

Appendix 12E  
**Detailed Accounting of Direct Effects of Alternatives on  
Natural Communities and Covered Species**

---



# Detailed Accounting of Direct Effects of Alternatives on Natural Communities and Covered Species

---

## Introduction

This appendix contains tables that display the results of GIS-based modeling of impacts to natural communities and covered plant and wildlife species discussed in the body of Chapter 12 of the BDCP EIR/EIS. The methodology for this modeling effort is described in Section 12.3.2 of Chapter 12, *Methods of Analysis*. Tables are included that represent the effects of all alternatives analyzed in the EIR/EIS. Where different alternatives have identical direct effects, the tables have not been duplicated. Alternatives 6A, 6B, and 6C have the same construction footprints for the water conveyance facilities and the same restoration actions as Alternatives 1A, 1B, and 1C, respectively, so separate tables are not included for Alternatives 6A, 6B, and 6C. Alternative 2C has the same construction footprint and restoration actions as Alternative 1C, so a separate table for 2C has not been included. Similarly, Alternative 8 effects are identical to Alternative 4, so the reader is referred to the Alternative 4 tables to view the effects of Alternative 8.

The tables are organized by alternative. For each alternative, there are four tables. This includes near-term and late long-term time frame tables of impacts on natural communities, and near-term and late long-term tables of impacts on covered plant and wildlife species. Tables are not included for the early long-term time period because this five year period did not warrant independent analysis for terrestrial biological resources.



# Alternative 1A

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Construction of recreational-related facilities	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)														Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farmsteads (without residence)	820	14	2	0	3	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	59	0	3	
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	79	38	25	43	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	333	25	67		
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	80	0	0		
Water surface	211	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	58	0	5		
<b>Developed</b>	<b>90,660</b>	<b>87</b>	<b>18</b>	<b>2</b>	<b>69</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>243</b>	<b>2</b>	<b>85</b>			

1  
2  
3





Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		Permanent (Acres)	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)		Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
Farmsteads (includes a farm residence)	2,132	16	4	0	7	0	0	0	0	0	0	0	0	0	11	0	62	7	9	1	91	6	5	0	0	0	0	0	0	0	0	0	117	0	12
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	0	12	0	3
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farmsteads (without residence)	820	14	2	0	3	0	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	0	113	0	6	
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	79	38	25	43	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	0	3,120	25	133		
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	0	143	0	0		
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	0	0	233	0	13		
Developed	90,660	87	18	2	69	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	0	0	0	0	908	2	153		

1  
3





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	202	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0	0
<b>Boggs Lake hedge-hyssop</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	202	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0	0
<b>Dwarf downingia</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	202	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0	0

1  
2

1 Table 12E-4. Direct Effects on Wildlife and Plants – Alternative 1A with Tunnel Alignment and Isolated Conveyance (Late Long-Term) (acres) [Version July 18, 2013]

Table with columns for Resource, Total Existing Modeled Habitat in the Plan Area (Acres), CM1 Water Facilities and Operation, CM2 Yolo Bypass Fisheries Enhancement, Suisun Marsh, Delta, CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, CM7 Riparian Natural Community Restoration, CM8 Grassland Restoration, CM10 Nontidal Marsh Natural Community Restoration, CM11 Natural Community Enhancement and Management, CM18 Conservation Hatcheries, and Maximum Allowable Habitat Loss (Permanent, Temporary, Borrow and Spoil).



Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent-Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	375	0	0	
Boggs Lake hedge-hyssop																																			
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	375	0	0	
Dwarf downingia																																			
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	375	0	0	

1  
2

1 Table 12E-5. Indirect Effects--Alternative 1A [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	18	0	0	51	343	0	412
Grassland habitat	3,103	0	161	0	0	51	263	0	475
<b>Total</b>	6,011	0	179	0	0	102	606	0	887
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	2	0	0	18	256	0	276
<b>Total</b>	2,166	0	2	0	0	18	256	0	276
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	169	0	0	0	0	0	169
<b>Total</b>	5,327	0	169	0	0	0	0	0	169
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	113	0	5	364	0	0	483
Secondary habitat	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	25,382	0	116	0	5	793	2	0	915
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,214	0	44	2,785	850	0	4,892
<b>Total</b>	86,263	0	1,214	0	44	2,785	850	0	4,892
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	219	0	0	0	0	0	219
Roosting and foraging - Temporary	16,579	0	1,427	0	0	174	0	0	1,600
Foraging	164,676	25	7,502	0	0	1,825	0	25	9,327
<b>Total</b>	188,594	25	9,148	0	0	1,999	0	25	11,146
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	1	160	0	244	619	406	1	1,430
<b>Total</b>	14,850	1	160	0	244	619	406	1	1,430
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	1	6,786	0	2,275	6,013	3,201	1	18,274
Nesting habitat	9,796	0	129	0	255	361	470	0	1,215
<b>Total</b>	487,675	1	6,915	0	2,530	6,373	3,672	1	19,490
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	16	626	0	1,612	1,152	852	16	4,243
Breeding habitat-foraging	60,828	0	376	0	931	2,389	532	0	4,228
Breeding habitat-nesting	1,935	0	39	0	89	43	114	0	285
Nonbreeding habitat-foraging ag	196,713	4	7,563	0	38	2,856	1,604	4	12,061
Nonbreeding habitat-roosting	28,067	3	349	0	49	1,214	25	3	1,638
Nonbreeding habitat-foraging	34,313	2	788	0	0	1,324	33	2	2,145
<b>Total</b>	424,040	25	9,741	0	2,721	8,978	3,161	25	24,601
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,227	0	1,202	3,038	541	0	6,008
Low-value habitat	254,352	0	4,260	0	512	1,632	1,977	0	8,381
<b>Total</b>	406,366	0	5,487	0	1,714	4,671	2,518	0	14,389
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	8	0	24	98	66	0	196
Migratory habitat	10,425	1	132	0	220	398	318	1	1,068
<b>Total</b>	12,395	1	140	0	244	496	384	1	1,265
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	2	184	0	269	543	523	2	1,519
Foraging habitat	507,922	1	6,816	0	2,297	6,477	2,982	1	18,571
<b>Total</b>	521,991	2	6,999	0	2,566	7,020	3,505	2	20,091
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	1	66	0	80	388	272	1	806
Secondary nesting and migratory habitat	5,528	0	94	0	5	172	135	0	405
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	1	160	0	244	634	406	1	1,445
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	163	0	13	219	131	0	525
Aquatic - nontidal	19,184	0	88	0	133	103	22	0	346
Upland-high	21,649	0	279	0	242	372	0	0	893



Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<i>Upland-moderate</i>	25,953	0	344	0	125	773	314	0	1,556
<i>Upland-low</i>	5,683	0	57	0	1	150	279	0	487
<b>Total</b>	84,567	0	931	0	516	1,616	745	0	3,808
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	0	40	0	11	33	22	0	105
<b>Western pond turtle</b>								0	0
<i>Aquatic habitat</i>	81,666	0	599	0	150	1,856	619	0	3,224
<i>Upland nesting and overwintering habitat</i>	16,184	0	150	0	115	331	245	0	841
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	0	122	0	37	243	30	0	432
<b>Total</b>	110,530	0	870	0	303	2,430	895	0	4,498
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	0	16	0	1	14	3	0	35
<b>Amphibians</b>								0	0
<b>California red-legged frog</b>								0	0
<i>Aquatic habitat</i>	159	0	0	0	0	0	0	0	0
<i>Upland cover and dispersal habitat</i>	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	0
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	208	0	30	659	0	0	897
<b>Total</b>	37,732	0	208	0	30	861	0	0	1,098
<b>Invertebrates</b>								0	0
<b>Valley elderberry longhorn beetle</b>								0	0
<i>Riparian vegetation</i>	17,786	0	89	0	56	125	200	0	471
<i>Nonriparian channels and grasslands</i>	16,670	0	223	0	85	261	210	0	778
<b>Total</b>	34,456	0	311	0	141	387	410	0	1,249
<b>California linderiella</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Longhorn fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Midvalley fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool tadpole shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Plants</b>								0	0
<i>Brittlescale total</i>	451	0	0	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	0	0	0	193	0	0	193
<i>San Joaquin spearscale total</i>	14,933	0	24	0	48	129	1	0	202
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	13	0	0	0	350	0	364
<i>Delta mudwort total</i>	6,081	0	86	0	10	261	122	0	480
<i>Mason's lilaopsis total</i>	6,081	0	86	0	10	261	122	0	480
<i>Delta tule pea total</i>	5,853	0	6	0	0	420	1	0	428
<i>Suisun Marsh aster total</i>	5,853	0	6	0	0	420	1	0	428
<i>Side-flowering skullcap total</i>	2,497	0	12	0	1	80	12	0	105
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>								0	0
<b>Alkali milk-vetch</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Legenere</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Heckard's peppergrass</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Boggs Lake hedge-hyssop</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Dwarf downingia</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150

1  
2

# Alternative 1B

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)		Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Farmsteads (without residence)	820	22	0	7	5	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	65	7	5			
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	391	15	463	88	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	622	463	113				
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	80	0	0				
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
Other Ag Lands	2,097	16	1	27	2	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	63	27	2					
Developed	90,660	158	3	36	86	15	16	1	0	13	1	1	0	15	1	85	5	1	0	124	0	0	0	0	0	0	0	0	300	36	102						

1  
2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)		Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	0	12	0	3			
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0			
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Farmsteads (without residence)	820	22	0	7	5	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	0	0	119	7	8				
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	391	15	463	88	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	0	3,409	463	179					
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	0	143	0	0					
Water surface	211	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4					
Other Ag Lands	2,097	16	1	27	2	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	0	238	27	11						
Developed	90,660	158	3	36	86	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	0	0	0	965	36	170						

1  
2







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta					CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management of rereational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<b>Boggs Lake hedge-hyssop</b>																																			
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	203	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0
<b>Dwarf downingia</b>																																			
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	203	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
Degraded vernal pool complex	2,576	3	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	375	0	0	
<b>Boggs Lake hedge-hyssop</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	
Degraded vernal pool complex	2,576	3	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	375	0	0
<b>Dwarf downingia</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	
Degraded vernal pool complex	2,576	3	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	373	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	375	0	0

1  
2

1 Table 12E-10. Indirect Effects—Alternative 1B [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	21	0	0	51	343	0	415
Grassland habitat	3,103	0	175	0	0	51	263	0	489
<b>Total</b>	6,011	0	196	0	0	102	606	0	904
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	9	0	0	18	256	0	283
<b>Total</b>	2,166	0	9	0	0	18	256	0	283
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	170	0	0	0	0	0	170
<b>Total</b>	5,327	0	170	0	0	0	0	0	170
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	46	0	5	364	0	0	415
Secondary habitat	17,915	0	3	0	0	428	2	0	433
<b>Total</b>	25,382	0	49	0	5	793	2	0	849
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,034	0	44	2,785	850	0	4,712
<b>Total</b>	86,263	0	1,034	0	44	2,785	850	0	4,712
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	173	0	0	0	0	0	173
Roosting and foraging - Temporary	16,579	0	1,041	0	0	174	0	0	1,214
Foraging	164,676	62	6,522	0	0	1,825	0	62	8,347
<b>Total</b>	188,594	62	7,736	0	0	1,999	0	62	9,734
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	1	240	0	244	619	406	1	1,510
<b>Total</b>	14,850	1	240	0	244	619	406	1	1,510
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	2	7,321	0	2,275	6,013	3,201	2	18,810
Nesting habitat	9,796	0	195	0	255	361	470	0	1,281
<b>Total</b>	487,675	2	7,516	0	2,530	6,373	3,672	2	20,091
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	8	702	0	1,612	1,152	852	8	4,319
Breeding habitat-foraging	60,828	0	397	0	931	2,389	532	0	4,250
Breeding habitat-nesting	1,935	0	37	0	89	43	114	0	283
Nonbreeding habitat-foraging ag	196,713	46	6,217	0	38	2,856	1,604	46	10,715
Nonbreeding habitat-roosting	28,067	3	263	0	49	1,214	25	3	1,552
Nonbreeding habitat-foraging	34,313	1	591	0	0	1,324	33	1	1,949
<b>Total</b>	424,040	58	8,208	0	2,721	8,978	3,161	58	23,067
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,028	0	1,202	3,038	541	0	5,809
Low-value habitat	254,352	0	3,860	0	512	1,632	1,977	0	7,981
<b>Total</b>	406,366	0	4,888	0	1,714	4,671	2,518	0	13,790
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	48	0	24	98	66	0	236
Migratory habitat	10,425	1	159	0	220	398	318	1	1,095
<b>Total</b>	12,395	1	206	0	244	496	384	1	1,331
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	2	273	0	269	543	523	2	1,608
Foraging habitat	507,922	2	7,213	0	2,297	6,477	2,982	2	18,969
<b>Total</b>	521,991	3	7,486	0	2,566	7,020	3,505	3	20,577
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	1	138	0	80	388	272	1	878
Secondary nesting and migratory habitat	5,528	0	103	0	5	172	135	0	414
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	1	241	0	244	634	406	1	1,526
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	145	0	13	219	131	0	507
Aquatic - nontidal	19,184	0	135	0	133	103	22	0	393
Upland-high	21,649	0	258	0	242	372	0	0	872
Upland-moderate	25,953	0	370	0	125	773	314	0	1,582
Upland-low	5,683	0	70	0	1	150	279	0	500
<b>Total</b>	84,567	0	978	0	516	1,616	745	0	3,855
Aquatic breeding, foraging, and movement (miles)	2,802	0	29	0	11	33	22	0	95
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	432	0	150	1,856	619	0	3,057
Upland nesting and overwintering habitat	16,184	0	181	0	115	331	245	0	873
Upland nesting and overwintering habitat-NHD	12,680	0	95	0	37	243	30	0	406
<b>Total</b>	110,530	0	708	0	303	2,430	895	0	4,336
Aquatic habitat linear (miles) - NHD	1,425	0	17	0	1	14	3	0	36

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Amphibians</b>									
California red-legged frog								0	0
Aquatic habitat	159	0	0	0	0	0	0	0	0
Upland cover and dispersal habitat	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
Aquatic breeding habitat	8,273	0	0	0	0	201	0	0	201
Terrestrial cover and aestivation	29,459	0	212	0	30	659	0	0	901
<b>Total</b>	37,732	0	212	0	30	861	0	0	1,102
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>									
Riparian vegetation	17,786	0	65	0	56	125	200	0	447
Nonriparian channels and grasslands	16,670	0	159	0	85	261	210	0	715
<b>Total</b>	34,456	0	224	0	141	387	410	0	1,162
<b>California linderiella</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Longhorn fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Midvalley fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool tadpole shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Plants</b>									
Brittlescale total	451	0	0	0	0	3	0	0	3
Heartscale total	6,528	0	0	0	0	193	0	0	193
San Joaquin spearscale total	14,933	0	24	0	48	129	1	0	202
Carquinez goldenbush total	1,346	0	0	0	0	9	0	0	9
Delta button celery total	3,361	0	12	0	0	0	350	0	363
Delta mudwort total	6,081	0	82	0	10	261	122	0	476
Mason's lilaepsis total	6,081	0	82	0	10	261	122	0	476
Delta tule pea total	5,853	0	6	0	0	420	1	0	427
Suisun Marsh aster total	5,853	0	6	0	0	420	1	0	427
Side-flowering skullcap total	2,497	0	12	0	1	80	12	0	106
Slough thistle total	1,834	0	0	0	0	0	349	0	349
Soft bird's-beak total	1,228	0	0	0	0	64	0	0	64
Suisun thistle total	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
Alkali seasonal wetland	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Legenere</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
Alkali seasonal wetland	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Heckard's peppergrass</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
Alkali seasonal wetland	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Boggs Lake hedge-hyssop</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
Alkali seasonal wetland	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Dwarf downingia</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
Alkali seasonal wetland	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150

1

2

**Alternative 1C**

---

1

2





Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss								
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)															Permanent (Acres)	Permanent (Acres)	Permanent (Acres)															
<i>Poultry farms</i>	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Farmsteads (without residence)</i>	820	8	1	5	1	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	5	1	
<i>Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)</i>	20,602	243	9	283	101	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	0	0	0	467	283	125		
<b>Riparian Vegetation</b>	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0		
<b>Water surface</b>	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
<i>Other Ag Lands</i>	2,097	9	0	6	9	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	0	0	0	0	55	6	9		
<b>Developed</b>	90,660	232	38	73	156	15	16	1	0	13	1	1	0	15	1	85	5	1	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	409	73	172			

1  
2

1 Table 12E-12. Direct Effects on Natural Communities--Alternative 1C with Full Implementation (Late Long-Term) (acres) [Version July 22, 2013]

Table with columns: Natural Community, Total Existing Modeled Habitat in the Plan Area (Acres), CM1 Water Facilities and Operation, CM2 Yolo Bypass Fisheries Enhancement, Suisun Marsh, Delta, CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, CM7 Riparian Natural Community Restoration, CM8 Grassland Restoration, CM10 Nontidal Marsh Natural Community Restoration, CM11 Natural Community Enhancement and Management, CM18 Conservation Hatcheries, and Maximum Allowable Habitat Loss. Rows include various natural communities like Tidal Perennial Aquatic, Mudflat, Tidal Brackish Emergent Wetland, etc.

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0		
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Farmsteads (without residence)	820	8	1	5	1	0	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	0	0	106	5	5			
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	243	9	283	101	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	0	0	3,254	283	191				
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	0	0	143	0	0				
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
Other Ag Lands	2,097	9	0	6	9	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	0	0	230	6	18					
Developed	90,660	232	38	73	156	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	0	0	0	0	1,074	73	240					

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	200	0	5	
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	243	20	19		
<b>Boggs Lake hedge-hyssop</b>																																		
Vernal pool complex	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	30	20	11		
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	200	0	5		
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2			
<b>Total</b>	12,320	42	0	20	19	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	243	20	19		
<b>Dwarf downingia</b>																																		
Vernal pool complex	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	30	20	11		
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	200	0	5		
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2			
<b>Total</b>	12,320	42	0	20	19	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	243	20	19		

1  
2

1 Table 12E-14. Direct Effects on Wildlife and Plants – Alternative 1C with Tunnel Alignment and Isolated Conveyance (Late Long-Term) (acres) [Version July 18, 2013]

Table with columns: Resource, Total Existing Modeled Habitat in the Plan Area (Acres), CM1 Water Facilities and Operation, CM2 Yolo Bypass Fisheries Enhancement, Suisun Marsh, Delta, CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, CM7 Riparian Natural Community Restoration, CM8 Grassland Restoration, CM10 Nontidal Marsh Natural Community Restoration, CM11 Natural Community Enhancement and Management, CM18 Conservation Hatcheries, Maximum Allowable Habitat Loss (Permanent, Temporary, Total).





