

Wisconsin's 2011 open water sportfishing effort and harvest from Lake Michigan and Green Bay

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Abstract - The sport fishery in Wisconsin waters of Lake Michigan and Green Bay was documented from March 1, 2011 through December 31, 2011. Fishing effort, harvest and harvest-rates were determined from 1) a stratified-random creel survey of launched-boat, pier, shore and stream anglers; 2) a randomized mail survey of moored-boat anglers; and 3) mandatory charter-boat reporting. For a detailed description of methods see Eggold 1995.

Anglers spent an estimated 2,540,985 hours fishing on Lake Michigan and Green Bay during 2011 with boat-angler effort at 2,058,788 hours, or 81% of the total hours. Fishing effort during 2011 was 8% below the ten-year average and 11% lower than 2010.

The estimated harvest of 784,942 fish was dominated by yellow perch (271,924), followed by Chinook salmon (169,752), coho salmon (157,367) and rainbow trout (75,442). The boat fishery, comprised of launched-boat, moored-boat and charter-boat anglers, dominated the fishery by harvesting an estimated 717,173 fish, which was 91% of the total harvest and was led by yellow perch (244,337), coho salmon (154,192) and Chinook salmon (147,240). Pier, shore and stream anglers harvested primarily yellow perch and Chinook salmon, followed by rainbow trout and coho salmon. Overall harvest-rates were highest for yellow perch at 0.1070 fish/hour and Chinook salmon at 0.0668 fish/hour.

The 2011 Chinook harvest of 169,752 was the lowest since 2000, when 136,379 Chinooks were harvested. The harvest in 2011 was also 46% lower than the ten-year average Chinook harvest. Coho harvest in 2011 was 157,367, which was the highest harvest since 1982 and the third highest on record. The coho harvest was 122% above the ten-year average. The 2011 rainbow trout harvest of 75,442 was the highest since 1999 and 45% above the ten-year average. Brown trout harvest in 2011 was 9,936, which was the lowest harvest since 1973 and was 56% below the ten-year average.

The 2011 harvest of yellow perch in Green Bay was 254,942, which was the highest harvest since 2007, but it was 6% below the ten-year average. The Lake Michigan yellow perch harvest in 2011 was 16,982; the lowest since 2000 and 66% below the ten-year average.

The standard weight of a 30 inch Chinook in 2011 was 10.26 pounds, which was the highest since 2000 and was 9% above the ten-year average. The standard weight for a 22 inch coho was 3.99 pounds, for a 22 inch rainbow was 4.25 pounds and for a 20 inch brown was 4.17 pounds. These were 3%, 3% and 7% above their ten-year averages, respectively.

REFERENCES

Eggold, B.T. 1995. Wisconsin's 1995 open water sportfishing effort and catch from Lake Michigan and Green Bay. Wisconsin Department of Natural Resources, Plymouth, Wisconsin. 19 pages.



Table 1. Estimated angler effort (hours) by location in Wisconsin waters of Lake Michigan and Green Bay during March through December of 2002 through 2011. Standard deviations are in *Italics*.

