

# COLDWATER TASK GROUP EXECUTIVE SUMMARY REPORT MARCH 2015



## 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. Eight charges were addressed by the CWTG during 2014-2015: (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) Maintenance of an electronic database of Lake Erie salmonid stocking information; (6) Steelhead fishery assessment and population biology, (7) Development of a Cisco impediments document and (8) Prepare a report addressing the current state of knowledge of Lake Whitefish populations in Lake Erie. The complete report is available from the Great Lakes Fishery Commission's Lake Erie Committee Coldwater Task Group website at <http://www.glfsc.org/lakecom/lec/CWTG.htm>, or upon request from an LEC or CWTG representative.

## Lake Trout

A total of 727 Lake Trout were collected in 109 unbiased gill net lifts across the eastern basin of Lake Erie in 2014. High Lake Trout catches were recorded in all jurisdictions relative to the time series. Young adults (ages 4-6) dominated the catches with Lake Trout ages 10 and older only sporadically caught. Basin-wide Lake Trout abundance (weighted by area) was the highest value in the time series at 4.9 fish per lift, but remains below the rehabilitation target of 8.0 fish/lift. Adult (ages 5+) abundance index increased in 2014 to a time series high (3.0 fish/lift), and for the first time exceeded the target of 2.0 fish per lift. Klondike, Finger Lakes, and Lake Champlain strain Lake Trout comprise the majority of the population. Natural reproduction has not been documented in Lake Erie despite more than 30 years of restoration efforts.

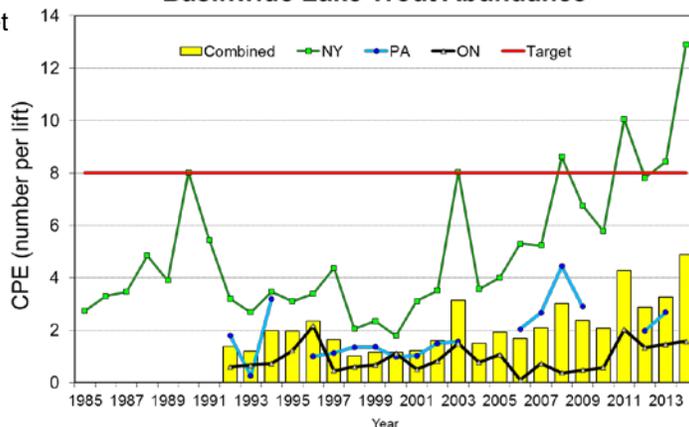
## Lake Whitefish

Lake Whitefish harvest in 2014 was 149,367 pounds, distributed exclusively between Ontario (77%) and Ohio (23%). Catches of sub-adult and adult Lake Whitefish in assessment surveys is low for the time series. Catches in 2014 were comparable to low levels observed during the 1980s before recovery. The 2003 year class (age 11) comprised the largest fraction of Lake Whitefish observed in fisheries and assessment surveys in 2013. Lake Whitefish sampled in fisheries and surveys ranged in age from 4 to 26. Few juvenile Lake Whitefish were observed in assessment surveys. Continued poor recruitment elevates the need for reduced fishing mortality and habitat improvement. Mean condition factors of adult male and female Lake Whitefish remain near historic averages.

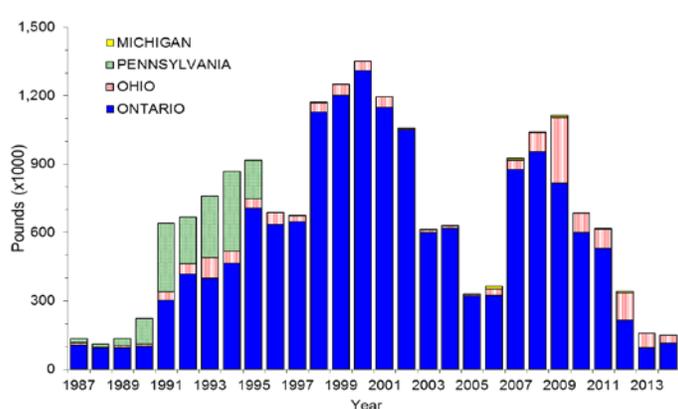
## Burbot

Total commercial harvest of Burbot in Lake Erie during 2014 was 2,695 pounds (1,222 kg) of which 70% came in New York by two fishers. Burbot abundance and biomass indices from annual coldwater gillnet assessments decreased (NY) or remained at a low level (ON) in 2014 continuing a downward trend since the early-2000s across east basin areas. Agency catch rates during 2014 averaged 0.37 (Ontario) to 0.55 (New York) Burbot per lift, which are about 20 to 8 times lower than mean catch rates observed during 2000-2004, respectively. Burbot catch ranged in age from 1 to 21 years in 2014. Ongoing low catch rates of Burbot in assessment surveys, the majority (55%) of the population being age-13+, and persistently low recruitment, signal continuing troubles for this population. Round Goby and Rainbow Smelt continue to be the dominant prey items in Burbot diets in eastern Lake Erie population.