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19	
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30	20	11
<i>Degraded vernal pool complex</i>	2,576	0	0	0	5	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	370	0	5
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2	
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19	
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	30	20	11	
<i>Degraded vernal pool complex</i>	2,576	0	0	0	5	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	370	0	5	
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19	

1  
2

1 Table 12E-15. Indirect Effects—Alternative 1C [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	1	0	0	51	343	0	395
Grassland habitat	3,103	0	42	0	0	51	263	0	356
<b>Total</b>	6,011	0	42	0	0	102	606	0	750
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	0	0	0	18	256	0	274
<b>Total</b>	2,166	0	0	0	0	18	256	0	274
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	145	0	0	0	0	0	145
<b>Total</b>	5,327	0	145	0	0	0	0	0	145
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	13	0	5	364	0	0	382
Secondary habitat	17,915	0	0	0	0	428	2	0	431
<b>Total</b>	25,382	0	13	0	5	793	2	0	813
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	985	0	44	2,785	850	0	4,664
<b>Total</b>	86,263	0	985	0	44	2,785	850	0	4,664
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	0	0	0	0	0	0	0
Roosting and foraging - Temporary	16,579	0	235	0	0	174	0	0	408
Foraging	164,676	12	3,675	0	0	1,825	0	12	5,499
<b>Total</b>	188,594	12	3,909	0	0	1,999	0	12	5,908
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	173	0	244	619	406	0	1,443
<b>Total</b>	14,850	0	173	0	244	619	406	0	1,443
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	0	7,392	0	2,275	6,013	3,201	0	18,881
Nesting habitat	9,796	0	180	0	255	361	470	0	1,266
<b>Total</b>	487,675	0	7,572	0	2,530	6,373	3,672	0	20,147
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	2	2,166	0	1,612	1,152	852	2	5,783
Breeding habitat-foraging	60,828	1	1,885	0	931	2,389	532	1	5,738
Breeding habitat-nesting	1,935	0	156	0	89	43	114	0	402
Nonbreeding habitat-foraging ag	196,713	21	4,875	0	38	2,856	1,604	21	9,373
Nonbreeding habitat-roosting	28,067	1	216	0	49	1,214	25	1	1,505
Nonbreeding habitat-foraging	34,313	2	685	0	0	1,324	33	2	2,042
<b>Total</b>	424,040	26	9,983	0	2,721	8,978	3,161	26	24,842
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	2,071	0	1,202	3,038	541	0	6,852
Low-value habitat	254,352	0	2,992	0	512	1,632	1,977	0	7,114
<b>Total</b>	406,366	0	5,063	0	1,714	4,671	2,518	0	13,966
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	0	0	24	98	66	0	188
Migratory habitat	10,425	0	123	0	220	398	318	0	1,059
<b>Total</b>	12,395	0	123	0	244	496	384	0	1,248
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	229	0	269	543	523	0	1,565
Foraging habitat	507,922	0	2,373	0	2,297	6,477	2,982	0	19,128
<b>Total</b>	521,991	0	2,602	0	2,566	7,020	3,505	0	20,693
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	118	0	80	388	272	0	858
Secondary nesting and migratory habitat	5,528	0	53	0	5	172	135	0	364
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	171	0	244	634	406	0	1,456
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	87	0	13	219	131	0	450
Aquatic - nontidal	19,184	0	74	0	133	103	22	0	332
Upland-high	21,649	0	288	0	242	372	0	0	902
Upland-moderate	25,953	0	391	0	125	773	314	0	1,603
Upland-low	5,683	0	74	0	1	150	279	0	504
<b>Total</b>	84,567	0	913	0	516	1,616	745	0	3,790
Aquatic breeding, foraging, and movement (miles)	2,802	0	28	0	11	33	22	0	93
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	309	0	150	1,856	619	0	2,934
Upland nesting and overwintering habitat	16,184	0	140	0	115	331	245	0	832
Upland nesting and overwintering habitat-NHD	12,680	0	163	0	37	243	30	0	473
<b>Total</b>	110,530	0	612	0	303	2,430	895	0	4,239
Aquatic habitat linear (miles) - NHD	1,425	0	15	0	1	14	3	0	34
<b>Amphibians</b>									

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>California red-legged frog</b>								0	0
<i>Aquatic habitat</i>	159	0	9	0	0	0	0	0	9
<i>Upland cover and dispersal habitat</i>	7,766	0	28	0	0	0	0	0	28
<b>Total</b>	7,925	0	37	0	0	0	0	0	37
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	0
<i>Aquatic breeding habitat</i>	8,273	0	74	0	0	201	0	0	275
<i>Terrestrial cover and aestivation</i>	29,459	0	305	0	30	659	0	0	994
<b>Total</b>	37,732	0	379	0	30	861	0	0	1,269
<b>Invertebrates</b>								0	0
<b>Valley elderberry longhorn beetle</b>								0	0
<i>Riparian vegetation</i>	17,786	0	66	0	56	125	200	0	448
<i>Nonriparian channels and grasslands</i>	16,670	0	148	0	85	261	210	0	704
<b>Total</b>	34,456	0	214	0	141	387	410	0	1,151
<b>California linderiella</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Conservancy fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Longhorn fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Midvalley fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Vernal pool fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Vernal pool tadpole shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Plants</b>								0	0
<i>Brittlescale total</i>	451	0	1	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	7	0	0	193	0	0	201
<i>San Joaquin spearscale total</i>	14,933	0	104	0	48	129	1	0	282
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	49	0	0	0	350	0	400
<i>Delta mudwort total</i>	6,081	0	58	0	10	261	122	0	451
<i>Mason's lilaopsis total</i>	6,081	0	58	0	10	261	122	0	451
<i>Delta tule pea total</i>	5,853	0	2	0	0	420	1	0	423
<i>Suisun Marsh aster total</i>	5,853	0	2	0	0	420	1	0	423
<i>Side-flowering skullcap total</i>	2,497	0	29	0	1	80	12	0	122
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>								0	0
<b>Alkali milk-vetch</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Legenere</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Heckard's peppergrass</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Boggs Lake hedge-hyssop</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Dwarf downingia</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196

**Alternative 2A**

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3		Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Farmsteads (without residence)	820	14	2	0	4	0	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0				
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	81	38	25	57	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	0	0	0				
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	0	0	0	0				
Developed	90,660	85	18	2	64	15	16	1	0	13	1	1	0	15	1	85	5	1	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

1  
2





Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)		Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	12	0	3				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8	0	0				
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Farmsteads (without residence)	820	14	2	0	4	0	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	114	0	8					
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	81	38	25	57	17	25	0	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	3,122	25	148					
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	143	0	0					
Water surface	211	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4					
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	233	0	13						
<b>Developed</b>	<b>90,660</b>	<b>85</b>	<b>18</b>	<b>2</b>	<b>64</b>	<b>15</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>39</b>	<b>14</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>383</b>	<b>79</b>	<b>58</b>	<b>15</b>	<b>664</b>	<b>125</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>906</b>	<b>2</b>	<b>148</b>						

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Construction	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0	
<b>Boggs Lake hedge-hyssop</b>																																			
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	202	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0	
<b>Dwarf downingia</b>																																			
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	202	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0	

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																										
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Boggs Lake hedge-hyssop</b>																																	
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dwarf downingia</b>																																	
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1  
2

1 Table 12E-20. Indirect Effects—Alternative 2A [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
<i>Riparian habitat</i>	2,909	0	18	0	0	51	343	0	412
<i>Grassland habitat</i>	3,103	0	162	0	0	51	263	0	476
<b>Total</b>	6,011	0	180	0	0	102	606	0	888
<b>Riparian woodrat</b>								0	0
<i>Habitat</i>	2,166	0	2	0	0	18	256	0	276
<b>Total</b>	2,166	0	2	0	0	18	256	0	276
<b>Salt marsh harvest mouse</b>								0	0
<i>Tidal brackish emergent wetland primary</i>	3,641	0	0	0	0	93	0	0	93
<i>Tidal brackish emergent wetland secondary</i>	2,718	0	0	0	0	60	0	0	60
<i>Upland secondary</i>	749	0	0	0	0	55	0	0	55
<i>Managed wetland—wetland primary, low long-term conservation value</i>	21,891	0	0	0	0	140	0	0	140
<i>Managed wetland—wetland secondary, low long-term conservation value</i>	2,800	0	0	0	0	45	0	0	45
<i>Managed wetland—upland, low long-term conservation value</i>	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San joaquin kit fox</b>								0	0
<i>Breeding, foraging, and dispersal habitat</i>	5,327	0	169	0	0	0	0	0	169
<b>Total</b>	5,327	0	169	0	0	0	0	0	169
<b>Suisun shrew</b>								0	0
<i>Primary habitat</i>	3,128	0	0	0	0	83	0	0	83
<i>Secondary habitat</i>	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
<i>Primary habitat</i>	7,467	0	117	0	5	364	0	0	487
<i>Secondary habitat</i>	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	25,382	0	120	0	5	793	2	0	919
<b>California clapper rail</b>								0	0
<i>Primary habitat</i>	296	0	0	0	0	19	0	0	19
<i>Secondary habitat</i>	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
<i>Nesting and Migratory Habitat</i>	86,263	0	1,243	0	44	2,785	850	0	4,922
<b>Total</b>	86,263	0	1,243	0	44	2,785	850	0	4,922
<b>Greater sandhill crane</b>								0	0
<i>Roosting and foraging - Permanent</i>	7,340	0	219	0	0	0	0	0	219
<i>Roosting and foraging - Temporary</i>	16,579	0	1,451	0	0	174	0	0	1,625
<i>Foraging</i>	164,676	30	8,435	0	0	1,825	0	30	10,260
<b>Total</b>	188,594	30	10,105	0	0	1,999	0	30	12,104
<b>Least Bell's vireo</b>								0	0
<i>Migratory and breeding</i>	14,850	0	166	0	244	619	406	0	1,436
<b>Total</b>	14,850	0	166	0	244	619	406	0	1,436
<b>Suisun song sparrow</b>								0	0
<i>Primary habitat</i>	3,722	0	0	0	0	287	0	0	287
<i>Secondary habitat</i>	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
<i>Foraging habitat</i>	477,879	0	7,456	0	2,275	6,013	3,201	0	18,945
<i>Nesting habitat</i>	9,796	0	134	0	255	361	470	0	1,220
<b>Total</b>	487,675	0	7,590	0	2,530	6,373	3,672	0	20,165
<b>Tricolored blackbird</b>								0	0
<i>Breeding habitat-ag foraging</i>	102,184	16	657	0	1,612	1,152	852	16	4,274
<i>Breeding habitat-foraging</i>	60,828	0	388	0	931	2,389	532	0	4,240
<i>Breeding habitat-nesting</i>	1,935	0	39	0	89	43	114	0	285
<i>Nonbreeding habitat-foraging ag</i>	196,713	8	8,449	0	38	2,856	1,604	8	12,947
<i>Nonbreeding habitat-roosting</i>	28,067	0	355	0	49	1,214	25	0	1,644
<i>Nonbreeding habitat-foraging</i>	34,313	5	801	0	0	1,324	33	5	2,158
<b>Total</b>	424,040	29	10,689	0	2,721	8,978	3,161	29	25,549
<b>Western burrowing owl</b>								0	0
<i>High-value habitat</i>	152,014	0	1,375	0	1,202	3,038	541	0	6,156
<i>Low-value habitat</i>	254,352	0	4,668	0	512	1,632	1,977	0	8,790
<b>Total</b>	406,366	0	6,044	0	1,714	4,671	2,518	0	14,946
<b>Western yellow-billed cuckoo</b>								0	0
<i>Breeding habitat</i>	1,970	0	8	0	24	98	66	0	196
<i>Migratory habitat</i>	10,425	0	134	0	220	398	318	0	1,070
<b>Total</b>	12,395	0	142	0	244	496	384	0	1,267
<b>White-tailed kite</b>								0	0
<i>Breeding habitat</i>	14,069	0	190	0	269	543	523	0	1,526
<i>Foraging habitat</i>	507,922	0	7,477	0	2,297	6,477	2,982	0	19,233
<b>Total</b>	521,991	0	7,668	0	2,566	7,020	3,505	0	20,759
<b>Yellow-breasted chat</b>								0	0
<i>Primary nesting and migratory habitat</i>	8,178	0	72	0	80	388	272	0	811
<i>Secondary nesting and migratory habitat</i>	5,528	0	95	0	5	172	135	0	406
<i>Suisun Marsh/upper Yolo Bypass nest and migratory habitat</i>	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	166	0	244	634	406	0	1,451
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
<i>Aquatic - tidal</i>	12,097	0	169	0	13	219	131	0	532
<i>Aquatic - nontidal</i>	19,184	0	90	0	133	103	22	0	348
<i>Upland-high</i>	21,649	0	286	0	242	372	0	0	900
<i>Upland-moderate</i>	25,953	0	355	0	125	773	314	0	1,567
<i>Upland-low</i>	5,683	0	58	0	1	150	279	0	488
<b>Total</b>	84,567	0	958	0	516	1,616	745	0	3,835
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	0	40	0	11	33	22	0	105
<b>Western pond turtle</b>								0	0
<i>Aquatic habitat</i>	81,666	0	598	0	150	1,856	619	0	3,224
<i>Upland nesting and overwintering habitat</i>	16,184	0	149	0	115	331	245	0	841
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	0	120	0	37	243	30	0	431
<b>Total</b>	110,530	0	868	0	303	2,430	895	0	4,495
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	0	17	0	1	14	3	0	35
<b>Amphibians</b>									



Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>California red-legged frog</b>								0	0
<i>Aquatic habitat</i>	159	0	0	0	0	0	0	0	0
<i>Upland cover and dispersal habitat</i>	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	0
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	206	0	30	659	0	0	895
<b>Total</b>	37,732	0	206	0	30	861	0	0	1,096
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>								0	0
<i>Riparian vegetation</i>	17,786	0	92	0	56	125	200	0	474
<i>Nonriparian channels and grasslands</i>	16,670	0	222	0	85	261	210	0	777
<b>Total</b>	34,456	0	314	0	141	387	410	0	1,251
<b>California linderiella</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Conservancy fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Longhorn fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Midvalley fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Vernal pool fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Vernal pool tadpole shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Plants</b>									
<i>Brittlescale total</i>	451	0	0	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	0	0	0	193	0	0	193
<i>San Joaquin spearscale total</i>	14,933	0	24	0	48	129	1	0	202
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	13	0	0	0	350	0	364
<i>Delta mudwort total</i>	6,081	0	91	0	10	261	122	0	484
<i>Mason's lilaopsis total</i>	6,081	0	91	0	10	261	122	0	484
<i>Delta tule pea total</i>	5,853	0	6	0	0	420	1	0	428
<i>Suisun Marsh aster total</i>	5,853	0	6	0	0	420	1	0	428
<i>Side-flowering skullcap total</i>	2,497	0	13	0	1	80	12	0	106
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Legenere</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Heckard's peppergrass</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Boggs Lake hedge-hyssop</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Dwarf downingia</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1

**Alternative 2B**

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0		
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Farmsteads (without residence)	820	23	0	7	5	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	66	7	5			
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	388	15	463	95	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	619	463	120				
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	80	0	0				
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
Other Ag Lands	2,097	16	1	27	2	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	63	27	2					
<b>Developed</b>	<b>90,660</b>	<b>154</b>	<b>3</b>	<b>36</b>	<b>81</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>36</b>	<b>97</b>						

1  
2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss						
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																																
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	0	12	0	3				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0				
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Farmsteads (without residence)	820	23	0	7	5	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	0	0	120	7	8					
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	388	15	463	95	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	0	3,406	463	186						
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	0	143	0	0						
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4						
Other Ag Lands	2,097	16	1	27	2	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	0	238	27	11							
Developed	90,660	154	3	36	81	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	0	0	0	961	36	165							

1  
2







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																										
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0
<b>Boggs Lake hedge-hyssop</b>																																	
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dwarf downingia</b>																																	
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	375	0	0	
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	373	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	375	0	0	
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,576	3	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	373	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	4	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	375	0	0	

1  
2

1 Table 12E-25. Indirect Effects--Alternative 2B [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	21	0	0	51	343	0	415
Grassland habitat	3,103	0	176	0	0	51	263	0	490
<b>Total</b>	6,011	0	197	0	0	102	606	0	905
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	9	0	0	18	256	0	283
<b>Total</b>	2,166	0	9	0	0	18	256	0	283
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland--wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland--wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland--upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	170	0	0	0	0	0	170
<b>Total</b>	5,327	0	170	0	0	0	0	0	170
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	49	0	5	364	0	0	418
Secondary habitat	17,915	0	4	0	0	428	2	0	434
<b>Total</b>	25,382	0	52	0	5	793	2	0	852
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,049	0	44	2,785	850	0	4,728
<b>Total</b>	86,263	0	1,049	0	44	2,785	850	0	4,728
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	173	0	0	0	0	0	173
Roosting and foraging - Temporary	16,579	0	1,148	0	0	174	0	0	1,322
Foraging	164,676	70	7,417	0	0	1,825	0	70	9,242
<b>Total</b>	188,594	70	8,738	0	0	1,999	0	70	10,736
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	246	0	244	619	406	0	1,516
<b>Total</b>	14,850	0	246	0	244	619	406	0	1,516
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	1	8,009	0	2,275	6,013	3,201	1	19,498
Nesting habitat	9,796	0	200	0	255	361	470	0	1,286
<b>Total</b>	487,675	1	8,209	0	2,530	6,373	3,672	1	20,784
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	8	733	0	1,612	1,152	852	8	4,350
Breeding habitat-foraging	60,828	0	409	0	931	2,389	532	0	4,262
Breeding habitat-nesting	1,935	0	37	0	89	43	114	0	283
Nonbreeding habitat-foraging ag	196,713	52	7,055	0	38	2,856	1,604	52	11,553
Nonbreeding habitat-roosting	28,067	0	274	0	49	1,214	25	0	1,563
Nonbreeding habitat-foraging	34,313	4	608	0	0	1,324	33	4	1,965
<b>Total</b>	424,040	64	9,117	0	2,721	8,978	3,161	64	23,977
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,134	0	1,202	3,038	541	0	5,915
Low-value habitat	254,352	0	4,260	0	512	1,632	1,977	0	8,381
<b>Total</b>	406,366	0	5,394	0	1,714	4,671	2,518	0	14,296
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	43	0	24	98	66	0	231
Migratory habitat	10,425	0	165	0	220	398	318	0	1,102
<b>Total</b>	12,395	0	208	0	244	496	384	0	1,333
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	281	0	269	543	523	0	1,617
Foraging habitat	507,922	1	7,904	0	2,297	6,477	2,982	1	19,660
<b>Total</b>	521,991	1	8,186	0	2,566	7,020	3,505	1	21,277
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	142	0	80	388	272	0	882
Secondary nesting and migratory habitat	5,528	0	104	0	5	172	135	0	415
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	247	0	244	634	406	0	1,532
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	159	0	13	219	131	0	522
Aquatic - nontidal	19,184	0	136	0	133	103	22	0	394
Upland-high	21,649	0	270	0	242	372	0	0	884
Upland-moderate	25,953	0	380	0	125	773	314	0	1,592
Upland-low	5,683	0	73	0	1	150	279	0	503
<b>Total</b>	84,567	0	1,018	0	516	1,616	745	0	3,895
Aquatic breeding, foraging, and movement (miles)	2,802	0	30	0	11	33	22	0	96
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	448	0	150	1,856	619	0	3,073
Upland nesting and overwintering habitat	16,184	0	183	0	115	331	245	0	875
Upland nesting and overwintering habitat-NHD	12,680	0	96	0	37	243	30	0	407
<b>Total</b>	110,530	0	727	0	303	2,430	895	0	4,355
Aquatic habitat linear (miles) - NHD	1,425	0	18	0	1	14	3	0	36

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
Aquatic habitat	159	0	0	0	0	0	0	0	0
Upland cover and dispersal habitat	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	0
Aquatic breeding habitat	8,273	0	0	0	0	201	0	0	201
Terrestrial cover and aestivation	29,459	0	212	0	30	659	0	0	901
<b>Total</b>	37,732	0	212	0	30	861	0	0	1,102
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>								0	0
Riparian vegetation	17,786	0	66	0	56	125	200	0	448
Nonriparian channels and grasslands	16,670	0	163	0	85	261	210	0	718
<b>Total</b>	34,456	0	229	0	141	387	410	0	1,167
<b>California linderiella</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Longhorn fairy shrimp</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Midvalley fairy shrimp</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool fairy shrimp</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool tadpole shrimp</b>								0	0
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	14	0	0	45	0	0	59
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Plants</b>									
Brittlescale total	451	0	0	0	0	3	0	0	3
Heartscale total	6,528	0	0	0	0	193	0	0	193
San Joaquin spearscale total	14,933	0	24	0	48	129	1	0	202
Carquinez goldenbush total	1,346	0	0	0	0	9	0	0	9
Delta button celery total	3,361	0	12	0	0	0	350	0	363
Delta mudwort total	6,081	0	89	0	10	261	122	0	482
Mason's lilaeopsis total	6,081	0	89	0	10	261	122	0	482
Delta tule pea total	5,853	0	6	0	0	420	1	0	428
Suisun Marsh aster total	5,853	0	6	0	0	420	1	0	428
Side-flowering skullcap total	2,497	0	13	0	1	80	12	0	106
Slough thistle total	1,834	0	0	0	0	0	349	0	349
Soft bird's-beak total	1,228	0	0	0	0	64	0	0	64
Suisun thistle total	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>								0	0
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Legenere</b>								0	0
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Heckard's peppergrass</b>								0	0
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Boggs Lake hedge-hyssop</b>								0	0
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Dwarf Downingia</b>								0	0
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	14	0	0	18	0	0	32
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150

1  
2

**Alternative 2C**

---

1

2





Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0	0				
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Farmsteads (without residence)	820	8	1	5	1	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	52	5	1						
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	243	9	283	101	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	467	283	125						
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	80	0	0						
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4						
Other Ag Lands	2,097	9	0	6	9	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	55	6	9						
Developed	90,660	232	38	73	156	15	16	1	0	13	1	1	0	15	1	85	5	1	0	124	0	0	0	0	0	0	0	409	73	172							

1  
2

1 Table 12E-27. Direct Effects on Natural Communities--Alternative 2C with Full Implementation (Late Long-Term) (acres) [Version July 22, 2013]

Table with columns: Natural Community, Plan Area (Acres), CM1 Water Facilities and Operation (Tunnel/Pipeline/Conveyance Facilities Construction), CM2 Yolo Bypass Fisheries Enhancement (Fremont Weir and Yolo Bypass Improvements), Suisun Marsh, Delta, CM4 Tidal Natural Communities Restoration, CM5 Seasonally Inundated Floodplain Restoration, CM7 Riparian Natural Community Restoration, CM8 Grassland Restoration, CM10 Nontidal Marsh Natural Community Restoration, CM11 Natural Community Enhancement and Management, CM18 Conservation Hatcheries, Maximum Allowable Habitat Loss (Permanent, Temporary).

