

# **Wisconsin's 2017 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, 2017 through November 20, 2017. 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 2,542,842 hours fishing on Lake Michigan and Green Bay during 2017 with boat-angler effort at 2,083,505 hours, or almost 82% of the total hours. Fishing effort during 2017 was slightly lower than effort in 2016 and approximately 4% lower than the 10-year average.

The estimated harvest of 533,469 fish was dominated by yellow perch (119,893) followed by Coho salmon (119,686). The boat fishery, comprised of launched-boat, moored-boat, and charter-boat anglers, dominated the fishery by harvesting an estimated 490,718 fish, which was 92% of the total harvest and was led by Coho salmon (116,635) and yellow perch (112,796). Pier anglers harvested primarily yellow perch, followed by Chinook salmon. Stream anglers harvested primarily Chinook salmon, followed by walleye and rainbow trout. Shore anglers harvested primarily brown trout, followed by yellow perch and Chinook salmon. Overall harvest-rates were highest for Coho salmon and yellow perch at 0.0471 fish/hour.

The 2017 Chinook harvest of 83,873 was 57% below the ten-year average and the lowest harvest on record since 1993, when 87,365 fish were harvested. The weak 2013-year class of Chinook likely contributed to the decline in harvest.

Although Coho harvest in 2017, at 119,686 fish, was lower than 2016 harvest, it remained 55% above the 10-year average. The 2017 rainbow trout harvest of 66,441 was 6.7% above the ten-year average. Brown trout harvest in 2017 was 20,398, which was 8% above the ten-year average. A total of 20,345 lake trout were harvested in

2017, which was 7% below the ten-year average. The 2017 harvest-rate for all salmonids combined was 0.1222 fish/hour.

The 2017 harvest of yellow perch in Green Bay was 117,412, which was 28% below the ten-year average, but the highest harvest since 2014 (118,980). The Lake Michigan yellow perch harvest in 2017 was 2,481, which was 86% below the ten-year average but higher than 2016's harvest of 2,132 fish. Perch harvest in Lake Michigan remains on the downward trend observed since 1993. The sport catch remains primarily comprised of the 2012 year-class. Age was assigned using the anal spines of 111 Lake Michigan angler-caught yellow perch during 2017. The 2012 year-class represented 64% of the total. The 2010 year-class contributed almost 6% to the fishery.

In 2017, the standard weight of a 30-inch Chinook was 10.4 pounds, which was 6.9% above the ten-year average. The standard weight for a 22-inch Coho was 3.65 pounds, which was 7% below the ten-year average. The standard weight for a 22-inch rainbow was 4.04 pounds, which was 3% below the ten-year average. The standard weight of a 25-inch lake trout was 5.67 pounds which was within 1% of the ten-year average. The standard weight of a 21-inch brown trout was 3.97 pounds, which was within 1% of the ten-year average.

