

## 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	12%	8%	6%	2%	0%	4%	
Coot	500	40	1	0	0	0	541
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	0	0	0	0	0	0
White-fronted goose	0	0	1	0	0	0	1
White goose	0	0	0	0	0	0	0
Western Canada goose	80	0	3	0	0	0	83
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>80</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>
Mallard	3,990	656	25	52	107	0	4,830
Pintail	7,010	396	0	0	2	0	7,408
Gadwall	410	90	0	16	30	0	546
Wigeon	0	0	1	0	0	0	1
Green-winged teal	730	126	0	0	0	0	856
Cinnamon teal	150	21	0	4	10	0	185
N. shoveler	250	110	1	0	0	0	361
Wood duck	70	4	0	8	0	0	82
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABBLERS</b>	<b>12,610</b>	<b>1,403</b>	<b>27</b>	<b>80</b>	<b>149</b>	<b>0</b>	<b>14,269</b>
Ring-necked duck	0	0	0	0	0	0	0
Ruddy duck	0	0	3	0	0	0	3
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>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>TOTAL DUCKS</b>	<b>12,610</b>	<b>1,403</b>	<b>30</b>	<b>80</b>	<b>149</b>	<b>0</b>	<b>14,272</b>
<b>TOTAL WATERFOWL</b>	<b>12,690</b>	<b>1,403</b>	<b>34</b>	<b>80</b>	<b>149</b>	<b>0</b>	<b>14,356</b>
<b>PERCENTAGES</b>	<b>88.4</b>	<b>9.8</b>	<b>0.2</b>	<b>0.6</b>	<b>1.0</b>	<b>0.0</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North Central Butte Sink Unit (Butte Sink WMA) Valley WMA)						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	22%	26%	26%	21%	81%	3%	
Coot	2,700	750	83	70	33	0	3,636
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	0	0	0	0	0	0
White-fronted goose	355	660	72	1,820	4	0	2,911
White goose	0	0	0	0	0	0	0
Western Canada goose	310	143	123	0	8	18	602
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>665</b>	<b>803</b>	<b>195</b>	<b>1,820</b>	<b>12</b>	<b>18</b>	<b>3,513</b>
Mallard	4,920	5,320	921	260	85	22	11,528
Pintail	24,280	25,050	12,088	656	23,900	0	85,974
Gadwall	3,230	1,680	454	72	50	4	5,490
Wigeon	630	300	30	176	20	0	1,156
Green-winged teal	4,260	2,500	132	20	0	0	6,912
Cinnamon teal	240	140	24	2	0	0	406
N. shoveler	5,100	2,910	613	84	50	0	8,757
Wood duck	75	150	4	30	0	0	259
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABBLERS</b>	<b>42,735</b>	<b>38,050</b>	<b>14,266</b>	<b>1,300</b>	<b>24,105</b>	<b>26</b>	<b>120,482</b>
Ring-necked duck	0	0	1	0	0	0	1
Ruddy duck	30	0	0	0	0	0	30
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>30</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>
<b>TOTAL DUCKS</b>	<b>42,765</b>	<b>38,050</b>	<b>14,267</b>	<b>1,300</b>	<b>24,105</b>	<b>26</b>	<b>120,513</b>
<b>TOTAL WATERFOWL</b>	<b>43,430</b>	<b>38,853</b>	<b>14,462</b>	<b>3,120</b>	<b>24,117</b>	<b>44</b>	<b>124,026</b>
<b>PERCENTAGES</b>	<b>35.0</b>	<b>31.3</b>	<b>11.7</b>	<b>2.5</b>	<b>19.4</b>	<b>0.0</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North Central Butte Sink Unit (Butte Sink WMA) Valley WMA)						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	56%	56%	66%	5%	98%	32%	
Coot	12,500	5,260	3,513	1,965	503	86	23,827
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	19	427	990	0	38	1,842	3,316
