Bureau of Fisheries
2009-10 Annual Report

State of New York
Department of
Environmental Conservation

2009-10 ANNUAL REPORT

Common Acronyms, Definitions and Units of Measure

Common Acronyms

ACOE: Army Core of Engineers

CPUE or CUE: catch per unit of effort - such as the number of fish caught per hour or fish caught per net.

DEC or NYSDEC: Department of Environmental Conservation.

DFWMR: Division of Fish, Wildlife and Marine Resources.

FWMA: Fish and Wildlife Management Act.

RM: river mile - denotes the distance upstream from the river mouth.

PFR: Public Fishing Rights.

TSMP: Toxic Substances Monitoring Program.

USGS: United States Geological Survey.

USFWS: United States Fish and Wildlife Service.

YOY: young of year - typically a fish that is captured by sampling in the same year it was hatched.

Definitions

Bottom trawl: a sampling technique where a net is dragged along the bottom of a water body behind a boat.

Creel Survey: a survey where anglers are interviewed about their catch.

Cross vane structure: a "U"-shaped structure of boulders or logs, built across the stream channel to reduce velocity and energy near the stream banks.

CROTS: Catch-Rate-Oriented-Trout-Stocking - the model used to develop stocking rates for trout streams that takes into account biological measures of the stream and stream carrying capacity, trout natural reproduction, hold-over of previously stocked trout, classification of the type of trout fishery managed for, measured or assumed angler effort and targeting an angler catch rate of 0.5 trout/hour.

Dreissenid mussles: a family of small freshwater mussels that attach themselves to stones or to any other hard surface.

Electrofishing: use of electricity to temporarily stun fish, allowing them to be captured.

Extirpated species: a species that no longer exists in the wild in a certain country or area.

Gill netting: a survey technique that uses a mesh net to ensnare fish.

Hydroacoustic survey: use of sound and reflected echoes from schools of fish to estimate abundance.

J-hook structure: an upstream directed, gently sloping structure designed to reduce bank erosion by reducing near-bank slope, velocity, velocity gradient, stream power and shear stress.

Pen reared: raising hatchery salmon or trout in a pen to "imprint" those fish to the pen rearing site. In theory, this will cause the fish to return to the pen rearing site to spawn.

PSD: proportional stock density - describes the portion of a fish population or sample that exceeds a size threshold. For example, the PSD for largemouth bass is the proportion of 12 inch and larger bass in the sample of largemouth bass that were stock size (8 inches and larger).

RSD 15: relative stock density greater than 15 inches - describes the proportion of fish larger than 15 inches in a population or sample of all fish exceeding a size threshold. For example, the RSD 15 for largemouth bass is the proportion of 15 inch and larger bass in a the sample of all largemouth bass that were stock size (8 inches and larger).

Secchi depth: the water depth in which the black and white colors of a disc can longer be distinguished from each other by an observer at the surface of the water.

Seining: using a seine net, a large net that hangs in the water due to weights along the bottom edge and floats along the top, to capture fish.

VHS/VHSv: Viral hemmoraghic septicemia - a serious disease of fish (not humans) recently introduced into New York State.

Year Class: a group of fish spawned during the same year.

Units of Measure

°C: degrees Celsius - to convert from c to farenheit (f) = (farenheit -32) x 5/9.

ha: hectare - a metric system unit of area, 1 hectare = 2.47 acres.

hr: hour.

in: inch.

kg: kilogram - a metric system unit of weight, 1 kg = 2.2 pounds.

km: kilometer - a metric system unit of length, 1 km = 0.62 miles or 3,281 feet.

m: meter - a metric system unit of length, 1 meter = 3.28 feet.

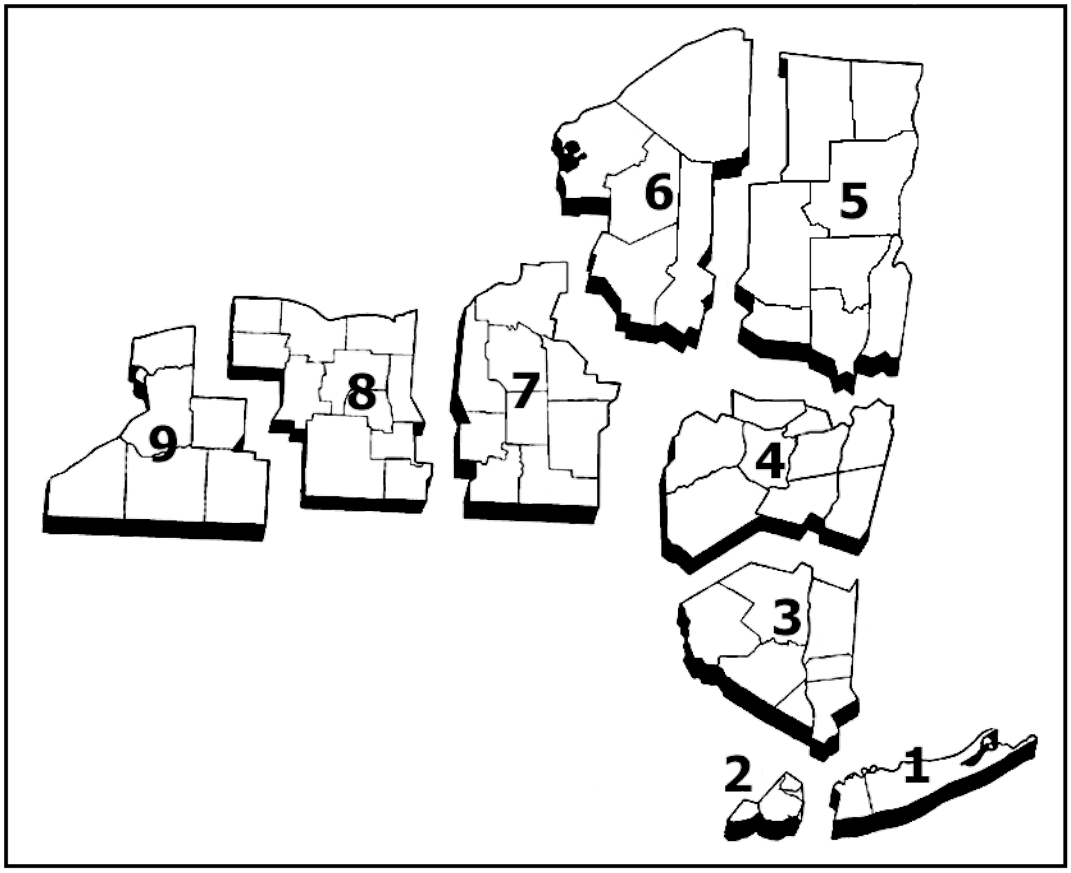
mm: millimeter - a metric system unit of length, 100 mm = 3.94 inches.

ppm: part per million - describes the density of a substance in another solid, liquid or gas (typically water, air).

ppb: parts per billion - describes the density of a substance in another solid, liquid or gas (typically water, air).

