

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Sacramento	Delevan	Colusa	Sutter	Butte Sink	Llano Seco Unit (North Central Valley WMA)	GRAND TOTALS
	NWR	NWR	NWR	NWR	Unit (Butte Sink WMA)	WMA)	
% of Wetlands Flooded	8%	10%	4%	3%	0%	4%	
Coot	250	30	6	0	0	0	286
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	0	0	0	0	0	0
White-fronted goose	0	0	0	0	0	0	0
White goose	0	0	0	0	0	0	0
Western Canada goose	200	0	0	0	0	0	200
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	0	0	0	0	0	0
<b>TOTAL GEESE</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>
Mallard	2,850	2,138	861	10	0	0	5,859
Pintail	5,010	1,335	80	0	0	0	6,425
Gadwall	190	0	90	0	0	0	280
Wigeon	0	0	0	0	0	0	0
Green-winged teal	750	162	23	0	0	0	935
Cinnamon teal	320	270	22	0	0	0	612
N. shoveler	450	59	10	0	0	0	519
Wood duck	60	23	0	10	0	0	93
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>9,630</b>	<b>3,987</b>	<b>1,086</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>14,723</b>
Ring-necked duck	0	0	0	0	0	0	0
Ruddy duck	0	0	0	0	0	0	0
Bufflehead	0	0	0	0	0	0	0
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0	0
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL DUCKS</b>	<b>9,630</b>	<b>3,987</b>	<b>1,086</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>14,723</b>
<b>TOTAL WATERFOWL</b>	<b>9,830</b>	<b>3,987</b>	<b>1,086</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>14,923</b>
<b>PERCENTAGES</b>	<b>65.9</b>	<b>26.7</b>	<b>7.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North Central Valley WMA)						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	35%	24%	22%	36%	82%	4%	
Coot	2,900	550	224	28	110	0	3,812
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	12	0	0	2	78	92
White-fronted goose	17,900	18,100	322	2,629	337	0	39,288
White goose	0	0	0	0	0	0	0
Western Canada goose	275	20	0	30	0	2	327
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	0	0	0	0	0	0
<b>TOTAL GEESE</b>	<b>18,175</b>	<b>18,120</b>	<b>322</b>	<b>2,659</b>	<b>337</b>	<b>2</b>	<b>39,615</b>
Mallard	5,110	3,940	533	816	182	40	10,621
Pintail	37,820	25,100	25,408	16,773	2,850	0	107,951
Gadwall	4,350	1,050	690	6	22	0	6,118
Wigeon	1,550	1,700	1,150	19	1,070	0	5,489
Green-winged teal	17,300	7,600	1,900	40	190	0	27,030
Cinnamon teal	175	190	2	28	22	0	417
N. shoveler	6,730	4,600	510	0	263	0	12,103
Wood duck	90	260	4	20	0	0	374
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>73,125</b>	<b>44,440</b>	<b>30,197</b>	<b>17,702</b>	<b>4,599</b>	<b>40</b>	<b>170,103</b>
Ring-necked duck	0	0	25	0	34	0	59
Ruddy duck	20	0	0	0	0	0	20
Bufflehead	0	0	0	0	0	0	0
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0	0
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>20</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>79</b>