Location	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Kenosha Co.	206,959 <i>9,676</i>	213,504 <i>11,531</i>	178,733 <i>6,785</i>	149,044 <i>6,744</i>	160,145 <i>7,114</i>	169,253 <i>7,378</i>	123,931 <i>5,748</i>	141,626 <i>8,197</i>	146,762 <i>8,287</i>	116,032 <i>5,801</i>	160,599 <i>7,910</i>
Racine Co.	225,067 <i>10,421</i>	154,568 <i>8,671</i>	166,653 <i>9,197</i>	157,571 <i>8,415</i>	148,919 <i>9,293</i>	154,228 <i>8,678</i>	120,828 <i>5,968</i>	175,220 <i>9,991</i>	161,959 <i>9,422</i>	151,135 <i>7,225</i>	161,615 <i>8,816</i>
Milwaukee Co.	382,873 <i>13,579</i>	338,672 <i>11,663</i>	323,797 <i>10,194</i>	277,583 <i>13,694</i>	289,698 <i>11,476</i>	355,727 <i>13,893</i>	244,716 <i>9,890</i>	302,368 <i>13,669</i>	340,503 <i>14,174</i>	276,843 <i>15,204</i>	313,278 <i>12,858</i>
Ozaukee Co.	253,817 <i>12,917</i>	245,038 <i>14,336</i>	199,405 <i>10,273</i>	219,929 <i>11,199</i>	190,431 <i>10,156</i>	221,062 <i>10,577</i>	178,438 <i>8,175</i>	209,223 <i>11,968</i>	215,809 <i>10,210</i>	256,961 <i>19,364</i>	219,011 <i>12,278</i>
Sheboygan Co.	272,311 <i>14,403</i>	254,426 <i>16,480</i>	183,880 <i>10,713</i>	224,373 <i>13,536</i>	236,400 <i>12,525</i>	269,932 <i>15,383</i>	214,928 <i>10,367</i>	222,741 <i>11,542</i>	238,132 <i>12,909</i>	199,350 <i>9,537</i>	231,647 <i>12,910</i>
Manitowoc Co.	229,205 <i>10,329</i>	187,928 <i>9,940</i>	244,227 <i>13,142</i>	246,770 <i>12,523</i>	208,400 <i>12,619</i>	233,155 <i>13,626</i>	162,851 <i>9,415</i>	198,420 <i>10,255</i>	206,362 <i>9,591</i>	179,525 <i>8,336</i>	209,684 <i>11,114</i>
Kewaunee Co.	423,035 <i>20,511</i>	401,840 <i>20,958</i>	428,023 <i>18,769</i>	463,532 <i>22,719</i>	401,030 <i>17,521</i>	480,792 <i>21,041</i>	409,096 <i>16,508</i>	405,917 <i>17,954</i>	382,614 <i>22,200</i>	323,860 <i>12,740</i>	411,974 <i>19,308</i>
E. Door Co.	249,042 <i>15,121</i>	255,264 <i>17,303</i>	222,330 <i>11,613</i>	233,079 <i>15,585</i>	260,107 <i>12,469</i>	246,522 <i>11,672</i>	167,331 <i>13,149</i>	184,720 <i>9,653</i>	213,147 <i>14,552</i>	151,136 <i>7,001</i>	218,268 <i>13,132</i>
Green Bay	703,539 <i>25,846</i>	650,571 <i>32,738</i>	671,652 <i>25,288</i>	819,005 <i>42,854</i>	880,607 <i>33,282</i>	930,708 <i>33,729</i>	874,362 <i>35,185</i>	1,017,143 <i>38,890</i>	936,050 <i>42,151</i>	886,143 <i>40,835</i>	836,978 <i>35,575</i>
Total Effort	2,945,848 <i>46,743</i>	2,701,811 <i>52,254</i>	2,618,700 <i>41,882</i>	2,790,886 <i>58,007</i>	2,775,737 <i>47,519</i>	3,061,379 <i>50,730</i>	2,496,481 <i>45,967</i>	2,857,378 <i>51,588</i>	2,841,338 <i>56,591</i>	2,540,985 <i>52,261</i>	2,763,054 <i>50,571</i>

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Table 2. Estimated harvest and total harvest-rate (number per hour, all anglers combined) of salmonids in Wisconsin waters of Lake Michigan and Green Bay during March through December of 2002 through 2011. Standard deviations are in Italics.

Species	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Coho Salmon	102,313 <i>3,546</i>	50,625 <i>2,052</i>	76,944 <i>2,792</i>	59,244 <i>2,690</i>	56,136 <i>2,693</i>	94,677 <i>3,776</i>	25,453 <i>1,222</i>	42,690 <i>1,989</i>	42,445 <i>2,039</i>	157,367 <i>11,432</i>	70,789 <i>4,400</i>
Chinook Salmon	275,454 <i>6,522</i>	317,619 <i>9,385</i>	360,991 <i>8,260</i>	418,918 <i>10,781</i>	398,905 <i>8,658</i>	431,143 <i>10,425</i>	256,796 <i>6,658</i>	214,621 <i>5,645</i>	315,294 <i>8,164</i>	169,752 <i>4,083</i>	315,949 <i>8,113</i>
Rainbow Trout	74,031 <i>2,250</i>	48,548 <i>2,077</i>	25,529 <i>1,194</i>	48,490 <i>3,539</i>	48,420 <i>1,700</i>	62,249 <i>2,212</i>	41,552 <i>1,635</i>	46,529 <i>2,063</i>	49,121 <i>2,023</i>	75,442 <i>2,588</i>	51,991 <i>2,210</i>
Brown Trout	35,220 <i>2,290</i>	23,654 <i>2,056</i>	20,918 <i>1,457</i>	27,489 <i>6,235</i>	17,769 <i>1,102</i>	37,947 <i>2,580</i>	23,763 <i>2,146</i>	15,792 <i>958</i>	13,029 <i>1,114</i>	9,936 <i>846</i>	22,552 <i>2,566</i>
Brook Trout	144 <i>61</i>	126 <i>54</i>	1 <i>0</i>	18 <i>12</i>	17 <i>8</i>	62 <i>24</i>	13 <i>14</i>	27 <i>0</i>	0 <i>0</i>	26 <i>0</i>	43 <i>28</i>
Lake Trout	39,865 <i>1,463</i>	23,881 <i>1,142</i>	14,209 <i>709</i>	14,139 <i>737</i>	10,638 <i>533</i>	19,281 <i>893</i>	12,763 <i>554</i>	14,946 <i>803</i>	17,483 <i>775</i>	17,788 <i>1,236</i>	18,499 <i>930</i>
Total Harvest	527,027 <i>8,220</i>	464,453 <i>10,106</i>	498,592 <i>8,948</i>	568,298 <i>13,244</i>	531,885 <i>9,306</i>	645,359 <i>11,631</i>	360,340 <i>7,308</i>	334,605 <i>6,453</i>	437,372 <i>8,760</i>	430,311 <i>12,502</i>	479,824 <i>9,875</i>
Harvest-Rate	0.1789	0.1719	0.1904	0.2036	0.1916	0.2108	0.1443	0.1171	0.1539	0.1693	0.1732