µg/l: micrograms per liter

DEC REGIONS



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INTRODUCTION

Introduction

The New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Fisheries delivers a diverse program and annually conducts a wide array of activities to accomplish its mission:

> ***Conserve and enhance New York State's abundant and diverse populations of freshwater fishes while providing the public with quality recreational angling opportunities.***

This report provides a summary of significant activities completed during fiscal year 2009-2010 by Bureau of Fisheries staff located in 9 regional offices, 2 research stations, 12 fish hatcheries, 1 fish disease laboratory, as well as the DEC Central Office in Albany. These activities are broken out by major resource or program categories including:

Species Management

- Great Lakes Research
- Warmwater Fisheries Management
- Coldwater Fisheries Management
- Inland Creel and Angler Surveys
- Endangered/Rare Fishes

Fish Culture

- Hatchery Infrastructure and Improvements
- Experimental Evaluations
- Egg Takes from Wild Fish
- Fish Health Collections
- Annual Production

Fish Health

Public Use and Outreach

- Fishing/Boating Access
- Aquatic Education/Outreach

Habitat Protection and Management

Fisheries/Angler Surveys

Technical Reports and Publications

Administration

- Permits and Licenses
- Bureau Staff

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SPECIES MANAGEMENT

Great Lakes Research: Lake Ontario

Sport Fishery Assessment

- In 2009, total Lake Ontario fishing boat effort was estimated at 77,863 fishing boat trips, which was comparable (+0.5%) to the 2004-2008 average. Total trout and salmon fishing success (charter catch per angler hour = 0.23) was the highest in the 25-year data series. The 2009 charter catch rate of Chinook salmon was the 5th highest in the data series. Charter catch rate for rainbow trout was the highest on record (76.0% higher than the 2004-2008 average) for the 2nd consecutive year. Total trout and salmon catch (228,287 fish) and harvest (122,723 fish) were dominated by Chinook salmon (44.4% and 44.8%, respectively) and rainbow trout (24.0% and 19.8%, respectively) for the 2nd consecutive year. Charter catch rate of coho salmon was the 3rd highest in the 25 year data series. The 2009 Atlantic salmon catch and harvest estimates were the highest since 1994 and catch rate was the 4th highest in the 25-year data series.
- Fishing boat trips targeting smallmouth bass during the traditional open season (3rd Saturday in June through September 30 when the creel survey ends) was an estimated 8,666 in 2009. Fishing quality for smallmouth bass along the south shore peaked in 2002 and has declined since then to the lowest levels observed since the survey began in 1985. Bass catch rate in 2009 declined 82.1% from the 2002 peak. This decline coincides with an exponential increase in round goby catches. Round goby is likely a contributing factor to the poor fishing quality; however, the current status of the southern shore bass population is unknown.

Anglers being surveyed as part of the sportfishery assessment.

Prey Fish Assessments

A trawl net full of baitfish collected as part of the preyfish asessment of Lake Ontario.

- In spring 2009, the abundance of adult alewife (age-2 and older) in U.S. waters of Lake Ontario was very similar to 2008, and higher than during 2004-2007. The 2009 biomass index increased from 2008 and was the highest observed since 2001. During 2003-2009, alewife condition in the fall has been higher than in any other period since the late 1970's, suggesting that the alewife population was at a level that does not depress food resources.
- After reaching historic lows in 2008, both number and weight indices for adult rainbow smelt increased in 2009 and were higher than 2007 or 2008. The number of age-1 rainbow smelt caught in 2009 was over double that observed in 2008, but still only 14% of the most recent high point in 2004. Sixty-five percent of the catch of rainbow smelt in 2009 was yearlings. Larger and older rainbow smelt remained scarce in 2009.
- During 2009 standard assessment trawling, USGS/DEC caught 66 deepwater sculpins, more than double the number of individuals collected in 2008. This continues the recent trend of increased catches of this species, once thought to be extirpated from Lake Ontario.
- The 2009 hydroacoustic survey of Lake Ontario preyfish populations consisted of five cross-lake transects and an Eastern Basin transect. Yearling and older alewife abundance (134 million fish) declined 45% from 2008 and remained relatively low at about 68% of the previous 5-year average. Alewife biomass (5,298 metric tons) also declined but was 18% greater than the 5-year average, principally due to the large average size of the 2005 year class which dominated the catches. The 2009 midsummer acoustic estimates of YOY smelt abundance and biomass in Lake Ontario increased slightly but remained relatively low, with 311 million fish and 1,714 metric tons, respectively.

SPECIES MANAGEMENT

Great Lakes Research: Lake Ontario

- In 2009, both the abundance and biomass indices for round goby decreased considerably from 2008. Gobies were first detected in 2002 and are now found along the entire south shore of Lake Ontario, with the highest population densities in U.S. waters just east of the Niagara River.

Coldwater Fisheries Management

- Fish stocking in the New York waters of Lake Ontario in 2009 included 1.76 million Chinook salmon, 250,420 coho salmon, 733,755 rainbow trout, 511,177 lake trout, 538,960 brown trout, and 74,000 Atlantic salmon.
- In 2009, 505,277 lake trout and 125,000 brown trout were stocked offshore by military landing craft in a continuing effort to reduce predation on newly stocked fish by double-crested cormorants and predatory fish.
- The 2009 mean length (35.2 in) and weight (19.45 lbs) of age-3 Chinook salmon in August, as measured from the open lake boat fishery, were the lowest and second lowest observed in the data series, respectively. Despite the declines in length and weight, condition in 2009, as determined from predicted weights of given length fish, was average for larger Chinook salmon (i.e. 36 in and 40 in fish). Condition of small Chinook salmon (i.e. 16, 20, and 24 in fish) was poor and the third lowest calculated.
- At Salmon River hatchery, the mean weight of age-1 Chinook males (jacks) sampled in 2009 was about 0.25 pounds above the long-term average. Age-2 male Chinook salmon were 0.3 pounds heavier than their historical average and females were 1.0 pound lighter than their historical average, but significantly heavier than the all-time low measured in 2007. Age-3 fish of both sexes were almost 2 pounds below their historical averages but significantly heavier than lows observed in recent years.
- Steelhead are sampled in the spring and, unlike Chinook and coho salmon, do not reflect growth during the 2009 growing season. Weights reported here reflect conditions prior to and including 2008. The mean weight of age-3 males was 5.2 lbs, only 0.1 lb lighter than the long-term average. The mean weight of Age-3 females was 6.1 lbs, 0.75 lbs lighter than the long term average, and significantly lighter than those sampled in 9 of the previous 21-years. The mean weight of Age-4 males was 8.0 lbs, 1.1 lbs lighter than average, but rebounding 1.5 lbs from the low observed in 2008. Age 4-females weighed 8.7 lbs, 0.8 lbs lighter than average and significantly lighter than 9 of the previous 21 years.
- Since the institution of seasonal base flows in the Salmon River, a dramatic increase in natural reproduction of Chinook salmon continues to be documented. Numbers of young-of-the-year Chinook salmon caught in 2009 were lower than anticipated, with a mean peak catch of 93 per haul during the last 3 weeks of May (mean=195, 2001-2008). This was probably a result of high flows that caused a relatively high rate of flushing of fish from the river during that time period. Flow during the previous October and average flow during May are both important factors for predicting parr year class strength.
- The twelfth year of pen-rearing steelhead and Chinook salmon along the New York shoreline of Lake Ontario was very successful due to low fish mortality at all sites, and a relatively high percentage of fish reaching target weights. A total of 94,060 steelhead trout (Washington and Skamania strains) were raised at nine pen sites comprising 14% of NYSDEC's Lake Ontario rainbow trout/steelhead stocking allotment in 2009. Six pen-rearing sites raised a total of 313,600 Chinook salmon, representing 18% of NYSDEC's 2009 Chinook stocking allotment.
- In 2008 and 2009, NYSDEC and the Ontario Ministry of Natural Resources began "mass marking" all stocked Chinook salmon (adipose fin clip on all Chinook; selected lots also receiving coded wire tags). This study will determine the relative contributions of wild and hatchery stocked Chinook salmon to the fishery. In 2010, mass marking technology will be used to begin evaluations of the performance of pen-reared Chinook salmon.

Coldwater fisheries management in Lake Ontario has produced an excellent salmon and trout fishery.

Lake Trout Restoration

- In 2009 the juvenile lake trout survival index was 2.4 times greater than the 2008 value, but remained low and was 72% below the average for the 1983-1989 year classes. In five out of the last eleven years, the survival index was about 3.5 times higher than the lows seen for the 1994–1996 year classes. In recent years, nearly all of the age-2 fish sampled were caught in the western end of Lake Ontario.