## **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 2008 through 2017. Standard deviations are in Italics.

Location	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
Kenosha Co.	123,931 <i>5,748</i>	141,626 <i>8,197</i>	146,762 <i>8,287</i>	116,032 <i>5,801</i>	135,980 <i>2,851</i>	128,865 <i>5,255</i>	130,028 <i>5,420</i>	101,115 <i>5,005</i>	109,277 <i>5,481</i>	90,700 <i>3,810</i>	122,432 <i>5,808</i>
Racine Co.	120,828 <i>5,968</i>	175,220 <i>9,991</i>	161,959 <i>9,422</i>	151,135 <i>7,225</i>	131,342 <i>10,091</i>	122,651 <i>8,484</i>	122,670 <i>7,070</i>	102,899 <i>8,988</i>	107,400 <i>7,777</i>	90,695 <i>6,559</i>	128,680 <i>8,273</i>
Milwaukee Co.	244,716 <i>9,890</i>	302,368 <i>13,669</i>	340,503 <i>14,174</i>	276,843 <i>15,204</i>	324,011 <i>14,704</i>	290,866 <i>11,427</i>	255,180 <i>10,870</i>	266,000 <i>10,079</i>	296,612 <i>12,556</i>	267,191 <i>14,736</i>	286,429 <i>12,877</i>
Ozaukee Co.	178,438 <i>8,175</i>	209,223 <i>11,968</i>	215,809 <i>10,210</i>	256,961 <i>19,364</i>	208,450 <i>12,203</i>	203,739 <i>9,651</i>	190,049 <i>9,525</i>	172,696 <i>8,333</i>	215,442 <i>13,704</i>	179,360 <i>13,185</i>	203,017 <i>12,055</i>
Sheboygan Co.	214,928 <i>10,367</i>	222,741 <i>11,542</i>	238,132 <i>12,909</i>	199,350 <i>9,537</i>	225,384 <i>11,503</i>	206,006 <i>9,124</i>	213,716 <i>10,111</i>	216,025 <i>11,712</i>	211,476 <i>11,733</i>	179,246 <i>9,027</i>	212,700 <i>10,828</i>
Manitowoc Co.	162,851 <i>9,415</i>	198,420 <i>10,255</i>	206,362 <i>9,591</i>	179,525 <i>8,336</i>	212,739 <i>10,796</i>	178,186 <i>8,370</i>	188,585 <i>9,482</i>	169,683 <i>8,250</i>	185,257 <i>10,330</i>	139,241 <i>7,010</i>	182,085 <i>9,250</i>
Kewaunee Co.	409,096 <i>16,508</i>	405,917 <i>17,954</i>	382,614 <i>22,200</i>	323,860 <i>12,740</i>	311,407 <i>7,780</i>	373,777 <i>14,969</i>	355,094 <i>15,390</i>	366,474 <i>15,312</i>	290,327 <i>13,069</i>	318,589 <i>13,337</i>	353,716 <i>15,345</i>
E. Door Co.	167,331 <i>13,149</i>	184,720 <i>9,653</i>	213,147 <i>14,552</i>	151,136 <i>7,001</i>	204,549 <i>23,159</i>	197,007 <i>12,272</i>	173,099 <i>9,008</i>	217,815 <i>3,414</i>	204,727 <i>10,731</i>	193,014 <i>9,108</i>	190,655 <i>12,267</i>
Green Bay	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>	771,724 <i>26,553</i>	1,078,064 <i>46,108</i>	991,943 <i>46,490</i>	1,115,376 <i>36,343</i>	1,007,835 <i>35,109</i>	1,084,806 <i>40,350</i>	976,345 <i>39,203</i>
Total Effort	2,496,481 <i>45,965</i>	2,857,378 <i>51,608</i>	2,841,338 <i>56,591</i>	2,540,985 <i>52,261</i>	2,525,586 <i>45,010</i>	2,779,161 <i>54,564</i>	2,620,364 <i>54,403</i>	2,728,083 <i>45,267</i>	2,628,353 <i>46,893</i>	2,542,842 <i>49,681</i>	2,656,057 <i>50,387</i>

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 2008 through 2017. Standard deviations are in Italics.

Species	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
Coho Salmon	25,453 <i>1,222</i>	42,690 <i>1,989</i>	42,445 <i>2,039</i>	157,367 <i>11,432</i>	73,395 <i>3,114</i>	89,061 <i>3,927</i>	52,297 <i>6,572</i>	41,010 <i>4,329</i>	125,964 <i>5,552</i>	119,686 <i>7,135</i>	76,937
Chinook Salmon	256,796 <i>6,658</i>	214,621 <i>5,645</i>	315,294 <i>8,164</i>	169,752 <i>4,083</i>	390,385 <i>9,058</i>	145,301 <i>4,363</i>	130,698 <i>3,587</i>	113,973 <i>3,479</i>	139,082 <i>4,724</i>	83,873 <i>3,125</i>	195,978
Rainbow Trout	41,552 <i>1,635</i>	46,529 <i>2,063</i>	49,121 <i>2,023</i>	75,442 <i>2,588</i>	75,981 <i>2,592</i>	58,311 <i>1,969</i>	73,105 <i>2,286</i>	59,106 <i>1,707</i>	76,846 <i>2,897</i>	66,441 <i>2,659</i>	62,243
Brown Trout	23,763 <i>2,146</i>	15,792 <i>958</i>	13,029 <i>1,114</i>	9,936 <i>846</i>	21,337 <i>1,768</i>	17,094 <i>1,303</i>	23,324 <i>1,785</i>	20,174 <i>1,899</i>	23,879 <i>2,589</i>	20,398 <i>1,716</i>	18,873
Brook Trout	13 <i>14</i>	27 <i>0</i>	0 <i>0</i>	26 <i>0</i>	18 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	8
Lake Trout	12,763 <i>554</i>	14,946 <i>803</i>	17,483 <i>775</i>	17,788 <i>1,236</i>	29,094 <i>1,261</i>	27,240 <i>1,005</i>	25,425 <i>1,098</i>	35,715 <i>1,460</i>	19,137 <i>868</i>	20,345 <i>1,115</i>	21,994
Total Harvest	360,340 <i>7,308</i>	334,605 <i>6,453</i>	437,372 <i>8,760</i>	430,311 <i>12,502</i>	590,210 <i>10,158</i>	337,007 <i>6,406</i>	304,849 <i>8,104</i>	269,978 <i>6,285</i>	384,908 <i>8,306</i>	310,743 <i>8,481</i>	376,032 <i>8,476</i>
Harvest-Rate	0.1443	0.1171	0.1539	0.1693	0.2337	0.1213	0.1163	0.0990	0.1464	0.1222	0.1416