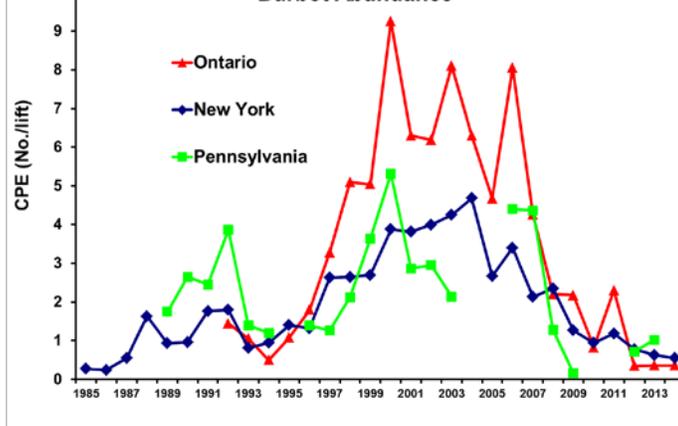
Basinwide Lake Trout Abundance



Commercial Lake Whitefish Harvest



Burbot Abundance



### Sea Lamprey

The A1-A3 wounding rate on Lake Trout over 532 mm was 16.6 wounds per 100 fish in 2014. This was a 16% increase from the 2013 wounding rate and is approximately double what was observed in 2011. The 2014 wounding rate is just over three times the target rate of five wounds per 100 fish; wounding rates have been above target for 19 of the past 20 years. Large Lake Trout over 736 mm continue to be the preferred targets for Sea Lamprey; A4 wounding rates on this size group remained very high (126 wounds per 100 fish). The estimated number of spawning adult Sea Lamprey (14,577) was lower than 2014 and the fifth consecutive annual decline; however, it is still well above the target population of 3,800. Comprehensive stream evaluations continued in 2014, including extensive surveys of Lake St. Clair and the Detroit River, to determine the source of the Lake Erie population.

### Lake Erie Salmonid Stocking

A total of 2,252,671 salmonids were stocked in Lake Erie in 2014. This was a 2% increase in the number of yearling salmonids stocked compared to 2013, and was 1% above the long-term average since 1990. Minor increases in stocking numbers were observed for Steelhead and moderate decreases of Lake Trout were seen between 2013 and 2014. Although Brown Trout make up only 6% of all trout stockings, the numbers stocked increased 31% from 2013. By species, there were 233,578 yearling Lake Trout stocked in all three basins of Lake Erie; 136,479 Brown Trout stocked in New York and Pennsylvania waters, 3,950 domestic Rainbow Trout stocked in New York, and 1,878,664 Steelhead stocked across all five jurisdictional waters.

### Steelhead

All agencies stocked yearling Steelhead in 2014. The summary of Steelhead stocking in Lake Erie by jurisdictional waters for 2014 is: Pennsylvania (1,070,554; 57%), Ohio (428,610; 23%), New York (258,950; 14%), Michigan (67,800; 4%) and Ontario (56,700; 3%). Steelhead stocking in 2014 (1.883 million) represented a 2% increase from 2013 and slightly above long-term average. Annual stocking numbers have been consistently in the 1.7-2.0 million fish range since 1993. The summer open lake fishery for Steelhead was again evaluated by all U.S. agencies and also in Ontario for 2014. Open lake harvest was estimated at 10,652 Steelhead: Ontario, 4,165; Ohio, 3,516; Pennsylvania, 2,552; New York, 419; and Michigan, 0. Overall, this harvest was almost twice that recorded for 2013, but Ontario data was not available for 2013. Overall open lake catch rates are near the long-term average, but effort remains minimal. Based upon creel surveys, the majority (>90%) of the fishery effort targeting Steelhead occurs in the tributaries from fall through spring.

### Cisco

Cisco, considered extirpated in Lake Erie, have been reported in small numbers (1-7) in 16 of the past 20 years. Of the 37 observations since 1995, all but two were surrendered by commercial fishermen operating in Ontario waters including two surrendered in 2014. None were captured in 2014 in assessment gear. The question arises from these recent captures whether these specimens represent a remnant stock or are transients from Lake Huron. A genetic analysis conducted in the early 2000's using 9 samples determined those sample fish were most likely from a remnant stock. Efforts are underway to increase this sample size to supplement this research; 27 additional Cisco samples were made available in 2014 to be genetically analyzed in 2015. A technical document entitled "Impediments to the Rehabilitation of Cisco (*Coregonus artedii*) in Lake Erie" was drafted by the CWTG in 2014 with the purpose of describing current knowledge and perceived impediments to Cisco rehabilitation, to determine if Cisco rehabilitation was feasible in the current state of Lake Erie, to identify research priorities for filling knowledge gaps, and provide direction for the development of a management plan. A completed document is to be given to the LEC 2015.