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Table 3. Estimated harvest and total harvest-rate (number per hour, all anglers combined) of yellow perch in Wisconsin waters of Lake Michigan and Green Bay during March through December of 2002 through 2011. Standard deviations are in Italics.

Location	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Green Bay	153,857 <i>15,661</i>	89,889 <i>6,819</i>	66,343 <i>6,261</i>	274,956 <i>19,231</i>	757,698 <i>55,220</i>	501,646 <i>36,032</i>	196,852 <i>15,560</i>	204,209 <i>19,361</i>	225,995 <i>21,042</i>	254,942 <i>24,973</i>	272,639 <i>25,946</i>
Harvest-Rate	0.2187	0.1382	0.0988	0.3357	0.8604	0.5390	0.2251	0.2008	0.2414	0.2877	0.3146
Lake Michigan	88,452 <i>7,578</i>	66,432 <i>13,023</i>	41,950 <i>5,105</i>	32,848 <i>8,472</i>	67,660 <i>9,285</i>	66,240 <i>5,327</i>	20,648 <i>2,562</i>	50,744 <i>5,122</i>	51,265 <i>4,787</i>	16,982 <i>2,296</i>	50,322 <i>7,074</i>
Harvest-Rate	0.0394	0.0324	0.0215	0.0167	0.0357	0.0311	0.0127	0.0276	0.0269	0.0103	0.0254
Total Harvest	242,309 <i>17,398</i>	156,321 <i>14,700</i>	108,293 <i>8,078</i>	307,804 <i>21,015</i>	825,358 <i>55,995</i>	567,886 <i>36,424</i>	217,500 <i>15,769</i>	254,953 <i>20,027</i>	277,260 <i>21,579</i>	271,924 <i>25,078</i>	322,961 <i>26,893</i>
Harvest-Rate	0.0823	0.0579	0.0414	0.1103	0.2973	0.1855	0.0871	0.0892	0.0976	0.1070	0.1156

Note: Table 3 reflects that Door County ramp and shore sites represent Green Bay for yellow perch harvest statistics.

Table 4. Estimated harvest-rate (harvest per hour), harvest and effort for all survey areas and **ALL FISHERY TYPES** for Wisconsin waters of Lake Michigan and Green Bay during 2011. Standard deviations are in *Italics*.

Species	Harvest per Hour	Mar/Apr	May	June	July	August	Sept/Oct	Nov/Dec	Season
Coho Salmon	0.0619	1,638 <i>912</i>	40,548 <i>8,084</i>	74,885 <i>7,827</i>	25,283 <i>1,466</i>	9,055 <i>587</i>	5,583 <i>863</i>	375 <i>88</i>	157,367 <i>11,432</i>
Chinook Salmon	0.0668	17 <i>10</i>	3,522 <i>876</i>	25,292 <i>1,290</i>	46,586 <i>1,736</i>	45,816 <i>1,777</i>	48,453 <i>2,839</i>	66 <i>25</i>	169,752 <i>4,083</i>
Rainbow Trout	0.0297	2,810 <i>471</i>	743 <i>111</i>	12,095 <i>1,045</i>	20,058 <i>984</i>	33,656 <i>1,917</i>	6,012 <i>854</i>	68 <i>18</i>	75,442 <i>2,588</i>
Brown Trout	0.0039	2,759 <i>640</i>	682 <i>276</i>	309 <i>89</i>	937 <i>140</i>	1,889 <i>298</i>	2,865 <i>331</i>	495 <i>68</i>	9,936 <i>846</i>
Brook Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	5 <i>0</i>	0 <i>0</i>	21 <i>0</i>	0 <i>0</i>	26 <i>0</i>
Lake Trout	0.0070	572 <i>298</i>	2,261 <i>944</i>	3,668 <i>386</i>	5,234 <i>418</i>	4,371 <i>327</i>	1,657 <i>343</i>	25 <i>0</i>	17,788 <i>1,236</i>
Splake	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Northern Pike	0.0013	804 <i>387</i>	1,551 <i>105</i>	408 <i>222</i>	42 <i>30</i>	184 <i>109</i>	356 <i>173</i>	0 <i>0</i>	3,345 <i>503</i>
White Perch	0.0001	0 <i>0</i>	0 <i>0</i>	65 <i>64</i>	0 <i>0</i>	46 <i>47</i>	77 <i>77</i>	0 <i>0</i>	188 <i>110</i>
Smallmouth Bass	0.0036	0 <i>0</i>	889 <i>425</i>	1,386 <i>591</i>	3,691 <i>1,271</i>	847 <i>216</i>	2,443 <i>1,021</i>	0 <i>0</i>	9,256 <i>1,798</i>
Yellow Perch	0.1070	58 <i>56</i>	2,142 <i>778</i>	25,735 <i>4,443</i>	64,535 <i>11,606</i>	82,452 <i>11,110</i>	97,002 <i>18,720</i>	0 <i>0</i>	271,924 <i>25,078</i>
Walleye	0.0275	4,950 <i>1,177</i>	12,797 <i>2,766</i>	20,806 <i>4,360</i>	22,215 <i>3,720</i>	7,042 <i>1,816</i>	2,108 <i>650</i>	0 <i>0</i>	69,918 <i>6,753</i>
Total Harvest	0.3089	13,608 <i>1,758</i>	65,135 <i>8,692</i>	164,649 <i>10,165</i>	188,586 <i>12,509</i>	185,358 <i>11,583</i>	166,577 <i>19,018</i>	1,029 <i>115</i>	784,942 <i>28,884</i>
Angler Hours		202,900 <i>25,206</i>	240,585 <i>22,335</i>	448,366 <i>22,526</i>	727,482 <i>21,697</i>	466,498 <i>18,037</i>	445,013 <i>17,120</i>	10,141 <i>672</i>	2,540,985 <i>52,261</i>

