

## APPENDIX A

Total number of fishes caught in Suisun Marsh by otter trawl, beach seine, midwater trawl, and all methods from 1979 to 2013 (native species in bold).

Common Name	Scientific Name	Otter Trawl	Beach Seine	Midwater Trawl	Total
American shad	<i>Alosa sapidissima</i>	1176	255		1431
<b>bay pipefish</b>	<b><i>Sygnathus leptorhynchus</i></b>	<b>2</b>			<b>2</b>
bigscale logperch	<i>Percina macrolepida</i>	17	2		19
black bullhead	<i>Ameiurus melas</i>	879	3		882
black crappie	<i>Pomoxis nigromaculatus</i>	1851	98	1	1950
bluegill	<i>Lepomis macrochirus</i>	19	18		37
brown bullhead	<i>Ameiurus nebulosus</i>	28			28
<b>California halibut</b>	<b><i>Paralichthys californicus</i></b>	<b>5</b>			<b>5</b>
channel catfish	<i>Ictalurus punctatus</i>	175	7		182
<b>Chinook salmon</b>	<b><i>Oncorhynchus tshawytscha</i></b>	<b>73</b>	<b>391</b>	<b>1</b>	<b>465</b>
common carp	<i>Cyprinus carpio</i>	5065	475	1	5541
<b>delta smelt</b>	<b><i>Hypomesus transpacificus</i></b>	<b>659</b>	<b>139</b>	<b>4</b>	<b>802</b>
fathead minnow	<i>Pimephales promelas</i>	36	38		74
golden shiner	<i>Notemigonus crysoleucas</i>	6	12		18
goldfish	<i>Carassius auratus</i>	298	48		346
<b>green sturgeon</b>	<b><i>Acipenser medirostris</i></b>	<b>3</b>			<b>3</b>
green sunfish	<i>Lepomis cyanellus</i>	5	3		8
<b>hardhead</b>	<b><i>Mylopharodon conocephalus</i></b>	<b>1</b>			<b>1</b>
<b>hitch</b>	<b><i>Lavinia exilicauda</i></b>	<b>121</b>	<b>16</b>		<b>137</b>
largemouth bass	<i>Micropterus salmoides</i>		3		3
<b>longfin smelt</b>	<b><i>Spirinchus thaleichthys</i></b>	<b>11791</b>	<b>52</b>	<b>5</b>	<b>11848</b>
<b>longjaw mudsucker</b>	<b><i>Gillichthys mirabilis</i></b>	<b>1</b>			<b>1</b>
Mississippi silverside	<i>Menidia audens</i>	1119	81071		82190
<b>northern anchovy</b>	<b><i>Engraulis mordax</i></b>	<b>262</b>		<b>37</b>	<b>299</b>
<b>Pacific herring</b>	<b><i>Clupea harengus</i></b>	<b>477</b>	<b>123</b>		<b>600</b>
<b>Pacific lamprey</b>	<b><i>Lampetra tridentata</i></b>	<b>43</b>			<b>43</b>
<b>Pacific sanddab</b>	<b><i>Citharichthys sordidas</i></b>	<b>3</b>	<b>2</b>		<b>5</b>
<b>plainfin midshipman</b>	<b><i>Porichthys notatus</i></b>	<b>11</b>			<b>11</b>
<b>prickly sculpin</b>	<b><i>Cottus asper</i></b>	<b>10547</b>	<b>944</b>	<b>1</b>	<b>11492</b>
<b>rainbow trout</b>	<b><i>Oncorhynchus mykiss</i></b>	<b>8</b>	<b>4</b>		<b>12</b>
rainwater killifish	<i>Lucania parva</i>	32	110		142
redeer sunfish	<i>Lepomis microlophus</i>	2	1		3
<b>river lamprey</b>	<b><i>Lampetra ayresi</i></b>	<b>3</b>			<b>3</b>
<b>Sacramento blackfish</b>	<b><i>Orthodon macrolepidotus</i></b>	<b>25</b>	<b>116</b>		<b>141</b>
<b>Sacramento pikeminnow</b>	<b><i>Ptychocheilus grandis</i></b>	<b>148</b>	<b>229</b>		<b>377</b>
<b>Sacramento splittail</b>	<b><i>Pogonichthys macrolepidotus</i></b>	<b>26875</b>	<b>3390</b>	<b>14</b>	<b>30279</b>
<b>Sacramento sucker</b>	<b><i>Catostomus occidentalis</i></b>	<b>3334</b>	<b>113</b>	<b>5</b>	<b>3452</b>
shimofuri goby	<i>Tridentiger bifasciatus</i>	10026	2276	1	12303
<b>shiner perch</b>	<b><i>Cymatogaster aggregata</i></b>	<b>17</b>			<b>17</b>
shokihaze goby	<i>Tridentiger barbatus</i>	722	2	6	730
<b>speckled sanddab</b>	<b><i>Citharichthys stigmaeus</i></b>	<b>3</b>			<b>3</b>
<b>staghorn sculpin</b>	<b><i>Leptocottus armatus</i></b>	<b>2530</b>	<b>3331</b>		<b>5861</b>