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Livestock feedlots	180	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	17	0	3				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	0	8	0	0	0	0	0	0	0	0	8	0	0					
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Farmsteads (without residence)	820	8	1	5	1	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	106	5	5						
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	243	9	283	101	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	3,254	283	191						
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	143	0	0							
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4						
Other Ag Lands	2,097	9	0	6	9	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	230	6	18							
<b>Developed</b>	<b>90,660</b>	<b>232</b>	<b>38</b>	<b>73</b>	<b>156</b>	<b>15</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>39</b>	<b>14</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>383</b>	<b>79</b>	<b>58</b>	<b>15</b>	<b>664</b>	<b>125</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,074</b>	<b>73</b>	<b>240</b>							

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	243	20	19	
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30	20	11
<i>Degraded vernal pool complex</i>	2,576	0	0	0	5	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	200	0	0	0	0	0	0	0	0	0	200	0	5	
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	201	0	0	0	0	0	0	0	0	243	20	19		
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	29	0	20	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	30	20	11	
<i>Degraded vernal pool complex</i>	2,576	0	0	0	5	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	200	0	0	0	0	0	0	0	0	200	0	5		
<i>Alkali seasonal wetland</i>	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	201	0	0	0	0	0	0	0	0	243	20	19		

1  
2







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
Vernal pool complex	9,557	29	0	20	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30	20	11
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	370	0	5	
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19		
<b>Boggs Lake hedge-hyssop</b>																																		
Vernal pool complex	9,557	29	0	20	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30	20	11	
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	370	0	5	
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19		
<b>Dwarf downingia</b>																																		
Vernal pool complex	9,557	29	0	20	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30	20	11	
Degraded vernal pool complex	2,576	0	0	0	5	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	370	0	5	
Alkali seasonal wetland	188	13	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2		
<b>Total</b>	12,320	42	0	20	19	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	413	20	19		

1 Table 12E-30. Indirect Effects--Alternative 2C [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	1	0	0	51	343	0	395
Grassland habitat	3,103	0	42	0	0	51	263	0	356
<b>Total</b>	6,011	0	43	0	0	102	606	0	751
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	0	0	0	18	256	0	274
<b>Total</b>	2,166	0	0	0	0	18	256	0	274
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland--wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland--wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland--upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	145	0	0	0	0	0	145
<b>Total</b>	5,327	0	145	0	0	0	0	0	145
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	13	0	5	364	0	0	382
Secondary habitat	17,915	0	0	0	0	428	2	0	431
<b>Total</b>	25,382	0	13	0	5	793	2	0	813
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	985	0	44	2,785	850	0	4,664
<b>Total</b>	86,263	0	985	0	44	2,785	850	0	4,664
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	0	0	0	0	0	0	0
Roosting and foraging - Temporary	16,579	0	235	0	0	174	0	0	408
Foraging	164,676	12	3,675	0	0	1,825	0	12	5,499
<b>Total</b>	188,594	12	3,909	0	0	1,999	0	12	5,908
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	173	0	244	619	406	0	1,443
<b>Total</b>	14,850	0	173	0	244	619	406	0	1,443
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	0	7,413	0	2,275	6,013	3,201	0	18,901
Nesting habitat	9,796	0	180	0	255	361	470	0	1,266
<b>Total</b>	487,675	0	7,593	0	2,530	6,373	3,672	0	20,168
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	2	2,197	0	1,612	1,152	852	2	5,814
Breeding habitat-foraging	60,828	1	1,897	0	931	2,389	532	1	5,750
Breeding habitat-nesting	1,935	0	156	0	89	43	114	0	402
Nonbreeding habitat-foraging ag	196,713	21	4,875	0	38	2,856	1,604	21	9,373
Nonbreeding habitat-roosting	28,067	1	216	0	49	1,214	25	1	1,505
Nonbreeding habitat-foraging	34,313	2	685	0	0	1,324	33	2	2,042
<b>Total</b>	424,040	26	10,026	0	2,721	8,978	3,161	26	24,886
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	2,075	0	1,202	3,038	541	0	6,856
Low-value habitat	254,352	0	3,001	0	512	1,632	1,977	0	7,122
<b>Total</b>	406,366	0	5,076	0	1,714	4,671	2,518	0	13,978
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	0	0	24	98	66	0	188
Migratory habitat	10,425	0	123	0	220	398	318	0	1,059
<b>Total</b>	12,395	0	123	0	244	496	384	0	1,248
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	229	0	269	543	523	0	1,565
Foraging habitat	507,922	0	7,391	0	2,297	6,477	2,982	0	19,147
<b>Total</b>	521,991	0	7,621	0	2,566	7,020	3,505	0	20,712
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	118	0	80	388	272	0	858
Secondary nesting and migratory habitat	5,528	0	53	0	5	172	135	0	364
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	171	0	244	634	406	0	1,456
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	87	0	13	219	131	0	450
Aquatic - nontidal	19,184	0	74	0	133	103	22	0	332
Upland-high	21,649	0	288	0	242	372	0	0	902
Upland-moderate	25,953	0	395	0	125	773	314	0	1,607
Upland-low	5,683	0	74	0	1	150	279	0	504
<b>Total</b>	84,567	0	917	0	516	1,616	745	0	3,794
Aquatic breeding, foraging, and movement (miles)	2,802	0	28	0	11	33	22	0	93
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	309	0	150	1,856	619	0	2,934
Upland nesting and overwintering habitat	16,184	0	140	0	115	331	245	0	832
Upland nesting and overwintering habitat-NHD	12,680	0	163	0	37	243	30	0	473
<b>Total</b>	110,530	0	612	0	303	2,430	895	0	4,239
Aquatic habitat linear (miles) - NHD	1,425	0	15	0	1	14	3	0	34

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
<i>Aquatic habitat</i>	159	0	9	0	0	0	0	0	9
<i>Upland cover and dispersal habitat</i>	7,766	0	28	0	0	0	0	0	28
<b>Total</b>	7,925	0	37	0	0	0	0	0	37
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	0
<i>Aquatic breeding habitat</i>	8,273	0	74	0	0	201	0	0	275
<i>Terrestrial cover and aestivation</i>	29,459	0	305	0	30	659	0	0	994
<b>Total</b>	37,732	0	379	0	30	861	0	0	1,269
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>								0	0
<i>Riparian vegetation</i>	17,786	0	66	0	56	125	200	0	448
<i>Nonriparian channels and grasslands</i>	16,670	0	149	0	85	261	210	0	704
<b>Total</b>	34,456	0	214	0	141	387	410	0	1,152
<b>California linderiella</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Conservancy fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Longhorn fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Midvalley fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Vernal pool fairy shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Vernal pool tadpole shrimp</b>								0	0
<i>Vernal pool complex</i>	9,607	0	51	0	0	89	0	0	140
<i>Degraded vernal pool complex</i>	2,713	0	10	0	0	45	0	0	56
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Plants</b>									
<b>Brittlescale total</b>	451	0	1	0	0	3	0	0	3
<b>Heartscale total</b>	6,528	0	7	0	0	193	0	0	201
<b>San Joaquin spearscale total</b>	14,933	0	104	0	48	129	1	0	282
<b>Carquinez goldenbush total</b>	1,346	0	0	0	0	9	0	0	9
<b>Delta button celery total</b>	3,361	0	49	0	0	0	350	0	400
<b>Delta mudwort total</b>	6,081	0	58	0	10	261	122	0	451
<b>Mason's lilaopsis total</b>	6,081	0	58	0	10	261	122	0	451
<b>Delta tule pea total</b>	5,853	0	2	0	0	420	1	0	423
<b>Suisun Marsh aster total</b>	5,853	0	2	0	0	420	1	0	423
<b>Side-flowering skullcap total</b>	2,497	0	29	0	1	80	12	0	122
<b>Slough thistle total</b>	1,834	0	0	0	0	0	349	0	349
<b>Soft bird's-beak total</b>	1,228	0	0	0	0	64	0	0	64
<b>Suisun thistle total</b>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Legenere</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Heckard's peppergrass</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Boggs Lake hedge-hyssop</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196
<b>Dwarf downingia</b>								0	0
<i>Vernal pool complex</i>	9,557	0	50	0	0	117	0	0	167
<i>Degraded vernal pool complex</i>	2,576	0	10	0	0	18	0	0	28
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	61	0	0	135	0	0	196

# Alternative 3

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of rereational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2		Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Farmsteads (without residence)	820	13	2	0	2	0	0	0	0	0	0	0	0	0	12	0	27	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	75	38	25	37	17	25	0	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	0	329	25	62	
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	0	0	0	5		
<b>Developed</b>	<b>90,660</b>	<b>74</b>	<b>18</b>	<b>2</b>	<b>47</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>2</b>	<b>63</b>	

1  
2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	12	0	3				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8	0	0					
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Farmsteads (without residence)	820	13	2	0	2	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	113	0	5						
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	75	38	25	37	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	3,116	25	128						
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	143	0	0							
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4							
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	233	0	13							
<b>Developed</b>	<b>90,660</b>	<b>74</b>	<b>18</b>	<b>2</b>	<b>47</b>	<b>15</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>39</b>	<b>14</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>383</b>	<b>79</b>	<b>58</b>	<b>15</b>	<b>664</b>	<b>125</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>895</b>	<b>2</b>	<b>131</b>							

1  
2







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																													
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Boggs Lake hedge-hyssop</b>																																				
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Dwarf downingia</b>																																				
<i>Vernal pool complex</i>	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	1	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1  
2

1 Table 12E-35. Indirect Effects–Alternative 3 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
<i>Riparian habitat</i>	2,909	0	18	0	0	51	343	0	412
<i>Grassland habitat</i>	3,103	0	161	0	0	51	263	0	475
<b>Total</b>	6,011	0	179	0	0	102	606	0	887
<b>Riparian woodrat</b>								0	0
<i>Habitat</i>	2,166	0	2	0	0	18	256	0	276
<b>Total</b>	2,166	0	2	0	0	18	256	0	276
<b>Salt marsh harvest mouse</b>								0	0
<i>Tidal brackish emergent wetland primary</i>	3,641	0	0	0	0	93	0	0	93
<i>Tidal brackish emergent wetland secondary</i>	2,718	0	0	0	0	60	0	0	60
<i>Upland secondary</i>	749	0	0	0	0	55	0	0	55
<i>Managed wetland—wetland primary, low long-term conservation value</i>	21,891	0	0	0	0	140	0	0	140
<i>Managed wetland—wetland secondary, low long-term conservation value</i>	2,800	0	0	0	0	45	0	0	45
<i>Managed wetland—upland, low long-term conservation value</i>	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
<i>Breeding, foraging, and dispersal habitat</i>	5,327	0	169	0	0	0	0	0	169
<b>Total</b>	5,327	0	169	0	0	0	0	0	169
<b>Suisun shrew</b>								0	0
<i>Primary habitat</i>	3,128	0	0	0	0	83	0	0	83
<i>Secondary habitat</i>	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
<i>Primary habitat</i>	7,467	0	113	0	5	364	0	0	483
<i>Secondary habitat</i>	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	25,382	0	116	0	5	793	2	0	915
<b>California clapper rail</b>								0	0
<i>Primary habitat</i>	296	0	0	0	0	19	0	0	19
<i>Secondary habitat</i>	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
<i>Nesting and Migratory Habitat</i>	86,263	0	1,173	0	44	2,785	850	0	4,851
<b>Total</b>	86,263	0	1,173	0	44	2,785	850	0	4,851
<b>Greater sandhill crane</b>								0	0
<i>Roosting and foraging - Permanent</i>	7,340	0	219	0	0	0	0	0	219
<i>Roosting and foraging - Temporary</i>	16,579	0	1,427	0	0	174	0	0	1,600
<i>Foraging</i>	164,676	9	7,612	0	0	1,825	0	9	9,437
<b>Total</b>	188,594	9	9,258	0	0	1,999	0	9	11,257
<b>Least Bell's vireo</b>								0	0
<i>Migratory and breeding</i>	14,850	0	155	0	244	619	406	0	1,425
<b>Total</b>	14,850	0	155	0	244	619	406	0	1,425
<b>Suisun song sparrow</b>								0	0
<i>Primary habitat</i>	3,722	0	0	0	0	287	0	0	287
<i>Secondary habitat</i>	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
<i>Foraging habitat</i>	477,879	0	6,821	0	2,275	6,013	3,201	0	18,310
<i>Nesting habitat</i>	9,796	0	115	0	255	361	470	0	1,201
<b>Total</b>	487,675	0	6,936	0	2,530	6,373	3,672	0	19,511
<b>Tricolored blackbird</b>								0	0
<i>Breeding habitat-og foraging</i>	102,184	7	647	0	1,612	1,152	852	7	4,264
<i>Breeding habitat-foraging</i>	60,828	0	378	0	931	2,389	532	0	4,231
<i>Breeding habitat-nesting</i>	1,935	0	39	0	89	43	114	0	285
<i>Nonbreeding habitat-foraging og</i>	196,713	0	7,665	0	38	2,856	1,604	0	12,163
<i>Nonbreeding habitat-roosting</i>	28,067	0	350	0	49	1,214	25	0	1,639
<i>Nonbreeding habitat-foraging</i>	34,313	0	784	0	0	1,324	33	0	2,141
<b>Total</b>	424,040	7	9,863	0	2,721	8,978	3,161	7	24,723
<b>Western burrowing owl</b>								0	0
<i>High-value habitat</i>	152,014	0	1,227	0	1,202	3,038	541	0	6,008
<i>Low-value habitat</i>	254,352	0	4,285	0	512	1,632	1,977	0	8,406
<b>Total</b>	406,366	0	5,512	0	1,714	4,671	2,518	0	14,415
<b>Western yellow-billed cuckoo</b>								0	0
<i>Breeding habitat</i>	1,970	0	8	0	24	98	66	0	196
<i>Migratory habitat</i>	10,425	0	127	0	220	398	318	0	1,064
<b>Total</b>	12,395	0	135	0	244	496	384	0	1,260
<b>White-tailed kite</b>								0	0
<i>Breeding habitat</i>	14,069	0	171	0	269	543	523	0	1,506
<i>Foraging habitat</i>	507,922	0	6,853	0	2,297	6,477	2,982	0	18,609
<b>Total</b>	521,991	0	7,024	0	2,566	7,020	3,505	0	20,115
<b>Yellow-breasted chat</b>								0	0
<i>Primary nesting and migratory habitat</i>	8,178	0	63	0	80	388	272	0	803
<i>Secondary nesting and migratory habitat</i>	5,528	0	92	0	5	172	135	0	403
<i>Suisun Marsh/upper Yolo Bypass nest and migratory habitat</i>	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	155	0	244	634	406	0	1,440
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
<i>Aquatic - tidal</i>	12,097	0	161	0	13	219	131	0	524
<i>Aquatic - nontidal</i>	19,184	0	88	0	133	103	22	0	346
<i>Upland-high</i>	21,649	0	277	0	242	372	0	0	891
<i>Upland-moderate</i>	25,953	0	349	0	125	773	314	0	1,561
<i>Upland-low</i>	5,683	0	59	0	1	150	279	0	489
<b>Total</b>	84,567	0	935	0	516	1,616	745	0	3,811
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	0	37	0	11	33	22	0	102
<b>Western pond turtle</b>								0	0
<i>Aquatic habitat</i>	81,666	0	593	0	150	1,856	619	0	3,218
<i>Upland nesting and overwintering habitat</i>	16,184	0	147	0	115	331	245	0	839
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	0	117	0	37	243	30	0	427
<b>Total</b>	110,530	0	857	0	303	2,430	895	0	4,485
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	0	16	0	1	14	3	0	34
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
<i>Aquatic habitat</i>	159	0	0	0	0	0	0	0	0

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<i>Upland cover and dispersal habitat</i>	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	206	0	30	659	0	0	895
<b>Total</b>	37,732	0	206	0	30	861	0	0	1,096
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>								0	0
<i>Riparian vegetation</i>	17,786	0	94	0	56	125	200	0	476
<i>Nonriparian channels and grasslands</i>	16,670	0	220	0	85	261	210	0	776
<b>Total</b>	34,456	0	314	0	141	387	410	0	1,252
<b>California linderiella</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Conservancy fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Longhorn fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Midvalley fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Vernal pool fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Vernal pool tadpole shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	12	0	0	45	0	0	57
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Plants</b>									
<i>Brittlescale total</i>	451	0	0	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	0	0	0	193	0	0	193
<i>San Joaquin spearscale total</i>	14,933	0	24	0	48	129	1	0	202
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	13	0	0	0	350	0	364
<i>Delta mudwort total</i>	6,081	0	88	0	10	261	122	0	481
<i>Mason's lilaopsis total</i>	6,081	0	88	0	10	261	122	0	481
<i>Delta tule pea total</i>	5,853	0	6	0	0	420	1	0	428
<i>Suisun Marsh aster total</i>	5,853	0	6	0	0	420	1	0	428
<i>Side-flowering skullcap total</i>	2,497	0	13	0	1	80	12	0	106
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>								0	0
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Legenere</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Heckard's peppergrass</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Boggs Lake hedge-hyssop</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149
<b>Dwarf downingia</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	12	0	0	18	0	0	30
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	14	0	0	135	0	0	149



# Alternative 4

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss						
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3		Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Tidal Perennial Aquatic	86,263	178	0	0	2,101	8	11	0	0	0	0	0	0	0	0	1	1	11	0.00	0.00	0.00	14	0	0	0	0	0	0	0	0	0	0	0	200	0	2,112	
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Farmsteads (without residence)	820	6	5	1	2	0	0	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	54	1	2		
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	53	83	8	29	17	25	0	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	352	8	54			
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	80	0	0			
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
Other Ag Lands	2,097	7	0	0	2	10	0	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	53	0	2				
Developed	90,660	59	34	1	49	15	16	1	0	13	1	1	0	0	15	1	85	5	1	0	124	0	0	0	0	0	0	0	0	0	231	1	65				

1  
2







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss								
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
<b>Reptiles</b>																																						
Giant garter snake																																			0	0	0	
Aquatic - tidal	12,097	16	1	0	55	9	2	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	57	
Aquatic - nontidal	19,184	10	56	0	13	59	13	0	0	0	0	0	0	0	5	2	89	9	3	0	109	0	0	0	0	0	0	0	0	0	0	0	0	235	0	26		
Upland-high	21,649	66	106	0	48	178	158	0	0	0	0	0	0	43	1	239	32	32	17	364	0	0	0	0	0	0	0	0	0	0	0	0	0	715	0	206		
Upland-moderate	25,953	167	54	0	135	60	61	0	0	0	0	0	0	70	43	552	26	7	1	700	0	0	0	0	0	0	0	0	0	0	0	0	0	1,017	0	196		
Upland-low	5,683	14	4	0	5	1	0	0	0	0	0	0	0	0	11	0	116	1	1	1	129	0	0	0	0	0	0	0	0	0	0	0	0	148	0	5		
<b>Total</b>	<b>84,567</b>	<b>274</b>	<b>222</b>	<b>0</b>	<b>257</b>	<b>306</b>	<b>234</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>48</b>	<b>996</b>	<b>69</b>	<b>43</b>	<b>20</b>	<b>1,305</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>2,142</b>	<b>0</b>	<b>491</b>		
Aquatic breeding, foraging, and movement (miles)	2,802	7	6	0	6	5	9	0	0	0	0	0	0	3	1	30	5	3	1	44	0	0	0	0	0	0	0	0	0	0	0	0	61	0	15			
<b>Western pond turtle</b>																																						
Aquatic habitat	81,666	180	57	0	2,098	37	23	45	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Upland nesting and overwintering habitat	16,184	105	97	0	34	109	70	2	1	48	41	16	0	2	0	24	2	0	0	136	0	0	0	0	0	0	0	0	0	0	0	0	0	451	0	104		
Upland nesting and overwintering habitat-NHD	12,680	30	47	0	34	21	49	5	5	12	7	2	0	0	9	1	88	9	5	2	144	0	0	0	0	0	0	0	0	0	0	0	0	0	242	0	83	
<b>Total</b>	<b>110,530</b>	<b>315</b>	<b>201</b>	<b>0</b>	<b>2,166</b>	<b>167</b>	<b>141</b>	<b>52</b>	<b>6</b>	<b>60</b>	<b>48</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>111</b>	<b>11</b>	<b>6</b>	<b>2</b>	<b>326</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,012</b>	<b>0</b>	<b>2,307</b>			
Aquatic habitat linear (miles) - NHD	1,425	3	6	0	3	1	3	0	0	1	1	1	0	0	1	0	14	3	2	0	24	0	0	0	0	0	0	0	0	0	0	0	34	0	6			
<b>Amphibians</b>																																						
California red-legged frog																																						
Aquatic habitat	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Upland cover and dispersal habitat	7,766	6	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	39			
<b>Total</b>	<b>7,925</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>39</b>				
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>California tiger salamander</b>																																						
Aquatic breeding habitat	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Terrestrial cover and aestivation	29,459	6	0	0	32	42	0	0	0	0	0	0	0	182	0	21	0	0	0	203	0	0	0	0	0	0	0	0	0	0	12	35	298	0	32			
<b>Total</b>	<b>37,732</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>182</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>203</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>35</b>	<b>298</b>	<b>0</b>	<b>32</b>					
<b>Invertebrates</b>																																						
Valley elderberry longhorn beetle																																						
Riparian vegetation	17,786	16	18	1	29	83	76	0	0	0	0	0	0	0	0	286	6	4	2	298	0	0	0	0	0	0	0	0	0	0	0	0	0	415	1	105		
Nonriparian channels and grasslands	16,670	126	101	0	62	41	94	1	0	9	4	0	0	7	0	59	13	6	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	369	0	156		
<b>Total</b>	<b>34,456</b>	<b>142</b>	<b>119</b>	<b>1</b>	<b>90</b>	<b>125</b>	<b>170</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>345</b>	<b>19</b>	<b>10</b>	<b>2</b>	<b>398</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>784</b>	<b>1</b>	<b>261</b>			
California linderiella																																						
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16		
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	208	0	2		
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216</b>	<b>0</b>	<b>18</b>			
Conservancy fairy shrimp																																						
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16		
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	208	0	2	
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216</b>	<b>0</b>	<b>18</b>			
Longhorn fairy shrimp																																						
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16		
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	208	0	2	
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216</b>	<b>0</b>	<b>18</b>			
Midvalley fairy shrimp																																						
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16		
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	208	0	2	
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216</b>	<b>0</b>	<b>18</b>			
Vernal pool fairy shrimp																																						
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16		
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0																		

