Prior to the 2014 fishing season, 125 anglers volunteered to participate in the salmon ambassadors program. The program involved measuring each and every Chinook Salmon caught over the course of the fishing season, checking each Chinook Salmon for an adipose fin clip, and recording this information along with the date and location of each catch.

The salmon ambassadors results presented in this report focus on the contribution of stocked (fin-clipped) and wild (unclipped) Chinook Salmon to ports around lake michigan and northern lake huron. At the end of the 2014 season, 71 anglers returned surveys and 59 provided usable data on 3,460 Chinook Salmon.

Registered volunteers represented over 25 Lake Michigan and northern Lake Huron ports. Due to the low numbers of fish reported at some ports, several of the following fact sheets group two or more ports into a larger area. Volunteers in northwest Michigan (from Frankfort, Leland, and Grand Traverse Bay) reported 15 fish (14 of which were wild) and these are not included on fact sheets.

The salmon ambassadors program is a Michigan Sea Grant initiative developed in coordination with Michigan, Wisconsin, Illinois, and Indiana DNRS, and the U.S. Fish & Wildlife Service. This program would not be possible without the effort of dedicated volunteers from organizations including Michigan Steelhead & Salmon Fishermen's Association and Michigan Charter Boat Association. Special thanks go out to Detroit Area Steelheaders, who provided a generous donation to support this program.

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Interpretation of Fact Sheets

**Salmon Ambassadors 2014 Results**

**Ludington Area** (includes Ludington and Pentwater)

**Volunteers were asked if they agreed with the following:**

- "I was pleased with my fishing experiences this season."
- "Fishing for Chinook Salmon was good from May-June."
- "Fishing for Chinook Salmon was good from July-September."

**Stocked & Wild Chinook Salmon Catch**

- **30%** - 80%
- **20-30**
- **30+**
- **<5%**

**Technical Note:**

The χ² test for proportions was used to test for differences in % wild. In cases where multiple comparisons were required, the α-level (0.05) was divided by the number of comparisons to avoid compromising α.

Fact sheets include complete and nearly complete data sets. Results from anglers who did not collect data on >5% of Chinooks May-Sep. are not included.

This large pie chart includes Chinooks of all sizes.

The smaller pie charts separate the same fish into three different length groups.

"N" is the number of fish included in each length group. In all cases, small (<20”) fish were the least common.

Some fact sheets include an extra graph or text box in the lower right hand corner.

This table is the only place on fact sheet that displays separate data for each port.

This caption explains which differences are truly meaningful. Statistical testing requires a relatively large number of fish to detect a “significant” difference. Small differences in % wild require a relatively large number of fish to detect.

**Seasonal Effect**

The Ludington area was the only region that showed a significant change in % wild from early (May-Jun) to late (Jul-Sep) the year.

- May-Jun: 58% wild
- Jul-Sep: 79% wild

In this example, there is a small difference (4%) between % wild in Ludington and Pentwater.

The number of fish caught in Pentwater was relatively low and the statistical test could not detect a “significant” difference between Ludington and Pentwater.

Numbers represent average values reported by volunteers. These opinions are color coded:

1-1.9 = RED
2-2.9 = ORANGE
3-3.9 = YELLOW
4-5.0 = GREEN

These graphs show weekly trends for two length groups.

20-30” Chinooks were mostly Age 2. Larger (30”+) fish were a mix of Age 2, Age 3, and a few Age 4 Chinooks.

In the Ludington area, fishing for large Chinooks peaked in late May and again in early August. Fishing was more consistent for 20-30” fish.

Some graphs show weekly trends for two length groups.

Salmon Ambassadors found that 70% of Chinook Salmon caught in the Ludington area in 2014 were wild. Although it appeared that a slightly lower percentage of large (30”) Chinooks were wild, this had no significant effect on the wild. Location also did not have a statistically significant effect on % wild. Location data was not available for all comparisons.

In this example, there is a small difference (4%) between % wild in Ludington and Pentwater.