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 2008 through 2017. Standard deviations are in Italics.

Location	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
Green Bay	196,852 <i>15,560</i>	204,209 <i>19,361</i>	225,995 <i>21,042</i>	254,942 <i>24,973</i>	148,980 <i>13,685</i>	215,422 <i>18,974</i>	118,980 <i>12,283</i>	93,964 <i>9,780</i>	72,223 <i>8,923</i>	117,412 <i>12,404</i>	164,898 <i>16,464</i>
Harvest-Rate	0.2251	0.2008	0.2414	0.2877	0.1930	0.1998	0.1199	0.0842	0.0717	0.1082	0.1732
Lake Michigan	20,648 <i>2,562</i>	50,744 <i>5,122</i>	51,265 <i>4,787</i>	16,982 <i>2,296</i>	9,115 <i>1,071</i>	8,830 <i>1,221</i>	8,174 <i>1,108</i>	5,358 <i>1,021</i>	2,132 <i>607</i>	2,481 <i>537</i>	17,573 <i>2,580</i>
Harvest-Rate	0.0127	0.0276	0.0269	0.0103	0.0052	0.0052	0.0050	0.0033	0.0013	0.0017	0.0099
Total Harvest	217,500 <i>15,769</i>	254,953 <i>20,027</i>	277,260 <i>21,579</i>	271,924 <i>25,078</i>	158,095 <i>13,727</i>	224,252 <i>19,013</i>	127,154 <i>12,333</i>	99,322 <i>9,834</i>	74,355 <i>8,944</i>	119,893 <i>12,416</i>	182,471 <i>16,665</i>
Harvest-Rate	0.0871	0.0892	0.0976	0.1070	0.0626	0.0807	0.0485	0.0364	0.0283	0.0471	0.0687

Note: Table 3 reflects that some Door County 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 2017. Standard deviations are in Italics.