SPECIES MANAGEMENT

Great Lakes Research: Lake Ontario

- A total of 527 adult lake trout were captured in the September 2009 gill net survey. The 2009 catch per unit effort (CPUE) of 7.6 for adult fish was 56% below the 1986-1998 mean and 31% below the 1999-2004 mean. The 2005-2009 mature lake trout CPUEs were similar to the 1982 and 1983 values which pre-dated effective sea lamprey control and recruitment from the first large stocking in 1979.
- Sea lamprey wounding rates on lake trout remain much lower than pre-1985 levels, but were above the target level of two A1 wounds (fresh, with no signs of healing) per 100 fish for eight of the last thirteen years. A1 wounding rate in 2009 was 1.22 wounds per 100 fish and was below target for the second consecutive year after six years of rates exceeding the target.
- In 2009, three naturally produced (wild) age-2 (mean size: 220.3 mm, 8.7 in) lake trout were caught during bottom trawling. Survival of naturally produced lake trout to the fingerling stage in summer and fall occurred each year during 1993-2007 representing production of 15 consecutive year classes. We caught no wild yearling lake trout during 2005-2009 and have no evidence of a naturally produced year class in 2008. Low numbers of small (<100 mm, 3.9 in), wild fish captured in recent years (1997-2009) may be due in part to a change in bottom trawl gear that was necessary to avoid abundant dreissenid mussels.
- Condition of adult lake trout (weight of a 700 mm or 27.6 in total length fish) in 2007-2009 increased from the relatively low 2003-2006 values to a level equivalent to the high levels observed during 1996-1999 (mean of 3679.6g, 8.1 lb; the highest values in the data series).
- In 2009, lake trout harvest (4,733), catch (11,241), and harvest rate were among the lowest values recorded. Relatively poor fishing for lake trout in 2009 was likely due, in part, to the declines in adult population size since 2004 and the relatively good fishing for Chinook salmon, coho salmon and rainbow trout.

Warmwater Fisheries

- Catch-per-unit-effort (CPUE) of warmwater fish in the 2009 Eastern Basin index gill netting survey was 31.4 fish/gill net and was comparable to the previous 5-year (2004-2008) average. The catch was dominated by smallmouth bass (31.2%) and yellow perch (23.4%).
- Walleye abundance in 2008 was 23.3% and 35.5% above previous 5-year and 10-year averages, respectively. In 2009, we observed the third highest catch of age-1 walleye since the assessment began in 1976, suggesting a strong 2008 year class.
- Smallmouth bass abundance in the Eastern Basin as measured in index gill nets was 133.2% higher than the 5-year period (2000-2004) when CPUE was at record low levels. Recent improved smallmouth bass growth and condition continued in 2009 with record or near record high mean length-at-age for all ages 2-10, and continued high condition of larger bass. Improved growth and a reduction in cormorant predation pressure likely contributed to the increased CPUEs observed from 2005-2009 as compared to CPUEs during 2000-2004.
- Yellow perch abundance in 2009 decreased 33.8% compared to the 2004-2008 average. The decline in yellow perch CPUE may be due to the relatively high variability of yellow perch catch in the gill nets. The NYSDEC Lake Ontario fishing boat survey estimated the two years of highest yellow perch harvest occurred in 2008 and 2009, indicating relatively higher yellow perch abundance in areas outside of the eastern basin.
- Round gobies first appeared in the Eastern Basin assessment in 2005 in both gillnet catches and smallmouth bass diets. Goby occurrence in predator diets increased each year since. In 2009, 59% of non-empty smallmouth bass stomachs contained gobies. Gobies were present in walleye diets each year from 2006-2009 and have been found in northern pike and brown trout caught in this survey.
- In Lake Ontario's Eastern Basin white perch abundance in 2008 was more than 6-fold higher than the previous 5-year average and the highest since 1991. In 2009, white perch CPUE declined 61.0% from 2008; however, it was the 3rd most commonly caught fish in the assessment, and CPUE (3.0) was 19.8% and 73.3% higher than the previous 5-year and 10-year averages, respectively.
- At least one Lake sturgeon has been collected in the Eastern Basin in eleven of the last fifteen years suggesting improvements in population status.

Diets of Double-crested Cormorants and Impacts on Sportfish Populations

- Egg oiling on Little Galloo Island in 2009 reduced cormorant chick production by approximately 86%, thereby reducing the number of cormorant chick feeding days by 345,424. The resulting reduction in fish consumption was estimated at 18,000 smallmouth bass and 156,000 yellow perch.
- In 2009, smallmouth bass abundance in the Eastern Basin as measured by index gill nets was 133.2% higher than the 2000-2004 average (the period of lowest CPUEs on record). Recent trends may indicate a population response to reduced cormorant predation.

Great Lakes Research: Lake Ontario

- Estimated total fish consumption by cormorants from the Little Galloo Island colony in 2009 was 13.11 million fish, including 12.7 million round goby, 0.36 million alewife, 0.36 million yellow perch, 0.16 million rock bass, 0.10 million pumpkinseed, and 0.02 million smallmouth bass.

Double-crested cormorant

- Estimated total fish consumption by cormorants from three upper St. Lawrence River colonies (Ontario waters) in 2009 was 13.9 million fish (0.71 million pounds). Average annual fish consumption by cormorants from Griswold, McNair, and Strachan Islands since 1999 is 7.41 million fish.
- Since 1999, the cormorant reproductive suppression program on Little Galloo Island has cumulatively reduced fish consumption by chicks at the colony by 62.7 million fish, including approximately 9.2 million yellow perch and 2.4 million smallmouth bass.

Deepwater Cisco Re-introduction

- In February 2010, fertilized bloater (*Coregonus hoyi*) eggs were obtained from Lake Michigan and experimentally reared by the Lake Ontario Unit at the Cape Vincent Fisheries Station (CVFS). The deepwater cisco re-introduction project is being conducted collaboratively with the Ontario Ministry of Natural Resources, USFWS, and the Great Lakes Fishery Commission. A variety of experiments were performed, including shipments of "green" eggs and dead, ripe adults for fertilization experiments at CVFS. Over 188,000 eggs were exposed to milt; however, only 30% of eggs were actually fertilized. No green eggs or eggs stripped from freshly shipped females fertilized successfully. While no fish will be stocked into Lake Ontario from these experiments, great progress has been made and experimental work will continue in 2010 and beyond.

Lower Trophic Level Monitoring

- From 1995-2009, the biomonitoring program in Lake Ontario has measured indicators of lower food web status with the primary objective of evaluating temporal and spatial patterns in total phosphorus, soluble reactive phosphorus, chlorophyll a, Secchi depth, and crustacean zooplankton density, biomass, and size structure.
- Embayments remained the most productive habitat in 2009 with the highest zooplankton density and biomass, chlorophyll a, total phosphorus, and soluble reactive phosphorus, as well as the lowest water clarity.
- The lower trophic level indicators were similar in the nearshore and offshore habitats and indicative of oligotrophic conditions. In 2009, low spring total phosphorus, low summer chlorophyll a, and high secchi depth were among the most extreme recorded, indicating low productivity and high water clarity in Lake Ontario's nearshore and offshore waters.
- Spring total phosphorus has been below the goal of 10 micrograms/liter set by the Great Lakes Water Quality Agreement of 1978 in the offshore since 1995 and in the nearshore since 2005.
- The current alewife population apparently was not sufficiently abundant to suppress larger sized, invasive zooplankton (*Cercopagis pengoi* and *Bythotrephes longimanus*). Bythotrephes and Cercopagis remained important components of the zooplankton community in 2009; however, abundance and biomass of these two species during their respective peak periods were in the lower range of what has been observed since 1998. The increase of Bythotrephes abundance in 2005 coincided with the decreased biomass of crustacean zooplankton, particularly the significant decline of bosminids and cyclopoid copepods in nearshore and offshore waters.
- Overall, zooplankton biomass in Lake Ontario's offshore epilimnion (surface waters) has been declining since the late-1990s at a rate of 15% per year. Similar rates of decline occurred in the 1980s, resulting in a 99% reduction in zooplankton biomass within the epilimnion in the last three decades. Offshore summer epilimnetic zooplankton density declined 13% per year since the early 1980s.