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<b>Total</b>	12,320	15	0	0	18	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	216	0	18
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	8	0	0	14	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	0	14
<i>Degraded vernal pool complex</i>	2,576	7	0	0	2	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	207	0	2
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<b>Total</b>	12,320	15	0	0	18	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	216	0	18	
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	8	0	0	14	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	9	0	14	
<i>Degraded vernal pool complex</i>	2,576	7	0	0	2	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	207	0	2	
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
<b>Total</b>	12,320	15	0	0	18	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	216	0	18	





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<b>Reptiles</b>																															0	0	0		
Giant garter snake																																	0	0	0
Aquatic - tidal	12,097	16	1	0	55	9	2	0	0	0	0	0	0	1	0	0	0	0	0	2	0	2	3	0	0	0	0	0	0	0	28	0	60		
Aquatic - nontidal	19,184	10	56	0	13	59	13	0	0	0	0	0	0	37	0	237	38	60	21	393	0	34	21	0	0	0	0	0	0	553	0	47			
Upland-high	21,649	66	106	0	48	178	158	0	0	0	0	0	0	33	0	477	17	26	39	594	0	0	0	0	0	0	0	0	944	0	206				
Upland-moderate	25,953	167	54	0	135	60	61	0	0	0	0	0	0	60	0	1,019	128	140	28	1,375	0	27	24	0	0	0	0	1,718	0	220					
Upland-low	5,683	14	4	0	5	1	0	0	0	0	0	0	0	7	0	137	4	3	2	154	0	20	18	0	0	0	0	193	0	23					
<b>Total</b>	<b>84,567</b>	<b>274</b>	<b>222</b>	<b>0</b>	<b>257</b>	<b>306</b>	<b>234</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>139</b>	<b>1</b>	<b>1,870</b>	<b>188</b>	<b>230</b>	<b>90</b>	<b>2,518</b>	<b>0</b>	<b>82</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>3,437</b>	<b>0</b>	<b>556</b>					
Aquatic breeding, foraging, and movement (miles)	2,802	7	6	0	6	5	9	0	0	0	0	0	0	8	0	73	18	23	16	138	0	2	1	0	0	0	0	156	0	16					
<b>Western pond turtle</b>																																			
Aquatic habitat	81,666	180	57	0	2,098	37	23	45	0	0	0	0	0	0	0	0	0	0	0	45	0	32	21	0	0	0	0	351	0	2,141					
Upland nesting and overwintering habitat	16,184	105	97	0	34	109	70	3	5	86	95	139	2	13	0	113	6	5	4	473	0	12	15	10	0	0	805	0	119						
Upland nesting and overwintering habitat-NHD	12,680	30	47	0	34	21	49	9	9	48	11	64	1	12	1	203	16	15	11	399	0	4	2	0	0	0	501	0	85						
<b>Total</b>	<b>110,530</b>	<b>315</b>	<b>201</b>	<b>0</b>	<b>2,166</b>	<b>167</b>	<b>141</b>	<b>57</b>	<b>14</b>	<b>134</b>	<b>107</b>	<b>203</b>	<b>3</b>	<b>24</b>	<b>1</b>	<b>316</b>	<b>22</b>	<b>20</b>	<b>15</b>	<b>917</b>	<b>0</b>	<b>48</b>	<b>39</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>1,657</b>	<b>0</b>	<b>2,346</b>						
<b>Aquatic habitat linear (miles) - NHD</b>	<b>1,425</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>43</b>	<b>15</b>	<b>20</b>	<b>12</b>	<b>106</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>118</b>	<b>0</b>	<b>7</b>						
<b>Amphibians</b>																																			
<b>California red-legged frog</b>																																			
Aquatic habitat	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0				
Upland cover and dispersal habitat	7,766	6	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	30	0	39					
<b>Total</b>	<b>7,925</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>31</b>	<b>0</b>	<b>39</b>						
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>California tiger salamander</b>																																			
Aquatic breeding habitat	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Terrestrial cover and aestivation	29,459	6	0	0	32	42	0	0	0	0	0	0	0	101	0	404	5	6	0	517	0	0	0	0	0	0	40	639	0	32					
<b>Total</b>	<b>37,732</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>404</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>517</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>639</b>	<b>0</b>	<b>32</b>						
<b>Invertebrates</b>																																			
<b>Valley elderberry longhorn beetle</b>																																			
Riparian vegetation	17,786	16	18	1	29	83	76	0	0	0	0	0	0	0	0	490	25	28	8	552	0	43	35	0	0	0	0	712	1	140					
Nonriparian channels and grasslands	16,670	126	101	0	62	41	94	1	2	11	10	18	0	18	0	149	16	22	13	260	0	9	14	0	0	0	538	0	170						
<b>Total</b>	<b>34,456</b>	<b>142</b>	<b>119</b>	<b>1</b>	<b>90</b>	<b>125</b>	<b>170</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>10</b>	<b>18</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>640</b>	<b>42</b>	<b>50</b>	<b>21</b>	<b>813</b>	<b>0</b>	<b>52</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,250</b>	<b>1</b>	<b>310</b>						
<b>California linderella</b>																																			
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16					
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	379	0	2					
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>372</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387</b>	<b>0</b>	<b>18</b>						
<b>Conservancy fairy shrimp</b>																																			
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16					
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	379	0	2					
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>372</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387</b>	<b>0</b>	<b>18</b>						
<b>Longhorn fairy shrimp</b>																																			
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16					
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	379	0	2					
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>372</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387</b>	<b>0</b>	<b>18</b>						
<b>Midvalley fairy shrimp</b>																																			
Vernal pool complex	9,607	8	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16					
Degraded vernal pool complex	2,713	7	0	0	2	0	0	0	0	1	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	379	0	2					
<b>Total</b>	<b>12,320</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<																					

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
<b>Total</b>	12,320	15	0	0	18	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	0	0	0	0	18	
<b>Boggs Lake hedge-hyssop</b>																																			
<i>Vernal pool complex</i>	9,557	8	0	0	14	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
<i>Degraded vernal pool complex</i>	2,576	7	0	0	2	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
<b>Total</b>	12,320	15	0	0	18	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	0	0	0	18		
<b>Dwarf downingia</b>																																			
<i>Vernal pool complex</i>	9,557	8	0	0	14	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14		
<i>Degraded vernal pool complex</i>	2,576	7	0	0	2	0	0	0	0	0	0	0	0	65	0	305	1	0	0	370	0	0	0	0	0	0	0	0	0	0	0	0	2		
<i>Alkali seasonal wetland</i>	188	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
<b>Total</b>	12,320	15	0	0	18	0	0	0	1	0	0	0	0	65	0	305	1	0	0	372	0	0	0	0	0	0	0	0	0	0	0	0	18		

1  
2

1 Table 12E-40. Indirect Effects--Alternative 4 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	5	0	0	51	343	0	399
Grassland habitat	3,103	0	191	0	0	51	263	0	505
<b>Total</b>	6,011	0	196	0	0	102	606	0	904
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	0	0	0	18	256	0	274
<b>Total</b>	2,166	0	0	0	0	18	256	0	274
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	92	0	0	92
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland--wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland--wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland--upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	182	0	0	0	0	0	182
<b>Total</b>	5,327	0	182	0	0	0	0	0	182
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	126	0	5	364	0	0	495
Secondary habitat	17,915	0	3	0	0	428	2	0	433
<b>Total</b>	25,382	0	129	0	5	793	2	0	928
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,386	0	44	2,785	850	0	5,064
<b>Total</b>	86,263	0	1,386	0	44	2,785	850	0	5,064
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	362	0	0	0	0	0	362
Roosting and foraging - Temporary	16,579	0	975	0	0	174	0	0	1,148
Foraging	164,676	27	8,218	0	0	1,825	0	27	10,043
<b>Total</b>	188,594	27	9,555	0	0	1,999	0	27	11,554
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	237	0	244	619	406	0	1,507
<b>Total</b>	14,850	0	237	0	244	619	406	0	1,507
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	0	6,954	0	2,275	6,013	3,201	0	18,443
Nesting habitat	9,796	0	172	0	255	361	470	0	1,258
<b>Total</b>	487,675	0	7,126	0	2,530	6,373	3,672	0	19,701
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	8	824	0	1,612	1,152	852	8	4,441
Breeding habitat-foraging	60,828	0	777	0	931	2,389	532	0	4,629
Breeding habitat-nesting	1,935	1	43	0	89	43	114	1	290
Nonbreeding habitat-foraging ag	196,713	17	7,597	0	38	2,856	1,604	17	12,096
Nonbreeding habitat-roosting	28,067	0	422	0	49	1,214	25	0	1,711
Nonbreeding habitat-foraging	34,313	0	824	0	0	1,324	33	0	2,181
<b>Total</b>	424,040	25	10,488	0	2,721	8,979	3,161	25	25,348
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,330	0	1,202	3,040	541	0	6,113
Low-value habitat	254,352	0	3,688	0	512	1,632	1,977	0	7,809
<b>Total</b>	406,366	0	5,017	0	1,714	4,673	2,518	0	13,922
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	49	0	24	98	66	0	237
Migratory habitat	10,425	0	152	0	220	398	318	0	1,088
<b>Total</b>	12,395	0	201	0	244	496	384	0	1,326
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	228	0	269	543	523	0	1,563
Foraging habitat	507,922	0	6,981	0	2,297	6,477	2,982	0	18,737
<b>Total</b>	521,991	0	7,209	0	2,566	7,020	3,505	0	20,300
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	124	0	80	388	272	0	863
Secondary nesting and migratory habitat	5,528	0	107	0	5	172	135	0	419
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	231	0	244	634	406	0	1,516
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	184	0	13	219	131	0	546
Aquatic - nontidal	19,184	0	87	0	133	103	22	0	345
Upland-high	21,649	0	277	0	242	372	0	0	891
Upland-moderate	25,953	0	427	0	125	773	314	0	1,639
Upland-low	5,683	0	79	0	1	150	279	0	509
<b>Total</b>	84,567	0	1,054	0	516	1,616	745	0	3,931
Aquatic breeding, foraging, and movement (miles)	2,802	0	26	0	11	33	22	0	92
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	697	0	150	1,856	619	0	3,323
Upland nesting and overwintering habitat	16,184	0	275	0	115	331	245	0	967
Upland nesting and overwintering habitat-NHD	12,680	0	106	0	37	243	30	0	417
<b>Total</b>	110,530	0	1,078	0	303	2,430	895	0	4,706
<b>Aquatic habitat linear (miles) - NHD</b>	1,425	0	12	0	1	14	3	0	30
<b>Amphibians</b>									

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>California red-legged frog</b>									
<i>Aquatic habitat</i>	159	0	4	0	0	0	0	0	4
<i>Upland cover and dispersal habitat</i>	7,766	0	60	0	0	0	0	0	60
<b>Total</b>	7,925	0	64	0	0	0	0	0	64
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	85	0	30	659	0	0	774
<b>Total</b>	37,732	0	85	0	30	860	0	0	976
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>									
<i>Riparian vegetation</i>	17,786	0	88	0	56	125	200	0	470
<i>Nonriparian channels and grasslands</i>	16,670	0	175	0	85	261	210	0	730
<b>Total</b>	34,456	0	263	0	141	387	410	0	1,200
<b>California linderiella</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Conservancy fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Longhorn fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Midvalley fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Vernal pool fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Vernal pool tadpole shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	40	0	0	89	0	0	129
<i>Degraded vernal pool complex</i>	2,713	0	1	0	0	45	0	0	47
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Plants</b>									
<i>Brittlescale total</i>	451	0	0	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	0	0	0	193	0	0	193
<i>San Joaquin spearscale total</i>	14,933	0	58	0	48	129	1	0	236
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	97	0	0	0	350	0	448
<i>Delta mudwort total</i>	6,081	0	93	0	10	261	122	0	486
<i>Mason's lilaopsis total</i>	6,081	0	93	0	10	261	122	0	486
<i>Delta tule pea total</i>	5,853	0	5	0	0	420	1	0	427
<i>Suisun Marsh aster total</i>	5,853	0	5	0	0	420	1	0	427
<i>Side-flowering skullcap total</i>	2,497	0	32	0	1	80	12	0	125
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>									
<i>Vernal pool complex</i>	9,557	0	32	0	0	117	0	0	149
<i>Degraded vernal pool complex</i>	2,576	0	1	0	0	18	0	0	19
<i>Alkali seasonal wetland</i>	188	0	8	0	0	0	0	0	8
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Legenere</b>									
<i>Vernal pool complex</i>	9,557	0	32	0	0	117	0	0	149
<i>Degraded vernal pool complex</i>	2,576	0	1	0	0	18	0	0	19
<i>Alkali seasonal wetland</i>	188	0	8	0	0	0	0	0	8
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Heckard's peppergrass</b>									
<i>Vernal pool complex</i>	9,557	0	32	0	0	117	0	0	149
<i>Degraded vernal pool complex</i>	2,576	0	1	0	0	18	0	0	19
<i>Alkali seasonal wetland</i>	188	0	8	0	0	0	0	0	8
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Boggs Lake hedge-hyssop</b>									
<i>Vernal pool complex</i>	9,557	0	32	0	0	117	0	0	149
<i>Degraded vernal pool complex</i>	2,576	0	1	0	0	18	0	0	19
<i>Alkali seasonal wetland</i>	188	0	8	0	0	0	0	0	8
<b>Total</b>	12,320	0	41	0	0	135	0	0	176
<b>Dwarf downingia</b>									
<i>Vernal pool complex</i>	9,557	0	32	0	0	117	0	0	149
<i>Degraded vernal pool complex</i>	2,576	0	1	0	0	18	0	0	19
<i>Alkali seasonal wetland</i>	188	0	8	0	0	0	0	0	8
<b>Total</b>	12,320	0	41	0	0	135	0	0	176

**Alternative 5**

---

1

2

1 Table 12E-41. Direct Effects on Natural Communities--Alternative 5 with Full Implementation (Near-Term) (acres) [Version July 22, 2013]

Table with columns for Natural Community, Plan Area (Acres), CM1 Water Facilities and Operation, CM2 Yolo Bypass Fisheries Enhancement, Suisun Marsh (High Tidal Brackish Marsh, Mid Tidal Brackish Marsh, Low Tidal Brackish Marsh, Intertidal mudflat, Subtidal 1, Subtidal 2, Subtidal 3), Delta (Ecotone, Intertidal mudflat, Tidal freshwater marsh, Subtidal 1, Subtidal 2, Subtidal 3), CM4 Tidal Natural Communities Restoration (Construction and Inundation), CM5 Seasonally Inundated Floodplain Restoration (Levee Construction), CM7 Riparian Natural Community Restoration (Riparian Restoration as Part of Tidal Natural Communities Restoration, Riparian Restoration as Part of Seasonal Floodplain Restoration), CM8 Grassland Restoration, CM10 Nontidal Marsh Natural Community Restoration (Construction and Inundation), CM11 Natural Community Enhancement and Management (Construction of recreational-related facilities), CM18 Conservation Hatcheries (Construction), and Maximum Allowable Habitat Loss (Permanent (Acres), Temporary (Borrow and Spoil) (Acres), Temporary (Acres)).

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of recreational-related facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Farmsteads (without residence)	820	13	2	0	1	0	0	0	0	0	0	0	0	12	0	27	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0	1			
Misc semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	74	38	25	37	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	328	25	61				
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	80	0	0				
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
Other Ag Lands	2,097	6	5	0	4	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	58	0	5					
<b>Developed</b>	<b>90,660</b>	<b>67</b>	<b>18</b>	<b>2</b>	<b>42</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>224</b>	<b>2</b>	<b>59</b>						

1  
2



1 Table 12E-42. Direct Effects on Natural Communities--Alternative 5 with Full Implementation (Late Long-Term) (acres) [Version July 22, 2013]

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation					CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration	CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss								
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)	High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)
Tidal Perennial Aquatic	86,263	35	0	0	84	8	11	0.20	0.23	1.34	0.20	0.00	0.00	0.00	0.95	0.59	12.54	0.00	0.00	0.00	16	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	61	0	100	
Mudflat	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available
Tidal Brackish Emergent Wetland	8,501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
Tidal Freshwater Emergent Wetland	8,856	6	0	0	3	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	14	0	4			
Valley/Foothill Riparian	17,966	47	0	0	17	89	88	0	0	0	0	0	0	0	0	389	7	5	2	403	43	35	0	0	0	0	0	0	0	0	0	0	0	582	0	140				
Grassland	78,047	292	2	151	84	388	239	0	0	1	0	0	0	32	3	632	39	17	6	732	51	34	11	399	0	0	0	50	35	1,960	151	357	0	0	0	0	0	0		
Alkali Seasonal Wetland Complex	3,723	0	0	0	0	45	0	0	0	0	0	0	0	0	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0			
Vernal Pool Complex	12,133	3	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	0	0	0	0	0	272	0	0	0	0	0		
Other Natural Seasonal Wetland	842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Nontidal Freshwater Perennial Emergent Wetland	1,509	1	0	0	1	25	1	0	0	0	0	0	0	0	0	50	0	1	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	78	0	2				
Nontidal Perennial Aquatic	5,567	12	0	0	9	24	12	0	0	0	0	0	0	6	0	51	10	1	0	68	28	16	0	0	0	0	0	0	0	0	0	0	132	0	36					
Managed Wetland	70,798	3	0	75	8	24	44	56	112	1,783	1,628	1,765	69	232	0	1,479	161	14	2	7,301	0	0	0	0	0	0	0	0	0	0	0	0	7,328	75	52	0	0	0		
Inland Dune Scrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cultivated Lands	487,106	2,118	1,539	972	758	629	363	0	0	0	0	0	0	823	207	7,104	2,365	829	95	11,423	2,087	1,194	960	3,593	2,000	1,950	0	0	26,300	972	2,315	0	0	0	0	0	0			
Cropland	459,778	2,009	1,489	947	711	568	334	0	0	0	0	0	0	788	190	6,575	2,335	766	80	10,734	1,947	1,108	862	3,062	2,000	1,950	0	0	24,621	947	2,153	0	0	0	0	0	0			
Grain and Hay Crops	1,507	0	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	159	0	0	287	0	111	0	0	0	0	0	0				
Wheat	4,731	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	0	9	0	0	0	0	0	0	0				
Oats	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Misc. grain and hay	27,667	225	57	42	77	31	0	0	0	0	0	0	0	31	8	195	414	137	0	785	132	72	0	0	0	0	0	1,229	42	148	0	0	0	0	0	0	0			
Non-irrigated Misc. Grain and Hay	1,303	0	0	0	0	0	0	0	0	0	0	0	0	0	28	499	110	1	1	640	0	0	0	0	0	0	0	640	0	0	0	0	0	0	0	0	0			
Mixed grain and hay	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Non-irrigated Mixed grain and hay	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Field Crops	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	622	142	0	0	764	0	0	0	0	0	0	0	0	0	0		
Cotton	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	38	44	0	0	0	0	0	0	0	44	0	0	0	0	0	44	0	0	0				
Safflower	15,592	34	18	0	37	5	27	0	0	0	0	0	0	0	19	177	78	0	0	274	123	69	37	147	0	0	638	0	133	0	0	0	0	0	0	0	0			
Sugar Beets	464	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Corn	102,424	402	727	11	317	0	0	0	0	0	0	0	0	0	11	124	310	194	9	647	251	145	141	550	216	443	0	0	3,378	11	462	0	0	0	0	0	0			
Grain sorghum	324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Sudan	6,356	1	0	22	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22	21	0	0	0	0	0	0	0	0			
Beans (dry)	6,025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	39	0	0	0	0	67	0	39	0	0	0	0	0	0	0	0			
Sunflowers	1,175	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0			
Hybrid sorghum/sudan	305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Miscellaneous field	4,571	12	0	51	0	0	0	0	0	0	0	0	0	0	0	1	14	16	0	31	5	1	0	1	0	0	49	51	2	0	0	0	0	0	0	0	0			
Pasture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	362	338	0	0	700	0	0	0	0	0	0	0	0	0	0		
Alfalfa & Alfalfa mixtures	81,396	862	40	46	37	0	12	0	0	0	0	0	0	25	123	1,217	465	81	1	1,913	604	333	300	866	347	208	0	0	5,140	46	382	0	0	0	0	0	0			
Clover	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Mixed pasture	30,750	6	0	0	3	67	0	0	0	0	0	0	0	399	0	2,205	46	92	1	2,744	43	21	18	62	0	0	2,940	0	24	0	0	0	0	0	0	0	0			
Non-irrigated mixed pasture	2,995	0	0	0	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0	0		
Native Pasture	8,376	0	0	0	0	1	0	0	0	0	0	0	0	226	0	450	41	25	0	742	14	6	0	0	0	0	757	0	6	0	0	0	0	0	0	0	0			
Non-irrigated native pasture	3,465	1	0	0	301	1	0	0	0	0	0	0	0	3	0	6	0	0	0	9	5	2	0	0	0	0	316	0	3	0	0	0	0	0	0	0	0			
Misc. grasses	422	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	4	0	0	0	0	18	0	4	0	0	0	0	0	0	0	0	0		
Turf farms	3,740	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Rye grass	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Other Pasture	577	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Rice	10,259	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	223	0	0	278	0	1	0	0	0	0	0	0	0	0		
Wild Rice	578	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Truck, nursery, and berry crops																																								

