation Area	0	0	0	0
Inlet/Outlet Works	0	0	0	0
Dams and Dikes	0	0	0	0
Conveyance to Sacramento River	0	0	0	0
Roads	0	0	0	0
Recreation Areas	0	0	0	0
Sites Reservoir and Related Facilities	0	0	0	0
Total Impacts	**0**	**0**	**0**	**0**

[1] Potentially suitable nesting and foraging habitat for western yellow-billed cuckoo consists of forested wetland, scrub-shrub wetland, and upland riparian land cover types with a minimum patch size of 37 acres, a minimum patch width of 328 feet, and a maximum canopy gap width of 328 feet.

Table 10C-16. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Yellow-breasted Chat and Yellow Warbler by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	1	0	1
Regulating Reservoirs and Conveyance Complex	0	3	<1	1
Sites Reservoir Inundation Area	54	0	49	0
Inlet/Outlet Works	<1	0	<1	0
Dams and Dikes	2	<1	2	<1
Conveyance to Sacramento River	<1	2	<1	2
Roads	10	2	48	3
Recreation Areas	4	0	3	0
Sites Reservoir and Related Facilities	<1	<1	1	0
Total Impacts	**71**	**8**	**104**	**8**

[1] Potentially suitable nesting and foraging habitat for these two species consists of forested wetland, scrub-shrub wetland, and upland riparian land cover types.

Table 10C-17. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Song Sparrow ("Modesto" Population) by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	1	0	1
Regulating Reservoirs and Conveyance Complex	<1	15	4	11
Sites Reservoir Inundation Area	92	0	87	0
Inlet/Outlet Works	<1	0	<1	0
Dams and Dikes	3	<1	2	<1
Conveyance to Sacramento River	<1	8	<1	8
Roads	12	3	49	3
Recreation Areas	4	0	3	0
Sites Reservoir and Related Facilities	1	1	1	<1
Total Impacts	**112**	**28**	**147**	**24**

[1] Potentially suitable nesting and foraging habitat for song sparrow consists of forested wetland, freshwater marsh, managed wetland, scrub-shrub wetland, and upland riparian land cover types.

Table 10C-18. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Burrowing Owl by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts
	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]	Nesting and Foraging Habitat[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	4	<1	4
Regulating Reservoirs and Conveyance Complex	17	589	112	535
Sites Reservoir Inundation Area	12,006	0	11,383	0
Inlet/Outlet Works	23	7	24	0
Dams and Dikes	155	42	83	35
Conveyance to Sacramento River	<1	44	1	65
Roads	916	147	979	229
Recreation Areas	460	0	450	0
Sites Reservoir and Related Facilities	409	155	437	98
Total Impacts	**13,986**	**989**	**13,469**	**966**

[1] Potentially suitable nesting and foraging habitat for burrowing owl consists of annual grassland, hayfields (includes alfalfa), ruderal, disturbed, and developed land cover types.

Table 10C-19. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Bank Swallow by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	<1	0	18	0	<1	0	18
Regulating Reservoirs and Conveyance Complex	0	154	0	876	0	128	0	793
Sites Reservoir Inundation Area	0	12,941	0	0	0	12,183	0	0
Inlet/Outlet Works	0	25	0	9	0	26	0	0
Dams and Dikes	0	180	0	47	0	105	0	41
Conveyance to Sacramento River	0	<1	0	98	0	3	0	224
Roads	0	1,131	0	190	0	1,460	0	293
Recreation Areas	0	781	0	0	0	719	0	0
Sites Reservoir and Related Facilities	0	436	0	181	0	464	0	100
Total Impacts	**0**	**15,649**	**0**	**1,419**	**0**	**15,088**	**0**	**1,469**

[1] Potentially suitable nesting habitat for bank swallow consists of ephemeral stream, forested wetland, intermittent stream, perennial stream, pond, reservoir, scrub-shrub wetland, and upland riparian land cover types along the Sacramento River.

[2] Potentially suitable foraging habitat for bank swallow consists of annual grassland, blue oak woodland, barren, canal/ditch, chamise chaparral, disturbed, ephemeral stream, forested wetland, foothill pine, freshwater marsh, hayfield (includes alfalfa), intermittent stream, managed wetland, mixed chaparral, oak savanna, orchard, ornamental woodland, perennial stream, pond, reservoir, rice, row crops, ruderal, vineyard, scrub-shrub wetland, seasonal wetland, and upland riparian land cover types.

Table 10C-20. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Tricolored Blackbird by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]	Nesting Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	0	0	14	0	0	0	14
Regulating Reservoirs and Conveyance Complex	<1	40	12	595	4	109	9	544
Sites Reservoir Inundation Area	38	11,548	0	0	38	10,920	0	0
Inlet/Outlet Works	0	23	0	7	0	24	0	0
Dams and Dikes	1	166	<1	44	<1	91	<1	36
Conveyance to Sacramento River	0	<1	6	63	0	2	6	176
Roads	2	839	<1	148	1	898	1	245
Recreation Areas	0	460	0	0	0	450	0	0
Sites Reservoir and Related Facilities	<1	411	1	172	0	438	<1	98
Total Impacts	**42**	**13,487**	**19**	**1,043**	**43**	**12,933**	**16**	**1,113**

[1] Potentially suitable nesting habitat for tricolored blackbird consists of freshwater marsh and managed wetland land cover types.

[2] Potentially suitable foraging habitat for tricolored blackbird consists of annual grassland, seasonal wetland, row crops, and rice (and ruderal land cover adjacent to these land cover types) within 3 miles of nesting habitat.