<b>TOTAL DUCKS</b>	<b>73,145</b>	<b>44,440</b>	<b>30,222</b>	<b>17,702</b>	<b>4,633</b>	<b>40</b>	<b>170,182</b>
<b>TOTAL WATERFOWL</b>	<b>91,320</b>	<b>62,560</b>	<b>30,544</b>	<b>20,361</b>	<b>4,970</b>	<b>42</b>	<b>209,797</b>
<b>PERCENTAGES</b>	<b>43.5</b>	<b>29.8</b>	<b>14.6</b>	<b>9.7</b>	<b>2.4</b>	<b>0.0</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Sacramento NWR 10/17/2017	Delevan NWR 10/16/2017	Colusa NWR 10/18/2017	Sutter NWR 10/15/2017	Llano Seco Unit (North Central Valley WMA)		GRAND TOTALS
					Butte Sink Unit (Butte Sink WMA) 10/18/2017	10/20/2017	
% of Wetlands Flooded	63%	56%	67%	66%	94%	33%	
Coot	8,061	8,507	2,235	648	895	129	20,475
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	55	227	524	0	119	1,053	1,978
White-fronted goose	112,604	54,402	33,203	28,452	1,505	10,351	240,517
White goose	11,170	2,260	86	20	0	0	13,536
Western Canada goose	184	16	0	0	0	742	942
Aleutian Canada goose	0	0	2	0	0	0	2
Cackling Canada goose	15	0	92	0	0	31	138
<b>TOTAL GEESE</b>	<b>123,973</b>	<b>56,678</b>	<b>33,383</b>	<b>28,472</b>	<b>1,505</b>	<b>11,124</b>	<b>255,135</b>
Mallard	6,833	7,601	1,995	1,310	284	360	18,383
Pintail	129,209	81,100	16,283	42,550	30,711	1,740	301,593
Gadwall	11,313	10,849	1,461	791	1,553	218	26,185
Wigeon	15,635	11,301	2,489	1,719	13,550	292	44,986
Green-winged teal	19,239	25,375	11,379	735	2,940	280	59,948
Cinnamon teal	60	357	11	24	0	0	452
N. shoveler	18,393	16,143	4,450	976	2,865	184	43,011
Wood duck	22	264	21	26	4	10	347
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>200,704</b>	<b>152,990</b>	<b>38,089</b>	<b>48,131</b>	<b>51,907</b>	<b>3,084</b>	<b>494,905</b>
Ring-necked duck	1,508	360	300	138	220	40	2,566
Ruddy duck	295	57	0	12	50	0	414
Bufflehead	0	0	0	0	0	0	0
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0	0
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>1,803</b>	<b>417</b>	<b>300</b>	<b>150</b>	<b>270</b>	<b>40</b>	<b>2,980</b>
<b>TOTAL DUCKS</b>	<b>202,507</b>	<b>153,407</b>	<b>38,389</b>	<b>48,281</b>	<b>52,177</b>	<b>3,124</b>	<b>497,885</b>
<b>TOTAL WATERFOWL</b>	<b>326,480</b>	<b>210,085</b>	<b>71,772</b>	<b>76,753</b>	<b>53,682</b>	<b>14,248</b>	<b>753,020</b>
<b>PERCENTAGES</b>	<b>43.4</b>	<b>27.9</b>	<b>9.5</b>	<b>10.2</b>	<b>7.1</b>	<b>1.9</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North Central						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Valley WMA)	
% of Wetlands Flooded	11/20/2017	11/21/2017	11/20/2017	11/20/2017	11/22/2017	11/17/2017	
	99%	99%	95%	90%	100%	69%	
Coot	27,650	20,550	9,375	2,974	4,356	325	65,230
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	82	0	0	4	418	504
White-fronted goose	9,050	9,180	9,600	29,795	870	18,906	77,401
White goose	38,800	31,800	20,725	14,605	2,915	3,200	112,045
Western Canada goose	240	33	0	0	0	398	671
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	0	29	0	0	40	69