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of Recreational-Related Facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)		Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
<i>Farmsteads (includes a farm residence)</i>	2,132	15	4	0	4	0	0	0	0	0	0	0	0	0	1	0	17	3	1	0	22	6	5	0	0	0	0	0	0	0	48	0	9				
<i>Livestock feedlots</i>	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	0	0	0	0	0	0	6	0	3					
<i>Dairies</i>	891	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	4	0	0					
<i>Poultry farms</i>	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
<i>Farmsteads (without residence)</i>	820	13	2	0	1	0	0	0	0	0	0	0	0	1	0	47	4	2	0	54	5	3	0	0	0	0	0	0	0	74	0	5					
<i>Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)</i>	20,602	74	38	25	37	17	25	0	0	0	0	0	0	32	17	324	130	58	14	575	114	66	0	531	0	0	0	0	1,350	25	127						
<i>Riparian Vegetation</i>	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	103	2	0	0	106	0	0	0	0	0	0	0	0	141	0	0						
<i>Water surface</i>	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4						
<i>Other Ag Lands</i>	2,097	6	5	0	4	10	0	0	0	0	0	0	0	2	0	34	2	2	0	39	9	9	98	0	0	0	0	0	167	0	13						
<b>Developed</b>	<b>90,660</b>	<b>67</b>	<b>18</b>	<b>2</b>	<b>42</b>	<b>15</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>29</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>139</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>222</b>	<b>125</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>446</b>	<b>2</b>	<b>126</b>							

1  
2

1 Table 12E-43. Direct Effects on Wildlife and Plants—Alternative 5 with Tunnel Alignment and Isolated Conveyance (Near-Term) (acres) [Version July 18, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh						Delta					CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss											
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation		Levee Construction		Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)			
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)														Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)												Permanent (Acres)	Permanent (Acres)	
<b>Mammals</b>																																								
<b>Riparian brush rabbit</b>																																								
<i>Riparian habitat</i>	2,909	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Grassland habitat</i>	3,103	150	0	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	6,011	157	0	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Riparian woodrat</b>																																								
<i>Habitat</i>	2,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	2,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Salt marsh harvest mouse</b>																																								
<i>Tidal brackish emergent wetland primary</i>	3,641	0	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Tidal brackish emergent wetland secondary</i>	2,718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Upland secondary</i>	749	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Managed wetland—wetland primary, low long-term conservation value</i>	21,891	0	0	0	0	0	0	0	0	0	0	534	577	770	3	0	0	0	0	0	0	1,349	564	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Managed wetland—wetland secondary, low long-term conservation value</i>	2,800	0	0	0	0	0	0	0	0	0	0	229	50	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Managed wetland—upland, low long-term conservation value</i>	3,787	0	0	0	0	0	0	0	0	0	64	70	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	35,588	0	0	0	0	0	0	0	49	7	892	697	817	3	0	0	0	0	0	0	0	1,517	948	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>San Joaquin kit fox</b>																																								
<i>Breeding, foraging, and dispersal habitat</i>	5,327	173	0	151	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	5,327	173	0	151	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Suisun shrew</b>																																								
<i>Primary habitat</i>	3,128	0	0	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Secondary habitat</i>	4,387	0	0	0	0	0	0	10	5	0	22	9	0	0	0	0	0	0	0	0	0	31	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	7,515	0	0	0	0	0	0	10	5	58	22	9	0	0	0	0	0	0	0	0	0	89	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Birds</b>																																								
<b>California black rail</b>																																								
<i>Primary habitat</i>	7,467	3	0	0	1	5	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	2	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Secondary habitat</i>	17,915	0	0	0	0	0	0	49	0	0	402	532	2	0	0	0	0	0	0	0	0	936	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	25,382	3	0	0	1	5	0	49	0	69	402	532	2	0	0	0	0	0	0	0	0	938	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>California clapper rail</b>																																								
<i>Primary habitat</i>	296	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Secondary habitat</i>	6,420	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	6,716	0	0	0	0	0	0	2	5	26	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>California least tern</b>																																								
<i>Nesting and Migratory Habitat</i>	86,263	35	0	0	84	8	11	0	0	1	0	0	0	0	0	1	1	11	12	4	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	86,263	35	0	0	84	8	11	0	0	1	0	0	0	0	0	1	1	11	12	4	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Greater sandhill crane</b>																																								
<i>Roosting and foraging - Permanent</i>	7,340	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Roosting and foraging - Temporary</i>	16,579	39	280	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Foraging</i>	164,676	1,138	406	134	445	0	0	0	0	0	0	0	0	0	2	0	709	852	363	26	1,951	0	0	0	0	0	257	567	1	0	0	0	0	0	0	0	0			
<b>Total</b>	188,594	1,180	686	134	536	0	0	0	0	0	0	0	0	2	0	709	852	363	26	1,951	0	0	0	0	0	257	567	1	0	0	0	0	0	0	0	0	0			
<b>Least Bell's vireo</b>																																								
<i>Migratory and breeding</i>																																								

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta						CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of Recreational-Related Facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																													
<b>Reptiles</b>	14,547	27	0	0	11	83	88	1	0	3	1	1	0	0	0	0	0	0	299	0	0	0	0	0	0	0	0	0	0	0	409	0	99			
<i>Giant garter snake</i>																																				
<i>Aquatic - tidal</i>	12,097	23	0	0	11	9	2	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Aquatic - nontidal</i>	19,184	20	5	0	15	59	13	0	0	0	0	0	0	5	2	89	9	3	109	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Upland-high</i>	21,649	47	2	14	69	178	158	0	0	0	0	0	0	43	1	239	32	32	364	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Upland-moderate</i>	25,953	271	8	6	65	60	61	0	0	0	0	0	0	70	43	552	26	7	700	0	0	0	0	0	0	0	0	0	0	35	1,074	6				
<i>Upland-low</i>	5,683	24	0	0	3	1	0	0	0	0	0	0	0	11	0	116	1	1	129	0	0	0	0	0	0	0	0	0	0	0	0	3				
<b>Total</b>	84,567	384	15	20	164	306	234	0	0	0	0	0	0	131	48	996	69	43	20	1,305	0	48	0	0	0	0	0	0	0	35	2,046	20	398			
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	12	6	1	6	5	9	0	0	0	0	0	0	3	1	30	5	3	44	0	0	0	0	0	0	0	0	0	0	66	1	16				
<b>Western pond turtle</b>																																				
<i>Aquatic habitat</i>	81,666	49	0	0	76	37	23	45	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Upland nesting and overwintering habitat</i>	16,184	105	0	3	17	109	70	2	1	48	41	16	0	2	0	24	2	0	136	0	0	0	0	4	0	0	0	0	0	0	354	3	86			
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	55	1	11	19	21	49	5	5	12	7	2	0	49	9	88	9	5	144	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Total</b>	110,530	209	1	14	112	167	141	52	6	60	48	18	0	10	1	111	11	6	326	0	0	0	4	0	0	0	0	0	0	0	706	14	253			
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	7	4	1	3	1	3	0	0	1	1	1	0	1	0	14	3	2	24	0	0	0	0	0	0	0	0	0	0	36	1	6				
<b>Amphibians</b>																																				
<b>California red-legged frog</b>																																				
<i>Aquatic habitat</i>	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Upland cover and dispersal habitat</i>	7,766	5	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	0				
<b>Total</b>	7,925	6	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	0				
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>California tiger salamander</b>																																				
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Terrestrial cover and aestivation</i>	29,459	5	0	151	6	42	0	0	0	0	0	0	0	182	0	21	0	0	203	0	0	0	0	0	0	12	35	296	151	6	6					
<b>Total</b>	37,732	5	0	151	6	42	0	0	0	0	0	0	0	182	0	21	0	0	203	0	0	0	0	0	12	35	296	151	6	6						
<b>Invertebrates</b>																																				
<b>Valley elderberry longhorn beetle</b>																																				
<i>Riparian vegetation</i>	17,786	47	0	0	17	83	76	0	0	0	0	0	0	0	0	286	6	4	298	0	0	0	0	0	0	0	0	0	0	0	428	0				
<i>Nonriparian channels and grasslands</i>	16,670	172	0	0	69	41	94	1	0	9	4	0	0	7	0	59	13	6	100	0	0	0	0	0	0	0	0	0	0	0	314	0				
<b>Total</b>	34,456	218	0	0	86	125	170	1	0	9	4	0	0	7	1	345	19	10	398	0	0	0	0	0	0	0	0	0	0	0	741	0				
<b>California linderella</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Conservancy fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Longhorn fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Midvalley fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Vernal pool fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Vernal pool tadpole shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	203	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	201	0	0	0	0	0	0	0	0	0	0	0	204	0				
<b>Plants</b>																																				
<i>Brittlescale total</i>	451	0	0	0	0	0	451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Heartscale total</i>	6,528	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>San Joaquin spearscale total</i>	14,933	34	0	32	2	56	0	0	0																											

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of Recreational-Related Facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	200	0	0	0	0	0	0	0	0	0	202	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	0	201	0	0	0	0	0	0	0	0	0	204	0	0	
<b>Boggs Lake hedge-hyssop</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	202	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0	
<b>Dwarf downingia</b>																																		
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	202	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	204	0	0	

1

1 Table 12E-44. Direct Effects on Wildlife and Plants – Alternative 5 with Tunnel Alignment and Isolated Conveyance (Late Long-Term) (acres) [Version July 18, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh								Delta					CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<b>Mammals</b>																																			
<b>Riparian brush rabbit</b>																																			
Riparian habitat	2,909	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grassland habitat	3,103	150	0	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	6,011	157	0	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Riparian woodrat</b>																																			
Habitat	2,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	2,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Salt marsh harvest mouse</b>																																			
Tidal brackish emergent wetland primary	3,641	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Upland secondary	749	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	0	0	15	36	670	825	1,067	6	0	0	0	0	0	0	0	1,898	721	0	0	0	0	0	0	0	0	0	0	0	2,619	
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	0	0	5	16	226	87	52	1	0	0	0	0	0	0	0	140	248	0	0	0	0	0	0	0	0	0	0	387		
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	0	0	5	9	144	174	61	1	0	0	0	0	0	0	0	236	158	0	0	0	0	0	0	0	0	0	395			
<b>Total</b>	35,588	0	0	0	0	0	0	26	69	1,106	1,086	1,181	8	0	0	0	0	0	0	2,275	1,201	0	0	0	0	0	0	0	0	0	0	0	3,476		
<b>San Joaquin kit fox</b>																																			
Breeding, foraging, and dispersal habitat	5,327	173	0	151	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	5,327	173	0	151	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Suisun shrew</b>																																			
Primary habitat	3,128	0	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	59	
Secondary habitat	4,387	0	0	0	0	0	0	7	17	0	58	22	1	0	0	0	0	0	0	81	24	0	0	0	0	0	0	0	0	0	0	0	105		
<b>Total</b>	7,515	0	0	0	0	0	0	7	17	59	58	22	1	0	0	0	0	0	0	140	24	0	0	0	0	0	0	0	0	0	0	0	164		
<b>Birds</b>																																			
<b>California black rail</b>																																			
Primary habitat	7,467	3	0	0	1	5	0	0	0	71	0	0	0	0	0	0	1	0	1	2	71	0	0	0	0	0	0	0	0	0	81	0	1		
Secondary habitat	17,915	0	0	0	0	0	29	63	0	607	757	4	0	0	0	0	1	0	0	1,367	93	0	0	0	0	0	0	0	0	1,460	0	0	0		
<b>Total</b>	25,382	3	0	0	1	5	0	29	63	71	607	757	4	0	0	0	1	0	1	1,369	164	0	0	0	0	0	0	0	1,541	0	1	0	0		
<b>California clapper rail</b>																																			
Primary habitat	296	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	26	0	0	0	
Secondary habitat	6,420	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	9	0	0	0	0		
<b>Total</b>	6,716	0	0	0	0	0	0	3	6	26	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	35	0	0	0	0		
<b>California least tern</b>																																			
Nesting and Migratory Habitat	86,263	35	0	0	84	8	11	0	0	1	0	0	0	1	1	13	13	4	0	33	0	2	5	0	0	0	0	0	0	0	78	0	100		
<b>Total</b>	86,263	35	0	0	84	8	11	0	0	1	0	0	0	1	1	13	13	4	0	33	0	2	5	0	0	0	0	0	0	78	0	100	0		
<b>Greater sandhill crane</b>																																			
Roosting and foraging - Permanent	7,340	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1		
Roosting and foraging - Temporary	16,579	39	280	0	89	0	0	0	0	0	0	0	0	0	0	41	0	0	0	41	0	0	0	0	0	0	0	0	0	0	360	0	89		
Foraging	164,676	1,138	406	134	445	0	0	0	0	0	0	0	0	11	0	1,407	827	381	29	2,655	0	0	0	0	300	1,350	4	0	5,853	134	445				
<b>Total</b>	188,594	1,180	686	134	536	0	0	0	0	0	0	0	0	11	0	1,448	827	381	29	2,696	0	0	0	0	300	1,350	4	0	6,216	134	536	0			
<b>Least Bell's vireo</b>																																			
Migratory and breeding	14,850	27	0	0	11	83	88	1	1	6	1	1	0	0	0	381	6	4	2	403	0	28	21	0	0	0	0	0	541	0	120				
<b>Total</b>	14,850	27	0	0	11	83	88	1	1	6	1	1	0	0	0	381	6	4	2	403	0	28	21	0	0	0	0	0	541	0	120	0			
<b>Suisun song sparrow</b>																																			
Primary habitat	3,722	0	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0	0	0	0	55	0	0	0			
Secondary habitat	23,986	0	0	0	0	0	0	32	70	0	623	851	5	0	0	0	0	0	0	1,479	102	0	0	0	0	0	0	0	1,581	0	0	0			
<b>Total</b>	27,707	0	0	0	0	0	0	32	70	55	624	851	5	0	0	0	0	0	0	1,479	157	0	0	0	0	0	0	1,637	0	0	0	0			
<b>Swainson's hawk</b>																																			
Foraging habitat	477,879	2,004	1,193	474	647	996	504	24	45	324	216	97	0	1,073	192	7,437	2,007	604	37	12,057	0	1,820	1,036	971	3,991	1,849	1,440	50	35	26,405	474	2,187			
Nesting habitat	9,796	12	0	0	11	79	54	0	0	4	2	0	0	0	0	217	2	2	1	228	0	38	31	0	0	0	0	0	356	0	97				
<b>Total</b>	487,675	2,015	1,193	474	658	1,075	558	24	46	328	218	97	0	1,073	193	7,654	2,009	605	38	12,285	0	1,857	1,067	971	3,991	1,849	1,440	50	35	26,761	474	2,284			
<b>Tricolored blackbird</b>																																			
Breeding habitat-ag foraging	102,184	625	57	162	120	477	84	0	0	0	0	0	0	554	143	2,341	421	7	1	1,126	2,341	503	275	7	0	1,521	568	0	7,224	162	479				
Breeding habitat-foraging	60,828	199	0	151	35	105	155	11	20	294	281	165	1	468	98	2	0	0	0	468	413	47	30	11	0	0	44	35	1,321	151	219				
Breeding habitat-nesting	1,935	9	0	2	13	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	2	0	0	0	0	28	0	0	80				
Nonbreeding habitat-foraging ag	196,713	1,023	771	11	356	0	54	0	0	0	0	0	0	223	27	2,870	986	548	29	1,813	2,870	652	367	953											

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh								Delta						CM4 Tidal Natural Communities Restoration		CMS Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of Rereational-Related Facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
		Total																																
<b>Reptiles</b>	14,547	27	0	0	11	83	88	1	1	6	1	1	0	0	0	0	0	0	381	6	4	2	403	0	28	21	0	0	0	0	0	541	0	120
<b>Giant garter snake</b>																																		
<i>Aquatic - tidal</i>	12,097	23	0	0	11	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	0	0	0	35	0	16
<i>Aquatic - nontidal</i>	19,184	20	5	0	15	59	13	0	0	0	0	0	0	8	0	134	12	3	0	158	0	34	21	0	0	0	0	0	0	0	275	0	48	
<i>Upland-high</i>	21,649	47	2	14	69	178	158	0	0	0	0	0	0	41	0	420	33	32	17	544	0	0	0	0	0	0	0	0	0	770	14	227		
<i>Upland-moderate</i>	25,953	271	8	6	65	60	61	0	0	0	0	0	0	66	1	722	69	12	1	871	0	27	24	0	0	0	0	0	35	1,272	6	151		
<i>Upland-low</i>	5,683	24	0	0	3	1	0	0	0	0	0	0	0	6	0	122	1	1	1	131	0	20	18	0	0	0	0	0	175	0	21			
<b>Total</b>	84,567	384	15	20	164	306	234	0	0	0	0	0	0	122	2	1,398	115	48	20	1,705	0	82	65	0	0	0	0	0	35	2,528	20	463		
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	12	6	1	6	5	9	0	0	0	0	0	0	4	1	49	11	7	2	74	0	2	1	0	0	0	0	0	98	1	17			
<b>Western pond turtle</b>																																		
<i>Aquatic habitat</i>	81,666	49	0	0	76	37	23	45	0	0	0	0	0	0	0	0	0	0	0	45	0	32	21	0	0	0	0	0	164	0	120			
<i>Upland nesting and overwintering habitat</i>	16,184	105	0	3	17	109	70	2	4	108	98	35	1	2	2	44	2	0	0	295	0	12	15	10	0	0	0	531	3	102				
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	55	1	11	19	21	49	4	7	11	15	7	0	7	1	164	10	6	2	235	0	4	2	0	0	0	0	315	11	70				
<b>Total</b>	110,530	209	1	14	112	167	141	52	11	120	113	41	1	9	1	208	12	6	2	576	0	48	39	10	0	0	0	1,009	14	292				
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	7	4	1	3	1	3	0	0	1	1	1	0	2	1	26	8	4	1	46	0	2	1	0	0	0	0	60	1	7				
<b>Amphibians</b>																																		
<b>California red-legged frog</b>																																		
<i>Aquatic habitat</i>	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Upland cover and dispersal habitat</i>	7,766	5	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	29	151	2				
<b>Total</b>	7,925	6	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	30	151	2				
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>California tiger salamander</b>																																		
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Terrestrial cover and aestivation</i>	29,459	5	0	151	6	42	0	0	0	0	0	0	0	140	0	135	0	0	0	275	0	0	0	0	0	0	40	35	397	151	6			
<b>Total</b>	37,732	5	0	151	6	42	0	0	0	0	0	0	0	140	0	135	0	0	0	275	0	0	0	0	0	40	35	397	151	6				
<b>Invertebrates</b>																																		
<b>Valley elderberry longhorn beetle</b>																																		
<i>Riparian vegetation</i>	17,786	47	0	0	17	83	76	0	0	0	0	0	0	0	0	389	7	5	2	403	0	43	35	0	0	0	0	576	0	128				
<i>Nonriparian channels and grasslands</i>	16,670	172	0	0	69	41	94	1	1	14	9	2	0	10	0	107	15	6	1	164	0	9	14	0	0	0	0	386	0	178				
<b>Total</b>	34,456	218	0	0	86	125	170	1	1	14	9	2	0	10	0	497	22	10	2	568	0	52	49	0	0	0	0	963	0	306				
<b>California linderella</b>																																		
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	271	0	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	272	0	0				
<b>Conservancy fairy shrimp</b>																																		
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	271	0	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	272	0	0				
<b>Longhorn fairy shrimp</b>																																		
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	271	0	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	272	0	0				
<b>Midvalley fairy shrimp</b>																																		
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	271	0	0				
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	269	0	0	0	0	0	0	0	272	0	0				
<b>Vernal pool fairy shrimp</b>																																		
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
<i>Degraded vernal pool complex</i>																																		