Table 5. Estimated harvest-rate (harvest per hour), harvest and effort for the **BOAT FISHERY** with all survey areas combined for Wisconsin waters of Lake Michigan and Green Bay during 2011. Standard deviations are in *Italics*.

Species	Harvest	Mar/Apr	May	June	July	August	Sept/Oct	Nov/Dec	Season
	per hour								
Coho Salmon	0.0749	1638 <i>912</i>	40,279 <i>8,082</i>	74,726 <i>7,827</i>	25,186 <i>1,463</i>	9,011 <i>586</i>	3,348 <i>756</i>	4 <i>0</i>	154,192 <i>11,422</i>
Chinook Salmon	0.0715	17 <i>10</i>	3,522 <i>876</i>	25,261 <i>1,290</i>	46,529 <i>1,735</i>	45,582 <i>1,776</i>	26,309 <i>2,170</i>	20 <i>0</i>	147,240 <i>3,648</i>
Rainbow Trout	0.0345	135 <i>86</i>	446 <i>88</i>	12,090 <i>1,045</i>	19,521 <i>925</i>	33,463 <i>1,911</i>	5,304 <i>832</i>	20 <i>0</i>	70,979 <i>2,511</i>
Brown Trout	0.0033	2,366 <i>627</i>	555 <i>260</i>	227 <i>81</i>	609 <i>107</i>	1,781 <i>288</i>	1,092 <i>268</i>	196 <i>0</i>	6,826 <i>796</i>
Brook Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	5 <i>0</i>	0 <i>0</i>	21 <i>0</i>	0 <i>0</i>	26 <i>0</i>
Lake Trout	0.0086	572 <i>298</i>	2,257 <i>944</i>	3,668 <i>386</i>	5,215 <i>417</i>	4,371 <i>327</i>	1,657 <i>343</i>	25 <i>0</i>	17,765 <i>1,236</i>
Splake	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Northern Pike	0.0007	379 <i>238</i>	170 <i>105</i>	408 <i>222</i>	42 <i>30</i>	184 <i>109</i>	246 <i>162</i>	0 <i>0</i>	1,429 <i>395</i>
White Perch	0.0001	0 <i>0</i>	0 <i>0</i>	65 <i>64</i>	0 <i>0</i>	0 <i>0</i>	77 <i>77</i>	0 <i>0</i>	142 <i>100</i>
Smallmouth Bass	0.0036	0 <i>0</i>	889 <i>425</i>	1,116 <i>564</i>	2,407 <i>1,055</i>	536 <i>140</i>	2,416 <i>1,021</i>	0 <i>0</i>	7,364 <i>1,635</i>
Yellow Perch	0.1187	0 <i>0</i>	2,131 <i>778</i>	25,462 <i>4,442</i>	61,731 <i>11,588</i>	80,313 <i>11,062</i>	74,700 <i>10,345</i>	0 <i>0</i>	244,337 <i>19,596</i>
Walleye	0.0326	2,370 <i>671</i>	12,597 <i>2,762</i>	20,806 <i>4,360</i>	22,215 <i>3,720</i>	7,042 <i>1,816</i>	2,108 <i>650</i>	0 <i>0</i>	67,138 <i>6,682</i>
Total Harvest	0.3483	7,477 <i>1,352</i>	62,846 <i>8,688</i>	163,829 <i>10,163</i>	183,460 <i>12,467</i>	182,283 <i>11,534</i>	117,278 <i>10,709</i>	265 <i>0</i>	717,173 <i>24,160</i>
Angler Hours		114,865 <i>24,453</i>	217,128 <i>22,140</i>	401,430 <i>19,862</i>	676,799 <i>21,367</i>	426,249 <i>17,741</i>	221,879 <i>14,271</i>	438 <i>0</i>	2,058,788 <i>49,575</i>

Table 6. Estimated harvest-rate (harvest per hour), harvest and effort for the **PIER FISHERY** with all survey areas combined for Wisconsin waters of Lake Michigan and Green Bay during 2011. Standard deviations are in *italics*.