White-fronted goose	90,165	101,090	38,841	29,715	6,310	3,980	270,101
White goose	10,950	10,350	378	310	0	0	21,988
Western Canada goose	92	18	50	10	0	609	779
Aleutian Canada goose	0	0	2	0	0	0	2
Cackling Canada goose	0	0	35	0	0	0	35
<b>TOTAL GEESE</b>	<b>101,207</b>	<b>111,458</b>	<b>39,306</b>	<b>30,035</b>	<b>6,310</b>	<b>4,589</b>	<b>292,905</b>
Mallard	12,362	9,592	2,347	1,975	353	208	26,837
Pintail	122,390	130,100	43,465	41,516	18,210	660	356,341
Gadwall	16,500	13,940	3,595	1,394	760	30	36,219
Wigeon	32,440	30,900	9,796	6,250	9,080	710	89,176
Green-winged teal	37,550	31,900	9,437	1,836	522	0	81,245
Cinnamon teal	80	100	3	26	0	0	209
N. shoveler	18,190	14,410	9,473	1,039	1,820	136	45,068
Wood duck	90	100	10	22	2	0	224
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABBLERS</b>	<b>239,602</b>	<b>231,042</b>	<b>78,126</b>	<b>54,058</b>	<b>30,747</b>	<b>1,744</b>	<b>635,319</b>
Ring-necked duck	4,360	2,530	1,217	0	730	0	8,837
Ruddy duck	0	0	0	0	100	0	100
Bufflehead	0	0	0	0	0	0	0
Redhead	0	0	0	0	0	0	0
Canvasback	15	0	0	0	0	0	15
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>4,375</b>	<b>2,530</b>	<b>1,217</b>	<b>0</b>	<b>830</b>	<b>0</b>	<b>8,952</b>
<b>TOTAL DUCKS</b>	<b>243,977</b>	<b>233,572</b>	<b>79,343</b>	<b>54,058</b>	<b>31,577</b>	<b>1,744</b>	<b>644,271</b>
<b>TOTAL WATERFOWL</b>	<b>345,184</b>	<b>345,030</b>	<b>118,649</b>	<b>84,093</b>	<b>37,887</b>	<b>6,333</b>	<b>937,176</b>
<b>PERCENTAGES</b>	<b>36.8</b>	<b>36.8</b>	<b>12.7</b>	<b>9.0</b>	<b>4.0</b>	<b>0.7</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	11/18/2019	11/18/2019	11/18/2019	11/21/2019	11/21/2019	11/21/2019	
	91%	94%	95%	85%	100%	88%	
Coot	28,180	22,077	6,801	2,784	4,900	667	65,409
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	107	728	0	22	252	1,109
White-fronted goose	26,580	20,877	13,565	20,543	870	11,406	93,841
White goose	144,670	107,380	88,922	51,946	6,060	16,125	415,103
Western Canada goose	90	50	0	0	0	332	472
Aleutian Canada goose	0	0	1	0	0	0	1
Cackling Canada goose	400	1	0	0	0	170	571
<b>TOTAL GEESE</b>	<b>171,740</b>	<b>128,308</b>	<b>102,488</b>	<b>72,489</b>	<b>6,930</b>	<b>28,033</b>	<b>509,988</b>
Mallard	18,808	21,074	5,544	1,916	426	654	48,422
Pintail	253,200	55,320	29,163	44,224	82,960	16,296	481,163
Gadwall	40,700	22,801	6,407	1,273	3,590	982	75,753
Wigeon	24,050	19,650	10,538	12,070	57,440	4,870	128,618
Green-winged teal	55,600	34,305	11,090	1,100	1,080	2,916	106,091
Cinnamon teal	180	0	1	6	0	0	187
N. shoveler	31,860	22,795	13,153	2,239	15,870	2,638	88,555
Wood duck	0	1	1	20	0	1	23
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>424,398</b>	<b>175,946</b>	<b>75,897</b>	<b>62,848</b>	<b>161,366</b>	<b>28,357</b>	<b>928,812</b>
Ring-necked duck	8,300	0	143	314	405	0	9,162
Ruddy duck	400	0	1	4	451	0	856
Bufflehead	55	2	51	10	0	10	128
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	2	0	0	0	2
Lesser scaup	0	0	0	0	0	0	0
other divers	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>8,755</b>	<b>2</b>	<b>197</b>	<b>328</b>	<b>856</b>	<b>10</b>	<b>10,148</b>
<b>TOTAL DUCKS</b>	<b>433,153</b>	<b>175,948</b>	<b>76,094</b>	<b>63,176</b>	<b>162,222</b>	<b>28,367</b>	<b>938,960</b>