Irondequoit Bay Electrofishing Survey

- An electrofishing survey of Irondequit Bay was conducted in 2009 to characterize the warm water fish community and complement gill net survey conducted in 2005. Two hundred sixteen individuals of 17 species were caught in 6.5 hours of electrofishing. 61% of the catch was largemouth bass, followed by yellow perch (8%), bluegill sunfish (6%), and walleye (5%). Analysis of the data and comparisons with previous surveys will be done at a later date.

State of the Lake Ontario Meetings

- These annual events bring together researchers and management officials from both State and Federal Governments to present the latest finding on the fishery of Lake Ontario. The meetings are held in Lockport, Mexico and Rochester. Rochester is usually one of the larger venues, and this year was no exception with over 120 people in attendance.

SPECIES MANAGEMENT

Great Lakes Research: Lake Erie

Sport Fishery Assessment

- An annual boat fishing survey found overall boat fishing effort on Lake Erie estimated as 268,942 angler-hours. This was a decline to the lowest measure observed in this 22 year data series. This decline seems mostly attributable to an accompanying decline in walleye fishing quality during 2009.
- Boat fishing survey results found smallmouth bass and yellow perch fishing quality to have been superb through recent years. Recent good spawning success suggests this good quality perch and bass fishing should continue in the near future.

A creel agent collecting information for the annual boat fishing survey.

Coldwater Fisheries Assessment

- Fish stocking in the New York waters of Lake Erie in 2009 totaled 512,632 fish including lake trout, rainbow trout (including steelhead), and brown trout. Steelhead accounted for most of this total with 272,000 yearlings stocked in nine tributaries.
- Surveys continued to assess abundance of wild, juvenile steelhead in Chautauqua Creek in anticipation of a fish passage initiative to increase steelhead access to 10 additional miles of upstream spawning and nursery habitat. Results of surveys through 2009 found few wild juvenile steelhead above barriers, highlighting the impact of these barriers and the anticipated benefits of achieving fish passage.

Warmwater Fisheries Assessment

- Survey netting found the dominant 2003 walleye year class as a very prominent component of the adult population at age-6. This same assessment detected only average spawning success since 2003, which indicates the adult population should gradually decline from a peak observed just a few years earlier.
- Smallmouth bass monitoring found this population slightly above long-term abundance levels, with moderate to high catches of juvenile bass detected through recent years. This forecasts abundance of the adult population to remain high in the near future.
- Predator growth rates were generally above long term average measures. In 2009, age-2 and age-3 smallmouth bass averaged 11.4-in and 13.7-in total length, respectively. Both of these measures in 2009 were approximately an inch longer than the average for bass in this 29-year time series.
- Survey netting measures for both adult and juvenile yellow perch in recent years have been especially high in Lake Erie, suggesting a large and stable adult yellow perch population will extend at least another few years.

Lake Trout Restoration

- Back-to-back annual treatments for sea lamprey for all key Lake Erie tributaries were completed in 2008 and 2009. These treatments are hoped to reduce sea lamprey wounding to below target levels beginning in 2010.
- Lake trout wounding rates and sea lamprey nest counts increased sharply in 2009, indicating that the Lake Erie sea lamprey population had been increasing just prior to initiation of aggressive treatments of all major sea lamprey spawning streams during 2008 and 2009.
- Standard survey netting found the abundance of lake trout has been slowly increasing since 2000. Much of the current population is comprised of young fish between 2 and 5 years old. A recently stocked Klondike strain of lake trout continues to show promise by demonstrating excellent sub-adult survival rates.

Prey Fish Assessments

- Bottom trawling results suggest that autumn forage fish densities in the New York waters of Lake Erie during 2009 were high relative to the history (1992-2009) of this annual trawling series. Through recent years rainbow smelt and round goby both contributed substantially to overall forage fish abundance.
- Examination of predator diets from netting surveys and from fish cleaning stations found predator diets dominated by rainbow smelt and round goby.

SPECIES MANAGEMENT

Great Lakes Research: Rivers

St. Lawrence River

Young of Year Northern Pike and Muskellunge Index

Standardized sampling of northern pike and muskellunge productivity has been ongoing in the St. Lawrence River since the year 2000. Northern pike young of year were low in abundance for both the Thousand Islands and Lake St. Lawrence in 2009, 0.06 and 0.1 fish/standard seine haul respectively. Muskellunge Y-O-Y were not collected in the Thousand Island samples, which is not unusual, but were found in abundance in Lake St. Lawrence (CUE = 0.91 fish/standard haul).

Lake St. Lawrence Warmwater Fish Stock Assessment

This annual index netting program took place in September of 2009. A total of 632 fish (CPUE=19.75 fish/net night) were collected. The catch was one of the higher for this index netting program. Of interest, smallmouth bass were at the lowest recorded density for this assessment (CPUE=1.0 f/nn). Walleye catch set a new record (CPUE=3.03 f/nn) and were comprised of predominantly age-2 fish. Yellow perch were found in abundance with a high proportion of the catch being >9 inches in length.

Angler Survey 2008-2009

The St. Lawrence River Angler Survey was completed in October of 2009. Boat anglers were interviewed over the 100 mile length of the St. Lawrence River from Cape Vincent to Massena. Preliminary results indicate that New York residents comprised the bulk of the anglers (72%). The bulk of anglers accessed the river from private residences or marinas (61.1%) while the remainder used public launches or state parks. On average approximately 337,000 angler hours were expended on an annual basis by boating anglers. An overall trend towards increased recreational boating and potentially decreased fishing activity was noted, along with the dominance of the catch and release philosophy of the angling public.

Thousand Islands Warmwater Fish Stock Assessment

Results of 2009 sampling with the greatest management significance include:

1) Northern pike abundance remains low, recruitment is relatively poor due to habitat loss,
2) Smallmouth bass abundance declined substantially reversing a recent increasing trend, and
3) Alewife abundance was surprisingly high.

The last time alewife abundance was near this level was 1986, when high St. Lawrence River abundance was thought to result from spillover from a very abundant Lake Ontario alewife population.

Upper and Lower Niagara River

Muskellunge Surveys

The Region 9 Fisheries Unit, a SUNY ESF PhD candidate, and a Niagara Musky Association volunteer completed several muskellunge surveys. In late May and early June, cooperative electrofishing efforts in the Buffalo Harbor/ Upper and Lower Niagara River collected 66 muskellunge, including 36 adults (> 30 in) and 30 sub-adults. Approximately 1/2 the adults were collected in the Upper Niagara River, 1/3 from the Lower Niagara River, and only a few adults were collected in Buffalo Harbor area. The sampling team collected a substantial number of sub-adult muskellunge, including a number of yearlings and two-year olds. Many of these fish were encountered in a basin associated with a tributary to the Upper Niagara River. This basin appears to be significant habitat for young muskellunge.

Electrofishing was conducted at several Upper Niagara River sites to assess relative abundance of young-of-year (YOY) muskellunge. At 102nd Street embayment, no young muskellunge were collected, which was disappointing. This particular embayment historically supported YOY muskellunge, however it was substantially disturbed and then restored during a sediment remediation project in the 1990's. In the previous year, a substantial number of YOY muskellunge were collected from the heavily vegetated embayment. YOY production at the embayment may be inconsistent from year to year and is likely influenced by annual changes in vegetated inshore habitat and other factors.

Electrofishing was conducted in the Lower Niagara on November 12th, primarily to collect adult muskellunge for genetic sampling. No adults were encountered, however 10 YOY muskellunge were collected at three sites downstream of Stella Niagara. Young muskellunge had been collected previously in 1995 at two of the sites located along the Ontario shoreline. Young muskellunge were also collected at a new location along the New York shoreline in the vicinity of Peggy's Eddy.

Juvenile muskellunge caught from the Niagara River.

