

**Table 4-8. Maximum Extent of Permanent Direct Impacts on Modeled Covered Species Habitat Types and Known Occurrences within the Plan Area (acres unless otherwise noted in the first column)**

Covered Species Modeled or Mapped Habitat Type and Occurrences	Existing in Plan Area	Maximum Extent Removed by Covered Activities	Percent Remaining in Plan Area with Implementation of Covered Activities
<b><i>Tricolored Blackbird</i></b>			
Breeding and Foraging Habitat <sup>1</sup>	268,666	12,617	95.3
Number of Known Nesting Colonies <sup>2</sup>	7	0	100.0
<b><i>Yellow-breasted Chat</i></b>			
Nesting and Foraging Habitat	6,972	278	96.0
Nesting and Foraging Habitat (Known Use Area)	302	0	100.0
<i>Subtotal</i>	7,275	278	96.2
<b><i>Bank Swallow</i></b>			
Nesting Habitat (linear miles)	169	0	100.0
Number of Known Nesting Colonies	27	0	100.0
<b><i>Western Burrowing Owl</i></b>			
Nesting and Foraging Habitat <sup>3</sup>	165,511	14,496	91.2
<b><i>Western Yellow-billed Cuckoo</i></b>			
Nesting Habitat	5,620	50	99.1
<b><i>Greater Sandhill Crane</i></b>			
Winter Roosting and Foraging Habitat <sup>4</sup>	147,880	1,627	98.9
Traditional Upland Use Area	2,814	137	95.1
<i>Subtotal</i>	150,694	1,764	98.8
<b><i>California Black Rail</i><sup>5</sup></b>			
No. of Occurrences	9	0	100.0
<b><i>American Peregrine Falcon</i></b>			
Nesting Habitat	64	0	100.0
Year-round Foraging Habitat <sup>6</sup>	160,742	1,817	98.9
Seasonal Foraging Habitat	34,119	1,943	94.3
<i>Subtotal</i>	194,924	3,759	98.1
Number of Known Nest Sites	3	0	100.0
<b><i>Swainson's Hawk</i></b>			

Nesting Habitat	17,358	315	98.2
Nesting and Foraging Habitat	2,565	557	78.3
Foraging Habitat <sup>7</sup>	130,239	10,441	92.0
<i>Subtotal</i>	<i>150,163</i>	<i>11,312</i>	<i>92.5</i>
Number of Known Nest Sites	19	0	100.0
<b>White-tailed Kite</b>			
Nesting Habitat	32,571	2,598	92.0
Year-round Foraging Habitat <sup>8</sup>	177,224	6,599	96.3
Breeding Season Foraging Habitat	94,526	6,986	92.6
<i>Subtotal</i>	<i>304,321</i>	<i>16,183</i>	<i>94.7</i>

<b>Bald Eagle</b>			
Nesting Habitat	23,827	2,708	88.6
Year-round Foraging Habitat	7,411	0	100.0
Seasonal Foraging Habitat <sup>9</sup>	182,018	3,570	98.0
<i>Subtotal</i>	<i>213,256</i>	<i>6,277</i>	<i>97.1</i>
Number of Known Nest Sites	7	0	100.0

<b>Giant Garter Snake</b>			
Breeding and Movement Habitat: Rice <sup>10</sup>	120,225	1,567	98.7
Breeding and Movement Habitat: Managed and Emergent Wetlands, Willow Scrub	32,883	54	99.8
Breeding and Movement Habitat: Adjoining Cropland <sup>11</sup>	14,008	1,573	88.8
<i>Subtotal (acreage)</i>	<i>167,116</i>	<i>3,194</i>	<i>98.1</i>
Movement Habitat: Connected Waterways (linear miles)	462.6	18.1	96.1

<b>Blainville's Horned Lizard<sup>5</sup></b>			
No. of Occurrences	5	0	100.0

<b>Western Pond Turtle</b>			
Aquatic Habitat: Emergent Wetland	4,440	35	99.2
Nesting and Movement Habitat	55,215	4,566	91.7
Aquatic, Nesting and Movement Habitat	25,486	5	100.0
<i>Subtotal (acreage)</i>	<i>85,142</i>	<i>4,606</i>	<i>94.6</i>
Aquatic Habitat (no. of ponds)	204	24	88.2
Aquatic Habitat-perennial streams (linear miles)	110.9	5.3	95.2