Species	Harvest	Mar/Apr	May	June	July	August	Sept/Oct	Season
	per hour							
Coho Salmon	0.0043	0 <i>0</i>	224 <i>175</i>	130 <i>45</i>	2 <i>2</i>	0 <i>0</i>	182 <i>85</i>	538 <i>199</i>
Chinook Salmon	0.0218	0 <i>0</i>	0 <i>0</i>	31 <i>16</i>	0 <i>0</i>	151 <i>52</i>	2,555 <i>414</i>	2,737 <i>418</i>
Rainbow Trout	0.0008	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	19 <i>15</i>	7 <i>7</i>	76 <i>38</i>	102 <i>42</i>
Brown Trout	0.0084	179 <i>97</i>	16 <i>13</i>	35 <i>28</i>	132 <i>44</i>	78 <i>75</i>	615 <i>86</i>	1,055 <i>159</i>
Brook Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Lake Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Splake	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Northern Pike	0.0116	0 <i>0</i>	1,377 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	74 <i>55</i>	1,451 <i>55</i>
White Perch	0.0004	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	46 <i>47</i>	0 <i>0</i>	46 <i>47</i>
Smallmouth Bass	0.0014	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	174 <i>0</i>	0 <i>0</i>	174 <i>0</i>
Yellow Perch	0.0214	0 <i>0</i>	0 <i>0</i>	213 <i>95</i>	1,000 <i>270</i>	1,472 <i>976</i>	0 <i>0</i>	2,685 <i>1,017</i>
Walleye	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Total Harvest	0.0701	179 <i>97</i>	1,617 <i>175</i>	409 <i>110</i>	1,153 <i>274</i>	1,928 <i>981</i>	3,502 <i>436</i>	8,788 <i>1,132</i>
Angler Hours		8,796 <i>1,377</i>	10,990 <i>2,467</i>	19,700 <i>1,474</i>	23,695 <i>2,456</i>	21,428 <i>2,196</i>	40,834 <i>3,705</i>	125,443 <i>5,894</i>

Table 7. Estimated harvest-rate (harvest per hour), harvest and effort for the **SHORE FISHERY** with all survey areas combined for Wisconsin waters of Lake Michigan and Green Bay during 2011. Standard deviations are in *Italics*.

Species	Harvest							
	per hour	Mar/Apr	May	June	July	August	Sept/Oct	Season
Coho Salmon	0.0066	0 <i>0</i>	45 <i>41</i>	29 <i>16</i>	95 <i>91</i>	44 <i>31</i>	634 <i>177</i>	847 <i>207</i>
Chinook Salmon	0.0441	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	57 <i>55</i>	83 <i>36</i>	5,502 <i>869</i>	5,642 <i>871</i>
Rainbow Trout	0.0100	54 <i>32</i>	0 <i>0</i>	5 <i>5</i>	518 <i>337</i>	186 <i>147</i>	520 <i>180</i>	1,283 <i>411</i>
Brown Trout	0.0059	41 <i>21</i>	111 <i>91</i>	47 <i>23</i>	196 <i>78</i>	30 <i>15</i>	328 <i>137</i>	753 <i>185</i>
Brook Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Lake Trout	0.0001	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	19 <i>18</i>	0 <i>0</i>	0 <i>0</i>	19 <i>18</i>
Splake	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Northern Pike	0.0001	13 <i>13</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	13 <i>13</i>
White Perch	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Smallmouth Bass	0.0120	0 <i>0</i>	0 <i>0</i>	110 <i>106</i>	1,284 <i>709</i>	137 <i>165</i>	0 <i>0</i>	1,531 <i>736</i>
Yellow Perch	0.0423	0 <i>0</i>	11 <i>12</i>	60 <i>44</i>	1,804 <i>583</i>	378 <i>150</i>	3,160 <i>1,799</i>	5,413 <i>1,897</i>
Walleye	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Total Harvest	0.1211	108 <i>40</i>	167 <i>101</i>	251 <i>118</i>	3,973 <i>987</i>	858 <i>272</i>	10,144 <i>2,018</i>	15,501 <i>2,268</i>
Angler Hours		7,921 <i>1,345</i>	3,269 <i>579</i>	9,633 <i>969</i>	21,412 <i>2,595</i>	13,582 <i>1,450</i>	72,151 <i>5,757</i>	127,968 <i>6,713</i>

Table 8. Estimated harvest-rate (harvest per hour), harvest and effort for the **STREAM FISHERY** with all survey areas combined for Wisconsin waters of Lake Michigan and Green Bay during 2011. Standard deviations are in *Italics*.