Common Name	Scientific Name	Otter Trawl	Beach Seine	Midwater Trawl	Total
<b>starry flounder</b>	<i>Platichthys stellatus</i>	<b>2001</b>	<b>262</b>	<b>4</b>	<b>2267</b>
striped bass	<i>Morone saxatilis</i>	83844	13682	30	97556
<b>surf smelt</b>	<i>Hypomesus pretiosus</i>	<b>5</b>			<b>5</b>
threadfin shad	<i>Dorosoma petenense</i>	2782	5293	1	8076
<b>threespine stickleback</b>	<i>Gasterosteus aculeatus</i>	<b>17310</b>	<b>6136</b>	<b>6</b>	<b>23452</b>
<b>tule perch</b>	<i>Hysterothorax traski</i>	<b>19141</b>	<b>2060</b>	<b>6</b>	<b>21207</b>
wakasagi	<i>Hypomesus nipponensis</i>	10	6		16
warmouth	<i>Lepomis gulosus</i>	1			1
western mosquitofish	<i>Gambusia affinis</i>	18	340		358
white catfish	<i>Ameiurus catus</i>	5461	164	13	5638
white crappie	<i>Pomoxis annularis</i>	112			112
<b>white croaker</b>	<i>Genyonemus lineatus</i>	<b>1</b>			<b>1</b>
<b>white sturgeon</b>	<i>Acipenser transmontanus</i>	<b>113</b>		<b>2</b>	<b>115</b>
yellowfin goby	<i>Acanthogobius flavimanus</i>	19505	16479		35984
Total		228702	137694	138	366534

## APPENDIX B

Total 2013 otter trawl catch of each fish species in each slough of Suisun Marsh (native species in bold).

Species	Slough											Total
	Boynton	Cut-off	Denver-ton	First Mallard	Good-year	lower Suisun	Montez-uma	Montezuma New	Nurse	Peytonia	upper Suisun	
American shad	5	5	7	1	3	2	5	4			2	37
black bullhead	1		1		1					1		4
black crappie	2		32									34
channel catfish							1					1
<b>Chinook salmon</b>				<b>1</b>								<b>1</b>
common carp	26	19	25	11	7	2		1	4	4	4	106
<b>delta smelt</b>				<b>1</b>		<b>3</b>		<b>1</b>				<b>5</b>
goldfish			1									1
<b>hitch</b>	<b>1</b>											<b>1</b>
<b>longfin smelt</b>	<b>1</b>	<b>149</b>	<b>1</b>	<b>30</b>		<b>17</b>	<b>114</b>	<b>58</b>	<b>14</b>	<b>3</b>	<b>9</b>	<b>396</b>
Mississippi silverside		3	7	35	1					8		54
<b>northern anchovy</b>						<b>4</b>						<b>4</b>
<b>Pacific herring</b>		<b>3</b>		<b>3</b>					<b>1</b>		<b>3</b>	<b>10</b>
<b>prickly sculpin</b>	<b>6</b>	<b>4</b>	<b>16</b>	<b>3</b>	<b>31</b>	<b>4</b>	<b>16</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>4</b>	<b>100</b>