<b>TOTAL WATERFOWL</b>	<b>604,893</b>	<b>304,256</b>	<b>178,582</b>	<b>135,665</b>	<b>169,152</b>	<b>56,400</b>	<b>1,448,948</b>
<b>PERCENTAGES</b>	<b>41.7</b>	<b>21.0</b>	<b>12.3</b>	<b>9.4</b>	<b>11.7</b>	<b>3.9</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	12/16/2019	12/16/2019	12/16/2019	12/19/20419	12/19/2019	12/19/2019	
	100%	100%	97%	100%	100%	89%	
<b>Coot</b>	36,730	43,873	8,255	5,485	3,731	1,663	99,737
<b>Tundra Swan</b>	0	0	0	0	0	0	0
<b>Sandhill Crane</b>	0	0	0	0	0	21	21
<b>White-fronted goose</b>	30,080	28,440	17,518	11,468	2,225	2,762	92,493
<b>White goose</b>	118,560	102,700	48,348	12,365	175	0	282,148
<b>Western Canada goose</b>	135	60	0	0	0	249	444
<b>Aleutian Canada goose</b>	0	0	0	0	0	0	0
<b>Cackling Canada goose</b>	0	10	0	0	0	0	10
<b>TOTAL GEESE</b>	<b>148,775</b>	<b>131,210</b>	<b>65,866</b>	<b>23,833</b>	<b>2,400</b>	<b>3,011</b>	<b>375,095</b>
<b>Mallard</b>	18,614	17,841	3,373	2,512	528	806	43,674
<b>Pintail</b>	97,620	70,310	19,342	50,415	13,586	15,712	266,985
<b>Gadwall</b>	34,222	20,903	5,946	1,181	5,719	2,306	70,277
<b>Wigeon</b>	15,345	28,571	5,094	17,333	20,656	11,163	98,162
<b>Green-winged teal</b>	30,510	37,810	12,434	12,751	7,330	4,286	105,121
<b>Cinnamon teal</b>	70	20	2	13	0	0	105
<b>N. shoveler</b>	24,510	33,074	10,250	2,115	4,911	5,083	79,943
<b>Wood duck</b>	0	0	4	34	1	0	39
<b>other dabblers</b>	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>220,891</b>	<b>208,529</b>	<b>56,445</b>	<b>86,354</b>	<b>52,731</b>	<b>39,356</b>	<b>664,306</b>
<b>Ring-necked duck</b>	6,450	100	74	223	12,100	2	18,949
<b>Ruddy duck</b>	1,230	145	0	48	642	0	2,065
<b>Bufflehead</b>	590	24	179	16	1	6	816
<b>Redhead</b>	0	0	0	0	0	0	0
<b>Canvasback</b>	0	0	0	0	0	0	0
<b>Lesser scaup</b>	0	0	0	0	0	0	0
<b>other divers</b>	0	0	0	0	0	0	0
<b>TOTAL DIVERS</b>	<b>8,270</b>	<b>269</b>	<b>253</b>	<b>287</b>	<b>12,743</b>	<b>8</b>	<b>21,830</b>
<b>TOTAL DUCKS</b>	<b>229,161</b>	<b>208,798</b>	<b>56,698</b>	<b>86,641</b>	<b>65,474</b>	<b>39,364</b>	<b>686,136</b>
<b>TOTAL WATERFOWL</b>	<b>377,936</b>	<b>340,008</b>	<b>122,564</b>	<b>110,474</b>	<b>67,874</b>	<b>42,375</b>	<b>1,061,231</b>
<b>PERCENTAGES</b>	<b>35.6</b>	<b>32.0</b>	<b>11.5</b>	<b>10.4</b>	<b>6.4</b>	<b>4.0</b>	<b>100.0</b>

## Sacramento NWR Complex Waterfowl Survey Summary

Refuge Date	Llano Seco Unit (North						GRAND TOTALS
	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	1/14/2020	1/23/2020	1/17/2020	1/20/2020	1/15/2020	1/15/2020	
	98%	100%	98%	92%	100%	89%	
Coot	41,080	39,360	10,879	5,726	9,763	1,236	108,044
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	0	0	0	0	39	39
White-fronted goose	13,385	15,313	1,486	6,371	2,058	2,488	41,101
White goose	85,550	37,532	10,117	5,658	1,250	3,675	143,782
Western Canada goose	240	22	9	0	0	94	365
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	0	8	0	0	0	8
<b>TOTAL GEESE</b>	<b>99,175</b>	<b>52,867</b>	<b>11,620</b>	<b>12,029</b>	<b>3,308</b>	<b>6,257</b>	<b>185,256</b>
Mallard	12,524	12,344	3,346	2,862	539	457	32,072