Species	Harvest	Mar/Apr	May	June	July	August	Sept/Oct	Nov/Dec	Season
	per hour								
Coho Salmon	0.0078	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	1,419 <i>366</i>	371 <i>88</i>	1,790 <i>376</i>
Chinook Salmon	0.0618	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	14,087 <i>1,558</i>	46 <i>25</i>	14,133 <i>1,558</i>
Rainbow Trout	0.0135	2,621 <i>462</i>	297 <i>68</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	112 <i>56</i>	48 <i>18</i>	3,078 <i>471</i>
Brown Trout	0.0057	173 <i>84</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	830 <i>109</i>	299 <i>68</i>	1,302 <i>154</i>
Brook Trout	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Lake Trout	0.0000	0 <i>0</i>	4 <i>3</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	4 <i>3</i>
Splake	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Northern Pike	0.0020	412 <i>305</i>	4 <i>3</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	36 <i>27</i>	0 <i>0</i>	452 <i>306</i>
White Perch	0.0000	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Smallmouth Bass	0.0008	0 <i>0</i>	0 <i>0</i>	160 <i>140</i>	0 <i>0</i>	0 <i>0</i>	27 <i>27</i>	0 <i>0</i>	187 <i>142</i>
Yellow Perch	0.0852	58 <i>56</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	289 <i>289</i>	19,142 <i>15,498</i>	0 <i>0</i>	19,489 <i>15,501</i>
Walleye	0.0122	2,580 <i>967</i>	200 <i>152</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	2,780 <i>979</i>
Total Harvest	0.1889	5,844 <i>1,119</i>	505 <i>167</i>	160 <i>140</i>	0 <i>0</i>	289 <i>289</i>	35,653 <i>15,581</i>	764 <i>115</i>	43,215 <i>15,626</i>
Angler Hours		71,318 <i>5,804</i>	9,198 <i>1,490</i>	17,603 <i>10,477</i>	5,576 <i>1,215</i>	5,239 <i>1,915</i>	110,149 <i>6,522</i>	9,703 <i>672</i>	228,786 <i>13,922</i>

Table 9. Average weight, average length and standard weight of salmonids from Wisconsin's Lake Michigan creel survey during 2002 through 2011, all areas and fishery types combined. std = standard deviation.

Year	Average weight (lbs.)	± 1 std	Average length (in.)	± 1 std	Standard weight (lbs.)
Coho salmon					
2002	3.5174	2.0263	21.0377	3.5987	3.5289
2003	4.6807	1.8751	23.0807	2.9682	3.7452
2004	4.8908	2.1299	23.7228	3.1697	3.7542
2005	3.5859	1.7365	21.5351	2.5803	3.7625
2006	3.7539	1.3560	21.6351	2.1038	3.8924
2007	4.5479	1.4540	22.9910	2.2278	3.7990
2008	4.4560	2.0490	22.4677	3.1329	3.9681
2009	4.9807	1.9220	23.2278	2.9728	4.2262
2010	4.5751	2.2101	22.8805	3.7821	3.9833
2011	4.2329	1.8161	22.1766	2.6627	3.9868
Chinook salmon					
2002	12.2901	6.6454	30.7430	7.1419	9.4467
2003	9.7510	5.7925	28.5172	5.6862	9.6825
2004	10.8366	4.8605	30.3981	5.2144	9.2655
2005	8.6770	4.3969	27.9173	5.2664	9.1806
2006	10.2487	4.7178	29.4031	4.9557	9.6769
2007	10.2004	4.4631	29.6011	4.8774	9.0942
2008	9.6660	4.7395	28.6085	4.9816	9.4565
2009	11.0706	5.3288	29.6812	5.5420	9.7943
2010	8.7700	4.3646	28.0374	5.5873	8.5914
2011	10.1487	5.8206	28.0507	6.0373	10.2631
Rainbow trout					
2002	6.2470	2.8717	25.8321	4.4530	3.7924
2003	6.1235	2.9715	25.2357	4.8806	3.8857
2004	6.6084	2.5308	25.8536	4.3064	4.3724
2005	6.2049	2.4847	25.9888	3.7545	3.8343
2006	6.7922	2.5199	25.7703	3.8482	4.3479
2007	6.5670	2.7310	25.9133	4.0252	3.8683
2008	5.8041	2.5126	24.6186	3.6684	3.8944
2009	6.4368	2.6692	25.1826	3.9525	4.5698
2010	6.2216	2.5984	25.6125	3.9888	4.3301
2011	6.1851	2.6215	24.8381	3.8826	4.2453
Brown trout					
2002	5.4742	3.2102	21.5383	4.6496	3.6206
2003	5.9883	3.7869	22.0368	4.8654	3.9051
2004	5.5489	3.6353	21.5438	5.1509	3.7367
2005	5.4529	3.8649	21.2167	5.6031	3.7473
2006	6.3170	3.5998	22.6715	4.7363	3.9029
2007	4.8583	2.9599	20.9185	3.7287	3.7323
2008	5.7157	3.1288	22.2123	3.7398	3.7529
2009	6.7666	3.9047	22.8051	4.3925	4.4162
2010	7.7499	4.3883	24.2774	5.0338	3.8949
2011	4.9160	4.0068	19.7757	5.5077	4.1725
Lake trout					
2002	7.3412	3.2020	26.9199	3.3907	5.3355
2003	5.8656	3.1534	24.7221	3.8386	5.8727
2004	5.6370	2.7429	24.5108	3.5812	5.6439
2005	4.7568	2.0300	23.4632	2.8051	5.4412
2006	5.3567	2.0533	24.2254	3.1010	5.5616
2007	5.8834	2.8582	24.7787	3.4032	5.4606
2008	6.0624	3.2897	24.5111	3.3282	5.9121
2009	6.0985	2.5753	25.1504	3.2636	5.5297
2010	5.9275	3.2344	24.2994	3.9970	5.9239
2011	6.1933	3.1017	25.0834	3.6291	5.6477

