



New York's 2012 Lake Ontario Fisheries Program Highlights

The following information summary is preliminary and selective. Comprehensive, final results will be reported in the “2012 Annual Report of the Bureau of Fisheries Lake Ontario Unit and St. Lawrence River Unit to the Great Lakes Fishery Commission’s Lake Ontario Committee”, which will be posted at www.dec.ny.gov/outdoor/27068.html in spring 2013. Results reported below were generated through collaborative fisheries and ecosystem monitoring and research programs conducted by the NYS Department of Environmental Conservation (NYSDEC), US Geological Survey, Ontario Ministry of Natural Resources, US Fish and Wildlife Service, and academic partners. For more information, contact:

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Stocking

- Fish stocking in the New York waters of Lake Ontario in 2012 included 1.51 million Chinook salmon, 120,190 coho salmon, 840,920 rainbow trout, 419,410 brown trout, 146,745 Atlantic salmon, 122,833 lake trout, and 23,200 walleye.
- Fall 2012 Chinook and coho salmon egg collections exceeded targets, and survival of eggs and fry have been good. We anticipate meeting our 2013 stocking targets for Chinook (1.76 million) and coho salmon (155,000 fall fingerlings and 90,000 spring yearlings [stocked in 2014]).
- We also expect to stock target levels for rainbow trout (600,000 yearlings) and lake trout (500,000 yearlings). Due to poor survival of coho salmon in fall 2011/spring 2012, the 2013 stocking of yearling coho into the Salmon River will be reduced from 90,000 to 75,000. In 2012, 30,000 surplus yearling coho were stocked into the Salmon River.
- Severe, disease related losses of brown trout at the NYSDEC Rome Hatchery in 2012 will impact 2013 yearling stocking statewide. Current projections suggest a 27% reduction in the number of brown trout yearlings stocked into Lake Ontario (reduction from 385,000 to 281,000).
- For the first time, 1,200 fall fingerling “bloaters” were stocked into Lake Ontario in November 2012. Bloaters are one of four species of deepwater ciscoes that once dominated Lake Ontario’s forage base. The fish were reared at the US Geological Survey’s Tunison Laboratory of Aquatic Science, contributing to a multi-agency, international effort to re-establish a deepwater cisco population in the lake. In addition, Tunison Laboratory staff also reared native lake herring, and stocked 18,564 fall fingerlings into Irondequoit Bay in December 2012 in an effort to re-establish spawning populations in south shore embayments.

2012 Sportfishing Regulation Proposals

- Several preliminary Great Lakes fishing regulation proposals are being considered and offered to the public for initial comment. These include:

- Lake Ontario tributaries - Extend prohibition of weight added below the hook, currently in force on the Salmon River and Cayuga/Oswego County tributaries, to all Lake Ontario tributaries.
 - With the exception of the Salmon River, allow multiple single, double or treble hooks attached to floating lures on all Lake Ontario tributaries.
 - Add the Genesee River from the State Route 104 bridge upstream to the lower falls as subject to seasonal regulations for Lake Ontario tributaries.
 - Increase minimum size limit for muskellunge in Great Lakes waters to 54”.
- Comments on these potential regulation proposals can be submitted to the address below, or via e-mail to: fwfishlo@gw.dec.state.ny.us