Species	Harvest per hour	Jan/Feb/ March/April	May	June	July	August	Sept/Oct	Nov/Dec	Season
Coho Salmon	0.0471	374 <i>128</i>	39,129 <i>5,220</i>	57,474 <i>4,628</i>	16,748 <i>1,407</i>	2,653 <i>303</i>	3,308 <i>395</i>	0 <i>0</i>	119,686 <i>7,135</i>
Chinook Salmon	0.0330	43 <i>0</i>	3,435 <i>748</i>	11,486 <i>717</i>	35,460 <i>2,221</i>	15,610 <i>1,310</i>	17,839 <i>1,429</i>	0 <i>0</i>	83,873 <i>3,125</i>
Rainbow Trout	0.0261	4,402 <i>648</i>	4,777 <i>737</i>	17,357 <i>1,349</i>	26,741 <i>1,924</i>	11,008 <i>738</i>	2,156 <i>201</i>	0 <i>0</i>	66,441 <i>2,659</i>
Brown Trout	0.0080	13,571 <i>1,623</i>	974 <i>206</i>	832 <i>303</i>	1,576 <i>267</i>	948 <i>115</i>	2,497 <i>304</i>	0 <i>0</i>	20,398 <i>1,716</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	0.0080	205 <i>67</i>	567 <i>90</i>	3,364 <i>690</i>	6,982 <i>741</i>	7,068 <i>424</i>	2,159 <i>158</i>	0 <i>0</i>	20,345 <i>1,115</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	0.0018	1,620 <i>692</i>	1,255 <i>418</i>	239 <i>152</i>	147 <i>93</i>	144 <i>72</i>	1,078 <i>466</i>	0 <i>0</i>	4,483 <i>952</i>
White Perch	0.0001	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	359 <i>325</i>	11 <i>11</i>	0 <i>0</i>	0 <i>0</i>	370 <i>325</i>
Smallmouth Bass	0.0032	0 <i>0</i>	673 <i>258</i>	3,134 <i>2,123</i>	1,813 <i>503</i>	866 <i>406</i>	1,656 <i>446</i>	0 <i>0</i>	8,142 <i>2,279</i>
Yellow Perch	0.0471	948 <i>318</i>	1,970 <i>682</i>	9,159 <i>2,693</i>	30,010 <i>6,179</i>	46,493 <i>9,114</i>	31,313 <i>5,010</i>	0 <i>0</i>	119,893 <i>12,416</i>
Walleye	0.0353	6,209 <i>1,787</i>	22,740 <i>4,420</i>	8,008 <i>1,734</i>	15,186 <i>2,901</i>	26,330 <i>4,682</i>	11,365 <i>2,069</i>	0 <i>0</i>	89,838 <i>7,769</i>
Total Harvest	0.2098	27,372 <i>2,617</i>	75,520 <i>6,975</i>	111,053 <i>6,254</i>	135,022 <i>7,629</i>	111,131 <i>10,378</i>	73,371 <i>5,670</i>	0 <i>0</i>	533,469 <i>17,107</i>
Angler Hours		324,896 <i>22,334</i>	298,947 <i>22,714</i>	415,334 <i>18,519</i>	658,546 <i>24,939</i>	439,033 <i>17,314</i>	406,086 <i>13,739</i>	0 <i>0</i>	2,542,842 <i>49,681</i>

Table 5. Estimated harvest-rate (harvest per hour), harvest and effort for the **BOAT FISHERY** with all surveys combined for Wisconsin waters of Lake Michigan and Green Bay during 2017. Standard deviations are in *Italics*.

Species	Harvest per hour	Jan/Feb/ March/April	May	June	July	August	Sept/Oct	Nov/Dec	Season
Coho Salmon	0.0560	242 <i>105</i>	38,855 <i>5,218</i>	57,109 <i>4,626</i>	16,353 <i>1,392</i>	2,645 <i>303</i>	1,431 <i>210</i>	0 <i>0</i>	116,635 <i>7,121</i>
Chinook Salmon	0.0343	43 <i>27</i>	3,408 <i>747</i>	11,452 <i>717</i>	34,851 <i>2,208</i>	15,261 <i>1,304</i>	6,349 <i>589</i>	0 <i>0</i>	71,364 <i>2,828</i>
Rainbow Trout	0.0293	42 <i>26</i>	4,734 <i>737</i>	17,357 <i>1,349</i>	26,513 <i>1,922</i>	10,784 <i>727</i>	1,657 <i>156</i>	0 <i>0</i>	61,087 <i>2,571</i>
Brown Trout	0.0064	9,157 <i>1,435</i>	763 <i>194</i>	648 <i>296</i>	1,248 <i>255</i>	871 <i>107</i>	680 <i>45</i>	0 <i>0</i>	13,367 <i>1,505</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	0.0097	205 <i>67</i>	527 <i>79</i>	3,364 <i>690</i>	6,982 <i>741</i>	7,068 <i>424</i>	2,159 <i>158</i>	0 <i>0</i>	20,305 <i>1,114</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	0.0019	1,363 <i>681</i>	1,101 <i>403</i>	239 <i>152</i>	129 <i>80</i>	102 <i>65</i>	1,013 <i>461</i>	0 <i>0</i>	3,947 <i>934</i>
White Perch	0.0002	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	359 <i>325</i>	11 <i>11</i>	0 <i>0</i>	0 <i>0</i>	370 <i>325</i>
Smallmouth Bass	0.0031	0 <i>0</i>	498 <i>229</i>	3,057 <i>2,122</i>	1,067 <i>492</i>	510 <i>234</i>	1,405 <i>432</i>	0 <i>0</i>	6,537 <i>2,245</i>
Yellow Perch	0.0541	0 <i>0</i>	823 <i>361</i>	6,973 <i>2,417</i>	28,469 <i>6,136</i>	45,828 <i>9,112</i>	30,703 <i>5,002</i>	0 <i>0</i>	112,796 <i>12,316</i>
Walleye	0.0405	2,055 <i>754</i>	22,703 <i>4,420</i>	8,008 <i>1,734</i>	15,186 <i>2,901</i>	26,330 <i>4,682</i>	10,028 <i>1,534</i>	0 <i>0</i>	84,310 <i>7,470</i>
Total Harvest	0.2355	13,107 <i>1,763</i>	73,412 <i>6,947</i>	108,207 <i>6,138</i>	131,157 <i>7,586</i>	109,410 <i>10,369</i>	55,425 <i>5,312</i>	0 <i>0</i>	490,718 <i>16,803</i>
Angler Hours		180,510 <i>19,839</i>	262,900 <i>22,573</i>	372,106 <i>18,287</i>	607,293 <i>24,680</i>	400,045 <i>16,916</i>	260,651 <i>12,471</i>	0 <i>0</i>	2,083,505 <i>47,837</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 2017. Standard deviations are in Italics.