SPECIES MANAGEMENT

Warmwater Fisheries Management: Lakes and Ponds

Region 1

Forest City Park Pond

An electrofishing survey was conducted on Forest City Park on May 12, 2009, to assess the bass/sunfish population. The pond was used as a source pond in 1994 for a trap-and-transfer project because of the extremely high catch rate of bass under 8 inches. The bass catch rate in 2009 was 20% of the catch rate in 1994. Bluegill are now more common than pumpkinseed.

Region 2

Clove Lake (Staten Island) General Biological Survey and Fish Health Surveillance, 9/15/09

An electrofishing survey of Clove Lake, Staten Island, revealed brown bullhead as a major proportion of the fish population. Most fell within the 5" – 8" size. Pumpkinseeds, bluegills and largemouth bass (up to 15") composed most of the other fish collected.

Rare Fish Investigation, Moravian Cemetery (Staten Island) 4/8/09

A 1909 record indicating bridle shiner (*Notropis bifrenatus*) once inhabited waters of Moravian Cemetery, Staten Island, triggered interest in determining if these fish were still present in the brook. A backpack electrofisher was used to collect fish of the brook. Although sunfish, largemouth bass and American eels were found, bridle shiners were not.

Van Cortlandt Lake (Bronx) Fish Survey with Fish Health Surveillance, 4/21/09

An electrofishing survey of Van Cortlandt Lake in April showed that while yellow perch were the greatest proportion of fish captured, the black crappie catch was also common. Also captured during the electrofishing survey were brown bullhead catfish over 13" in length, largemouth bass over 14" in length, white suckers and many sunfish.

Harlem Meer and Central Park Lake Fish Surveys, Central Park, 5/5/09 & 5/6/09

Electrofishing surveys of the Harlem Meer and Central Park Lake, both located in Central Park, were completed during two consecutive evenings in May. The capture of a northern snakehead in the latter prompted the 2009 surveys. A significant finding was an absence of large-sized largemouth bass in the Harlem Meer suggesting illegal harvest of these fish or insufficient amounts of prey. Alternatively, the Central Park Lake survey revealed a relatively large proportion of bass over 12 inches. No snakeheads were observed or captured.

Fish Survey of Meadow Lake

Routine surveillance of Meadow and Willow Lakes for the invasive northern snakehead continued with an electrofishing survey of Meadow Lake on July 6, 2009. Catch rates for snakeheads and other fish species were relatively low, most likely due to high water turbidity. The survey was notable for the capture of a 31" snakehead, the largest caught by Region 2 Fisheries staff to date. Snakeheads were first discovered in Meadow Lake in 2005.

Region 3

Toronto Reservoir

A boat electrofishing survey was conducted on Toronto Reservoir in the spring of 2009. Sixteen species were collected, with an abundant smallmouth bass population being documented. Interestingly, 24 walleye up to 30 inches long were collected. The walleyes are from a private stocking policy.

Region 4

Upper Blenheim-Gilboa Reservoir

The 360 acre upper Blenheim-Gilboa Reservoir was sampled with six gill nets. The catch of 12.2 fish/net indicates a sparse fish population. However, the catch of 7.5 walleye/net and 2.5 legal walleye/net suggests a high abundance of walleye in this reservoir.

Picking a gill net at Blenheim-Gioboa Reservoir.

Region 5

Loon Lake Walleye Assessment

On October 14 and 15, 2009, a post stocking walleye assessment was completed on Loon Lake, Warren County. Approximately 12,000 fifty day fingerlings were stocked

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on June 11, 2009, and will be stocked for each of the next four years. While we did not collect any of the stocked fish to evaluate their growth, three adult walleye ranging from 19 to 22 inches were collected by electrofishing. These walleye are remnants of previous attempts to establish a population in Loon Lake.

Rainbow Lake

Rainbow Lake, Town of Brighton in Franklin County, was sampled in the second week of June. Multiple year classes of walleye were caught, though the catch rate was modest at one walleye per net set. This rate was still much better than a similar netting effort done in 1997 after walleye stocking efforts by the Rainbow Lake Association. The size structure of the yellow perch population appears to have greatly improved from 1997 when this species dominated the fish community and were of small average size.

Lake Champlain Bass Population Monitoring Initiated

DEC and USFWS initiated nighttime electrofishing transects for centrarchid monitoring on Lake Champlain. The goal was to identify specific places which can be re-surveyed in future years which are representative of the habitats of Lake Champlain.

Region 6

Five Falls Reservoir Percid Sampling

Five Falls Reservoir, one of the Raquette River impoundments, was evaluated for walleye in June of 2009. During Federal Energy Regulatory Commission (FERC) relicensing in 2002, requirements for increased spring bypass flows were initiated to enhance habitat for spawning walleye. Both gill netting and seining failed to produce any walleye. The lack of either adult or juvenile walleye implies that additional spring flows had a negligible effect on the overall walleye population.

Walleye Fingerling Evaluation

No young-of-the-year walleye were found in Black, Red and Payne Lakes (Jefferson and St. Lawrence Counties), but sampling did provide good indices of large (>15 inch) predator abundance which could affect fingerling stocking success. Predator abundance was high in all lakes. Stocking methods will be modified next year.

Black Lake Bass Evaluation

Black Lake, Jefferson County, sampling produced a good estimate of largemouth bass size distribution which showed no evidence of fish stockpiling just below the minimum length of 15 inches. This had been a concern of some local anglers, but no evidence was found requiring modified regulations.

Electrofishing boats are often used as a non-lethal method to sample fish populations.

Region 7

Panther Lake

An assessment of the fish community in Panther Lake, Oswego County, was completed in late spring to determine the existing predatory fish population. Local anglers expressed a desire for the DEC to stock walleyes in Panther Lake, which had been done periodically in the past. It was determined that the black bass and pickerel populations were fairly high, and therefore the probability of a successful walleye stocking program was low. It was decided that the existing tiger muskellunge stocking program should continue since it is a small but popular fishery.

Whitney Point Reservoir Summer Fish Assessment

Standard summer sampling was conducted on Whitney Point Reservoir, Broome County, in 2009 to monitor population trends of the reservoir's fish community, particularly walleye and crappie. The number of walleye caught per gillnet was almost twice the former record catch from the 2007 effort. Multiple sizes/year classes were represented from 8" (Age 0) up to 25" (Age 9+). Crappie populations continue to be depressed, and there appeared to be very few fish from the 2008 year-class present. Although the reason for poor crappie production is not clear, walleye may be playing a role in keeping crappie populations suppressed. Because walleye density is so high and recruitment of walleye via natural reproduction has been consistently high since the mid-1990s, a return to the statewide walleye regulation appears to be in order.

Warmwater Fisheries Management: Lakes and Ponds

Whitney Point Reservoir Electrofishing to Assess Juvenile Walleye Abundance

Fall sampling for juvenile walleye revealed strong year-classes of walleye were produced in both 2008 and 2009. Abundance of yearling (2008 year-class) walleye was the third highest of the eight years we have estimates for, and their average size (~11") was good. Young-of-year (YOY) walleye were also abundant but the average size of these fish (>6") was the smallest we have yet observed in fourteen years of sampling the reservoir. The 2008 year-class should contribute substantially to the future walleye fishery, but the small average size of the 2009 year-class will likely limit their overall contribution to the fishery.

Otisco Lake Fall Electrofishing to Assess Juvenile Walleye Abundance

Several walleye fingerlings from the spring 2009 stocking were captured during limited sampling in October, indicating the experimental stocking of 50-day old fish can be successful. However, abundance of these fish was relatively low indicating this year-class likely won't contribute great numbers to the fishery as adults. Yearling walleye (stocked in 2008) were very abundant and continued to show good growth. This year-class should contribute significantly to the walleye fishery in another two to three years.

Region 8

Waterport Reservoir's Fish Community Assessment

A fisheries survey of Waterport Reservoir in the Town of Carlton, Orleans County, was conducted from September 14 to 15, 2009. The purpose of the survey was to assess the overall fish community and the success of annual fingerling walleye stockings that have taken place since 1989. The game fish catch consisted of 6 walleyes, 73 largemouth bass, 14 smallmouth bass, and one northern pike. Three round goby, an invasive species, were captured in the reservoir for the first time. Initial results suggest that fingerling walleye stocking has resulted in a relatively small population.

