

# COLDWATER TASK GROUP EXECUTIVE SUMMARY REPORT MARCH 2008



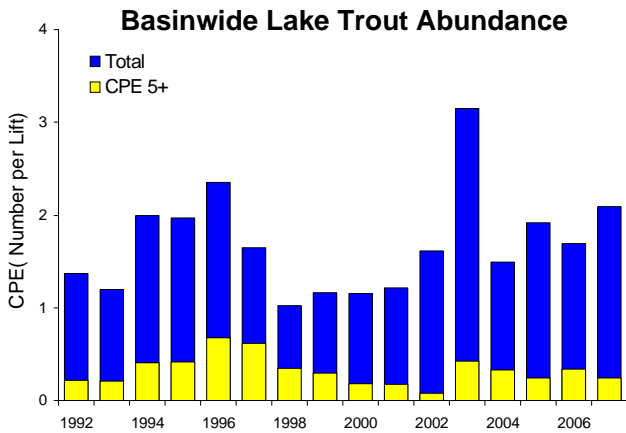
## Introduction

This year's Lake Erie Committee (LEC) Coldwater Task Group (CWTG) has produced an Executive Summary Report encapsulating information from the CWTG annual report. The complete report is available from the GLFC's Lake Erie Committee Coldwater Task Group website at <http://www.glfc.org/lakecom/lec/CWTG.htm>, or upon request from an LEC, Standing Technical Committee (STC), or CWTG representative.

Eight charges were addressed by the CWTG during 2007-2008: (1) Lake trout assessment in the eastern basin; (2) Lake whitefish fishery assessment and population biology; (3) Burbot fishery assessment and population biology; (4) Participation in sea lamprey assessment and control in the Lake Erie watershed; (5) Electronic database maintenance of Lake Erie salmonid stocking information; (6) Steelhead fishery assessment and population biology; (7) Development of a Lake Herring management Plan and (8) Completion of a revision of the Lake Trout Management Plan.

## Lake Trout

A total of 468 lake trout were collected in 130 lifts across the eastern basin of Lake Erie in 2007. Young cohorts (ages 3-5) dominated catches with lake trout ages 8 and older only sporadically caught. Basin-wide abundance continues to slowly increase, but the abundance of adult lake trout age 5 and older remains well below average. The abundance of mature, repeat spawning females is at one fourth of the target level. Returns of Klondike strain lake trout remain strong through age-4, despite low stocking amounts. Klondikes are also exhibiting lower lengths- and weights-at-age compared to lean lake trout strains.

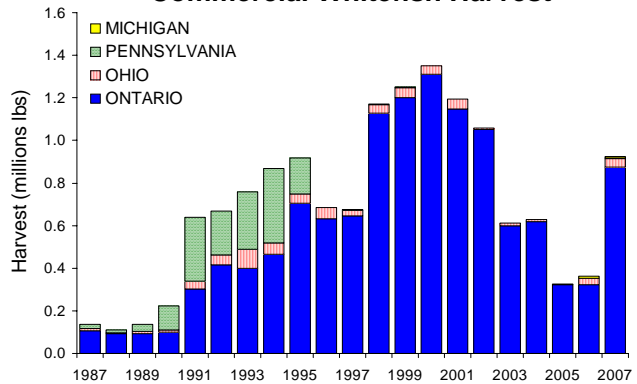


## Whitefish

The total harvest of lake whitefish in 2007 was 925,834 pounds. The 2007 whitefish harvest was taken mostly in Ontario (94%), with Ohio (4%) and Michigan (1%) and trace harvest by Pennsylvania accounting for the remainder. A large proportion of Ontario's whitefish harvest (40%) was from gill nets targeting walleye and white bass. Ohio and Michigan whitefish harvest was from trap nets primarily during late fall. Fishery and survey catch rates were among the highest recorded from some sources. Four-year-old whitefish dominated fishery and survey catches across the lake in 2007. In addition to the dominant 2003 cohort, the 2001 year class and older fish were represented in fishery harvest. In assessment surveys, the 2005 cohort and to a lesser extent, the 2004 year class, were also present. Whitefish caught in 2007 surveys consisted of ages up to 20. In 2008, 5-year-old whitefish are expected to dominate the

harvest, with nominal recruitment from the 2004 and 2005 year classes.

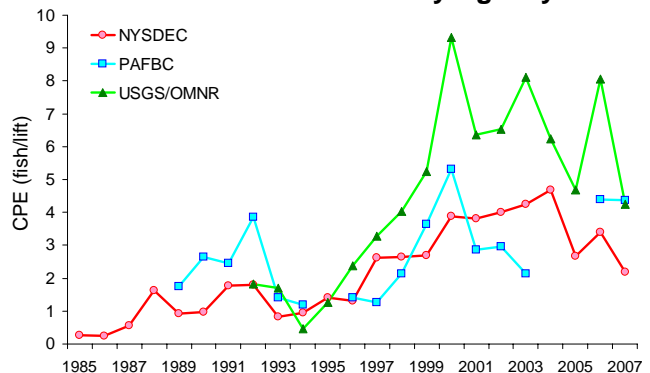
## Commercial Whitefish Harvest



## Burbot

Total commercial harvest of burbot in Lake Erie during 2007 was 5,198 pounds, a slight decrease from 2006, and the second lowest harvest observed since 1990. Abundance and biomass of burbot as determined from annual coldwater gillnet assessments increased from about 1993 through 2000 in all jurisdictions. Burbot abundance and biomass declined slightly after peaking in 2000 in Pennsylvania and Ontario and in 2004 in New York. Increasing mean age since 1998, and dramatically decreased age-4 abundance after 2001 in Canadian waters of the eastern basin, indicates an aging burbot population suffering from poor recruitment. Round gobies have replaced rainbow smelt as dominant burbot prey item in four of the last five years.