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of Rereational-Related Facilities	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Boggs Lake hedge-hyssop</b>																																					
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dwarf downingia</b>																																					
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



1 Table 12E-45. Indirect Effects—Alternative 5 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration Construction (Acres)	CM5 Seasonally Inundated Floodplain Restoration Construction (Acres)	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)			Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	25	0	0	110	526	0	661
Grassland habitat	3,103	0	250	0	0	70	307	0	627
<b>Total</b>	<b>6,011</b>	<b>0</b>	<b>275</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>832</b>	<b>0</b>	<b>1,287</b>
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	3	0	0	60	419	0	482
<b>Total</b>	<b>2,166</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>419</b>	<b>0</b>	<b>482</b>
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	<b>35,588</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>429</b>	<b>0</b>	<b>0</b>	<b>429</b>
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	239	0	0	0	0	0	239
<b>Total</b>	<b>5,327</b>	<b>0</b>	<b>239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>239</b>
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	<b>7,515</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>	<b>0</b>	<b>0</b>	<b>167</b>
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	113	0	5	364	0	0	483
Secondary habitat	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	<b>25,382</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>5</b>	<b>793</b>	<b>2</b>	<b>0</b>	<b>915</b>
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	<b>6,716</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>542</b>	<b>0</b>	<b>0</b>	<b>542</b>
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,157	0	44	2,785	850	0	4,835
<b>Total</b>	<b>86,263</b>	<b>0</b>	<b>1,157</b>	<b>0</b>	<b>44</b>	<b>2,785</b>	<b>850</b>	<b>0</b>	<b>4,835</b>
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	219	0	0	0	0	0	219
Roosting and foraging - Temporary	16,579	0	1,427	0	0	174	0	0	1,600
Foraging	164,676	5	7,609	0	0	1,825	0	5	9,434
<b>Total</b>	<b>188,594</b>	<b>5</b>	<b>9,255</b>	<b>0</b>	<b>0</b>	<b>1,999</b>	<b>0</b>	<b>5</b>	<b>11,254</b>
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	154	0	244	619	406	0	1,424
<b>Total</b>	<b>14,850</b>	<b>0</b>	<b>154</b>	<b>0</b>	<b>244</b>	<b>619</b>	<b>406</b>	<b>0</b>	<b>1,424</b>
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	<b>27,707</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>871</b>	<b>0</b>	<b>0</b>	<b>871</b>
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	5	10,484	0	4,284	9,107	4,499	5	28,375
Nesting habitat	9,796	1	367	0	367	460	500	1	1,496
<b>Total</b>	<b>487,675</b>	<b>7</b>	<b>10,654</b>	<b>0</b>	<b>4,650</b>	<b>9,567</b>	<b>4,999</b>	<b>7</b>	<b>29,870</b>
<b>Tricolored blackbird</b>								0	0
Breeding habitat-eg foraging	102,184	2	646	0	1,612	1,152	852	2	4,263
Breeding habitat-foraging	60,828	0	375	0	931	2,389	532	0	4,228
Breeding habitat-nesting	1,935	0	39	0	89	43	114	0	285
Nonbreeding habitat-foraging eg	196,713	0	7,665	0	38	2,856	1,604	0	12,163
Nonbreeding habitat-roosting	28,067	0	350	0	49	1,214	25	0	1,639
Nonbreeding habitat-foraging	34,313	0	784	0	0	1,324	33	0	2,141
<b>Total</b>	<b>424,040</b>	<b>2</b>	<b>9,859</b>	<b>0</b>	<b>2,721</b>	<b>8,978</b>	<b>3,161</b>	<b>2</b>	<b>24,719</b>
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,235	0	1,202	3,038	541	0	6,016
Low-value habitat	254,352	0	4,297	0	512	1,632	1,977	0	8,418
<b>Total</b>	<b>406,366</b>	<b>0</b>	<b>5,532</b>	<b>0</b>	<b>1,714</b>	<b>4,671</b>	<b>2,518</b>	<b>0</b>	<b>14,435</b>
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	8	0	24	98	66	0	196
Migratory habitat	10,425	0	126	0	220	398	318	0	1,062
<b>Total</b>	<b>12,395</b>	<b>0</b>	<b>134</b>	<b>0</b>	<b>244</b>	<b>496</b>	<b>384</b>	<b>0</b>	<b>1,259</b>
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	1	289	0	388	742	586	1	2,006
Foraging habitat	507,922	5	10,556	0	4,331	9,708	4,098	5	28,693
<b>Total</b>	<b>521,991</b>	<b>7</b>	<b>10,845</b>	<b>0</b>	<b>4,720</b>	<b>10,450</b>	<b>4,684</b>	<b>7</b>	<b>30,699</b>
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	63	0	80	388	272	0	803
Secondary nesting and migratory habitat	5,528	0	91	0	5	172	135	0	402
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	<b>14,547</b>	<b>0</b>	<b>154</b>	<b>0</b>	<b>244</b>	<b>634</b>	<b>406</b>	<b>0</b>	<b>1,439</b>
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	287	0	19	417	161	0	885
Aquatic - nontidal	19,184	0	156	0	206	126	44	0	533
Upland-high	21,649	0	415	0	386	496	0	0	1,297
Upland-moderate	25,953	0	515	0	231	1,120	370	0	2,237
Upland-low	5,683	0	82	0	3	270	429	0	784
<b>Total</b>	<b>84,567</b>	<b>0</b>	<b>1,455</b>	<b>0</b>	<b>845</b>	<b>2,430</b>	<b>1,005</b>	<b>0</b>	<b>5,735</b>
Aquatic breeding, foraging, and movement (miles)	2,802	0	36	0	11	33	22	0	102
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	1,102	0	199	3,511	884	0	5,696
Upland nesting and overwintering habitat	16,184	0	289	0	238	552	308	0	1,388
Upland nesting and overwintering habitat-NHD	12,680	0	148	0	47	376	33	0	605
<b>Total</b>	<b>110,530</b>	<b>0</b>	<b>1,539</b>	<b>0</b>	<b>484</b>	<b>4,440</b>	<b>1,225</b>	<b>0</b>	<b>7,689</b>
<b>Aquatic habitat linear (miles) - NHD</b>	1,425	0	21	0	2	20	4	0	47
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
Aquatic habitat	159	0	0	0	0	0	0	0	0

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<i>Upland cover and dispersal habitat</i>	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
<b>Aquatic habitat (miles)</b>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	206	0	30	659	0	0	895
<b>Total</b>	37,732	0	206	0	30	861	0	0	1,096
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>									
<i>Riparian vegetation</i>	17,786	0	93	0	56	125	200	0	475
<i>Nonriparian channels and grasslands</i>	16,670	0	229	0	85	261	210	0	784
<b>Total</b>	34,456	0	322	0	141	387	410	0	1,259
<b>California linderiella</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Conservancy fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Longhorn fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Midvalley fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Vernal pool fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Vernal pool tadpole shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	9	0	0	201	0	0	210
<i>Degraded vernal pool complex</i>	2,713	0	40	0	0	85	0	0	125
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Plants</b>									
<i>Brittscale total</i>	451	0	0	0	0	6	0	0	6
<i>Heartscale total</i>	6,528	0	0	0	1	385	0	0	386
<i>San Joaquin spearscale total</i>	14,933	0	35	0	98	284	1	0	418
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	74	0	0	74
<i>Delta button celery total</i>	3,361	0	25	0	0	0	634	0	659
<i>Delta mudwort total</i>	6,081	0	126	0	14	373	149	0	662
<i>Mason's lilaopsis total</i>	6,081	0	126	0	14	373	149	0	662
<i>Delta tule pea total</i>	5,853	0	12	0	0	573	2	0	587
<i>Suisun Marsh aster total</i>	5,853	0	12	0	0	573	2	0	587
<i>Side-flowering skullcap total</i>	2,497	0	35	0	1	155	13	0	204
<i>Slough thistle total</i>	1,834	0	0	0	0	0	634	0	634
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	95	0	0	95
<i>Suisun thistle total</i>	1,281	0	0	0	0	104	0	0	104
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>									
<i>Vernal pool complex</i>	9,557	0	9	0	0	251	0	0	260
<i>Degraded vernal pool complex</i>	2,576	0	40	0	0	35	0	0	75
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Legenere</b>									
<i>Vernal pool complex</i>	9,557	0	9	0	0	251	0	0	260
<i>Degraded vernal pool complex</i>	2,576	0	40	0	0	35	0	0	75
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Heckard's peppergrass</b>									
<i>Vernal pool complex</i>	9,557	0	9	0	0	251	0	0	260
<i>Degraded vernal pool complex</i>	2,576	0	40	0	0	35	0	0	75
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Boggs Lake hedge-hyssop</b>									
<i>Vernal pool complex</i>	9,557	0	9	0	0	251	0	0	260
<i>Degraded vernal pool complex</i>	2,576	0	40	0	0	35	0	0	75
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	48	0	0	286	0	0	334
<b>Dwarf downingia</b>									
<i>Vernal pool complex</i>	9,557	0	9	0	0	251	0	0	260
<i>Degraded vernal pool complex</i>	2,576	0	40	0	0	35	0	0	75
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	48	0	0	286	0	0	334

**Alternative 7**

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss						
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Construction and Inundation	Construction of Recreational-Related Facilities	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)					
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)															Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farmsteads (without residence)	820	12	3	0	3	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0	3	
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	75	39	26	38	17	25	0	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	330	26	62	0	0	
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	
Water surface	211	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Other Ag Lands	2,097	6	5	0	3	10	0	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	0	58	0	3	0	0	
<b>Developed</b>	<b>90,660</b>	<b>71</b>	<b>18</b>	<b>2</b>	<b>55</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>228</b>	<b>2</b>	<b>71</b>	<b>0</b>	<b>0</b>		

1  
2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta						CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration Levee Construction			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration Construction and Inundation	CM11 Natural Community Enhancement and Management Construction of Rereational-Related Facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss		
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)		Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																													
<i>Farmsteads (includes a farm residence)</i>	2,132	11	4	0	6	0	0	0	0	0	0	0	0	0	11	0	62	7	9	1	91	12	10	0	0	0	0	0	0	118	0	15				
<i>Livestock feedlots</i>	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	12	7	0	0	0	0	0	0	18	0	7				
<i>Dairies</i>	891	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	8	0	0				
<i>Poultry farms</i>	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Farmsteads (without residence)</i>	820	12	3	0	3	0	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	9	7	0	0	0	0	0	0	117	0	9				
<i>Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)</i>	20,602	75	39	26	38	17	25	0	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	229	132	0	531	0	0	0	3,232	26	194					
<b>Riparian Vegetation</b>	352	0	0	0	0	35	0	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	143	0	0					
<b>Water surface</b>	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4					
<b>Other Ag Lands</b>	2,097	6	5	0	3	10	0	0	0	0	0	0	0	0	4	0	63	9	19	9	105	17	17	98	0	0	0	0	242	0	20					
<b>Developed</b>	90,660	71	18	2	55	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	249	136	0	0	0	0	0	1,017	2	207					

1  
2

1 Table 12E-48. Direct Effects on Wildlife and Plants—Alternative 7 with Tunnel Alignment and Isolated Conveyance (Near-Term) (acres) [Version July 18, 2013]

Table with 30 columns: Resource, Total Existing Modeled Habitat in the Plan Area (Acres), CM1 Water Facilities and Operation (Permanent, Reusable Tunnel Material, Temporary Spoil, Temporary), CM2 Yolo Bypass Fisheries Enhancement (Permanent, Temporary), Suisun Marsh (High Tidal Brackish Marsh, Mid Tidal Brackish Marsh, Low Tidal Brackish Marsh, Intertidal mudflat, Subtidal 1, 2, 3), Delta (Intertidal mudflat, Tidal freshwater marsh, Subtidal 1, 2, 3), CM4 Tidal Natural Communities Restoration (Permanent, Conversion), CM5 Seasonally Inundated Floodplain Restoration (Permanent, Temporary), CM7 Riparian Natural Restoration (Riparian Restoration as Part of Tidal Natural Communities Restoration, Riparian Restoration as Part of Seasonal Floodplain Restoration), CM8 Grassland Restoration (Permanent), CM10 Nontidal Marsh Natural Community Restoration (Construction and Inundation), CM11 Natural Community Enhancement and Management (Construction of Rereational-Related Facilities), CM18 Conservation Hatcheries (Construction), and Maximum Allowable Habitat Loss (Permanent, Temporary Spoil, Temporary).



Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss						
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																													
<b>Reptiles</b>	<b>Total</b>	14,547	28	0	0	16	83	88	1	0	3	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	410	0	104
<b>Giant garter snake</b>																																				
<i>Aquatic - tidal</i>	12,097	24	0	0	18	9	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Aquatic - nontidal</i>	19,184	20	5	0	13	59	13	0	0	0	0	0	0	5	2	89	9	3	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	193	0	26
<i>Upland-high</i>	21,649	58	2	15	65	178	158	0	0	0	0	0	0	43	1	239	32	32	17	364	0	0	0	0	0	0	0	0	0	0	0	0	603	15	223	
<i>Upland-moderate</i>	25,953	276	8	6	72	60	61	0	0	0	0	0	0	70	43	552	26	7	1	700	0	0	0	0	0	0	0	0	0	0	0	0	1,079	6	134	
<i>Upland-low</i>	5,683	23	0	0	4	1	0	0	0	0	0	0	0	11	0	116	1	1	1	129	0	0	0	0	0	0	0	0	0	0	0	0	154	0	4	
<b>Total</b>	<b>84,567</b>	<b>401</b>	<b>15</b>	<b>21</b>	<b>172</b>	<b>306</b>	<b>234</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>48</b>	<b>996</b>	<b>69</b>	<b>43</b>	<b>20</b>	<b>1,305</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>2,063</b>	<b>21</b>	<b>406</b>	
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	12	6	1	7	5	9	0	0	0	0	0	0	3	1	30	5	3	1	44	0	0	0	0	0	0	0	0	0	0	0	0	66	1	16	
<b>Western pond turtle</b>																																				
<i>Aquatic habitat</i>	81,666	49	0	0	78	37	23	45	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	132	0	101
<i>Upland nesting and overwintering habitat</i>	16,184	105	0	3	17	109	70	2	1	48	41	16	0	2	0	24	2	0	0	136	0	0	0	0	4	0	0	0	0	0	0	0	354	3	87	
<i>Upland nesting and overwintering habitat-NHD</i>	12,680	55	1	11	25	21	49	5	5	12	7	2	0	9	1	88	9	5	2	144	0	0	0	0	0	0	0	0	0	0	0	0	220	11	75	
<b>Total</b>	<b>110,530</b>	<b>209</b>	<b>1</b>	<b>14</b>	<b>121</b>	<b>167</b>	<b>141</b>	<b>52</b>	<b>6</b>	<b>60</b>	<b>48</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>111</b>	<b>11</b>	<b>6</b>	<b>2</b>	<b>326</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>706</b>	<b>14</b>	<b>262</b>		
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	7	4	1	3	1	3	0	0	1	1	0	0	1	0	14	3	2	0	24	0	0	0	0	0	0	0	0	0	0	0	36	1	6		
<b>Amphibians</b>																																				
<b>California red-legged frog</b>																																				
<i>Aquatic habitat</i>	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Upland cover and dispersal habitat</i>	7,766	5	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	13	151	2		
<b>Total</b>	<b>7,925</b>	<b>6</b>	<b>0</b>	<b>151</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>14</b>	<b>151</b>	<b>2</b>		
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>California tiger salamander</b>																																				
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Terrestrial cover and aestivation</i>	29,459	5	0	151	7	42	0	0	0	0	0	0	0	182	0	21	0	0	0	203	0	0	0	0	0	0	0	0	0	0	12	35	296	151	7	
<b>Total</b>	<b>37,732</b>	<b>5</b>	<b>0</b>	<b>151</b>	<b>7</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>182</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>203</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>35</b>	<b>296</b>	<b>151</b>	<b>7</b>		
<b>Invertebrates</b>																																				
<b>Valley elderberry longhorn beetle</b>																																				
<i>Riparian vegetation</i>	17,786	48	0	0	25	83	76	0	0	0	0	0	0	0	0	286	6	4	2	298	0	0	0	0	0	0	0	0	0	0	0	0	0	429	0	101
<i>Nonriparian channels and grasslands</i>	16,670	183	0	0	69	41	94	1	0	9	4	0	0	7	0	59	13	6	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	325	0	163
<b>Total</b>	<b>34,456</b>	<b>231</b>	<b>0</b>	<b>0</b>	<b>93</b>	<b>125</b>	<b>170</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>345</b>	<b>19</b>	<b>10</b>	<b>2</b>	<b>398</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>754</b>	<b>0</b>	<b>264</b>	
<b>California linderella</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	203	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>204</b>	<b>0</b>	<b>0</b>	
<b>Conservancy fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	203	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>204</b>	<b>0</b>	<b>0</b>	
<b>Longhorn fairy shrimp</b>																																				
<i>Vernal pool complex</i>	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Degraded vernal pool complex</i>	2,713	2	0	0	0	0	0	0	0	1	0	0	0	179	0	21	0	0	0	201	0</															

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>Boggs Lake hedge-hyssop</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>Dwarf downingia</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss									
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)			
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																																	
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>Boggs Lake hedge-hyssop</b>																																								
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Dwarf downingia</b>																																								
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

1  
2

1 Table 12E-50. Indirect Effects—Alternative 7 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	18	0	0	51	343	0	412
Grassland habitat	3,103	0	161	0	0	51	263	0	475
<b>Total</b>	6,011	0	179	0	0	102	606	0	887
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	2	0	0	18	256	0	276
<b>Total</b>	2,166	0	2	0	0	18	256	0	276
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	169	0	0	0	0	0	169
<b>Total</b>	5,327	0	169	0	0	0	0	0	169
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	113	0	5	364	0	0	483
Secondary habitat	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	25,382	0	116	0	5	793	2	0	915
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,172	0	44	2,785	850	0	4,850
<b>Total</b>	86,263	0	1,172	0	44	2,785	850	0	4,850
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	219	0	0	0	0	0	219
Roosting and foraging - Temporary	16,579	0	1,427	0	0	174	0	0	1,600
Foraging	164,676	18	7,548	0	0	1,825	0	18	9,373
<b>Total</b>	188,594	18	9,194	0	0	1,999	0	18	11,193
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	156	0	244	619	406	0	1,426
<b>Total</b>	14,850	0	156	0	244	619	406	0	1,426
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	0	6,858	0	2,275	6,013	3,201	0	18,347
Nesting habitat	9,796	0	117	0	255	361	470	0	1,203
<b>Total</b>	487,675	0	6,975	0	2,530	6,373	3,672	0	19,550
<b>Tricolored blackbird</b>								0	0
Breeding habitat-og foraging	102,184	14	634	0	1,612	1,152	852	14	4,251
Breeding habitat-foraging	60,828	0	373	0	931	2,389	532	0	4,225
Breeding habitat-nesting	1,935	0	38	0	89	43	114	0	284
Nonbreeding habitat-foraging og	196,713	4	7,606	0	38	2,856	1,604	4	12,104
Nonbreeding habitat-roosting	28,067	0	349	0	49	1,214	25	0	1,638
Nonbreeding habitat-foraging	34,313	0	788	0	1,324	33	0	0	2,145
<b>Total</b>	424,040	18	9,787	0	2,721	8,978	3,161	18	24,647
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	0	1,283	0	1,202	3,038	541	0	6,064
Low-value habitat	254,352	0	4,252	0	512	1,632	1,977	0	8,373
<b>Total</b>	406,366	0	5,535	0	1,714	4,671	2,518	0	14,437
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	8	0	24	98	66	0	196
Migratory habitat	10,425	0	128	0	220	398	318	0	1,065
<b>Total</b>	12,395	0	136	0	244	496	384	0	1,261
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	172	0	269	543	523	0	1,507
Foraging habitat	507,922	0	6,891	0	2,297	6,477	2,982	0	18,647
<b>Total</b>	521,991	0	7,064	0	2,566	7,020	3,505	0	20,155
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	65	0	80	388	272	0	805
Secondary nesting and migratory habitat	5,528	0	91	0	5	172	135	0	402
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	156	0	244	634	406	0	1,442
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	164	0	13	219	131	0	527
Aquatic - nontidal	19,184	0	81	0	133	103	22	0	339
Upland-high	21,649	0	279	0	242	372	0	0	893
Upland-moderate	25,953	0	345	0	125	773	314	0	1,557
Upland-low	5,683	0	57	0	1	150	279	0	487
<b>Total</b>	84,567	0	926	0	516	1,616	745	0	3,802
Aquatic breeding, foraging, and movement (miles)	2,802	0	38	0	11	33	22	0	103
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	0	600	0	150	1,856	619	0	3,225
Upland nesting and overwintering habitat	16,184	0	150	0	115	331	245	0	842
Upland nesting and overwintering habitat-NHD	12,680	0	122	0	37	243	30	0	432
<b>Total</b>	110,530	0	871	0	303	2,430	895	0	4,499
Aquatic habitat linear (miles) - NHD	1,425	0	16	0	1	14	3	0	35
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
Aquatic habitat	159	0	0	0	0	0	0	0	0