Species	Harvest per hour	March/April	May	June	July	August	Sept/Oct	Season
Coho Salmon	0.0085	11 <i>13</i>	274 <i>133</i>	365 <i>108</i>	373 <i>203</i>	0 <i>0</i>	50 <i>43</i>	1,073 <i>269</i>
Chinook Salmon	0.0153	0 <i>0</i>	27 <i>27</i>	34 <i>24</i>	438 <i>191</i>	312 <i>115</i>	1,114 <i>286</i>	1,925 <i>364</i>
Rainbow Trout	0.0055	98 <i>77</i>	4 <i>4</i>	0 <i>0</i>	218 <i>81</i>	199 <i>122</i>	179 <i>74</i>	698 <i>181</i>
Brown Trout	0.0097	631 <i>194</i>	113 <i>50</i>	147 <i>56</i>	136 <i>43</i>	30 <i>24</i>	170 <i>78</i>	1,227 <i>227</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	0.0003	0 <i>0</i>	40 <i>44</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	40 <i>44</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	0.0003	21 <i>22</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	14 <i>14</i>	4 <i>4</i>	39 <i>26</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	0.0032	0 <i>0</i>	34 <i>37</i>	77 <i>73</i>	89 <i>49</i>	49 <i>29</i>	151 <i>98</i>	400 <i>140</i>
Yellow Perch	0.0272	0 <i>0</i>	0 <i>0</i>	1,915 <i>1,182</i>	1,318 <i>716</i>	88 <i>72</i>	109 <i>66</i>	3,430 <i>1,385</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	761 <i>210</i>	492 <i>156</i>	2,538 <i>1,191</i>	2,572 <i>775</i>	692 <i>187</i>	1,777 <i>330</i>	8,832 <i>1,493</i>
Angler Hours		9,978 <i>1,063</i>	13,730 <i>1,787</i>	23,545 <i>2,198</i>	27,908 <i>2,930</i>	23,268 <i>1,953</i>	27,532 <i>2,364</i>	125,961 <i>5,210</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 2017. Standard deviations are in Italics.