Table 10C-21. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Pallid Bat and Long-eared Myotis by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	<1	2	18	<1	<1	2	18
Regulating Reservoirs and Conveyance Complex	103	51	40	843	12	117	13	785
Sites Reservoir Inundation Area	575	12,491	0	0	446	11,856	0	0
Inlet/Outlet Works	2	23	1	7	2	24	0	0
Dams and Dikes	12	171	2	45	12	95	4	37
Conveyance to Sacramento River	<1	<1	26	82	1	3	33	202
Roads	318	909	41	151	620	981	41	255
Recreation Areas	322	463	0	0	269	453	0	0
Sites Reservoir and Related Facilities	17	419	1	180	17	447	1	99
Total Impacts	**1,351**	**14,528**	**114**	**1,327**	**1,380**	**13,976**	**95**	**1,397**

[1] Potentially suitable roosting and foraging habitat for these two species consists of blue oak woodland, canal, chamise chaparral, developed, ditch, foothill pine, forested wetland, mixed chaparral, oak savanna, orchard, ornamental woodland, upland riparian land cover types.

[2] Potentially suitable foraging habitat for these two species consists of annual grassland, barren, ephemeral stream, freshwater marsh, intermittent stream, perennial stream, scrub-shrub wetland, seasonal wetland, pond, disturbed, hayfield, managed wetland, reservoir, rice, row crops, ruderal, and vineyard land cover types.

Table 10C-22. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Townsend's Big-eared Bat and Silver-haired Bat by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	<1	2	18	<1	<1	2	18
Regulating Reservoirs and Conveyance Complex	103	51	40	843	12	117	13	785
Sites Reservoir Inundation Area	575	12,491	0	0	446	11,856	0	0
Inlet/Outlet Works	2	23	1	7	2	24	0	0
Dams and Dikes	12	171	2	45	12	95	4	37
Conveyance to Sacramento River	<1	<1	26	82	1	3	33	202
Roads	318	909	41	151	620	981	41	255
Recreation Areas	322	463	0	0	269	453	0	0
Sites Reservoir and Related Facilities	17	419	1	180	17	447	1	99
Total Impacts	**1,351**	**14,528**	**114**	**1,327**	**1,380**	**13,976**	**95**	**1,397**

[1] Potentially suitable roosting and foraging habitat for these two species consists of blue oak woodland, canal, chamise chaparral, developed, ditch, foothill pine, forested wetland, mixed chaparral, oak savanna, orchard, ornamental woodland, upland riparian land cover types.

[2] Potentially suitable foraging habitat for these two species consists of annual grassland, barren, ephemeral stream, freshwater marsh, intermittent stream, perennial stream, scrub-shrub wetland, seasonal wetland, pond, disturbed, hayfield, managed wetland, reservoir, rice, row crops, ruderal, and vineyard land cover types.

Table 10C-23. Acreages of Permanent and Temporary Impacts on Modeled Habitat for Western Red Bat and Hoary Bat by Project Component

	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Permanent Impacts	Alternatives 1 and 3 Temporary Impacts	Alternatives 1 and 3 Temporary Impacts	Alternative 2 Permanent Impacts	Alternative 2 Permanent Impacts	Alternative 2 Temporary Impacts	Alternative 2 Temporary Impacts
	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]	Roosting/ Foraging Habitat[1]	Foraging Habitat[2]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	0	<1	1	19	0	<1	1	19
Regulating Reservoirs and Conveyance Complex	100	54	28	856	8	121	6	793
Sites Reservoir Inundation Area	504	12,562	0	0	376	11,927	0	0
Inlet/Outlet Works	2	23	1	7	2	24	0	0
Dams and Dikes	11	172	2	45	12	95	4	37
Conveyance to Sacramento River	<1	1	17	91	1	3	18	217
Roads	231	996	41	152	526	1,075	41	256
Recreation Areas	322	463	0	0	269	453	0	0
Sites Reservoir and Related Facilities	17	419	1	180	17	447	1	99
Total Impacts	**1,188**	**14,690**	**91**	**1,349**	**1,211**	**14,146**	**71**	**1,421**

[1] Potentially suitable roosting and foraging habitat for these two species consists of blue oak woodland, chamise chaparral, foothill pine, forested wetland, mixed chaparral, oak savanna, orchard, ornamental woodland, upland riparian land cover types.

[2] Potentially suitable foraging habitat for these two species consists of annual grassland, barren, ephemeral stream, freshwater marsh, intermittent stream, perennial stream, pond, scrub-shrub wetland, seasonal wetland, canal, developed, disturbed, ditch, hayfield, managed wetland, reservoir, rice, row crops, ruderal, and vineyard land cover types.

Table 10C-24. Acreages of Permanent and Temporary Impacts on Modeled Habitat for American Badger by Project Component

	Alternatives 1 and 3 Permanent Impacts[1]	Alternatives 1 and 3 Temporary Impacts[1]	Alternative 2 Permanent Impacts[1]	Alternative 2 Temporary Impacts[1]
Sacramento River Diversion and Conveyance to Regulating Reservoirs	<1	2	<1	2
Regulating Reservoirs and Conveyance Complex	16	586	112	532
Sites Reservoir Inundation Area	11,736	0	10,988	0
Inlet/Outlet Works	24	9	26	0
Dams and Dikes	164	45	93	38
Conveyance to Sacramento River	0	2	0	2
Roads	1,022	185	1,341	268
Recreation Areas	780	0	717	0
Sites Reservoir and Related Facilities	428	156	456	99
Total Impacts	**14,171**	**984**	**13,733**	**940**

[1] Potentially suitable habitat for American badger consists of annual grassland, blue oak woodland, chamise chaparral, ephemeral stream, foothill pine, mixed chaparral, and oak savanna land cover types, as well as disturbed and ruderal land cover types that abut potentially suitable habitat.