Conesus Lake's Fish Community Assessment

A fisheries survey of Conesus Lake, Livingston County, was conducted from September 21 to 24, 2009. The purpose of the survey was to assess the overall fish community and the success of fingerling walleye from DEC hatcheries that have been stocked periodically since 1984. The game fish catch consisted of 109 walleyes, 27 smallmouth bass, and nine northern pike. Twenty seven juvenile walleyes were collected, suggesting that survival of recently stocked fingerlings is good. Multiple year classes of walleye were captured. Further analysis is needed to draw conclusions about the walleye population. Only four yellow perch (0.4/net) were sampled, indicating that recruitment of this species is still suppressed by alewife predation.

Conesus Lake walleyes during their spring spawning run.

Waneta and Lamoka Lakes Fishery Surveys

An electrofishing survey was conducted on these lakes as part of on-going monitoring of the impacts of an aquatic plant treatment using the herbicide, tryclopyr. This survey represents the seventh and final year of annual spring and fall surveys. Results to date suggest there are no biologically significant affects on reproduction and growth of fish in these lakes that can be attributed to large scale, short-term vegetation control.

Waneta Lake Musky Netting

A netting survey was conducted on April 14-24, 2009, to evaluate the Waneta Lake muskellunge population. A total of 158 muskellunge were collected. Catch rates were lower than a similar 2005 survey, but were higher than results from the 1990s. Fifty-nine percent of the muskellunge were legal size (30 in) or greater. Further data analysis is needed to determine if the 2003 Sonar treatment to control Eurasion watermilfoil, which subsequently eliminated all vegetation for a period of two years, had negatively impacted the musky poplation.

Region 9

Silver Lake Fisheries Surveys

An electrofishing survey was conducted on Silver Lake to evaluate the fish community and examine the relative abundance and size distribution of yellow perch and walleye. Biologists had received several phone calls from anglers concerned that walleye abundance had declined. Although the data has yet to be analyzed, walleye numbers appeared to be comparable to the 2004 survey.

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Warmwater Fisheries Management: Lakes and Ponds

Chautauqua Lake Trawl Surveys

In 2009, Regional Fisheries Staff sampled several locations in Chautauqua Lake with a bottom trawl (net is pulled behind boat to capture fish located on bottom). Results showed an increased abundance of smaller walleye. These results are encouraging in light of the low numbers of young walleye collected over the last several years. To compensate for low natural reproduction, Chautauqua Lake has been stocked with fingerling walleye since 2003.

Chautauqua Lake Fisheries Assessment

Fisheries staff completed the fall electrofishing assessment for bass, walleye and muskellunge. Both largemouth and smallmouth bass were abundant at most sites. Walleye, although not approaching historical levels of abundance, showed either good survival from stocking or an adequate natural hatch in 2008.

Cornell University Research

Ecology and Management of the Fish Communities in Oneida and Canadarago Lakes:

Researchers at the Cornell Biological Field Station at Oneida Lake completed their annual assessment of the fish communities in Oneida and Canadarago Lakes. Funded by a Federal Aid to Sportfish Restoration grant, these monitoring projects are the longest running warmwater fishery assessments in New York State and continue to provide valuable insight on the complex dynamics associated with warmwater fish populations in large northern lakes.

Oneida Lake

- The adult walleye population was estimated to be 368,300. Over the full span of the 1975 – 2009 data series, the adult walleye population has exhibited a significant decrease, but has shown a significant increase in the last decade, partly driven by a large 2001 year class, three years with restrictive harvest regulations, and a positive response to the cormorant hazing program.
- The yellow perch population was estimated to be 808,000 age-3 and older fish, which is a sharp drop from the 2008 estimate (1.6 million), but is similar to the 2007 estimate. It is expected that yellow perch numbers will fluctuate around 1 million fish in the near future.
- Walleye and yellow perch represented 46% of the total gill net catch whereas white perch comprised 44% of the catch. This was the second highest percent catch of white perch on record (behind 2007).

The Oneida Lake age-3 and older yellow perch population was estimated at 808,000 fish.

- Cormorant numbers averaged 128 birds from April through October. A diet analysis indicated that gizzard shad made up 67% of the food items found in cormorant stomachs whereas yellow perch represented 21% of the food items. Cormorants should not have had a measurable effect on percids in 2009.
- A new invasive species, *Hemimysis anomala* (bloody red shrimp), was discovered in the stomach of a white perch collected during routine gill net sampling. Subsequent sampling revealed the organism is widely distributed in Oneida Lake. Continued monitoring of fish diets and growth patterns, combined with routine limnological monitoring should allow us to detect potential impacts of this new invasive in the future.

Canadarago Lake

- Walleye natural recruitment was low again in 2009. Fry sampling since 2005 has produced few or no walleye fry. Yellow perch fry were abundant in 2005 and 2006, decreased dramatically in 2008 and rebounded in 2009.
- A mark recapture study yielded a population estimate of 14,233 adult walleye. This number will be adjusted after all scale samples are aged. The adult walleye population was estimated at 18,667 in 2004.
- Estimates of alewife abundance have steadily increased over the last 5 years and were at the highest level on record in 2009.
- Zooplankton average size (0.35 mm) was well below average, and biomass (95 µg/l) was also well below the long term ranges seen in Canadarago Lake. These declines are consistent with increased density of planktivorous fishes such as alewife.

SPECIES MANAGEMENT

Warmwater Fisheries Management: Rivers

Region 3

Northern Snakehead Eradication

In 2008, rotenone, a substance poisonous to fish, was used in Ridgebury Lake and Catlin Creek, Town of Wawayanda, Orange County, to eradicate northern snakeheads. A follow up survey in 2009 captured 2 adult snakeheads. Consequently, a second northern snakehead eradication effort occurred in the fall of 2009, including the use of three Mashmaster tractors from the USFWS to allow for a more thorough application of the rotenone. Twenty eight juvenile northern snakeheads were collected following the rotenone treatment in 2009. All the snakeheads collected came from the area downstream of where two adults had been collected earlier in the year. Upstream of this point (where a small dam impounding a private pond prevented upstream movement), no northern snakeheads were collected; indicating that the 2008 treatment may have been 100% successful in this section all the way up to including Ridgebury Lake. No snakeheads have been caught in Catlin Creek since the 2009 treatment.

USFWS Marshmaster in use applying rotenone to a marshy area of Catlin Creek.

Fall Tidal Hudson River Black Bass Electrofishing Surveys

Electrofishing surveys were conducted to sample the black bass populations in the tidal portions of the Rondout Creek and Esopus Creek during late October, 2009. The survey purpose was to help assess the Hudson River black bass population's response to a fall 2006 regulation change that increased the minimum size limit for bass from 12 inches up to 15 inches. In the tidal Rondout Creek, 182 largemouth bass and 5 smallmouth bass were collected in 2 hours of electrofishing. Nearly 45% of the bass collected were over 15". In the tidal Esopus Creek, 174 largemouth bass and 4 smallmouth bass were collected in 1.68 hours of electrofishing. Over 40% of the bass collected from the Esopus Creek were over 15". Over the next several years, the fishery will be monitored in a variety of ways to assess the effectiveness of the new size regulation.

Region 6

Mohawk River -Walleye Spawning Survey

Spawning walleye from Delta Lake were assessed in the Mohawk River in Westernville using boat electrofishing. High water initially caused sampling difficulty, but eventual results indicated that natural spawning is significant to the support of this important walleye fishery.

Region 7

Susquehanna River Migratory Fish Restoration Plan

Staff participated in a major effort to rewrite the "Migratory Fish Management and Restoration Plan for the Susquehanna River Basin." This document, jointly prepared by the member agencies of the Susquehanna River Anadromous Fish Restoration Cooperative (SRAFRC), is intended to guide present and future efforts to restore American shad, river herring, and other native migratory species in the Susquehanna River system. The document is available for public review at: http://www.fws.gov/northeast/susquehannariver.