Species	Harvest per hour	March/April	May	June	July	August	Sept/Oct	Season
Coho Salmon	0.0049	121 <i>72</i>	0 <i>0</i>	0 <i>0</i>	22 <i>13</i>	8 <i>8</i>	381 <i>86</i>	532 <i>113</i>
Chinook Salmon	0.0155	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	171 <i>146</i>	37 <i>22</i>	1,484 <i>258</i>	1,692 <i>298</i>
Rainbow Trout	0.0071	443 <i>178</i>	37 <i>27</i>	0 <i>0</i>	10 <i>10</i>	25 <i>24</i>	253 <i>97</i>	768 <i>206</i>
Brown Trout	0.0379	3,203 <i>707</i>	98 <i>48</i>	37 <i>31</i>	192 <i>69</i>	47 <i>32</i>	550 <i>119</i>	4,127 <i>723</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	0.0041	187 <i>119</i>	154 <i>111</i>	0 <i>0</i>	18 <i>23</i>	28 <i>28</i>	61 <i>62</i>	448 <i>178</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	0.0053	0 <i>0</i>	37 <i>37</i>	0 <i>0</i>	142 <i>89</i>	307 <i>331</i>	96 <i>48</i>	582 <i>348</i>
Yellow Perch	0.0167	67 <i>48</i>	542 <i>0</i>	271 <i>117</i>	223 <i>125</i>	219 <i>175</i>	501 <i>276</i>	1,823 <i>373</i>
Walleye	0.0000	0 <i>0</i>	37 <i>38</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>
Total Harvest	0.0916	4,021 <i>744</i>	905 <i>135</i>	308 <i>121</i>	778 <i>225</i>	671 <i>378</i>	3,326 <i>424</i>	9,972 <i>979</i>
Angler Hours		24,983 <i>2,740</i>	9,809 <i>949</i>	9,740 <i>1,020</i>	13,322 <i>1,353</i>	10,321 <i>1,090</i>	40,709 <i>2,998</i>	108,884 <i>4,632</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 2017. Standard deviations are in *Italics*.

Species	Harvest per hour	March/April	May	June	July	August	Sept/Oct	Season
Coho Salmon	0.0064	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	1,446 <i>320</i>	1,446 <i>320</i>
Chinook Salmon	0.0396	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	8,892 <i>1,243</i>	8,892 <i>1,243</i>
Rainbow Trout	0.0173	3,819 <i>617</i>	2 <i>2</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	67 <i>34</i>	3,888 <i>618</i>
Brown Trout	0.0075	580 <i>187</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	1,097 <i>265</i>	1,677 <i>324</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	0.0002	49 <i>29</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	49 <i>29</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	0.0028	0 <i>0</i>	104 <i>106</i>	0 <i>0</i>	515 <i>0</i>	0 <i>0</i>	4 <i>4</i>	623 <i>106</i>
Yellow Perch	0.0082	881 <i>315</i>	605 <i>578</i>	0 <i>0</i>	0 <i>0</i>	358 <i>0</i>	0 <i>0</i>	1,844 <i>658</i>
Walleye	0.0245	4,154 <i>1,621</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	1,337 <i>1,389</i>	5,491 <i>2,134</i>
Total Harvest	0.1065	9,483 <i>1,773</i>	711 <i>588</i>	0 <i>0</i>	515 <i>0</i>	358 <i>0</i>	12,843 <i>1,910</i>	23,910 <i>2,671</i>
Angler Hours		109,425 <i>9,828</i>	12,508 <i>1,520</i>	9,943 <i>1,634</i>	10,023 <i>1,552</i>	5,399 <i>2,934</i>	77,194 <i>4,319</i>	224,492 <i>11,456</i>

Table 9. Average weight, average length and standard weight of salmonids from Wisconsin's Lake Michigan creel survey during 2008 through 2017, all areas and fishery types combined. std = standard deviation.