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Sportfishery Assessments

Open Lake Fishing Boat Survey

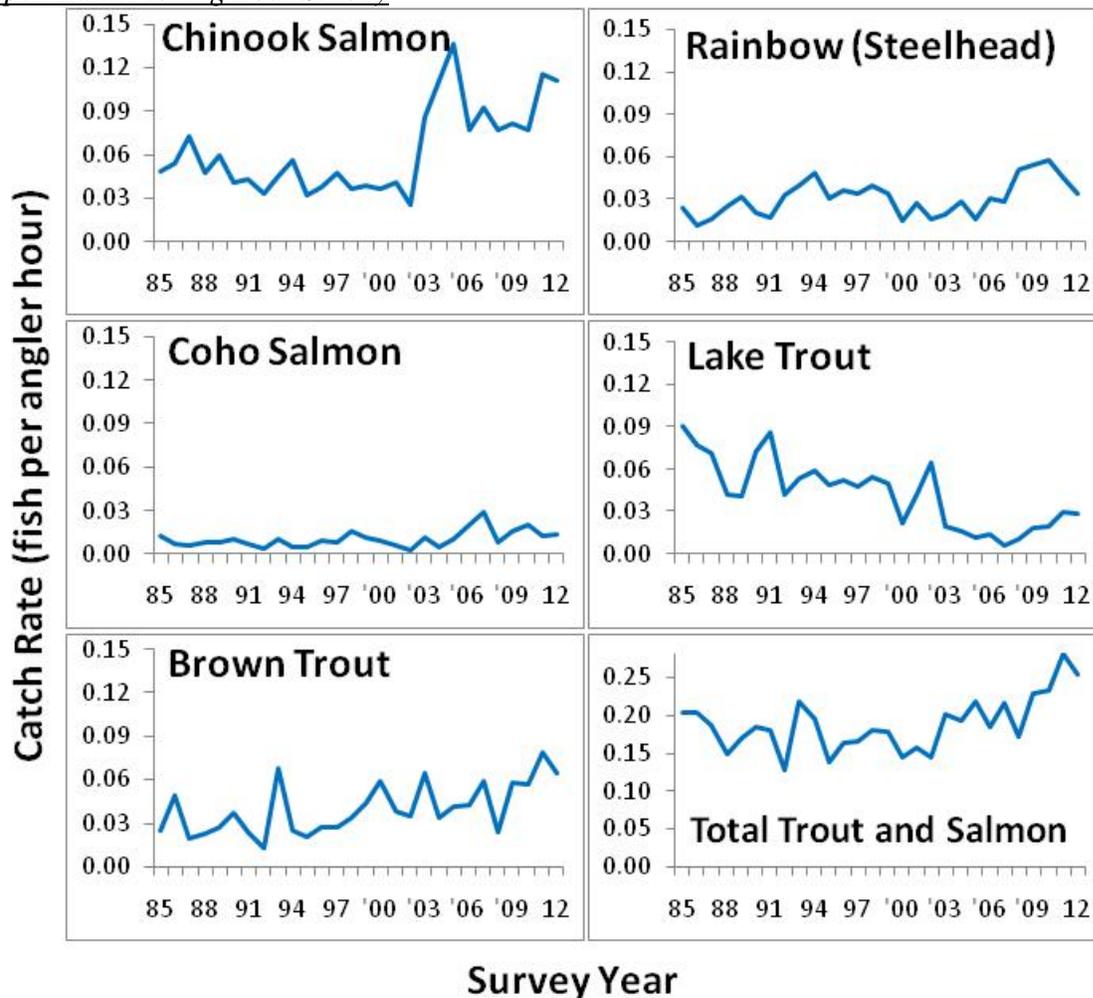


Figure 1. Trout and salmon catch rates (fish caught per angler hour) for charter boats fishing the open waters of Lake Ontario April 15- September 30, 1985-2012.