Susquehanna R. Adult Smallmouth Bass Abundance

Electrofishing was conducted to compare the abundance of bass at Sandy Beach Park, Binghamton, relative to past sampling efforts at this same site. Since roughly 2003, anglers have complained about poor bass fishing in portions of the river. Sampling results from 2009 showed an increase in the abundance of legal sized bass along with a reasonably high abundance of bass between 6" and 12" compared to sampling done in 2005, 2007 and 2008. However, bass numbers are still approximately half of what were observed at this site in 1993. Since no dead fish were ever observed or reported in New York, reasons for the apparent decline are unknown. Possible causes include undiagnosed fish disease(s), pollution inputs associated with several major floods or a combination of both.

Susquehanna River YOY Smallmouth Bass Sampling

Shoreline backpack electrofishing was conducted in July to assess the relative abundance of young-of-year (YOY) smallmouth bass and to determine if *Columnaris* bacterial infections were present. The catch rate of 86 young-of-year/300 meter stretch of shoreline indicates that smallmouth bass production in 2009 was relatively low, based on Pennsylvania Fish and Boat Commission data collected for the past 20+ years. Also, none of the bass collected showed any signs of disease. Both findings were not a surprise given the relatively high river flows. Smallmouth bass production tends to be best in hot dry years while the worst disease outbreaks, in Pennsylvania's portion of the river, have occurred under these conditions as well.

SPECIES MANAGEMENT

Coldwater Fisheries Management: Lakes and Ponds

Region 3

Rondout Reservoir

Gillnets were set in Rondout Reservoir during two nights in early August with the objective of documenting the status of the trout population in the reservoir. This reservoir is currently stocked with brown trout yearlings and lake trout yearlings, with wild fish of both species also present. Of the 67 brown trout collected, 55 (82%) were of hatchery origin, indicating that this stocking policy contributes substantially to the brown trout population. All 18 of the lake trout collected were wild, indicating that the lake trout stocking policy may no longer be making a significant contribution to the fishery. Further netting is planned in 2010 to increase the size of the lake trout sample.

Region 4

Huggins Lake Brook Trout

Huggins Lake, Delaware County, is one of two wild brook trout ponds in Region 4. The population study estimated that there were 852 yearling and older brook trout in this 19 acre pond. The results are very similar from the estimated population of 841 brook trout recorded during a similar study in 2004. The largest brook trout collected measured 15.6 inches. Non-trout fish species continue to remain absent, allowing the brook trout population to remain stable.

Region 5

Four newly acquired ponds surveyed

Fisheries surveys were conducted on four ponds in Franklin County on lands where the DEC recently acquired recreational easements. Fish Hole and Grass ponds (Town of Franklin) and Balsam Pond (Town of Waverly) all contained brook trout. Mountain Pond (Town of Franklin) did not contain brook trout, but has water quality that could support brook trout. Stocking policies will be considered for all four waters.

Lake George Salmonid Survey

Annual monitoring of salmon and lake trout was conducted the week of November 9. Seven landlocked salmon of good size and condition were collected in three nets set near Hague Brook, Indian Brook and Shelving Rock Brook. In addition, 53 lake trout were collected, also of good size and condition. Results were similar to the results from the previous five years.

Lake George Fall Salmon Stocking

On October 14 and 15, approximately 3,000 landlocked salmon were stocked in the lake. These salmon were given an extra growing season in the Warren County Hatchery. The additional growth results in better survival and recruitment to the fishery than smaller, spring stocked salmon.

Chazy Lake

The Bureau of Fisheries conducted a general fisheries survey of Chazy Lake. The goal was to determine the current status of the fish community and assess the impacts of the recent introduction of northern pike. Initial analysis of the data indicated that lake trout have declined in abundance and the stocking of landlocked salmon continues to provide a fishery. Despite the known existence of northern pike, none were captured during the survey.

Region 6

Temescamie Hybrid Brook Trout Study

Netting surveys were conducted on 55 ponds stocked with the Temescamie Hybrid brook trout in the western Adirondacks to assess rates of natural reproduction and to look into using fish condition (lipid levels) to set stocking rates. Twenty-one of the 55 ponds had some wild fish, including 9 that had a significant number of wild fish. DEC staff are continuing to map out the seasonal changes in fish lipid levels to develop a method to use fish condition in setting stocking rates.

Region 7

2009 Owasco Lake Standard Gang Gill Netting

During July and August 2009, the Region 7 fisheries unit surveyed the coldwater fish community of Owasco Lake for the 10th time using standard Finger Lakes gang gill nets and standard netting sites. Previous surveys were carried out in 1976, 1977, 1979, 1982, 1985, 1988, 1991, 1994 and 2003. The primary purpose of the 2009 survey was to determine lake trout density and growth rate. An average of 14.5 lake trout were caught per net in the 2009 survey which was the second largest lake trout catch per net of the ten standard gang surveys. All but six of the 291 lake trout collected had fin clips, indicating the fishery continues to be sustained almost entirely by stocking.

Region 8

Canandaigua Lake Standard Gang Gill Netting

Canandaigua Lake was surveyed using standard Finger Lakes gill nets in order to assess the lake trout population, collect lake trout samples for the Toxic Substance Monitoring Program (TSMP), and collect lake trout and alewives for wild fish health surveillance at USFWS Lamar Fish Health Center. A total of 197 lake trout were collected for an average of 8.2 per net night. The 2009 catch rate ranks 4th out of the eight netting surveys that have been conducted on Canandaigua Lake and is the highest since 1985. Wild lake trout are estimated to contribute about 20% of the overall lake trout population. All lake trout and alewives submitted to Lamar tested negative for diseases of concern (including VHS).

SPECIES MANAGEMENT

Coldwater Fisheries Management: Rivers and Streams

Region 1

Brook Trout Surveys

An electrofishing survey was conducted on Yaphank Creek, Little Neck Run, and Beaverdam Creek to determine if brook trout were being negatively impacted by a leachate plume originating from the Brookhaven Town Landfill. The plume has already intersected Beaverdam Creek and may be discharging to Little Neck Run. In the 2009 surveys, brook trout were found in the same locations as they were in 1996. It does not appear that brook trout have been adversely affected by the landfill leachate plume.

Connetquot River CROTS Survey

The Region 1 Fisheries Unit completed a CROTS survey of the Connetquot River, collected trout for disease analysis, and developed an interim trout stocking plan based upon the results of the survey and DEC's trout management guidelines. CROTS takes carrying capacity into account. Management recommendations are to manage the upper section for wild brook trout, manage the middle section (immediately above the hatchery) by not stocking until the hatchery water supply can be separated from the river due to disease concerns (infectious pancreatic necrosis), and to stock the lower section with 2,700 trout in the spring and 900 trout in the fall.

Region 3

Neversink River tailwater "boat pools" sampling

Three standard boat pool sample sites below the Neversink Reservoir were sampled during July, 2009, to continue what was originally a three year series of trout biomass estimates along the Neversink tailwater. The 2004-2006 surveys were conducted to evaluate the three year experimental reservoir release program which was approved by the Delaware River Basin Commission. Total 2009 trout biomass estimates ranged from 42.1 lb/acre to 107.7 lb/acre, and were in line with past biomass estimates. The current release regime (known as the Flexible flow Management Plan) appears to be adequately protecting the trout habitat of this tailwater.

Willowemoc Creek

Willowemoc Creek was sampled by electrofishing in late July, 2009, to document survival of brown trout fall fingerlings. These fall fingerlings were fin clipped in 2007 and 2008 for the purpose of identification during this evaluation. A total of 27 trout were collected between two sites. All were brown trout with the exception of one brook trout. Six of the brown trout were wild (23%). None of the 16 hatchery brown trout had finclips. Based on these results, the fall fingerling policy was cancelled.