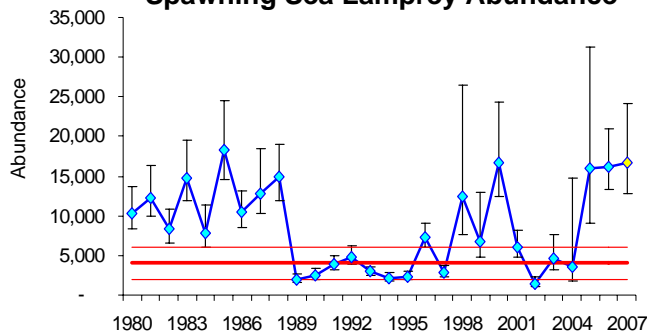
## Burbot Abundance by Agency



## Sea Lamprey

A1-A3 wounding rates on lake trout >21" was 14.9 wounds/100 fish in 2007, well above the target level of 5 wounds/100 fish. Wounding rates have been above target for 11 of the past 12 years. Large lake trout >25 inches continue to receive the highest percentage of the fresh wounds. A4 wounding declined to 48.2 wounds/100 fish, but is still the third highest A4 wounding rate in the 23-year time series. The estimated number of spawning-phase sea lampreys increased to 16,664 in 2007, which is over 4 times the target level. Control efforts in 2007 included lampricide treatment in Big Otter Creek (ON) and Cattaraugus Creek (NY) and assessments were conducted in 5 U.S. tributaries to rank them for possible treatment during 2008. A two year experiment of back-to-back lampricide treatments in the nine major sea lamprey producing streams will begin in 2008 to reduce the number of parasitic sea lampreys in Lake Erie to target levels.

### Spawning Sea Lamprey Abundance



## Lake Erie Salmonid Stocking

A total of 2,140,491 salmonids were stocked in Lake Erie in 2007. This was a 4.6% decline in the number of yearling salmonids stocked compared to 2006, and 7% lower than the long-term average from 1989-2006. By species, there were 137,637 lake trout stocked New York waters; 65,615 brown trout stocked in New York and Pennsylvania waters, and a total of 1,937,239 steelhead/rainbow trout stocked by all five jurisdictions.

## Steelhead

All agencies stocked yearling steelhead smolts in 2007. The vast majority (95%) of the steelhead were stocked in PA (1,222,996), OH (453,413) and NY (272,630) waters. Overall steelhead stocking numbers (1.937 million in 2007) were slightly above the long-term average of 1.795 million yearlings. Stockings have been consistently in the 1.7-2.0 million range since 1993.

The summer open lake fishery for steelhead was again evaluated by Ohio, Pennsylvania and New York. Open lake harvest was estimated at 25,685, summed for all reporting agencies. This was a substantial increase over the 2006 harvest estimate of 7,741, but does not approach the estimated harvest of over

123,000 by all agencies in 2002. Open lake angler catch rates, where surveyed, increased in 2007 compared to 2006. Catch rates for Ohio anglers seeking steelhead were as high as 0.33 fish/hr for private boaters and 0.29 fish/hr for charter boaters.

Steelhead diets were assessed again during the summer in Ohio's central basin. As in previous years, *Bythotrephes* was found most often in diets, but by dry weight analysis, fish (emerald shiners, rainbow smelt and gizzard shad) were the most important items of caloric value. A total of 16 different diet items were present in steelhead diets.

Steelhead catch-at-age data and catch curves were used to generate annual estimates of total mortality and survival. These rate function estimates were then applied to annual stocking numbers and estimates of natural reproduction to build an initial population model. Cursory estimates using fixed survival and mortality rates puts the adult Lake Erie steelhead population at a median value of about 800,000 fish with a range of 0.3-2.8 million adult fish.

## Lake Herring

Lake herring are considered extirpated in Lake Erie, although commercial fishermen report them periodically. Two lake herring females (age 7) were caught in commercial nets in the eastern basin in May 2007. Genetic testing of recent catches found them to be most related to the historic Lake Erie stock and then to current Lake Huron stock. Disease testing of eastern Lake Ontario lake herring, a primary candidate source for stocking in Lake Erie, was negative for 2006 and 2007 samples; however, one more year of testing is needed. Preparation of a lake herring management plan began in fall 2007 with the goal of rehabilitating lake herring in Lake Erie. The final draft on the plan is expected to be completed in fall 2008.

## Lake Trout Management Plan

A revised Lake Erie lake trout management plan, titled "A Strategic Plan for the Rehabilitation of Lake Trout in Lake Erie, 2008-2020", is completed. The plan covers the historical background of lake trout restoration in Lake Erie, current status of stocks, new goals and objectives, management strategies to achieve these new goals, and impediments to lake trout restoration. The document also outlines assessment and research needs by lake jurisdictions as well as the agency roles and responsibilities. The new goals defined in the plan to increase and maintain overall lake trout abundance recommend a combination of better sea lamprey control, increased stocking of at least 200,000 yearlings annually, and identification of potential lake trout spawning areas. Upon final approval by the LEC, the plan will be posted on the GLFC Coldwater Task Group's web page at: <http://www.glfc.org/lakecom/lec/CWTG.htm>. Copies will also be available upon request from an LEC, Standing Technical Committee (STC), or CWTG representative.