- The Lake Ontario Fishing Boat Survey was initiated on April 15 and ended September 30, 2012. The following results cover the April 15-September 30 period for each year 1985-2012. With the exception of rainbow trout, fishing success (catch rate, or fish caught per angler hour) reported applies only to anglers fishing onboard charter boats. In the case of rainbow trout, fishing success reported applies to both charter and non-charter anglers.
- Total trout and salmon fishing success in 2012 was the 2nd highest in the 28-year data series (highest occurred in 2011). During 2003-2012 anglers experienced some of the highest species-specific catch rates on record (Figure 1).
- The 2012 catch rate of Chinook salmon was the 3rd highest in the data series and was 25.8% greater than the previous 5-year average. Catch rate was the highest on record for the month of April and was near record high each month May through September. The ten highest Chinook salmon catch rates occurred during 2003-2012. Chinook salmon growth and condition remained above average during summer 2012.
- Brown trout catch rate remained among the highest experienced for the fourth consecutive year (2011 was the highest, 2012 was 3rd highest).
- The coho salmon catch rate was excellent for 5 of the past 7 years, and 2012 was the 5th highest on record. The 2012 rainbow trout catch rate (charter and non-charter boat anglers combined) was the fourth consecutive year of record or near record highs (Figure 1 shows rate for charter boat anglers only).
- Lake trout catch rates improved from the 2007 record low, and for the last 2 years (2011-2012), remained at the highest levels in nearly a decade.
- Atlantic salmon continued to appear in angler catch; however, the 2012 seasonal catch rate was lower than the record high rates experienced in 2010-2011.
- Total trout and salmon catch (196,625 fish) and harvest (107,456 fish) were dominated by Chinook salmon (45.2% and 51.3%, respectively) and brown trout (20.1% and 21.7%, respectively).
- Fishing effort directed at trout and salmon has remained relatively stable for more than a decade. An estimated 46,059 boat trips targeted trout and salmon from April 15-September 30, 2012 (82.0% of all fishing trips).
- The number of lampreys observed per 1,000 trout and salmon caught was estimated at 17.5 in 2012, a 31.9% decrease compared to the previous 5-year average.
- The estimated number of fishing boat trips targeting smallmouth bass during the traditional open season (3rd Saturday in June through September 30 when the creel survey ends) remained among the lowest in the data series (6,203 bass trips in 2012). Fishing quality for smallmouth bass peaked in 2002 and has since declined to the lowest levels observed. Bass catch per angler hour in 2012 remained among the lowest in the data series (75.7% below the 2002 peak); however, this was a 42.0% increase compared to the 2010 record low.

Preliminary Tributary Creel Survey Results

- A survey of anglers on 21 Lake Ontario tributaries was conducted from fall 2011 through spring 2012. A total of 9,000 angler interviews were conducted.
- Tributary angler effort totaled 409,000 angler trips or 1.6 million angler hours
- The Salmon River accounted for 68% of the total effort with 1.1 million angler hours.
- The Salmon and Oswego rivers, and Oak Orchard, South Sandy, and Eighteenmile creeks each contributed >50,000 angler hours.
- Chinook salmon were the most abundant species caught (126,259) and harvested (45,612). These estimates were lower than in 2005-06 and 2006-07 surveys.
- Coho and steelhead catches increased markedly over 2005-06 and 2006-07 survey levels.

Results of Spring 2012 Alewife Bottom Trawl Survey

- Abundance of adult (age-2 and older) alewife in spring 2012 bottom trawling surveys increased by approximately 30% from 2011 levels (Figure 2). Yearling (age-1) alewife abundance was above average (post-1994, zebra/quagga mussel invasion) for the third consecutive year, and is the largest value observed since 1999.