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<i>Upland cover and dispersal habitat</i>	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
<i>Aquatic habitat (miles)</i>	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
<i>Aquatic breeding habitat</i>	8,273	0	0	0	0	201	0	0	201
<i>Terrestrial cover and aestivation</i>	29,459	0	208	0	30	659	0	0	897
<b>Total</b>	37,732	0	208	0	30	861	0	0	1,098
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>									
<i>Riparian vegetation</i>	17,786	0	90	0	56	125	200	0	472
<i>Nonriparian channels and grasslands</i>	16,670	0	223	0	85	261	210	0	779
<b>Total</b>	34,456	0	313	0	141	387	410	0	1,250
<b>California linderiella</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Longhorn fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Midvalley fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool fairy shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool tadpole shrimp</b>									
<i>Vernal pool complex</i>	9,607	0	2	0	0	89	0	0	91
<i>Degraded vernal pool complex</i>	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Plants</b>									
<i>Brittlescale total</i>	451	0	0	0	0	3	0	0	3
<i>Heartscale total</i>	6,528	0	0	0	0	193	0	0	193
<i>San Joaquin sparscale total</i>	14,933	0	24	0	48	129	1	0	202
<i>Carquinez goldenbush total</i>	1,346	0	0	0	0	9	0	0	9
<i>Delta button celery total</i>	3,361	0	13	0	0	0	350	0	364
<i>Delta mudwort total</i>	6,081	0	87	0	10	261	122	0	480
<i>Mason's lilaopsis total</i>	6,081	0	87	0	10	261	122	0	480
<i>Delta tule pea total</i>	5,853	0	7	0	0	420	1	0	428
<i>Suisun Marsh aster total</i>	5,853	0	7	0	0	420	1	0	428
<i>Side-flowering skullcap total</i>	2,497	0	12	0	1	80	12	0	105
<i>Slough thistle total</i>	1,834	0	0	0	0	0	349	0	349
<i>Soft bird's-beak total</i>	1,228	0	0	0	0	64	0	0	64
<i>Suisun thistle total</i>	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Legenere</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Heckard's peppergrass</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Boggs Lake hedge-hyssop</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Dwarf downingia</b>									
<i>Vernal pool complex</i>	9,557	0	1	0	0	117	0	0	118
<i>Degraded vernal pool complex</i>	2,576	0	13	0	0	18	0	0	31
<i>Alkali seasonal wetland</i>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150

1  
2

# Alternative 8

---

1

2



1 Table 12E-51. Direct Effects on Natural Communities—Alternative 8 with Full Implementation (Near-Term) (acres) [Version July 22, 2013]

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement				Suisun Marsh															Delta			CM4 Tidal Natural Communities Restoration  Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration  Levee Construction	CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements				High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)			Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)		
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																																	
Tidal Perennial Aquatic	86,263	41	0	0	108	8	11	0	0	1	0	0	0	0	1	1	11	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	63	0	119				
Mudflat	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available					
Tidal Brackish Emergent Wetland	8,501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Tidal Freshwater Emergent Wetland	8,856	6	0	0	5	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	13	0	5					
Valley/Foothill Riparian	17,966	48	0	0	25	89	88	0	0	0	0	0	0	0	0	0	286	6	4	2	298	0	0	0	0	0	0	0	0	0	0	435	0	112						
Grassland	78,047	303	2	151	104	388	239	0	0	1	0	0	0	0	39	3	345	37	16	6	448	0	0	4	0	0	0	0	13	35	1,194	151	343							
Alkali Seasonal Wetland Complex	3,723	0	0	0	0	45	0	0	0	0	0	0	0	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0	0							
Vernal Pool Complex	12,133	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	0	0	0	201	0	0	0	0	0	204	0	0							
Other Natural Seasonal Wetland	842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Nontidal Freshwater Perennial Emergent Wetland	1,509	1	0	0	1	25	1	0	0	0	0	0	0	0	0	0	38	0	1	0	40	0	0	0	0	0	0	0	0	66	0	2								
Nontidal Perennial Aquatic	5,567	12	0	0	9	24	12	0	0	0	0	0	0	0	5	2	19	8	0	0	34	0	0	0	0	0	0	0	0	70	0	20								
Managed Wetland	70,798	3	0	75	8	24	44	88	0	1,569	1,099	1,183	42	0	223	141	1,339	26	7	2	5,718	0	0	0	0	0	0	0	0	5,745	75	52								
Inland Dune Scrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Cultivated Lands	487,106	2,195	1,546	977	1,000	629	363	0	0	0	0	0	0	482	13	3,494	1,386	432	71	5,878	0	0	10	0	1,140	700	0	0	12,098	977	1,363									
Cropland	459,778	2,090	1,495	950	952	568	334	0	0	0	0	0	0	458	9	3,257	1,345	410	69	5,547	0	0	7	0	1,140	700	0	0	11,547	950	1,286									
Grain and Hay Crops	1,507	0	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	63	0	0	136	0	111										
Wheat	4,731	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Oats	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Misc. grain and hay	27,667	225	61	42	100	31	0	0	0	0	0	0	0	32	0	149	331	120	0	632	0	0	0	0	0	0	0	948	42	100										
Non-irrigated Misc. Grain and Hay	1,303	0	0	0	0	0	0	0	0	0	0	0	0	7	323	0	0	0	0	330	0	0	0	0	0	0	0	330	0	0										
Mixed grain and hay	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Non-irrigated Mixed grain and hay	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Field Crops	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	354	43	0	0	397	0	0											
Cotton	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	38	44	0	0	0	0	0	0	44	0	0											
Safflower	15,592	16	18	0	36	5	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	63											
Sugar Beets	464	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Corn	102,424	401	727	11	319	0	0	0	0	0	0	0	0	0	0	29	21	23	0	73	0	1	123	185	0	0	1,511	11	319											
Grain sorghum	324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Sudan	6,356	1	0	22	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22	21											
Beans (dry)	6,025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Sunflowers	1,175	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0											
Hybrid sorghum/sudan	305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Miscellaneous field	4,571	12	0	51	0	0	0	0	0	0	0	0	0	0	0	14	14	0	28	0	0	0	0	0	0	0	40	51	0											
Pasture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206	99	0	0	306	0	0											
Alfalfa & Alfalfa mixtures	81,396	874	40	46	83	0	12	0	0	0	0	0	0	0	0	66	30	28	0	124	0	0	198	80	0	0	1,316	46	95											
Clover	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
Mixed pasture	30,750	6	0	0	29	67	0	0	0	0	0	0	0	399	1	1,349	47	92	1	1,890	0	6	0	0	0	0	1,969	0	29											
Non-irrigated mixed pasture	2,995	0	0	0	62	0	0	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	0	70	0												
Native Pasture	8,376	0	0	0	1	0	0	0	0	0	0	0	0	0	0	68	41	25	0	134	0	0	0	0	0	0	135	0	0											
Non-irrigated native pasture	3,465	1	0	0	301	1	0	0	0	0	0	0	0	5	0	2	0	0	8	0	0	0	0	0	0	310	0	1												
Misc. grasses	422	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	1												
Turf farms	3,740	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Rye grass	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Other Pasture	577	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Rice	10,259	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	52	0	0	84	0	1											
Wild Rice	578	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Truck, nursery, and berry crops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99	57	0	0	156	0	0											
Artichokes																																								

Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Construction and Inundation	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)			
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)															Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)				
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farmsteads (without residence)	820	12	3	0	3	0	0	0	0	0	0	0	0	12	0	27	2	2	0	43	0	0	0	0	0	0	0	0	0	0	0	0	58	0	3	
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	75	39	26	38	17	25	0	0	0	0	0	10	2	129	35	18	2	196	0	0	2	0	0	0	0	0	0	0	0	330	26	62	0	0	
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	1	1	42	2	0	0	46	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0	
Water surface	211	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Other Ag Lands	2,097	6	5	0	3	10	0	0	0	0	0	0	1	1	32	1	2	0	36	0	0	1	0	0	0	0	0	0	0	58	0	3	0	0		
<b>Developed</b>	<b>90,660</b>	<b>71</b>	<b>18</b>	<b>2</b>	<b>55</b>	<b>15</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>85</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>228</b>	<b>2</b>	<b>71</b>	<b>0</b>	<b>0</b>		

1  
2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss								
		Tunnel/Pipeline/Conveyance Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Construction and Inundation	Levee Construction			Riparian Restoration as Part of Tidal Natural Communities Restoration	Riparian Restoration as Part of Seasonal Floodplain Restoration	Construction and Inundation	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)															Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	
Farmsteads (includes a farm residence)	2,132	11	4	0	6	0	0	0	0	0	0	0	0	11	0	62	7	9	1	91	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	112	0	10	
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	3	
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farmsteads (without residence)	820	12	3	0	3	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	112	0	6	
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	75	39	26	38	17	25	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	0	0	0	0	0	0	0	0	0	3,117	26	128		
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143	0	0	
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Other Ag Lands	2,097	6	5	0	3	10	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	0	0	0	0	0	0	0	0	0	233	0	12		
Developed	90,660	71	18	2	55	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	0	0	0	0	0	0	0	0	893	2	139		

1  
2

1 Table 12E-53. Direct Effects on Wildlife and Plants—Alternative 8 with Tunnel Alignment and Isolated Conveyance (Near-Term) (acres) [Version July 18, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta					CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Construction	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
<b>Mammals</b>																																			
<b>Riparian brush rabbit</b>																																			
Riparian habitat	2,909	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grassland habitat	3,103	150	0	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	<b>6,011</b>	<b>157</b>	<b>0</b>	<b>3</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>Riparian woodrat</b>																																			
Habitat	2,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	<b>2,166</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>Salt marsh harvest mouse</b>																																			
Tidal brackish emergent wetland primary	3,641	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	0		
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Upland secondary	749	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0		
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	0	30	0	534	577	770	3	0	0	0	0	0	0	0	1,349	564	0	0	0	0	0	0	0	0	0	0	0	0	0	
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	0	11	0	229	50	23	0	0	0	0	0	0	0	0	74	241	0	0	0	0	0	0	0	0	0	0	0	0	0	
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	0	8	0	64	70	24	0	0	0	0	0	0	0	0	94	71	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>35,588</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>7</b>	<b>892</b>	<b>697</b>	<b>817</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,517</b>	<b>948</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>San Joaquin kit fox</b>																																			
Breeding, foraging, and dispersal habitat	5,327	173	0	151	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>5,327</b>	<b>173</b>	<b>0</b>	<b>151</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Suisun shrew</b>																																			
Primary habitat	3,128	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Secondary habitat	4,387	0	0	0	0	0	10	5	0	22	9	0	0	0	0	0	0	0	0	31	15	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>7,515</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>58</b>	<b>22</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Birds</b>																																			
<b>California black rail</b>																																			
Primary habitat	7,467	3	0	0	1	5	0	0	69	0	0	0	0	0	0	0	0	0	0	2	69	0	0	0	0	0	0	0	0	0	0	0	0	0	
Secondary habitat	17,915	0	0	0	0	0	49	0	0	402	532	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>25,382</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>49</b>	<b>0</b>	<b>69</b>	<b>402</b>	<b>532</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>69</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>California clapper rail</b>																																			
Primary habitat	296	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Secondary habitat	6,420	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>6,716</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>California least tern</b>																																			
Nesting and Migratory Habitat	86,263	41	0	0	108	8	11	0	1	0	0	0	0	1	1	11	12	4	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>86,263</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>108</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>11</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Greater sandhill crane</b>																																			
Roosting and foraging - Permanent	7,340	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Roosting and foraging - Temporary	16,579	39	280	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Foraging	164,676	1,154	411	138	587	0	0	0	0	0	0	0	0	2	0	709	852	363	26	1,951	0	0	0	0	0	0	257	567	1	0	0	0	0	0	
<b>Total</b>	<b>188,594</b>	<b>1,196</b>	<b>691</b>	<b>138</b>	<b>677</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>709</b>	<b>852</b>	<b>363</b>	<b>26</b>	<b>1,951</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>257</b>	<b>567</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Least Bell's vireo</b>																																			
Migratory and breeding	14,850	28	0	0	16	83	88	1	0	3	1	1	0	0	0	282	6	4	2	299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>14,850</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>83</b>	<b>88</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>282</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>299</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Suisun song sparrow</b>																																			
Primary habitat	3,722	0	0	0	0	0	0	0	54	0	0	0	0	0	0	0	0	0	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Secondary habitat	23,986	0	0	0	0	0	53	5	0	432	605	2	0	0	0	0	0	0	0	1,040	58	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>27,707</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>5</b>	<b>54</b>	<b>432</b>	<b>605</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,040</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Swainson's hawk</b>																																			
Foraging habitat	477,879	2,012	1,199	478	778	996	504	27	29	192	59	43	0	0	773	152	3,742	882	352	27	6,278	0	0	13	0	1,054	527	13	35	12,127	478	1,282	0		
Nesting habitat	9,796	13	0	0	13	79	54	0	4	1	0	0	0	0	0	0	164	2	1	1	173	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>487,675</b>	<b></b>																																	

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss																			
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)											
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																			Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)										Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)
<b>Reptiles</b>	Total	14,547	28	0	0	16	83	88	1	0	3	1	1	0	0	0	282	6	4	2	299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	410	0	104								
<b>Giant garter snake</b>																																																	
Aquatic - tidal	12,097	24	0	0	18	9	2	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Aquatic - nontidal	19,184	20	5	0	13	59	13	0	0	0	0	0	0	0	0	5	2	89	9	3	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Upland-high	21,649	58	2	15	65	178	158	0	0	0	0	0	0	0	0	43	1	239	32	32	17	364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Upland-moderate	25,953	276	8	6	72	60	61	0	0	0	0	0	0	0	0	70	43	552	26	7	1	700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Upland-low	5,683	23	0	0	4	1	0	0	0	0	0	0	0	0	0	11	0	116	1	1	1	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
<b>Total</b>	84,567	401	15	21	172	306	234	0	0	0	0	0	0	0	0	131	48	996	69	43	20	1,305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
<i>Aquatic breeding, foraging, and movement (miles)</i>	2,802	12	6	1	7	5	9	0	0	0	0	0	0	0	0	3	1	30	5	3	1	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
<b>Western pond turtle</b>																																																	
Aquatic habitat	81,666	49	0	0	78	37	23	45	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Upland nesting and overwintering habitat	16,184	105	0	3	17	109	70	2	1	48	41	16	0	0	0	2	0	24	2	0	0	136	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Upland nesting and overwintering habitat-NHD	12,680	55	1	11	25	21	49	5	5	12	7	2	0	0	0	9	1	88	9	5	2	144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Total</b>	110,530	209	1	14	121	167	141	52	6	60	48	18	0	0	10	1	111	11	6	2	326	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<i>Aquatic habitat linear (miles) - NHD</i>	1,425	7	4	1	3	1	3	0	0	1	1	1	0	0	0	1	0	14	3	2	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Amphibians</b>																																																	
<b>California red-legged frog</b>																																																	
Aquatic habitat	159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Upland nesting and dispersal habitat	7,766	5	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	7,925	6	0	151	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>California tiger salamander</b>																																																	
Aquatic breeding habitat	8,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Terrestrial cover and aestivation	29,459	5	0	151	7	42	0	0	0	0	0	0	0	0	0	182	0	21	0	0	0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	37,732	5	0	151	7	42	0	0	0	0	0	0	0	0	0	182	0	21	0	0	0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Invertebrates</b>																																																	
<b>Valley elderberry longhorn beetle</b>																																																	
Riparian vegetation	17,786	48	0	0	25	83	76	0	0	0	0	0	0	0	0	0	0	286	6	4	2	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Nonriparian channels and grasslands	16,670	183	0	0	69	41	94	1	0	9	4	0	0	0	0	7	0	59	13	6	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	34,456	231	0	0	93	125	170	1	0	9	4	0	0	0	0	7	1	345	19	10	2	398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>California linderiella</b>																																																	
Vernal pool complex	9,607	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Degraded vernal pool complex	2,713	2	0	0	0	0	0	0	0	1	0	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Conservancy fairy shrimp</b>																																																	
Vernal pool complex	9,607	1	0	0	0	0</																																											

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss							
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Boggs Lake hedge-hyssop</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dwarf downingia</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	3	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0







Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat								
		Tunnel/Pipeline Facilities Construction				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																															
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>Boggs Lake hedge-hyssop</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Dwarf downingia</b>																																						
Vernal pool complex	9,557	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Degraded vernal pool complex	2,576	2	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>12,320</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>305</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

1 Table 12E-55. Indirect Effects—Alternative 8 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	0	18	0	0	51	343	0	412
Grassland habitat	3,103	0	161	0	0	51	263	0	475
<b>Total</b>	6,011	0	179	0	0	102	606	0	887
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	2	0	0	18	256	0	276
<b>Total</b>	2,166	0	2	0	0	18	256	0	276
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	35,588	0	0	0	0	429	0	0	429
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	169	0	0	0	0	0	169
<b>Total</b>	5,327	0	169	0	0	0	0	0	169
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	7,515	0	0	0	0	167	0	0	167
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	113	0	5	364	0	0	483
Secondary habitat	17,915	0	2	0	0	428	2	0	433
<b>Total</b>	25,382	0	116	0	5	793	2	0	915
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	6,716	0	0	0	0	542	0	0	542
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	0	1,172	0	44	2,785	850	0	4,850
<b>Total</b>	86,263	0	1,172	0	44	2,785	850	0	4,850
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	219	0	0	0	0	0	219
Roosting and foraging - Temporary	16,579	0	1,427	0	0	174	0	0	1,600
Foraging	164,676	18	7,548	0	0	1,825	0	18	9,373
<b>Total</b>	188,594	18	9,194	0	0	1,999	0	18	11,193
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	0	156	0	244	619	406	0	1,426
<b>Total</b>	14,850	0	156	0	244	619	406	0	1,426
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	27,707	0	0	0	0	871	0	0	871
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	0	6,858	0	2,275	6,013	3,201	0	18,347
Nesting habitat	9,796	0	117	0	255	361	470	0	1,203
<b>Total</b>	487,675	0	6,975	0	2,530	6,373	3,672	0	19,550
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	14	634	0	1,612	1,152	852	14	4,251
Breeding habitat-foraging	60,828	0	373	0	931	2,389	532	0	4,225
Breeding habitat-nesting	1,935	0	38	0	89	43	114	0	284
Nonbreeding habitat-foraging ag	196,713	4	7,606	0	38	2,856	1,604	4	12,104
Nonbreeding habitat-roosting	28,067	0	349	0	49	1,214	25	0	1,638
Nonbreeding habitat-foraging	34,313	0	788	0	0	1,324	33	0	2,145
<b>Total</b>	424,040	18	9,787	0	2,721	8,978	3,161	18	24,647
<b>Western burrowing owl</b>								0	0
Hgh-value habitat	152,014	0	1,283	0	1,202	3,038	541	0	6,064
Low-value habitat	254,352	0	4,252	0	512	1,632	1,977	0	8,373
<b>Total</b>	406,366	0	5,535	0	1,714	4,671	2,518	0	14,437
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	8	0	24	98	66	0	196
Migratory habitat	10,425	0	128	0	220	398	318	0	1,065
<b>Total</b>	12,395	0	136	0	244	496	384	0	1,261
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	0	172	0	269	543	523	0	1,507
Foraging habitat	507,922	0	6,891	0	2,297	6,477	2,982	0	18,647
<b>Total</b>	521,991	0	7,064	0	2,566	7,020	3,505	0	20,155
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	65	0	80	388	272	0	805
Secondary nesting and migratory habitat	5,528	0	91	0	5	172	135	0	402
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	14,547	0	156	0	244	634	406	0	1,442
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	0	164	0	13	219	131	0	527
Aquatic - nontidal	19,184	0	81	0	133	103	22	0	339
Upland-high	21,649	0	279	0	242	372	0	0	893
Upland-moderate	25,953	0	345	0	125	773	314	0	1,557
Upland-low	5,683	0	57	0	1	150	279	0	487
<b>Total</b>	84,567	0	926	0	516	1,616	745	0	3,802
Aquatic breeding, foraging, and movement (miles)	2,802	0	38	0	11	33	22	0	103
<b>Western pond turtle</b>								0	0