Year	Average weight (lbs.)	± 1 std	Average length (in.)	± 1 std	Standard weight (lbs.)
<b>Coho salmon</b>					
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
2012	3.4466	1.4930	20.6385	2.8135	3.8802
2013	5.3848	2.6743	23.6931	3.4848	4.0654
2014	3.9803	1.9275	21.2898	3.0179	3.9316
2015	4.0000	1.8299	21.4375	3.3676	3.8470
2016	4.7300	1.9033	23.3117	2.6028	3.9260
2017	4.0892	2.1177	22.4113	2.6747	3.6520
<b>Chinook salmon</b>					
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
2012	10.2651	4.0305	30.0844	4.6550	8.8881
2013	10.4966	7.0121	28.1742	6.7792	10.2408
2014	11.3915	5.0015	30.0012	4.8944	10.2321
2015	10.4108	4.5165	29.7477	5.4302	9.1940
2016	10.3154	6.0139	28.1910	5.9369	10.3142
2017	11.8211	6.0754	29.6128	5.8775	10.4097
<b>Rainbow trout</b>					
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
2012	6.3634	2.4765	26.1214	3.7593	4.2812
2013	6.4838	2.6676	25.5596	3.7736	4.0376
2014	6.7767	2.8838	25.9776	3.8120	4.1739
2015	5.7588	2.4129	25.2419	4.4224	3.9037
2016	5.8938	2.5324	24.7988	3.8542	4.2855
2017	6.5706	2.7022	25.8441	4.0113	4.0464
<b>Brown trout</b>					
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
2012	4.7658	2.7347	20.7304	3.7789	4.0676
2013	5.8537	3.0350	22.0303	3.6793	3.9190
2014	5.8459	3.3608	21.2050	4.6428	4.2392
2015	5.1532	3.1955	20.9572	4.3664	3.8568
2016	5.3826	4.0422	20.7914	5.2190	3.9606
2017	5.7685	3.2424	21.9807	3.9553	3.9659
<b>Lake trout</b>					
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
2012	6.7815	3.6110	26.1740	4.1798	5.3274
2013	5.8791	2.7630	25.0904	3.1524	5.3559
2014	6.3332	3.4466	24.7813	4.0396	5.8595
2015	7.4777	3.7718	26.8174	4.1894	5.6124
2016	6.6598	3.4108	25.7354	3.8402	5.8303
2017	6.7796	3.3955	25.8882	3.9219	5.6707

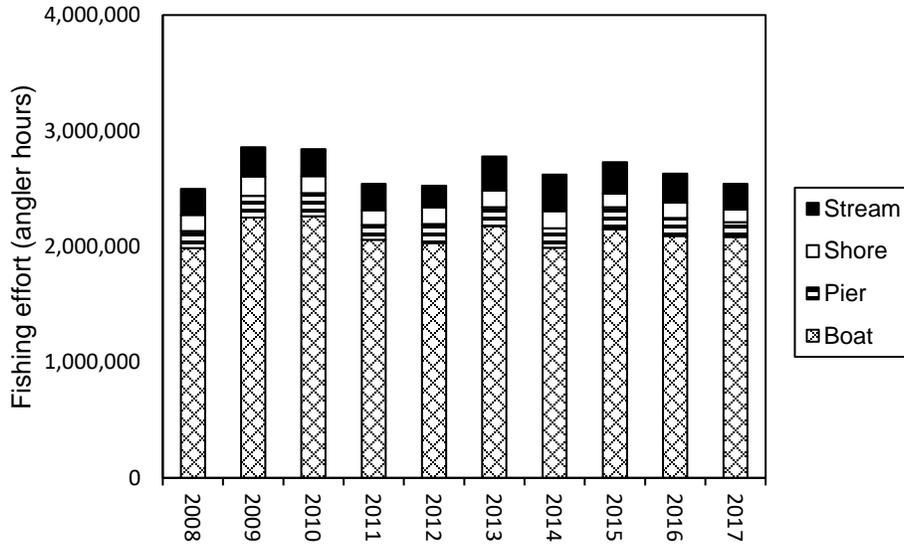


Figure 1. Fishing effort (angler hours) in Wisconsin waters of Lake Michigan and Green Bay from 2008 through 2017.