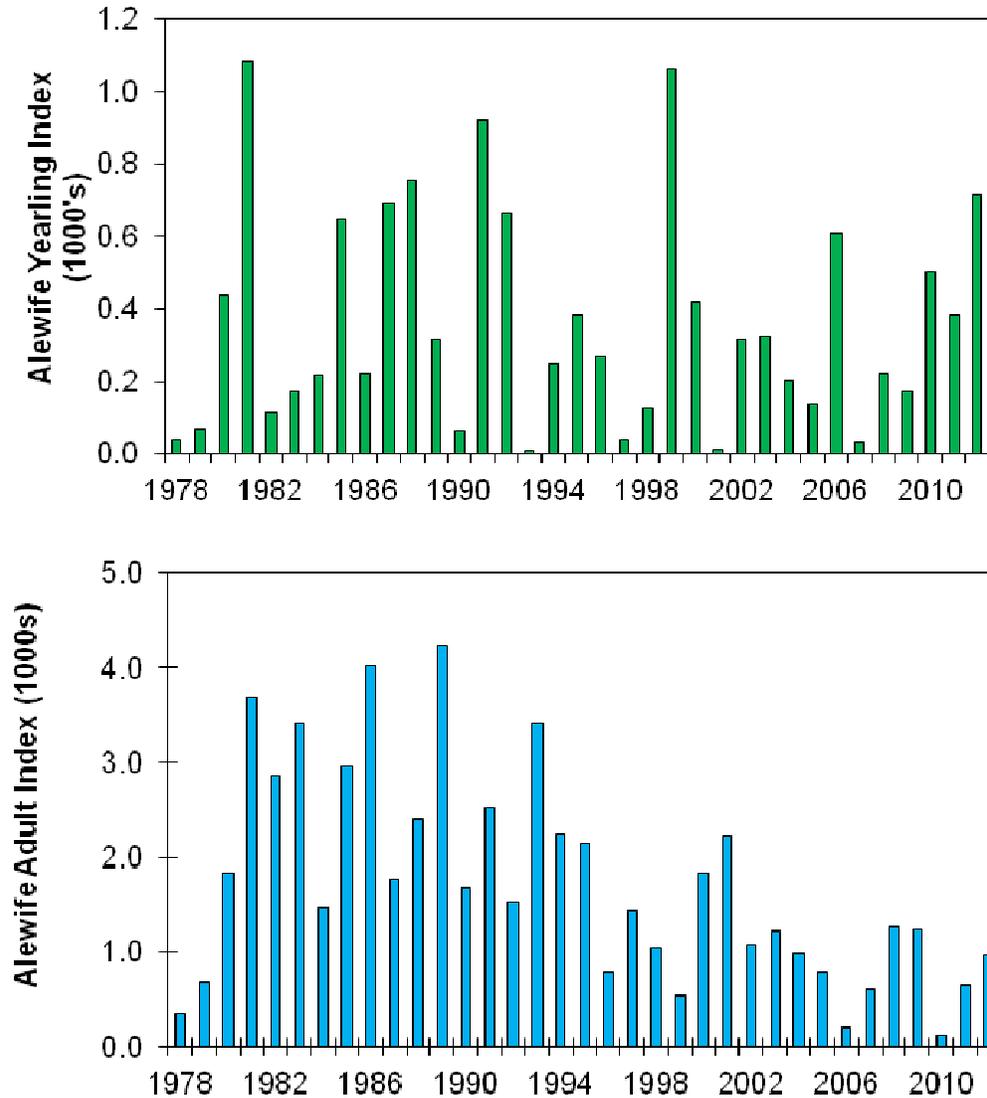


Figure 2. Bottom trawl abundance indices for yearling (age-1; top graph) and adult (age-2 and older; bottom graph) alewife. Abundance is the number of alewife captured per 10 minute bottom trawl tow.