Figure 1. Fishing effort (angler hours) in Wisconsin waters of Lake Michigan and Green Bay from 2002 through 2011.

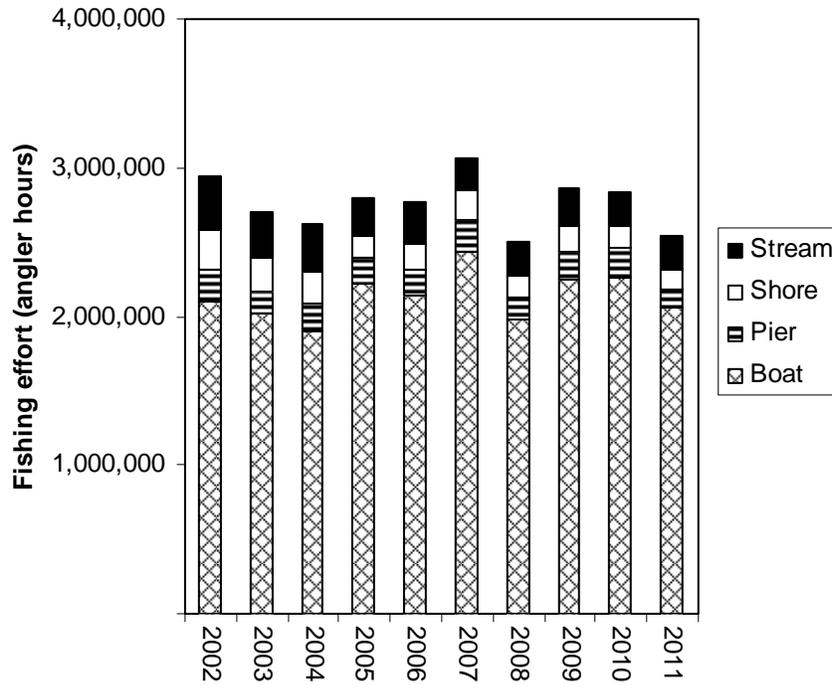


Figure 2. Trout and salmon harvest and harvest-rate from Wisconsin waters of Lake Michigan and Green Bay from 2002 through 2011.