Species	Slough											Total
	Boynton	Cutoff	Denver-ton	First Mallard	Good-year	lower Suisun	Montez-uma	Montezuma New	Nurse	Peytonia	upper Suisun	
<b>Sacramento blackfish</b>			<b>1</b>									<b>1</b>
<b>Sacramento pikeminnow</b>		<b>1</b>										<b>1</b>
<b>Sacramento splittail</b>	<b>63</b>	<b>38</b>	<b>173</b>	<b>71</b>	<b>107</b>	<b>87</b>	<b>25</b>	<b>22</b>	<b>97</b>	<b>105</b>	<b>149</b>	<b>937</b>
<b>Sacramento sucker</b>	<b>10</b>	<b>9</b>	<b>11</b>	<b>3</b>		<b>1</b>			<b>3</b>	<b>15</b>		<b>54</b>
shimofuri goby	7	12	78	4	3				31	5	9	149
shokihaze goby					2	2	1	4	1		3	13
<b>staghorn sculpin</b>				<b>1</b>	<b>5</b>	<b>5</b>	<b>1</b>				<b>2</b>	<b>14</b>
<b>starry flounder</b>			<b>3</b>		<b>3</b>	<b>6</b>	<b>2</b>	<b>1</b>			<b>2</b>	<b>17</b>
striped bass	60	51	43	77	129	85	78	77	54	49	101	815
threadfin shad	2	1	7	2			32		6		3	53
<b>threespine stickleback</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>55</b>	<b>17</b>	<b>12</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>133</b>
<b>tule perch</b>	<b>26</b>	<b>93</b>	<b>81</b>	<b>59</b>	<b>12</b>	<b>21</b>	<b>25</b>	<b>11</b>	<b>43</b>	<b>20</b>	<b>43</b>	<b>456</b>
white catfish	12	20	119	5	1		9	2	6	6	4	184
yellowfin goby	3	5	2	5	6	11	13	5	4	1	10	65
Total	234	417	616	316	366	267	334	195	275	232	353	3646

Total 2013 beach seine catch of each fish species in Denver-ton, Montezuma, and upper Suisun sloughs (native species are in bold).

Species	Slough			Total
	Denver-ton	Montezuma New	upper Suisun	
American shad	5	2	2	9
black crappie	8			8
<b>Chinook salmon</b>		<b>3</b>		<b>3</b>
common carp	17	7	3	27
<b>delta smelt</b>		<b>1</b>		<b>1</b>
golden shiner		1	1	2
goldfish	1			1
<b>longfin smelt</b>	<b>1</b>			<b>1</b>
Mississippi silverside	792	680	1738	3210
<b>Pacific herring</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>7</b>
<b>prickly sculpin</b>	<b>7</b>			<b>7</b>
rainwater killifish			1	1
<b>Sacramento pikeminnow</b>	<b>1</b>			<b>1</b>
<b>Sacramento splittail</b>	<b>13</b>	<b>113</b>	<b>39</b>	<b>165</b>

Species	Slough			Total
	Denverton	Montezuma New	upper Suisun	
<b>Sacramento sucker</b>	<b>1</b>			<b>1</b>
shimofuri goby	74	8	8	90
<b>staghorn sculpin</b>	<b>3</b>	<b>2</b>	<b>12</b>	<b>17</b>
<b>starry flounder</b>		<b>1</b>	<b>1</b>	<b>2</b>
striped bass	113	45	162	320
threadfin shad	116	26	4	146
<b>threespine stickleback</b>	<b>24</b>	<b>23</b>	<b>24</b>	<b>71</b>
<b>tule perch</b>	<b>8</b>	<b>34</b>	<b>26</b>	<b>68</b>
western mosquitofish		1	1	2
white catfish	1			1
yellowfin goby	22	193	310	525
Total	1208	1142	2336	4686

## APPENDIX C

Number of otter trawls in each slough and each month in 2013.

Slough	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Boynton	2	2	2	2	2	2	2	2	2	2	2	2	24
Cutoff	2	2	2	2	1	2	2	2	2	3	2	2	24
Denverton	2	2	2	2	2	2	2	2	2	2	2	2	24
First Mallard	2	2	2	2	2	2	2	2	2	2	2	2	24
Goodyear	3	3	3	3	2	3	3	0	3	3	3	3	32
lower Suisun	2	2	2	2	0	2	2	0	2	2	2	2	20
Montezuma	2	2	2	2	2	2	2	2	2	2	2	2	24
Montezuma new	2	2	2	2	1	2	2	1	2	2	2	2	22
Nurse	2	2	2	2	2	2	2	2	2	2	2	2	24
Peytonia	2	2	2	2	2	2	2	0	2	2	2	2	22
upper Suisun	2	2	2	2	2	2	2	1	2	2	2	2	23
Total	23	23	23	23	18	23	23	14	23	24	23	23	263

Number of beach seines in each slough and each month in 2013.

Slough	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Denverton	3	3	3	3	3	3	3	3	3	3	3	3	36
Montezuma New	3	3	3	0	3	3	3	0	3	3	3	3	30

Slough	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
upper Suisun	3	3	3	3	3	3	2	3	3	3	3	3	35
Total	9	9	9	6	9	9	8	6	9	9	9	9	101