Growth and Condition of Chinook Salmon

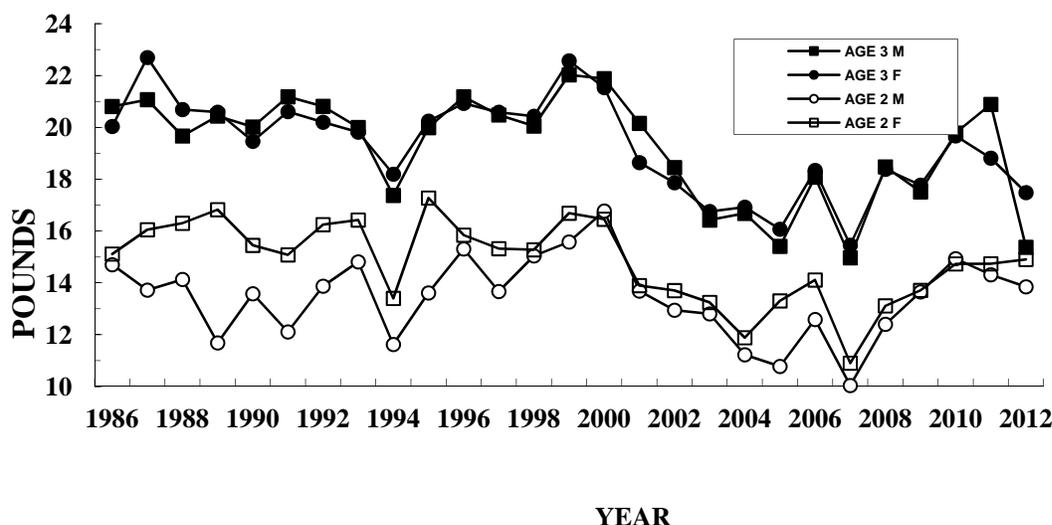


Figure 3. Fall weights of age-2 and age-3 Chinook salmon measured at Salmon River Hatchery, 1986-2012.

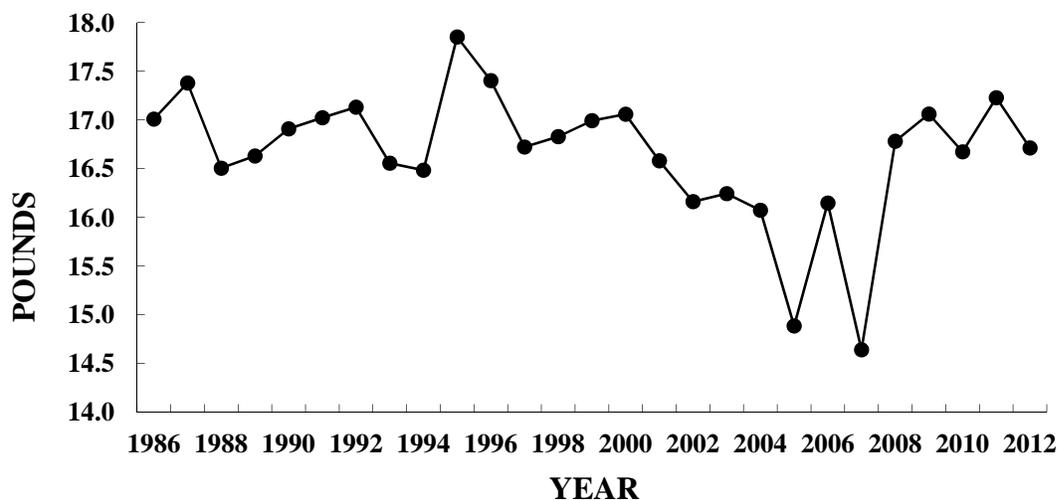


Figure 4. Estimated weights of a 36-inch Chinook salmon (body “condition”) from the NYSDEC Salmon River Hatchery fall (October) collections 1986-2012.

- At Salmon River Hatchery, the mean weight of age-1 Chinook males (jacks) sampled in 2012 was very near the long term average.
- Age-2 males were 0.4 pounds above average (13.9 lbs) and females were less than 0.1 pound below average (14.8 lbs) (Figure 3).
- Age-3 males were 3.9 lbs below average (19.2 lbs) and 5.5 pounds lighter than in 2011, while females were approximately 2 pounds below average (19.3 lbs) (Figure 3).
- Low Salmon River water levels during fall 2012 may have contributed to the relatively smaller fish observed at the Salmon River Hatchery. Low water levels allowed anglers to potentially target larger fish that would have otherwise completed their migration to the hatchery. Disproportionate harvest of larger individuals would bias the age and size distribution of fish reaching the hatchery.

- The condition or relative “plumpness” of Chinook salmon (based on the predicted weight of a 36 inch long Chinook salmon) in 2012 was 16.7 pounds, which is also the historical average (Figure 4).