<b>Foothill Yellow-legged Frog</b>			
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Habitat - within 130ft of Perennial Streams	2,113	326	84.6
Habitat - within 130ft of Intermittent Streams	8,918	863	90.3
<i>Subtotal (acreage)</i>	<i>11,031</i>	<i>1,189</i>	<i>89.2</i>
<b>Western Spadefoot Toad</b>			
Breeding Habitat: Non-pond	2,211	46	97.9
Breeding and Upland Habitat	34,241	1,963	94.3
Upland Habitat	71,512	8,133	88.6
<i>Subtotal</i>	<i>107,963</i>	<i>10,142</i>	<i>90.6</i>
Breeding Habitat (no. of ponds)	195	22	88.7
Breeding Habitat-perennial/intermittent streams (linear miles)	380	32	91.7
<b>Central Valley Steelhead</b>			
Adult migration; juvenile rearing and migration habitat (linear miles)	84.7	0.0	100.0
Adult spawning and migration; juvenile rearing and migration habitat (linear miles)	105.8	0.0	100.0
Non-natal juvenile rearing habitat (linear miles)	6.7	0.0	100.0
<i>Subtotal</i>	<i>197.1</i>	<i>0.0</i>	<i>100.0</i>
<b>Central Valley Spring-run Chinook Salmon</b>			
Adult migration; juvenile rearing and migration habitat (linear miles)	97.7	0.0	100.0
Adult spawning and migration; juvenile rearing and migration habitat (linear miles)	20.2	0.0	100.0
Non-natal juvenile rearing habitat (linear miles)	33.0	0.0	100.0
<i>Subtotal</i>	<i>151.0</i>	<i>0.0</i>	<i>100.0</i>
<b>Central Valley Fall/Late Fall-run Chinook Salmon</b>			
Adult migration; juvenile rearing and migration habitat (linear miles)	54.5	0.0	100.0
Adult spawning and migration; juvenile rearing and migration habitat (linear miles)	92.0	0.0	100.0
Non-natal juvenile rearing habitat (linear miles)	5.4	0.0	100.0
<i>Subtotal</i>	<i>151.8</i>	<i>0.0</i>	<i>100.0</i>
<b>Green Sturgeon</b>			
Adult migration and spawning; juvenile migration and rearing habitat (linear miles)	9.1	0.0	100.0
Adult migration; juvenile migration and rearing habitat (linear miles)	20.1	0.0	100.0
Adult migration and potential spawning habitat (linear miles)	22.0	0.0	100.0
<i>Subtotal</i>	<i>51.2</i>	<i>0.0</i>	<i>100.0</i>
<b>Valley Elderberry Longhorn Beetle</b>			

Habitat	42,951	2,280	94.7
<b><i>Vernal Pool Tadpole Shrimp</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	17	3	82.4
<b><i>Conservancy Fairy Shrimp</i><sup>13</sup></b>			
No. of Occurrences	3	0	100.0
<b><i>Vernal Pool Fairy Shrimp</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	29	17	41.4
<b><i>Ferris' Milkvetch</i></b>			
Habitat	2,208	176	92.0
No. of Occurrences	8	0	100.0
<b><i>Lesser Saltscale</i><sup>12</sup></b>			
No. of Occurrences	2	0	100.0
<b><i>Hoover's Spurge</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	4	0	100.0
<b><i>Ahart's Dwarf Rush</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	17	0	100.0
<b><i>Red Bluff Dwarf Rush</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	32	1	96.9
<b><i>Butte County Meadowfoam</i><sup>14</sup></b>			
Primary Habitat	16,750	331	98.0
Secondary Habitat	6,360	1,161	81.7
<i>Subtotal</i>	<i>23,110</i>	<i>1,493</i>	<i>93.5</i>
No. of Occurrences		Not applicable <sup>15</sup>	
<b><i>Veiny Monardella</i></b>			
No. of Occurrences	8	0	100.0
<b><i>Hairy Orcutt Grass</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	1	0	100.0

<b><i>Slender Orcutt Grass</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	2	0	100.0
<b><i>Ahart's Paronychia</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	5	0	100.0
<b><i>California Beaked-rush</i><sup>13</sup></b>			
No. of Occurrences	7	0	100.0
<b><i>Butte County Checkerbloom</i></b>			
Habitat	36,823	2,638	92.8
No. of Occurrences	127	8	93.7
<b><i>Butte County Golden Clover</i></b>			
Habitat	14,998	236	98.4
No. of Occurrences	18	0	100.0
<b><i>Greene's Tuctoria</i></b>			
Habitat <sup>12</sup>	34,241	1,422	95.8
No. of Occurrences	4	0	100.0

Note: Discrepancies in totals are due to rounding.

<sup>1</sup>140 acres of permanent direct effects due to borrow sites from Caltrans roadway construction projects in the Cascade and Sierras CAZs outside of UPAs and rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>2</sup>Removal of tricolored blackbird nesting colonies that have been active within the last five years will be avoided.

<sup>3</sup>100 acres of permanent direct effects due to borrow sites from Caltrans roadway construction projects in the Cascade and Sierras CAZs outside of UPAs and rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>4</sup>40 acres of permanent direct effects due to rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>5</sup>Habitat for this species has not been modeled. A description of this species' habitat requirements is provided in Appendix A, Covered Species Accounts.