The number of fish caught in Pentwater was relatively low and the statistical test could not detect a “significant” difference between Ludington and Pentwater.
Salmon Ambassadors 2014 Results

Manistee

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 4

Chinook Salmon caught by volunteers 679

Average length of Chinook Salmon 29.5”

Average length of stocked Chinook 30.5”

Average length of wild Chinook 29.1”

Salmon Ambassadors found that 75% of Chinook Salmon caught from Manistee in 2014 were wild. Size had a significant effect on % wild. A lesser percentage of small (<20”) fish were wild.

<table>
<thead>
<tr>
<th>Manistee</th>
<th>Stocked</th>
<th>Wild</th>
<th>% Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>6</td>
<td>10</td>
<td>63%</td>
</tr>
<tr>
<td>Jun</td>
<td>80</td>
<td>209</td>
<td>72%</td>
</tr>
<tr>
<td>Jul</td>
<td>18</td>
<td>64</td>
<td>78%</td>
</tr>
<tr>
<td>Aug</td>
<td>29</td>
<td>91</td>
<td>76%</td>
</tr>
<tr>
<td>Sep</td>
<td>20</td>
<td>88</td>
<td>81%</td>
</tr>
<tr>
<td>Oct</td>
<td>16</td>
<td>48</td>
<td>75%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>169</td>
<td>510</td>
<td>75%</td>
</tr>
</tbody>
</table>

A Note on Rivers...

Six of our 2014 volunteers primarily fished rivers for Chinook Salmon. Several anglers reported slow fishing during the fall run, and only six fish were reported by our river volunteers. One trip taken on the Manistee River produced three wild fish, and another on the Muskegon River also produced three wild fish.
Salmon Ambassadors 2014 Results
Ludington Area (includes Ludington and Pentwater)

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches: 10
Chinook Salmon caught by volunteers: 750
Average length of Chinook Salmon: 28.4”
Average length of stocked Chinook: 29.4”
Average length of wild Chinook: 28.0”

Salmon Ambassadors found that 70% of Chinook Salmon caught in the Ludington area in 2014 were wild. Although it appeared that a slightly lower percentage of large (30”) Chinooks were wild, size had no significant effect on % wild. Location also did not have a statistically significant effect on % wild, but season did; Chinook Salmon caught in Jul-Sep were more likely to be wild than those caught May-Jun in the Ludington area (see below).

Seasonal Effect
The Ludington area was the only region that showed a significant change in % wild from early (N=305) to late (N=443) in the year.

May-Jun: 58% wild
Jul-Sep: 79% wild
Salmon Ambassadors 2014 Results
Grand Haven Area (includes Holland to Muskegon)

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 10
Chinook Salmon caught by volunteers 427
Average length of Chinook Salmon 27.9”
Average length of stocked Chinook 29.1”
Average length of wild Chinook 27.4”

Salmon Ambassadors found that 74% of Chinook Salmon caught in the Grand Haven area in 2014 were wild. Size had a significant effect on % wild. Chinook Salmon over 30” long were less likely to be wild than smaller fish. Location did not have a statistically significant effect on % wild. Although Holland, Grand Haven and Muskegon appeared to differ slightly these differences were not significant (see below).
Salmon Ambassadors 2014 Results
South Haven

Volunteers were asked if they agreed with the following:

- “I was pleased with my fishing experiences this season.”
- “Fishing for Chinook Salmon was good from May-June.”
- “Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 7

Chinook Salmon caught by volunteers 296
Average length of Chinook Salmon 28.4”
Average length of stocked Chinook 29.0”
Average length of wild Chinook 28.0”

Salmon Ambassadors found that 65% of Chinook Salmon caught in South Haven during 2014 were wild. Size had no significant effect on % wild. Although it appeared that the three length groups show above were different, these differences were not meaningful.

## South Haven

<table>
<thead>
<tr>
<th>Stocked Chinooks Caught</th>
<th>Wild Chinooks Caught</th>
<th>% Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>46</td>
<td>61</td>
</tr>
<tr>
<td>Jun</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>Jul</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Aug</td>
<td>33</td>
<td>71</td>
</tr>
<tr>
<td>Sep</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>102</td>
<td>189</td>
</tr>
</tbody>
</table>

South Haven 20-30" Catch by Week

South Haven 30"+ Catch by Week

Salmon Ambassadors: Angler Science Project
www.miseagrant.umich.edu/salmon-ambassadors
Salmon Ambassadors 2014 Results
St. Joseph (includes St. Joseph and Benton Harbor)

