

## Lake Michigan yellow perch winter graded mesh assessment – 2017 (12/2/16 to 12/9/16)

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Our annual winter graded mesh assessment of the yellow perch population in Lake Michigan for 2017 was conducted between December 2, 2016 and December 9, 2016. The survey was conducted in Lake Michigan, north and south from the main gap of the Milwaukee Harbor using the DNR research vessel *R/V Coregonus*. We set two gangs of 1,600 ft. each on 12/02/2016, about 1.5 miles off Milwaukee harbor at about 70 to 75 feet of water and caught two yellow perch. The second set was conducted on 12/7/2016 using three gangs over a depth range of 57 to 75 ft. and fished north east of the main gap. Eight yellow perch were caught in this set. We fished another three gangs on 12/8/2016 to the south of the main gap at 54 to 75 ft. depth range, and caught seven yellow perch. A final lift of two gangs, one shallow at 44-45 ft. and the other deep at 74-78 ft., was made on December 9, 2016 which produced one yellow perch. We caught a total of eighteen yellow perch in four lifts of 16,000 ft. of graded mesh gill net effort.

The catch per 1000 ft. in the 2017 assessment was 1.1 yellow perch (for all meshes combined) which is less than 2016 CPE (1.5). Most perch were caught in the larger size meshes (Table 1). There were only two males out of eighteen perch caught in this assessment. Both were 2-year-old perch. The perch ages ranged from 2 to 12, with the majority of them being age 12 (2005 year-class) (Table 2).

Table 1. Number of yellow perch caught in the graded mesh assessment by mesh size in the 2017 assessment.

Mesh size (inch)	1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0	3.25
# perch	3	1	1	1	1	1	0	1	2	7

Table 2. Number of yellow perch caught in the graded mesh assessment by age in the 2017 assessment.

Age	1	2	3	4	5	6	7	8	9	10	11	12
# perch	0	6	0	0	1	0	0	1	2	0	1	7
Ave. length (mm)		148			278			371	322		337	341

Males: 11%; Females: 89%

We have maintained a consistent protocol from year to year in our yellow perch graded mesh assessment in terms of sampling window, sampling location, gear and depths. We do vary depth and specific locations to make sure we sample areas that represent the habitat yellow perch would be found in. Even though we varied depth, we did not see much variation in the catches. The nets appeared to be fishing effectively which was evident in the good numbers of alewife (578), round white fish (262) and lake trout (34) caught in the nets. Other species included bloater chub (2), Chinook salmon (1), brown trout (2), burbot (12), round goby (13), sculpin (1), and rainbow smelt (16). The cause of low catches of yellow perch is probably unrelated to the gear and more likely due to the extremely low numbers of yellow perch in Lake Michigan offshore of Milwaukee County.

In addition to collecting yellow perch information during this survey, we assisted Researchers from UWM-School of Freshwater Sciences to collect round whitefish eggs for their research project. We collected biological data from round whitefish including collecting 32 otolith samples for age determination. The round whitefish ages ranged from 3 to 14, and males dominated the catch.

The continued low numbers of yellow perch caught during this graded mesh assessment (Figure 1) indicate continued poor recruitment to the fishery.

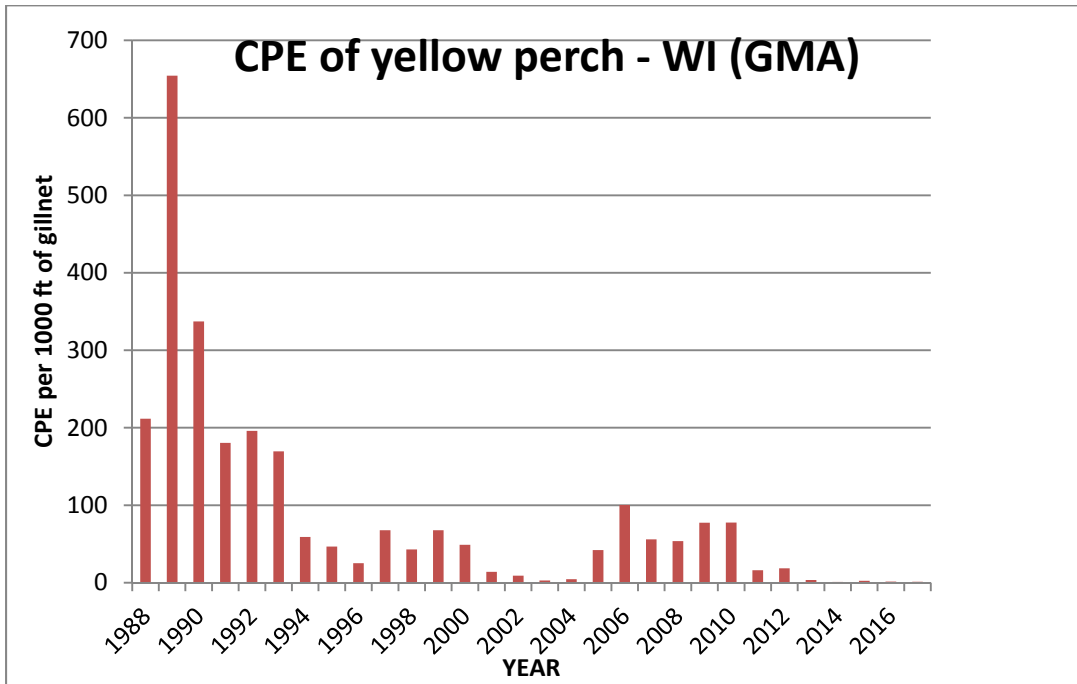


Figure 1. Yellow perch catch per 1000 feet of graded mesh gill net effort in the Lake Michigan waters off Milwaukee.