

# COLDWATER TASK GROUP EXECUTIVE SUMMARY REPORT MARCH 2012



## 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.

Seven charges were addressed by the CWTG during 2011-2012: (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, and (7) Development of a cisco management plan.

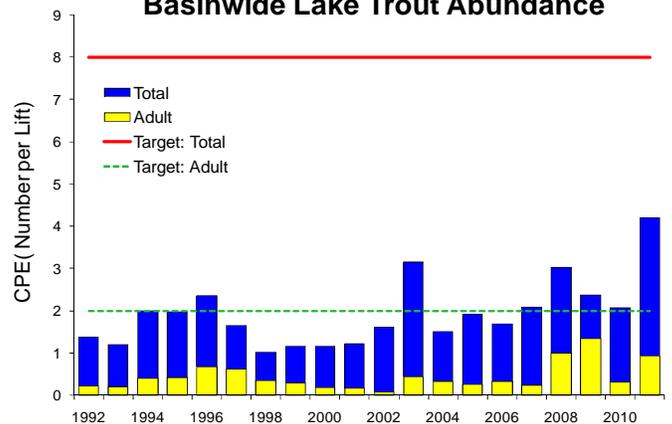
## Lake Trout

A total of 717 lake trout were collected in 89 lifts across the eastern basin of Lake Erie in 2011. Record lake trout catches were recorded in New York surveys and near-record in Ontario surveys. Young cohorts (ages 1-5) dominated catches with lake trout ages 10 and older only sporadically caught. Basin-wide lake trout abundance (weighted by area) increased to its highest value in the time series but remains below the rehabilitation target of 8.0 fish/lift. Adult (age 5+) abundance also increased in 2011 and remains below target. Recent estimates indicate very low rates of adult survival. Klondike and Finger Lakes strain lake trout comprise the majority of the population. Successful natural reproduction has yet to be documented in Lake Erie despite more than 30 years of restoration efforts.

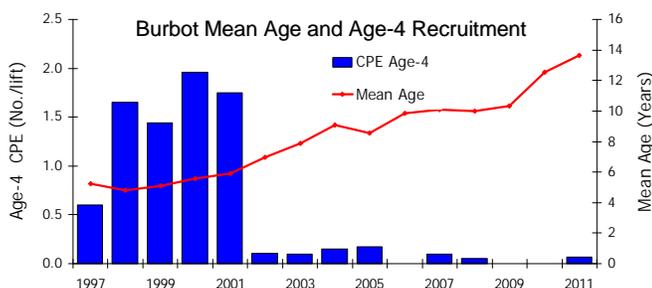
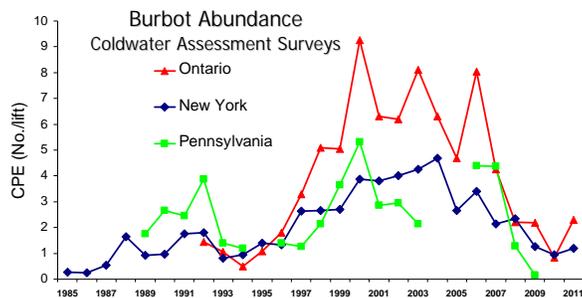
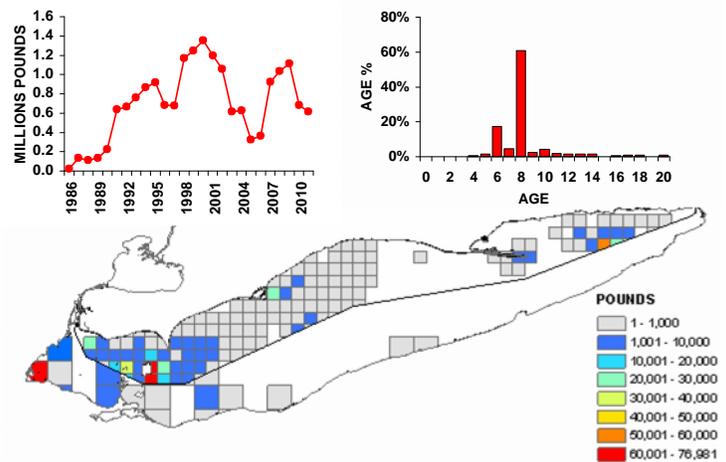
## Whitefish

Lake whitefish harvest in 2011 was 616,973 pounds, distributed among Ontario (86%), Ohio (13%), and Michigan (1%) commercial fisheries. The 2003 year class (age 8) dominated the population age structure in the observed harvest and assessment surveys in 2011. Ages present in the 2011 population ranged from 1 to 20, with no evidence of young-of-the-year in assessment surveys lake-wide. With recruitment sparse or absent, population abundance continues to decline. No significant recruitment is expected in 2011, although older lake whitefish persist in the population. Fisheries in 2011 will continue

## Basinwide Lake Trout Abundance



## Commercial Lake Whitefish Harvest



to rely on the 2003 year class followed by the 2005 cohort with some contribution from other adjacent year classes. In 2011, mean condition factor of mature female and male whitefish was above the historic average. Chironomids and isopods represented the largest fraction of prey observed in whitefish diets during 2011.