<b>TOTAL GEESE</b>	<b>48,090</b>	<b>41,013</b>	<b>30,354</b>	<b>44,400</b>	<b>3,785</b>	<b>22,544</b>	<b>190,186</b>
Mallard	20,118	12,342	4,219	2,064	1,076	1,345	41,164
Pintail	168,054	125,470	33,519	40,116	97,894	58,260	523,313
Gadwall	27,276	15,470	5,711	2,190	15,941	1,998	68,586
Wigeon	39,550	23,150	13,608	10,769	156,607	5,630	249,314
Green-winged teal	41,400	43,150	11,274	4,900	1,176	4,590	106,490
Cinnamon teal	20	60	8	40	0	0	128
N. shoveler	25,510	20,160	12,657	8,295	28,376	4,220	99,218
Wood duck	0	0	0	42	0	0	42
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>321,928</b>	<b>239,802</b>	<b>80,996</b>	<b>68,416</b>	<b>301,070</b>	<b>76,043</b>	<b>1,088,255</b>
Ring-necked duck	12,300	400	16	86	6	0	12,808
Ruddy duck	5,450	400	1	26	955	0	6,832
Bufflehead	200	80	14	4	0	116	414
Redhead	0	0	0	0	0	0	0
Canvasback	150	0	0	0	0	0	150
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>18,100</b>	<b>880</b>	<b>31</b>	<b>116</b>	<b>961</b>	<b>116</b>	<b>20,204</b>
<b>TOTAL DUCKS</b>	<b>340,028</b>	<b>240,682</b>	<b>81,027</b>	<b>68,532</b>	<b>302,031</b>	<b>76,159</b>	<b>1,108,459</b>
<b>TOTAL WATERFOWL</b>	<b>388,118</b>	<b>281,695</b>	<b>111,381</b>	<b>112,932</b>	<b>305,816</b>	<b>98,703</b>	<b>1,298,645</b>
<b>PERCENTAGES</b>	<b>29.9</b>	<b>21.7</b>	<b>8.6</b>	<b>8.7</b>	<b>23.5</b>	<b>7.6</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Sacramento NWR		Delevan NWR		Colusa NWR		Sutter NWR		Llano Seco Unit (North Central Valley WMA)		GRAND TOTALS
	12/21/2017	12/22/2017	12/22/2017	12/22/2017	12/19/2017	12/17/2017	12/19/2017	12/19/2017	12/19/2017	12/19/2017	
% of Wetlands Flooded	100%	100%	100%	100%	97%	92%	100%	100%	68%		
Coot	39,650	32,033	14,439	3,184	8,014	1,800					99,120
Tundra Swan	0	0	0	0	0	0					0
Sandhill Crane	0	0	0	0	0	27					27
White-fronted goose	17,020	15,864	8,400	13,506	190	5,540					60,520
White goose	88,710	112,282	52,002	46,081	4,700	3,500					307,275
Western Canada goose	250	14	0	0	0	1,064					1,328
Aleutian Canada goose	0	0	182	0	0	0					182
Cackling Canada goose	750	0	66	0	0	0					816
<b>TOTAL GEESE</b>	<b>106,730</b>	<b>128,160</b>	<b>60,650</b>	<b>59,587</b>	<b>4,890</b>	<b>10,104</b>					<b>370,121</b>
Mallard	16,018	31,247	6,006	3,062	1,711	2,170					60,214
Pintail	72,100	72,336	54,745	50,417	59,748	32,350					341,696
Gadwall	28,040	35,194	12,445	2,967	11,624	1,140					91,410
Wigeon	12,950	24,616	16,164	13,679	63,715	15,880					147,004
Green-winged teal	32,070	45,735	41,905	6,362	34,893	4,680					165,645
Cinnamon teal	51	0	2	16	0	0					69
N. shoveler	31,005	39,080	23,063	6,410	10,771	7,710					118,039
Wood duck	0	3,808	8	119	2	0					3,937
other dabblers	0	0	0	0	0	0					0
<b>TOTAL DABLERS</b>	<b>192,234</b>	<b>252,016</b>	<b>154,338</b>	<b>83,032</b>	<b>182,464</b>	<b>63,930</b>					<b>928,014</b>