2012 Chinook Salmon and Steelhead Pen-rearing Projects

- Spring 2012 was the 15th year of volunteer-based pen-rearing projects for steelhead and Chinook salmon. Pen rearing projects were initiated with the intent of improving survival and/or homing of pen-reared fish when compared to traditional, shore-stocked fish.
- Approximately 497,970 Chinook salmon fingerlings were reared at eight pen sites, comprising 33% of NYSDEC’s 2012 Chinook stocking allotment.
- Approximately 83,300 steelhead (Washington strain) yearlings were reared at nine sites, representing 15.0% of NYSDEC’s 2012 steelhead stocking allotment. Most projects raised both salmon and steelhead at the same location.
- Plans for fin-clipping and tagging Chinook salmon in 2012 were cancelled due to warm temperatures and low water at stocking sites. Chinook will be marked and tagged for a 3rd and final year in 2013 to evaluate the relative contributions of pen-reared and traditional shore-stocked Chinook salmon to sportfisheries, and recoveries of marked Chinook in the open lake and at pen sites will continue through 2016.

Chinook Salmon Marking Projects

- In 2008, NYSDEC purchased an automated fish marking trailer (AutoFish) which is capable of adipose clipping and/or applying coded wire tags (CWTs) to salmon and trout at high speed and accuracy. To determine the proportions of wild and hatchery Chinook salmon in Lake Ontario, all Chinook salmon stocked by New York and Ontario from 2008-2011 were marked with an adipose fin clip. In 2012, preliminary results indicated that 56% of the Chinook salmon harvested in New York waters of Lake Ontario were wild. The proportion of wild Chinook salmon observed in most New York tributaries varied by fish age but was generally low (i.e., 5-20%), except in the Salmon River, where approximately 70% of angler-caught Chinook salmon were wild.
- To determine the degree of homing and straying to the NYSDEC Salmon River Hatchery (SRH), all Chinook Salmon stocked at the Salmon River received adipose fin clips and CWTs from 2008-2010. Straying of fish from other sites to the SRH from 2009-2012 has varied with year class and age, but has been generally low with straying rates of 6-12%.

Salmon River Wild Young-of-Year (YOY) Chinook Salmon Seining Program

- Despite below average flows in the fall of 2011 and near average flows in May 2012, mean peak catch of YOY Chinook was at a record high (872 fish per haul) during the last three weeks of May. The 2012 catches suggest that variables other than October and May flows influence the numbers of young Chinook caught in this survey.

Progress Toward Lake Trout Restoration

- Following a very low population level during 2005-2007, adult lake trout abundance increased for the 5th consecutive year, returning to levels observed in the early 2000s.
- The survival index for stocked yearlings increased in 2012 to a level not observed since the early 1990s, suggesting improved post-stocking survival.
- The number of fresh sea lamprey wounds on lake trout (2.4) was slightly above the target of 2 wounds per 100 lake trout >17 inches long examined.
- Body condition, an index of a fish’s relative “plumpness”, was high for adults but remains low for age-2 fish.

- Wild lake trout were collected each year from 1994-2012, representing 18 year classes of wild lake trout production.

Lake Ontario Black Bass Angler Diary Program

- The Lake Ontario Black Bass Angler Diary Program was initiated in 2010 to provide additional information on fishing quality experienced by anglers targeting smallmouth and largemouth bass in Lake Ontario, its embayments, and tributaries to the first impassable barrier, as well as biological characteristics of bass caught. In 2012, 33 angler diaries were returned to NYSDEC accounting for 1,687 angler hours (256 total fishing trips). Participation in the diary program was similar to 2011 (32 diaries returned). Additional participation is needed to detect statistically significant changes in the fishery. Those interested in participating in the diary program should contact the Department via e-mail at: fwfishlo@gw.dec.state.ny.us
- Smallmouth bass catch rate in Lake Ontario (3rd Saturday in June – September 30) was 0.60 bass per angler hour, approximately 1.4 times higher than rates experienced by diary cooperators in 2010 and 2011 (0.40 and 0.45 bass per angler hour, respectively), and 1.2 times higher than bass anglers interviewed in the 2012 Lake Ontario Fishing Boat Survey (0.49 bass per angler hour).