## Burbot

Total commercial harvest of burbot in Lake Erie during 2011 was 2,894 pounds, a 40% decrease from 2010. Burbot abundance and biomass indices from annual coldwater gillnet assessments increased slightly in 2011 reversing a downward trend observed across east basin areas following time-series maxima during the early- to mid-2000s. Agency catch rates during 2011 averaged 1.2 (New York) to 2.3 (Ontario) burbot per lift which are about 3.5 to 3.1 times lower than mean catch rates observed from 2000 to 2004. Despite an

improvement in age-4 recruitment during 2011, ongoing low catch rates of burbot in assessment surveys, combined with increasing mean age of adults and persistent low recruitment, signal continuing troubles for this population. Round gobies and rainbow smelt continue to be the dominant prey items in burbot diets in eastern Lake Erie.

### Sea Lamprey

The A1-A3 wounding rate on lake trout over 532 mm was 8.2 wounds per 100 fish in 2011. This was a 36% decline from the 2010 wounding rate of 12.8 wounds per 100 fish and a 58% decrease over the past two years. Despite the decline, likely attributable to a 2008-2010 accelerated lampricide treatment program, the current wounding rate still exceeds the target rate of five wounds per 100 fish. Wounding rates have been above target for 16 of the past 17 years. Large lake trout over 736 mm continue to be the preferred targets for sea lampreys. A4 wounding rates slightly decreased in 2011 to 53.9

wounds/100 fish, the third highest A4 wounding rate in the 27-year time series. A4 wounding rates on lake trout over 736 mm remain very high (163 wounds/100 fish). The estimated number of spawning-phase sea lampreys decreased from 22,179 in 2010 to 20,638 in 2011. However, this is the third highest population estimate in the time-series. Comprehensive stream evaluations in 2011 concluded that intensive streams treatments conducted in 2008-2010 were very effective, suggesting that the continued high abundance of the adult spawning population in Lake Erie is from an unknown and untreated source.

### Lake Erie Salmonid Stocking

A total of 2,101,719 salmonids were stocked in Lake Erie in 2011. This was a 9% decrease in the number of yearling salmonids stocked compared to 2010 and the long-term average from 1989-2009. Declines were primarily due to temporary reductions in steelhead/rainbow trout stockings in 2011. By species, there were 240,133 yearling lake trout stocked in New York and Ontario; 100,370 brown trout stocked in New York and Pennsylvania waters, and a 1,761,217 steelhead/rainbow trout stocked in all five jurisdictional waters.

### Steelhead

All agencies stocked yearling steelhead/rainbow trout in 2011. A summary of rainbow trout/steelhead stocking in Lake Erie by jurisdictional waters for 2011 is as follows: Pennsylvania (1,091,793; 62%), New York (305,780;

17%), Ohio (265,469; 15%), Michigan (61,445; 3%) and Ontario (36,730; 2%). Overall steelhead stocking numbers (1.761 million in 2011) represented a 4% decrease below the long-term

average and a 9% decrease from 2010. Annual stocking numbers 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 4,480 fish, summed for all reporting agencies; Ohio (2,996), Pennsylvania (1,389), New York (92) and Michigan (3). Overall, this was a 51% decrease from the 2010 harvest and 81% below the average harvest between 1999 and 2010. Open lake steelhead harvest decreased in all jurisdictions from 2010, and was greatest in Pennsylvania (-73%), followed by Ohio (-23%) and New York (-16%). The steelhead harvest is negligible in Michigan and not reported in Ontario waters of Lake Erie. Catch rates in the open water fishery were mixed as well in 2011 and were slightly above the long-term average. Based upon creel surveys, the majority (>90%) of the fishery effort targeting steelhead occurs in the tributaries from fall through spring. Catch rates by tributary anglers in the New York cooperative diary program dropped to 0.52 fish/hour in 2010, declining 33% since 2008, but remained near the long-term average of 0.47 fish/hour.

### Cisco

Cisco, considered extirpated in Lake Erie, have been reported in small numbers (1-6) in 10 of the past 15 years by commercial fishers; four were observed in 2011. Preliminary genetic testing of some of these fish found them to be most related to an historic Lake Erie stock, suggesting that a remnant Lake Erie stock may still exist. In 2010-11 observations of larval cisco and juvenile coregonids in the Huron-Erie Corridor provide an alternate source of at least some of the Lake Erie observations. Actions undertaken by the CWTG in 2011 were directed at resolving issues which currently prevent the completion of a cisco management plan (first undertaken in 2007). Consultation with cisco experts from other lakes was used to identify deficiencies (in timing and location) of current fisheries programs for accurately targeting and assessing cisco in Lake Erie. This resulted in preliminary gillnet sampling (USGS) at historic western basin spawning locations in the fall of 2011, which did not catch any cisco. A genetic research strategy to address issues of remnant, historic and related stocks was developed which will utilize recent cisco tissue samples and alternate historic DNA (scales). The task group will seek partnerships and funding to further both of these approaches in 2012.