Ring-necked duck	9,050	1,820	187	66	3,500	0					14,623
Ruddy duck	2,550	1,380	4	26	1,800	0					5,760
Bufflehead	570	120	135	80	2	74					981
Redhead	0	0	0	0	0	0					0
Canvasback	0	0	0	0	0	0					0
Lesser scaup	0	0	0	0	0	0					0
other divers <sup>1</sup>	10	0	0	0	0	0					10
<b>TOTAL DIVERS</b>	<b>12,180</b>	<b>3,320</b>	<b>326</b>	<b>172</b>	<b>5,302</b>	<b>74</b>					<b>21,374</b>
<b>TOTAL DUCKS</b>	<b>204,414</b>	<b>255,336</b>	<b>154,664</b>	<b>83,204</b>	<b>187,766</b>	<b>64,004</b>					<b>949,388</b>
<b>TOTAL WATERFOWL</b>	<b>311,144</b>	<b>383,496</b>	<b>215,314</b>	<b>142,791</b>	<b>192,656</b>	<b>74,108</b>					<b>1,319,509</b>
<b>PERCENTAGES</b>	<b>23.6</b>	<b>29.1</b>	<b>16.3</b>	<b>10.8</b>	<b>14.6</b>	<b>5.6</b>					<b>100.0</b>

<sup>1</sup> = Hooded merganser

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Sacramento NWR 1/18/2018	Delevan NWR 1/19/2018	Colusa NWR 1/18/2018	Sutter NWR 1/19/2018	Butte Sink Unit (Butte Sink WMA) 1/19/2018	Llano Seco Unit (North Central Valley WMA) 1/17/2018	GRAND TOTALS
% of Wetlands Flooded	100%	90%	97%	88%	100%	73%	
Coot	32,930	27,102	10,825	5,310	3,345	2,740	82,252
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	0	0	0	0	103	103
White-fronted goose	12,750	12,092	1,094	4,958	640	710	32,244
White goose	13,900	35,183	1,077	21,326	4,400	150	76,036
Western Canada goose	110	4	0	0	0	32	146
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	2	0	0	0	0	2
<b>TOTAL GEESE</b>	<b>26,760</b>	<b>47,281</b>	<b>2,171</b>	<b>26,284</b>	<b>5,040</b>	<b>892</b>	<b>108,428</b>
Mallard	14,666	18,488	2,656	2,100	1,034	2,380	41,324
Pintail	27,790	33,082	9,389	28,994	28,130	9,450	136,835
Gadwall	25,290	26,228	5,420	2,876	4,823	1,720	66,357
Wigeon	4,440	25,195	3,663	7,867	27,520	18,640	87,325
Green-winged teal	29,210	40,410	14,245	9,204	24,597	4,750	122,416
Cinnamon teal	24	340	12	44	44	0	464
N. shoveler	32,060	39,625	13,219	3,571	3,870	5,840	98,185
Wood duck	0	32	0	119	0	0	151
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>133,480</b>	<b>183,400</b>	<b>48,604</b>	<b>54,775</b>	<b>90,018</b>	<b>42,780</b>	<b>553,057</b>
Ring-necked duck	10,330	1,396	993	1,300	4,762	890	19,671
Ruddy duck	3,380	340	176	453	2,345	0	6,694
Bufflehead	470	54	284	56	0	66	930
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	1	0	0	0	1
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>14,180</b>	<b>1,790</b>	<b>1,454</b>	<b>1,809</b>	<b>7,107</b>	<b>956</b>	<b>27,296</b>
<b>TOTAL DUCKS</b>	<b>147,660</b>	<b>185,190</b>	<b>50,058</b>	<b>56,584</b>	<b>97,125</b>	<b>43,736</b>	<b>580,353</b>
<b>TOTAL WATERFOWL</b>	<b>174,420</b>	<b>232,471</b>	<b>52,229</b>	<b>82,868</b>	<b>102,165</b>	<b>44,628</b>	<b>688,781</b>
<b>PERCENTAGES</b>	<b>25.3</b>	<b>33.8</b>	<b>7.6</b>	<b>12.0</b>	<b>14.8</b>	<b>6.5</b>	<b>100.0</b>