Eastern Basin Warmwater Fisheries Assessment

- Since 1976, the Department has conducted an annual index gill net survey to evaluate the status of warmwater fish populations in Lake Ontario's Eastern Basin.
- Each year since 1995, smallmouth bass and yellow perch dominated catches in the survey. In 2012, yellow perch and smallmouth bass represented 46.8% and 25.4% of the catch, respectively.
- Smallmouth bass abundance was comparable to (+2.9%) the previous 5-year average.
- Yellow perch abundance was comparable to higher levels observed in recent years, and was 7.3% above the previous 5-year average.
- Walleye abundance has remained relatively stable for more than a decade and, in 2012, was 22.9% above the previous 10-year average. NYSDEC and Ontario Ministry of Natural Resources data indicate relatively strong natural reproduction in 2008; therefore, the walleye population is expected to remain stable for several more years.
- Lake sturgeon catches were extremely rare in this assessment prior to 1995. At least one lake sturgeon was collected in 13 of the last 18 years, suggesting improved population status.
- Round gobies remain an important component of smallmouth bass diets in the eastern basin. In 2012, 79% of nonempty bass stomachs contained gobies. Round gobies have also been observed in stomachs of walleye, brown trout, lake trout, lake whitefish, yellow perch, white perch, and rock bass.

Diets of Double-crested Cormorants in Eastern Lake Ontario and the St. Lawrence River

Little Galloo Island

- Round gobies continued to be the major prey fish consumed by cormorants at Little Galloo Island and made up 88% of the diet in 2012.
- Cormorants at Little Galloo consumed 23.4 million fish in 2012, 20.6 million of which were round goby.
- Cormorant population management measures (egg oiling and culling of adult birds) at Little Galloo reduced potential fish consumption by 12 million in 2012.

St. Lawrence River

- Cormorants at three St. Lawrence River colonies (Griswold, McNair, and Strachan Islands) consumed 13 million fish in 2012.
- Round gobies were the major fish consumed by cormorants at St. Lawrence River colonies (73% of the diet), followed by yellow perch (11%), and rock bass (9%).

Lake Ontario Natural Resources Damages Settlement Projects

www.dec.ny.gov/outdoor/40068.html

Projects Completed in 2012-13

- The Lindsey Creek angler parking area (Jefferson County) was completed in October 2012.
- The Maxwell Creek fishing access site (Wayne County) was paved in July of 2012, providing a 40 car parking area.
- Improvements to the Slater Creek fishing access site (Monroe County) are complete, including re-paving the parking area and other repairs.

Ongoing Projects

- Improvements to the NYSDEC Salmon River Fish Hatchery water supply:
 - Salmon River reservoir main pipeline - A tethered video inspection probe will be used to determine the cause of the flow problem in the main pipeline. The inspection is tentatively scheduled for the end of April 2013.
 - Infiltration well development – pending contract approval, installation of a new infiltration well is planned for 2013.
- The Lake Ontario boat launch/fishing access site at the Isthmus (Jefferson County) was completed in November 2012. This site features a double-lane boat launch with floating docks, parking for 25 cars with trailers, and an additional 10 parking spaces for shore anglers. The site will open to the public once landscaping is complete and docks are installed in May 2013.
- Improvements to the Village of Morristown boat launch (St. Lawrence Co.) including a new ramp will be completed by April 1, 2013.
- The re-designed NYSDEC Great Lakes Fishing brochure is under review, and is tentatively scheduled for distribution in 2013.
- A contract is in development with Monroe County Parks to improve stream habitat and stabilize shoreline in a portion of Irondequoit Creek.
- The installation of new aquaria and interpretive displays at the Salmon River Hatchery visitor's center has been delayed due to higher priority of other hatchery issues.
- The Great Lakes Fishery Commission (GLFC) constructed a sea lamprey barrier on Orwell Brook (Oswego County) in 2013. A contract is in development to cost share with the GLFC on the barrier and to support ongoing efforts to re-establish deepwater ciscoes in Lake Ontario.

Planning efforts for 2013-14

- New interpretive displays at the Cape Vincent Fisheries Station visitor's center
- Construction of a new water control structure on Cranberry Creek (Jefferson County)
- Fishing access acquisition on Sandy Pond (Oswego County)
- Four fishing access projects at Niagara Region New York State Parks