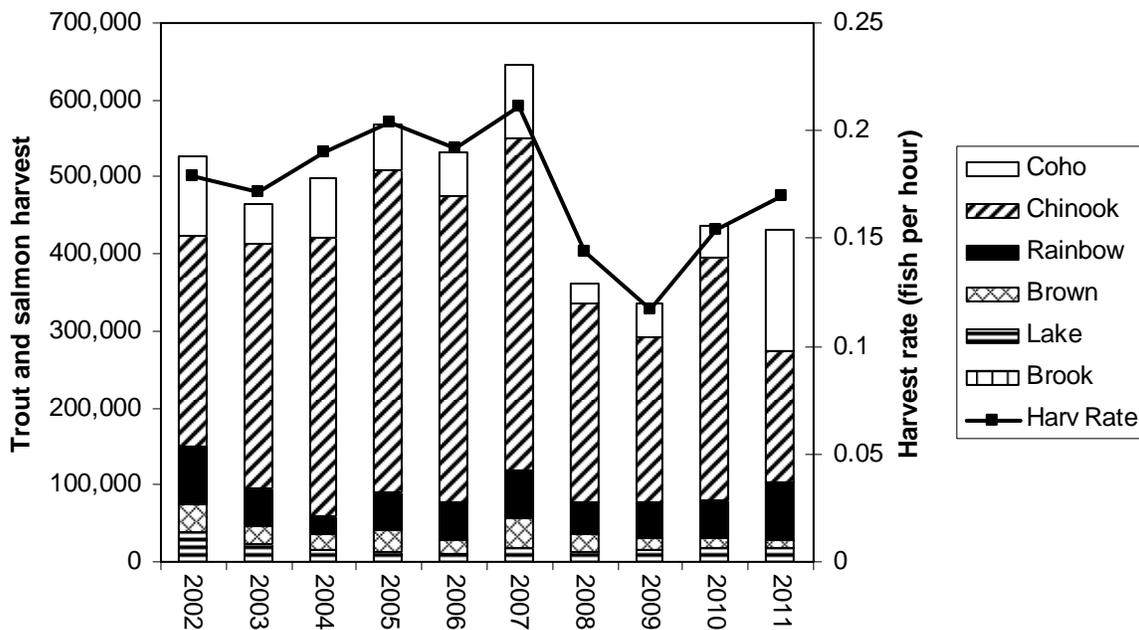
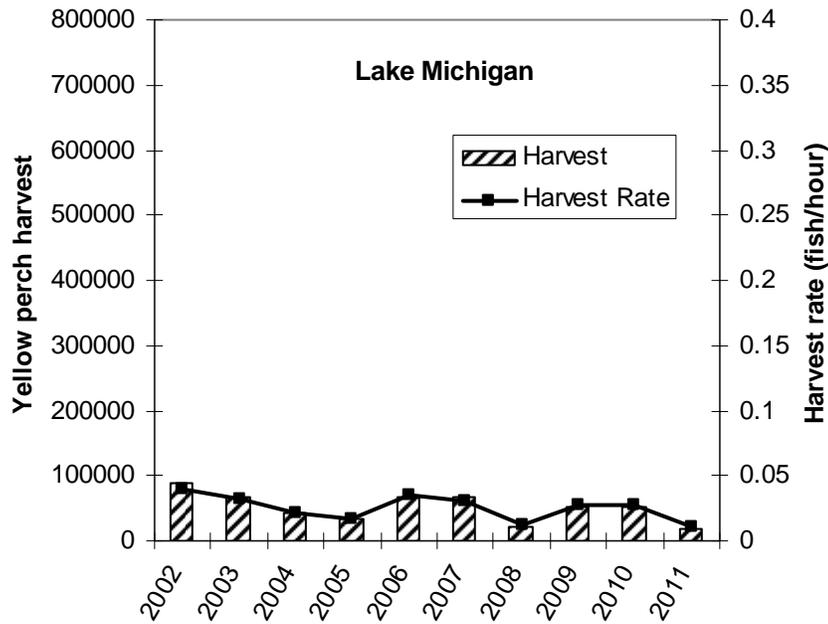
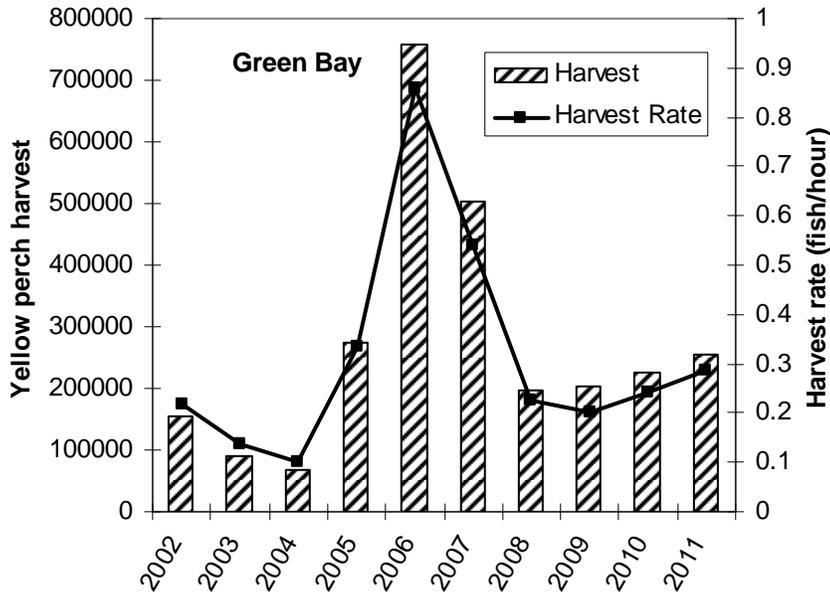


Figure 3. Yellow perch angler-harvest and harvest-rate from Wisconsin waters of Green Bay and Lake Michigan from 2002 through 2011.



Note: Figure 3 reflects that Door County ramp and shore sites represent Green Bay for yellow perch harvest statistics.