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 4
Chinook Salmon caught by volunteers 264
Average length of Chinook Salmon 28.2”
Average length of stocked Chinook 28.7”
Average length of wild Chinook 27.8”

Stocked & Wild Chinook Salmon Catch

Salmon Ambassadors found that 74% of Chinook Salmon caught from St. Joseph & Benton Harbor in 2014 were wild. Size had no significant effect on % wild. Although it appeared that a lesser percentage of small (<20”) fish were wild, this difference was not meaningful.
Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches = 4

Chinook Salmon caught by volunteers = 321

Average length of Chinook Salmon = 28.9”

Average length of stocked Chinook = 29.2”

Average length of wild Chinook = 28.8”

Stocked & Wild Chinook Salmon Catch

Salmon Ambassadors found that 62% of Chinook Salmon caught in the Door Peninsula area in 2014 were wild. Length had a statistically significant effect on % wild, with each of the three length groups shown above having a different % wild. Location did not have a significant effect on % wild. Although Kewaunee appeared to have a lower % wild, this difference was not meaningful (see below).

<table>
<thead>
<tr>
<th></th>
<th>Gills Rock &amp; Washington Is.</th>
<th>Kewaunee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stocked</td>
<td>Wild</td>
</tr>
<tr>
<td><strong>Chinooks Caught</strong></td>
<td>111</td>
<td>182</td>
</tr>
<tr>
<td>May</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jun</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Jul</td>
<td>54</td>
<td>92</td>
</tr>
<tr>
<td>Aug</td>
<td>49</td>
<td>70</td>
</tr>
<tr>
<td>Sep</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>111</td>
<td>182</td>
</tr>
</tbody>
</table>
Salmon Ambassadors 2014 Results
Southern Wisconsin (Illinois border to Port Washington)

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 8

Chinook Salmon caught by volunteers 328

Average length of Chinook Salmon 28.3”

Average length of stocked Chinook 28.9”

Average length of wild Chinook 27.8”

Stocked & Wild Chinook Salmon Catch

Salmon Ambassadors found that 57% of Chinook Salmon caught in the southern Wisconsin area in 2014 were wild. Salmon length had a statistically significant effect on % wild. A greater percentage of medium-sized (20-30”) fish were wild than small or large fish. Location did not have a significant effect on % wild. Although Racine & Kenosha appeared to have a lower % wild, this difference was not meaningful (see below).

<table>
<thead>
<tr>
<th>Port Washington &amp; Milwaukee</th>
<th>Racine &amp; Kenosha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stocked</td>
</tr>
<tr>
<td></td>
<td>Chinooks</td>
</tr>
<tr>
<td></td>
<td>Caught</td>
</tr>
<tr>
<td>May</td>
<td>3</td>
</tr>
<tr>
<td>Jun</td>
<td>7</td>
</tr>
<tr>
<td>Jul</td>
<td>4</td>
</tr>
<tr>
<td>Aug</td>
<td>7</td>
</tr>
<tr>
<td>Sep</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>27</td>
</tr>
</tbody>
</table>
Salmon Ambassadors 2014 Results

Illinois

Volunteers were asked if they agreed with the following:

“I was pleased with my fishing experiences this season.”

“Fishing for Chinook Salmon was good from May-June.”

“Fishing for Chinook Salmon was good from July-September.”

Answers ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

Number of volunteers reporting all catches 4

Chinook Salmon caught by volunteers 63

Average length of Chinook Salmon 29.1”

Average length of stocked Chinook 28.5”

Average length of wild Chinook 29.5”

Salmon Ambassadors found that 67% of Chinook Salmon caught from Illinois ports in 2014 were wild. Salmon length had no statistically significant effect on % wild. Although large (30”+) Chinook salmon appeared to have a greater % wild, this difference was not meaningful.
Salmon Ambassadors found that 82% of Chinook Salmon caught in northern Lake Huron in 2014 were wild. Although it appeared that a higher percentage of small (<20") and large (30"+) Chinook Salmon were wild, size did not have a significant effect on % wild. However, the location did have a statistically significant effect, with each area of northern Lake Huron producing a different % wild (see below).