Pintail	80,860	62,470	27,476	52,675	110,200	11,326	345,007
Gadwall	29,906	23,002	7,997	1,341	7,909	428	70,583
Wigeon	8,070	32,080	5,504	16,618	34,533	6,863	103,668
Green-winged teal	27,540	34,702	18,983	13,833	11,545	2,401	109,004
Cinnamon teal	60	0	2	2	0	3	67
N. shoveler	20,420	24,987	18,786	4,584	19,893	5,050	93,720
Wood duck	2	0	2	30	2	0	36
other dabblers	0	2	0	0	0	0	2
<b>TOTAL DABLERS</b>	<b>179,382</b>	<b>189,587</b>	<b>82,096</b>	<b>91,945</b>	<b>184,621</b>	<b>26,528</b>	<b>754,159</b>
Ring-necked duck	17,020	3,175	1,078	978	650	0	22,901
Ruddy duck	2,680	4,970	1,364	56	2,095	0	11,165
Bufflehead	650	186	203	49	3	22	1,113
Redhead	0	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0	0
Lesser scaup	0	30	0	0	0	0	30
other divers	10	0	0	0	0	0	10
<b>TOTAL DIVERS</b>	<b>20,360</b>	<b>8,361</b>	<b>2,645</b>	<b>1,083</b>	<b>2,748</b>	<b>22</b>	<b>35,219</b>
<b>TOTAL DUCKS</b>	<b>199,742</b>	<b>197,948</b>	<b>84,741</b>	<b>93,028</b>	<b>187,369</b>	<b>26,550</b>	<b>789,378</b>
<b>TOTAL WATERFOWL</b>	<b>298,917</b>	<b>250,815</b>	<b>96,361</b>	<b>105,057</b>	<b>190,677</b>	<b>32,807</b>	<b>974,634</b>
<b>PERCENTAGES</b>	<b>30.7</b>	<b>25.7</b>	<b>9.9</b>	<b>10.8</b>	<b>19.6</b>	<b>3.4</b>	<b>100.0</b>

Other divers = Hooded Merganser

Other dabblers = Blue-winged teal

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	Sacramento NWR	Delevan NWR	Colusa NWR	Sutter NWR	Butte Sink Unit (Butte Sink WMA)	Central Valley WMA)	
% of Wetlands Flooded	2/19/2020	2/19/2020	2/14/2020		2/13/2020	2/13/2020	
	91%	88%	96%		100%	89%	
Coot	45,200	30,717	8,518	0	3,472	1,903	89,810
Tundra Swan	0	0	0	0	0	0	0
Sandhill Crane	0	8	0	0	0	1,530	1,538
White-fronted goose	16,220	10,544	8,917	0	822	2,792	39,295
White goose	38,160	22,238	14,510	0	0	12,255	87,163
Western Canada goose	73	39	12	0	19	73	216
Aleutian Canada goose	0	0	0	0	0	0	0
Cackling Canada goose	0	0	2	0	0	185	187
<b>TOTAL GEESE</b>	<b>54,453</b>	<b>32,821</b>	<b>23,441</b>	<b>0</b>	<b>841</b>	<b>15,305</b>	<b>126,861</b>
Mallard	9,170	9,284	3,487	0	528	880	23,349
Pintail	51,735	76,800	23,159	0	12,234	18,740	182,668
Gadwall	30,480	13,758	6,876	0	1,661	1,839	54,614
Wigeon	7,080	21,282	9,857	0	3,000	8,082	49,301
Green-winged teal	23,700	25,221	10,823	0	11,752	5,266	76,762
Cinnamon teal	131	34	8	0	1	0	174
N. shoveler	37,765	26,734	15,619	0	5,142	4,363	89,623
Wood duck	0	0	6	0	0	0	6
other dabblers	0	0	0	0	0	0	0
<b>TOTAL DABLERS</b>	<b>160,061</b>	<b>173,113</b>	<b>69,835</b>	<b>0</b>	<b>34,318</b>	<b>39,170</b>	<b>476,497</b>
Ring-necked duck	11,350	2,020	1,604	0	201	581	15,756
Ruddy duck	2,310	3,640	243	0	1,541	1	7,735
Bufflehead	589	238	80	0	7	11	925
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>14,249</b>	<b>5,898</b>	<b>1,927</b>	<b>0</b>	<b>1,749</b>	<b>593</b>	<b>24,416</b>
<b>TOTAL DUCKS</b>	<b>174,310</b>	<b>179,011</b>	<b>71,762</b>	<b>0</b>	<b>36,067</b>	<b>39,763</b>	<b>500,913</b>
<b>TOTAL WATERFOWL</b>	<b>228,763</b>	<b>211,832</b>	<b>95,203</b>	<b>0</b>	<b>36,908</b>	<b>55,068</b>	<b>627,774</b>
<b>PERCENTAGES</b>	<b>36.4</b>	<b>33.7</b>	<b>15.2</b>	<b>0.0</b>	<b>5.9</b>	<b>8.8</b>	<b>100.0</b>