<sup>6</sup>40 acres of permanent direct effects due to rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>7</sup>100 acres of permanent direct effects due to borrow sites from Caltrans roadway construction projects in the Cascade and Sierras CAZs outside of UPAs and rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>8</sup>140 acres of permanent direct effects due to borrow sites from Caltrans roadway construction projects in the Cascade and Sierras CAZs outside of UPAs and rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>9</sup>40 acres of permanent direct effects due to rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>10</sup>40 acres of permanent direct effects due to rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>11</sup>20 acres of permanent direct effects due to rerouting existing canals in the Basin CAZ outside of UPAs are included.

<sup>12</sup>The difference in impact between the vernal pool species habitat models and the grassland with vernal swale complex land cover type is that individually mapped large vernal pools outside of grassland with vernal swale complex are included in the vernal pool species habitat models.

<sup>13</sup>Habitat for this species has not been modeled. A description of this species' habitat requirements is provided in Appendix A, *Covered Species Accounts*.

<sup>14</sup>Habitat acreage shown is mapped based on aerial imagery and soil survey maps.

<sup>15</sup>See Table 4-10.

Gray-shaded cells - Values in these cells are less than the total amount of GIS-generated overlap between modeled habitats and the covered activities effects footprint data layer. These acreage values were adjusted down to reflect the likely level of impact for these specific modeled habitat types due to the likelihood of projects avoiding impacts and are therefore less than the total amount of impact that was generated from the GIS analyses. Covered activities are authorized only to the amount of modeled habitat acreage removal (permanent direct effects) identified in this table and will avoid impacts on the remaining acreage of these modeled habitat types. The GIS footprint of permanent direct effects on known tricolored blackbird nesting colonies is 1 colony and actual permanent direct effects are 0. The GIS footprint of permanent direct effects on modeled yellow-breasted chat nesting and foraging habitat is 980 acres and actual permanent direct effects are 278 acres. The GIS footprint of permanent direct effects on modeled yellow-breasted chat nesting and foraging habitat (known use area) is 48 acres and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled bank swallow nesting habitat is 9.1 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled American peregrine falcon nesting habitat and known nest sites is 9 acres and 1 site, respectively, and there are no actual permanent direct effects on either. The GIS footprint of permanent direct effects on modeled Swainson's hawk nesting habitat is 712 acres and actual permanent direct effects are 315 acres. The GIS footprint of permanent direct effects on modeled white-tailed kite nesting habitat is 3,079 acres and actual permanent direct effects are 2,598 acres. The GIS footprint of permanent direct effects on modeled bald eagle nesting habitat is 2,784 acres and actual permanent direct effects are 2,708 acres. The GIS footprint of permanent direct effects on modeled bald eagle year-round foraging habitat is 85 acres and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled giant garter snake breeding and movement habitat: managed and emergent wetlands, willow scrub is 56 acres and actual permanent direct effects are 54 acres. The GIS footprint of permanent direct effects on modeled western pond turtle aquatic habitat is 81 acres and actual permanent direct effects are 35 acres. The GIS footprint of permanent direct effects on modeled Central Valley steelhead adult migration-juvenile rearing and migration habitat is 0.4 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley steelhead adult spawning and migration-juvenile rearing and migration habitat is 5.0 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley steelhead non-natal juvenile rearing habitat is 0.04 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley spring-run Chinook salmon adult migration-juvenile rearing and migration habitat is 0.5 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley spring-run Chinook salmon adult spawning and migration-juvenile rearing and migration habitat is 4.0 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley spring-run Chinook salmon non-natal juvenile rearing habitat is 0.6 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley fall/late fall-run Chinook salmon adult migration-juvenile rearing and migration habitat is 0.1 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Central Valley fall/late fall-run Chinook salmon adult spawning and migration-juvenile rearing and migration habitat is 5.1 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled Sacramento splittail rearing, migration, and potential spawning habitat is 0.1 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled green sturgeon adult migration and potential spawning habitat is 1.5 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled river lamprey spawning, rearing, and migration habitat is 1.5 linear miles and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on modeled valley elderberry longhorn beetle habitat is 3,360 acres and actual permanent direct effects are 2,280 acres. The GIS footprint of permanent direct effects on vernal pool tadpole shrimp, vernal pool fairy shrimp, Hoovers' spurge, ahart's dwarf rush, Red Bluff dwarf rush, hairy orcutt grass, slender orcutt grass, Ahart's paronychia, and Greene's tuctoria is 1,963 acres and there are 1,422 acres of actual permanent direct effects. The GIS footprint of permanent direct effects on Conservancy fairy shrimp occurrences is 2 and there are no actual permanent direct effects. The GIS footprint of permanent direct effects on veiny monardella occurrences is 6 and there are no actual permanent direct effects.