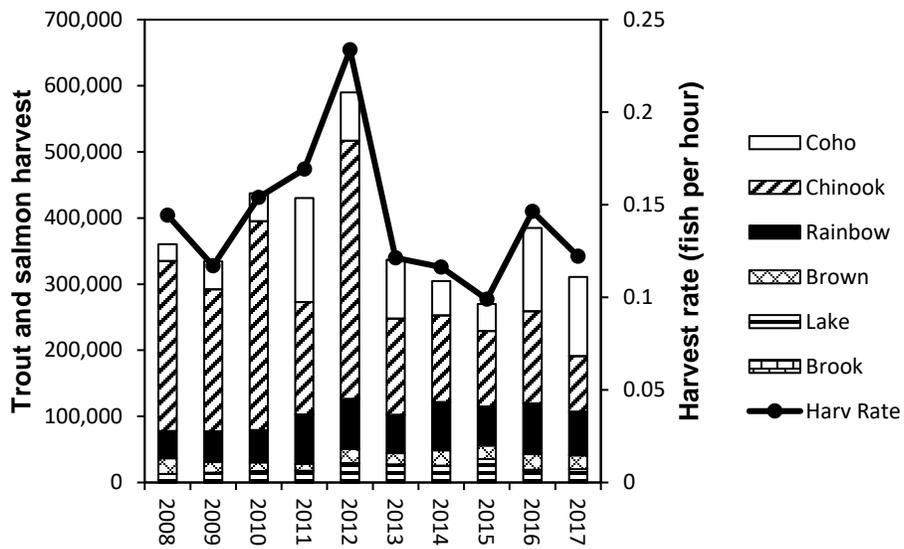


Figure 2. Trout and salmon harvest and harvest-rate from Wisconsin waters of Lake Michigan and Green Bay from 2008 through 2017.

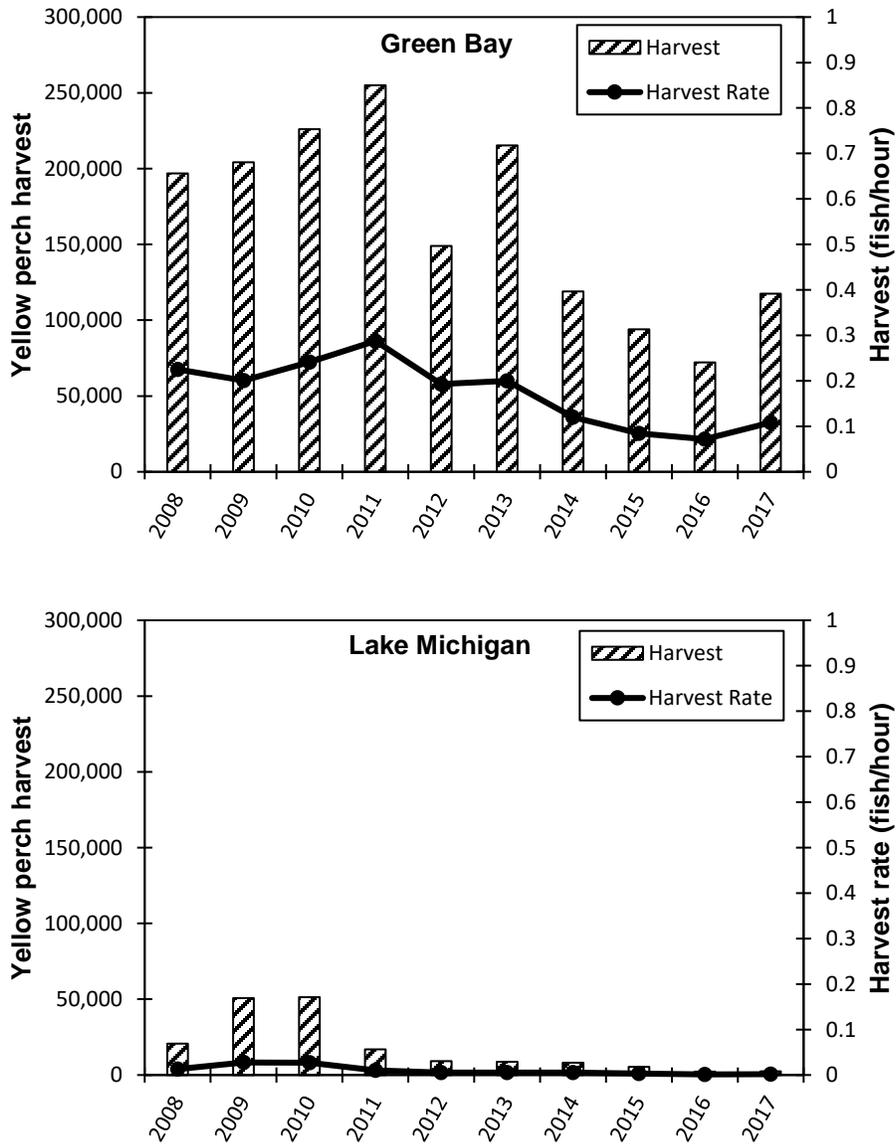


Figure 3. Yellow perch angler-harvest and harvest-rate from Wisconsin waters of Green Bay and Lake Michigan from 2008 through 2017. Note: Figure 3 reflects that some Door County sites represent Green Bay for yellow perch harvest statistics.