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Aquatic habitat</b>	81,666	0	600	0	150	1,856	619	0	3,225
Aquatic habitat	16,184	0	150	0	115	331	245	0	842
Upland nesting and overwintering habitat	12,680	0	122	0	37	243	30	0	432
Upland nesting and overwintering habitat-NHD									
<b>Total</b>	110,530	0	871	0	303	2,430	895	0	4,499
<b>Aquatic habitat linear (miles) - NHD</b>	1,425	0	16	0	1	14	3	0	35
<b>Amphibians</b>									
<b>California red-legged frog</b>									
Aquatic habitat	159	0	0	0	0	0	0	0	0
Upland cover and dispersal habitat	7,766	0	147	0	0	0	0	0	147
<b>Total</b>	7,925	0	147	0	0	0	0	0	147
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>									
Aquatic breeding habitat	8,273	0	0	0	0	201	0	0	201
Terrestrial cover and aestivation	29,459	0	208	0	30	659	0	0	897
<b>Total</b>	37,732	0	208	0	30	861	0	0	1,098
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>									
Riparian vegetation	17,786	0	90	0	56	125	200	0	472
Nonriparian channels and grasslands	16,670	0	223	0	85	261	210	0	779
<b>Total</b>	34,456	0	313	0	141	387	410	0	1,250
<b>California linderiella</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Longhorn fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Midvalley fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool fairy shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Vernal pool tadpole shrimp</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Plants</b>									
Brittlescale total	451	0	0	0	0	3	0	0	3
Heartscale total	6,528	0	0	0	0	193	0	0	193
San Joaquin spearscale total	14,933	0	24	0	48	129	1	0	202
Carquinez goldenbush total	1,346	0	0	0	0	9	0	0	9
Delta button celery total	3,361	0	13	0	0	0	350	0	364
Delta mudwort total	6,081	0	87	0	10	261	122	0	480
Mason's lilaepsis total	6,081	0	87	0	10	261	122	0	480
Delta tule pea total	5,853	0	7	0	0	420	1	0	428
Suisun Marsh aster total	5,853	0	7	0	0	420	1	0	428
Side-flowering skullcap total	2,497	0	12	0	1	80	12	0	105
Slough thistle total	1,834	0	0	0	0	0	349	0	349
Soft bird's-beak total	1,228	0	0	0	0	64	0	0	64
Suisun thistle total	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	13	0	0	18	0	0	31
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Legenere</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	13	0	0	18	0	0	31
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Heckard's peppergrass</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	13	0	0	18	0	0	31
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Boggs Lake hedge-hyssop</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	13	0	0	18	0	0	31
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Dwarf downingia</b>									
Vernal pool complex	9,557	0	1	0	0	117	0	0	118
Degraded vernal pool complex	2,576	0	13	0	0	18	0	0	31
<b>Alkali seasonal wetland</b>	188	0	1	0	0	0	0	0	1
<b>Total</b>	12,320	0	15	0	0	135	0	0	150

**Alternative 9**

---

1

2



Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta			CM4 Tidal Natural Communities Restoration Construction and Inundation	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management Construction of Rereational-Related Facilities	CM18 Conservation Hatcheries Construction	Maximum Allowable Habitat Loss						
		Separate Corridors Impacts				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3		Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)					Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																														
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farmsteads (without residence)	820	4	0	1	3	0	0	0	0	0	0	0	0	0	12	0	27	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Misc semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	19	0	86	17	17	25	0	0	0	0	0	0	10	2	129	35	18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	1	1	42	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Ag Lands	2,097	0	0	4	1	10	0	0	0	0	0	0	0	1	1	32	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Developed	90,660	46	0	12	64	15	16	1	0	13	1	1	0	15	1	85	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

1  
2





Natural Community	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh										Delta						CM4 Tidal Natural Communities Restoration	CM5 Seasonally Inundated Floodplain Restoration			CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss		
		Permanent (Acres)	Permanent Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)	High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)		
																																			Construction and Inundation	Levee Construction
Farmsteads (includes a farm residence)	2,132	5	0	0	3	0	0	0	0	0	0	0	0	0	11	0	62	7	9	1	91	6	5	0	0	0	0	0	64	0	102	0	7			
Livestock feedlots	180	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	6	6	3	0	0	0	0	12	0	12	0	3				
Dairies	891	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	8	0	0	0	0	0	0	0	8	0	8	0	0			
Poultry farms	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Farmsteads (without residence)	820	4	0	1	3	0	0	0	0	0	0	0	0	0	3	0	61	11	15	2	92	5	3	0	0	0	15	0	101	1	6					
Misc. semi-ag (small roads, ditches, non-planted areas of cropped fields)	20,602	19	0	86	17	17	25	0	0	0	0	0	0	0	104	0	1,058	438	511	228	2,340	114	66	0	531	0	463	0	3,022	86	108					
Riparian Vegetation	352	0	0	0	0	35	0	0	0	0	0	0	0	0	1	0	104	2	1	0	108	0	0	0	0	0	0	0	143	0	0					
Water surface	211	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4					
Other Ag Lands	2,997	0	0	4	1	10	0	0	0	0	0	0	0	0	4	0	63	9	19	9	105	9	9	98	0	0	82	0	221	4	9					
Developed	90,660	46	0	12	64	15	16	3	3	39	14	20	2	0	47	0	383	79	58	15	664	125	68	0	0	0	360	0	850	12	148					

1  
2





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss				
		Separate Corridors Impacts				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Permanent (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																											
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Heckard's peppergrass</b>																																		
<i>Vernal pool complex</i>	9,557	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Degraded vernal pool complex</i>	2,576	0	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Boggs Lake hedge-hyssop</b>																																		
<i>Vernal pool complex</i>	9,557	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Degraded vernal pool complex</i>	2,576	0	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Dwarf downingia</b>																																		
<i>Vernal pool complex</i>	9,557	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Degraded vernal pool complex</i>	2,576	0	0	0	0	0	0	0	0	0	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Alkali seasonal wetland</i>	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	0	179	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		





Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation				CM2 Yolo Bypass Fisheries Enhancement		Suisun Marsh									Delta			CM4 Tidal Natural Communities Restoration		CM5 Seasonally Inundated Floodplain Restoration		CM7 Riparian Natural Community Restoration		CM8 Grassland Restoration	CM10 Nontidal Marsh Natural Community Restoration	CM11 Natural Community Enhancement and Management	CM18 Conservation Hatcheries	Maximum Allowable Habitat Loss					
		Separate Corridors Impacts				Fremont Weir and Yolo Bypass Improvements		High Tidal Brackish Marsh	Mid Tidal Brackish Marsh	Low Tidal Brackish Marsh	Intertidal mudflat	Subtidal 1	Subtidal 2	Subtidal 3	Ecotone	Intertidal mudflat	Tidal freshwater marsh	Subtidal 1	Subtidal 2	Subtidal 3	Permanent (Acres)	Conversion (Acres)	Permanent (Acres)	Temporary (Acres)	Riparian Restoration as Part of Tidal Natural Communities Restoration					Riparian Restoration as Part of Seasonal Floodplain Restoration	Construction and Inundation	Construction and Inundation	Construction of Rereational-Related Facilities	Construction	Permanent (Acres)
		Permanent (Acres)	Permanent - Reusable Tunnel Material (Acres)	Temporary (Borrow and Spoil) (Acres)	Temporary (Acres)	Permanent (Acres)	Temporary (Acres)																												
Degraded vernal pool complex	2,576	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	0	370	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	0	372	0	0
<b>Boggs Lake hedge-hyssop</b>																																			
Vernal pool complex	9,557	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Degraded vernal pool complex	2,576	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	0	370	0	0
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	0	372	0	0
<b>Dwarf downingia</b>																																			
Vernal pool complex	9,557	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
Degraded vernal pool complex	2,576	0	0	0	0	0	0	0	0	0	0	0	0	65	0	305	1	0	0	0	370	0	0	0	0	0	0	0	0	0	0	370	0	0	
Alkali seasonal wetland	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	0	0	0	0	1	0	0	0	65	0	305	1	0	0	0	372	0	0	0	0	0	0	0	0	0	0	0	372	0	0

1 Table 12E-60. Indirect Effects–Alternative 9 [Version July 24, 2013]

Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Mammals</b>									
<b>Riparian brush rabbit</b>								0	0
Riparian habitat	2,909	1	26	0	0	51	342	1	419
Grassland habitat	3,103	1	75	0	0	51	263	1	389
<b>Total</b>	<b>6,011</b>	<b>2</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>605</b>	<b>2</b>	<b>808</b>
<b>Riparian woodrat</b>								0	0
Habitat	2,166	0	6	0	0	18	255	0	279
<b>Total</b>	<b>2,166</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>255</b>	<b>0</b>	<b>279</b>
<b>Salt marsh harvest mouse</b>								0	0
Tidal brackish emergent wetland primary	3,641	0	0	0	0	93	0	0	93
Tidal brackish emergent wetland secondary	2,718	0	0	0	0	60	0	0	60
Upland secondary	749	0	0	0	0	55	0	0	55
Managed wetland—wetland primary, low long-term conservation value	21,891	0	0	0	0	140	0	0	140
Managed wetland—wetland secondary, low long-term conservation value	2,800	0	0	0	0	45	0	0	45
Managed wetland—upland, low long-term conservation value	3,787	0	0	0	0	37	0	0	37
<b>Total</b>	<b>35,588</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>429</b>	<b>0</b>	<b>0</b>	<b>429</b>
<b>San Joaquin kit fox</b>								0	0
Breeding, foraging, and dispersal habitat	5,327	0	9	0	0	0	0	0	9
<b>Total</b>	<b>5,327</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>
<b>Suisun shrew</b>								0	0
Primary habitat	3,128	0	0	0	0	83	0	0	83
Secondary habitat	4,387	0	0	0	0	84	0	0	84
<b>Total</b>	<b>7,515</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>	<b>0</b>	<b>0</b>	<b>167</b>
<b>Birds</b>									
<b>California black rail</b>								0	0
Primary habitat	7,467	0	43	0	5	364	0	0	412
Secondary habitat	17,915	0	4	0	0	428	2	0	435
<b>Total</b>	<b>25,382</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>5</b>	<b>793</b>	<b>2</b>	<b>0</b>	<b>847</b>
<b>California clapper rail</b>								0	0
Primary habitat	296	0	0	0	0	19	0	0	19
Secondary habitat	6,420	0	0	0	0	523	0	0	523
<b>Total</b>	<b>6,716</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>542</b>	<b>0</b>	<b>0</b>	<b>542</b>
<b>California least tern</b>								0	0
Nesting and Migratory Habitat	86,263	9	603	0	44	2,785	845	9	4,277
<b>Total</b>	<b>86,263</b>	<b>9</b>	<b>603</b>	<b>0</b>	<b>44</b>	<b>2,785</b>	<b>845</b>	<b>9</b>	<b>4,277</b>
<b>Greater sandhill crane</b>								0	0
Roosting and foraging - Permanent	7,340	0	0	0	0	0	0	0	0
Roosting and foraging - Temporary	16,579	0	169	0	0	174	0	0	343
Foraging	164,676	0	1,760	0	0	1,825	0	0	3,585
<b>Total</b>	<b>188,594</b>	<b>0</b>	<b>1,929</b>	<b>0</b>	<b>0</b>	<b>1,999</b>	<b>0</b>	<b>0</b>	<b>3,927</b>
<b>Least Bell's vireo</b>								0	0
Migratory and breeding	14,850	4	209	0	244	619	403	4	1,475
<b>Total</b>	<b>14,850</b>	<b>4</b>	<b>209</b>	<b>0</b>	<b>244</b>	<b>619</b>	<b>403</b>	<b>4</b>	<b>1,475</b>
<b>Suisun song sparrow</b>								0	0
Primary habitat	3,722	0	0	0	0	287	0	0	287
Secondary habitat	23,986	0	0	0	0	584	0	0	584
<b>Total</b>	<b>27,707</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>871</b>	<b>0</b>	<b>0</b>	<b>871</b>
<b>Swainson's hawk</b>								0	0
Foraging habitat	477,879	8	2,732	0	2,275	6,013	3,200	8	14,220
Nesting habitat	9,796	4	133	0	255	361	467	4	1,216
<b>Total</b>	<b>487,675</b>	<b>12</b>	<b>2,865</b>	<b>0</b>	<b>2,530</b>	<b>6,373</b>	<b>3,667</b>	<b>12</b>	<b>15,436</b>
<b>Tricolored blackbird</b>								0	0
Breeding habitat-ag foraging	102,184	17	438	0	1,612	1,152	852	17	4,055
Breeding habitat-foraging	60,828	7	114	0	931	2,389	529	7	3,964
Breeding habitat-nesting	1,935	4	32	0	89	43	112	4	276
Nonbreeding habitat-foraging ag	196,713	40	2,245	0	38	2,856	1,604	40	6,743
Nonbreeding habitat-roosting	28,067	3	159	0	49	1,214	25	3	1,448
Nonbreeding habitat-foraging	34,313	9	257	0	0	1,324	33	9	1,615
<b>Total</b>	<b>424,040</b>	<b>80</b>	<b>3,246</b>	<b>0</b>	<b>2,721</b>	<b>8,978</b>	<b>3,156</b>	<b>80</b>	<b>18,101</b>
<b>Western burrowing owl</b>								0	0
High-value habitat	152,014	3	455	0	1,202	3,038	540	3	5,235
Low-value habitat	254,352	1	1,760	0	512	1,632	1,977	1	5,881
<b>Total</b>	<b>406,366</b>	<b>4</b>	<b>2,215</b>	<b>0</b>	<b>1,714</b>	<b>4,671</b>	<b>2,517</b>	<b>4</b>	<b>11,116</b>
<b>Western yellow-billed cuckoo</b>								0	0
Breeding habitat	1,970	0	80	0	24	98	66	0	268
Migratory habitat	10,425	4	109	0	220	398	315	4	1,042
<b>Total</b>	<b>12,395</b>	<b>4</b>	<b>189</b>	<b>0</b>	<b>244</b>	<b>496</b>	<b>381</b>	<b>4</b>	<b>1,310</b>
<b>White-tailed kite</b>								0	0
Breeding habitat	14,069	4	217	0	269	543	520	4	1,549
Foraging habitat	507,922	8	2,723	0	2,297	6,477	2,981	8	14,477
<b>Total</b>	<b>521,991</b>	<b>12</b>	<b>2,939</b>	<b>0</b>	<b>2,566</b>	<b>7,020</b>	<b>3,500</b>	<b>12</b>	<b>16,026</b>
<b>Yellow-breasted chat</b>								0	0
Primary nesting and migratory habitat	8,178	0	128	0	80	388	272	0	868
Secondary nesting and migratory habitat	5,528	4	81	0	5	172	131	4	389
Suisun Marsh/upper Yolo Bypass nest and migratory habitat	841	0	0	0	160	74	0	0	234
<b>Total</b>	<b>14,547</b>	<b>4</b>	<b>209</b>	<b>0</b>	<b>244</b>	<b>634</b>	<b>403</b>	<b>4</b>	<b>1,491</b>
<b>Reptiles</b>									
<b>Giant garter snake</b>								0	0
Aquatic - tidal	12,097	1	131	0	13	219	131	1	493
Aquatic - nontidal	19,184	0	14	0	133	103	22	0	272
Upland-high	21,649	0	105	0	242	372	0	0	718
Upland-moderate	25,953	1	289	0	125	773	314	1	1,501
Upland-low	5,683	1	53	0	1	150	278	1	482
<b>Total</b>	<b>84,567</b>	<b>3</b>	<b>591</b>	<b>0</b>	<b>516</b>	<b>1,616</b>	<b>744</b>	<b>3</b>	<b>3,467</b>
Aquatic breeding, foraging, and movement (miles)	2,802	0	24	0	11	33	22	0	89
<b>Western pond turtle</b>								0	0
Aquatic habitat	81,666	3	417	0	150	1,856	618	3	3,041
Upland nesting and overwintering habitat	16,184	0	100	0	115	331	245	0	792
Upland nesting and overwintering habitat-NHD	12,680	0	53	0	37	243	30	0	364
<b>Total</b>	<b>110,530</b>	<b>3</b>	<b>570</b>	<b>0</b>	<b>303</b>	<b>2,430</b>	<b>894</b>	<b>3</b>	<b>4,197</b>
Aquatic habitat linear (miles) - NHD	1,425	0	7	0	1	14	3	0	26



Resource	Total Existing Modeled Habitat in the Plan Area (Acres)	CM1 Water Facilities and Operation		CM2 Yolo Bypass Fisheries Enhancement		CM4 Tidal Restoration	CM5 Seasonally Inundated Floodplain Restoration	Total Allowable Indirect Effects	
		O&M (Acres)	Construction (Acres)	O&M (Acres)	Construction (Acres)	Construction (Acres)	Construction (Acres)	Permanent (Acres)	Temporary (Acres)
<b>Amphibians</b>									
<b>California red-legged frog</b>								0	0
Aquatic habitat	159	0	0	0	0	0	0	0	0
Upland cover and dispersal habitat	7,766	0	0	0	0	0	0	0	0
<b>Total</b>	7,925	0	0	0	0	0	0	0	0
Aquatic habitat (miles)	30	0	0	0	0	0	0	0	0
<b>California tiger salamander</b>								0	201
Aquatic breeding habitat	8,273	0	0	0	0	201	0	0	201
Terrestrial cover and aestivation	29,459	0	0	0	30	659	0	0	689
<b>Total</b>	37,732	0	0	0	30	861	0	0	890
<b>Invertebrates</b>									
<b>Valley elderberry longhorn beetle</b>								0	0
Riparian vegetation	17,786	0	86	0	56	125	200	0	468
Nonriparian channels and grasslands	16,670	0	193	0	85	261	210	0	748
<b>Total</b>	34,456	0	279	0	141	387	410	0	1,216
<b>California linderiella</b>									
Vernal pool complex	9,607	0	2	0	0	89	0	0	91
Degraded vernal pool complex	2,713	0	13	0	0	45	0	0	58
<b>Total</b>	12,320	0	15	0	0	135	0	0	150
<b>Conservancy fairy shrimp</b>									
Vernal pool complex	9,607	0	0	0	0	89	0	0	89
Degraded vernal pool complex	2,713	0	0	0	0	45	0	0	45
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Longhorn fairy shrimp</b>									
Vernal pool complex	9,607	0	0	0	0	89	0	0	89
Degraded vernal pool complex	2,713	0	0	0	0	45	0	0	45
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Midvalley fairy shrimp</b>									
Vernal pool complex	9,607	0	0	0	0	89	0	0	89
Degraded vernal pool complex	2,713	0	0	0	0	45	0	0	45
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Vernal pool fairy shrimp</b>									
Vernal pool complex	9,607	0	0	0	0	89	0	0	89
Degraded vernal pool complex	2,713	0	0	0	0	45	0	0	45
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Vernal pool tadpole shrimp</b>									
Vernal pool complex	9,607	0	0	0	0	89	0	0	89
Degraded vernal pool complex	2,713	0	0	0	0	45	0	0	45
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Plants</b>									
Brittlescale total	451	0	0	0	0	3	0	0	3
Heartscale total	6,528	0	0	0	0	193	0	0	193
San Joaquin spearscale total	14,933	0	1	0	48	129	1	0	179
Carquinez goldenbush total	1,346	0	0	0	0	9	0	0	9
Delta button celery total	3,361	0	0	0	0	0	350	0	350
Delta mudwort total	6,081	0	62	0	10	261	122	0	455
Mason's lilaopsis total	6,081	0	62	0	10	261	122	0	455
Delta tule pea total	5,853	0	4	0	0	420	1	0	426
Suisun Marsh aster total	5,853	0	4	0	0	420	1	0	426
Side-flowering skullcap total	2,497	0	30	0	1	80	12	0	123
Slough thistle total	1,834	0	0	0	0	0	349	0	349
Soft bird's-beak total	1,228	0	0	0	0	64	0	0	64
Suisun thistle total	1,281	0	0	0	0	66	0	0	66
<b>Vernal Pool Plants</b>									
<b>Alkali milk-vetch</b>								0	0
Vernal pool complex	9,557	0	0	0	0	117	0	0	117
Degraded vernal pool complex	2,576	0	0	0	0	18	0	0	18
<b>Alkali seasonal wetland</b>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Legenere</b>									
Vernal pool complex	9,557	0	0	0	0	117	0	0	117
Degraded vernal pool complex	2,576	0	0	0	0	18	0	0	18
<b>Alkali seasonal wetland</b>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Heckard's peppergrass</b>									
Vernal pool complex	9,557	0	0	0	0	117	0	0	117
Degraded vernal pool complex	2,576	0	0	0	0	18	0	0	18
<b>Alkali seasonal wetland</b>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Boggs Lake hedge-hyssop</b>									
Vernal pool complex	9,557	0	0	0	0	117	0	0	117
Degraded vernal pool complex	2,576	0	0	0	0	18	0	0	18
<b>Alkali seasonal wetland</b>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	135	0	0	135
<b>Dwarf downingia</b>									
Vernal pool complex	9,557	0	0	0	0	117	0	0	117
Degraded vernal pool complex	2,576	0	0	0	0	18	0	0	18
<b>Alkali seasonal wetland</b>	188	0	0	0	0	0	0	0	0
<b>Total</b>	12,320	0	0	0	0	135	0	0	135