Wappinger Creek

Staff conducted an electrofishing survey of Wappinger Creek, a major Dutchess County trout stream, from August 18-21, 2009. This was the first major survey of Wappinger Creek since August 1992. Survey results documented a 20% decline in the brown trout population from the 1992 survey. Particularly disappointing was an apparent lack of any young of the year wild brown trout. A possible explanation for the low number of trout is that stream temperatures during the current survey ranged from 71 to 80 degrees F, compared to 68 - 73 degrees F in 1992. The summer of 2009 was unusually wet, and this may have contributed to the higher water temperatures given that the stream has three shallow lakes as its source. The impact of this warm surface runoff was evident in that the highest water temperature recorded (80 degrees F) was at the upstream most sampling station. In addition, the Wappinger Creek watershed has undergone a substantial amount of development since 1992, and runoff from roads and parking lots could have contributed to higher stream temperatures.

Region 4

Brook Trout Surveys

The Region 4 Fisheries Office completed the third year of a five year effort to survey many of the smaller streams throughout the nine county region to document the presence or absence of brook trout. The two man survey team sampled 776 streams, primarily in the Susquehanna watershed in Delaware and Otsego Counties, of which trout were found in 466 streams. Brook trout were found in 442 streams; brown trout were found in 184 streams. A total of 320 streams are now eligible for upgrading of their water classification, including 177 unprotected streams to protected status.

Backpack electrofishing a small stream looking for brook trrout.

SPECIES MANAGEMENT

Coldwater Fisheries Management: Rivers and Streams

East Branch Delaware River

Mark and recapture population studies were conducted to evaluate the impact of releases on the tailwater trout populations at the same four sites as in previous years. Trout abundance ranged from 21 to 217 trout/acre with the biomass ranging from 11.5 to 24.3 lbs/acre. Yearling brown trout were the dominant age group. Compared to the six year averages, trout abundance in 2009 was up at two sites, unchanged at one site, and down at one site; however, trout biomass was up at three sites and down at one site.

West Branch Delaware River

Mark and recapture population studies were conducted at the same four sites sampled most years since 1993 to assess the impact of releases on the tailwater trout populations. Trout abundance ranged from 19 to 187 trout/acre with the biomass ranging from 23.7 to 74.1 lbs/acre. Trout abundance and density were comparable to previous years. The percentage of trout 16 inches and larger ranged from 9 to 42% at the four sites.

Region 5

Batten Kill

The Batten Kill was sampled with backpack electroshocking units and a small barge-mounted generator. The fish data along with the creel survey conducted this year, will allow DEC staff to evaluate the stocking rates and regulation changes. Initial impressions are that the Batten Kill has substantial wild brown and brook trout populations and good survival and growth of stocked brown trout through the first summer.

Barge electrofishing the Batten Kill.

Region 7

Eastern Brook Trout Joint Venture

Region 7 staff surveyed 27 streams in 2009 as part of the Eastern Brook Trout Joint Venture study. These streams were in watersheds where brook trout were predicted to have been extirpated. Brook trout were fairly plentiful in the streams of the east branch of the Tioughnioga River watershed. No brook trout were found in the other presumed extirpated watersheds. Two waters were found that qualify for reclassification to a higher water quality standard.

Cayuga Inlet Juvenile Sea Lamprey Electrofishing Survey

An electrofishing survey was conducted on Cayuga Inlet, during August and September 2009, to determine the presence and density of juvenile sea lampreys above the Cayuga Inlet fishway. Results revealed the presence of juvenile lampreys, which were collected at an average rate of 37.8 per hour. Due to their uniform and large size, the juvenile lampreys collected were likely produced in 2007, the last year lamprey spawning nests were observed above the fishway. The 2009 survey catch rate was high, but juvenile lamprey do not appear to be as abundant as they were in the years prior to Cayuga Inlet being treated with lampricide, a lamprey poison, in 1986 and 1996. Prior to the 1986 lampricide treatment, juvenile lamprey were more than twice as abundant while their density prior to the 1996 treatment was approximately 50% higher. There are no plans to treat the 2007 year class due to cost constraints and to determine the effects of a single year class of sea lamprey on the trout and salmon populations.

2009 Cayuga Inlet Fishway Monitoring

Operation of the Cayuga Inlet fishway continued in spring 2009. The fishway collects fish migrating upstream to spawn. A total of 677 rainbow trout (145 more than the previous spring run), 2,467 white suckers and 1,839 sea lampreys were handled. The vast majority of the rainbows and all the white suckers were passed upstream. All the lampreys were killed to prevent them from spawning upstream. A total of 105,000 wild and 24,000 hybrid eggs were collected and transported to the NYS Bath Fish Hatchery for hatching and rearing. Twenty-four rainbow trout were sacrificed for fish health inspections (VHS, BKD, etc.). No diseases were found. All rainbow trout captured at the fishway were examined for the presence of wounds from sea lamprey attacks. The average wounding rate in 2009 was one of the lowest wounding rates ever observed on rainbow trout handled at the Cayuga Inlet fishway.

SPECIES MANAGEMENT

Coldwater Fisheries Management: Rivers and Streams

Cayuga Lake Tributary Sea Lamprey Nest Counts

Since 1979, sea lamprey spawning activity in Cayuga Lake tributaries has been monitored by counting the number of lamprey spawning nests found in index sections of Cayuga Inlet, Sixmile Creek, Cascadilla Creek, Fall Creek, Salmon Creek and Yawgers Creek. The total number of nests counted in 2009 (44) was much lower than both the numbers counted during the previous two years and the 30 year average (224 nests per year). The absence of nests in the index sections upstream of the Cayuga Inlet fishway likely indicates that adult lamprey were unable to migrate above it.

2009 Chittenango Creek Electrofishing Survey

On August 20, 2009, an electrofishing survey was conducted on Chittenango Creek to collect base line data on the brown trout population in the reach of stream where a catch and release/artificial lures only regulation will go into effect on October 1, 2010. A 500 ft. section downstream of Olmstead Road and a 600 ft. section downstream of Dyke Road were sampled. Fifty-six brown trout were collected at Olmstead Road and 24 brown trout were collected at Dyke Road. Of the 80 brown trout collected, 20 appeared to be stocked fish, based on observed fin erosion. Subsequent surveys will be used to make comparisons of the trout populations from before and after the regulation change.

Canasawacta Creek Electrofishing

Fish sampling was conducted at two sites on Canasawacta Creek, Chenango County, in order to document fish community characteristics prior to implementation of major habitat restoration work planned for 2010. Currently, much of the stream is warm and lacks significant amounts of deep holding water for trout. Not surprisingly, no trout were captured or observed during the survey. Planned habitat improvements should increase pool habitat, increase available shading over time, and ultimately allow for wild brook trout colonization from headwater areas where they are still locally abundant.

Region 8

Catharine Creek Rainbow Trout Production Survey

Catharine Creek, the main rainbow trout spawning tributary to Seneca Lake, was sampled during summer of 2009 to evaluate trout production. Rainbow trout abundance was estimated at 1,348 YOY trout/acre, well within the range from the 1970's (i.e. 732 to 3,259 trout/acre). Rainbow trout production in Sleepers Creek, the main tributary to Catharine Creek, was 4,083 YOY and age 1+ rainbow trout/acre, less than a third of estimates during the 1970's. It does not appear that rainbow trout production is a limiting factor to adult recruitment in Catharine Creek; however further evaluation of Sleepers Creek is warranted.

Finger Lake Spring Rainbow Trout Electrofishing

Spring rainbow trout spawning runs were monitored in March 2009 in Catharine, Cold Brook, Naples, and Springwater Creeks. Thirty one rainbow trout were caught in Cold Brook, the highest number of trout collected since 2000. Catharine and Naples Creeks' samples were within normal numbers. Springwater Creek numbers remain low.

Electrofishing Havana Glen, a tributary to Catherine Creek, in early spring.

Springwater Creek Rainbow Trout Production

Springwater Creek is the primary spawning tributary for the Hemlock Lake rainbow trout population. The rainbow trout fishery is currently supported entirely by natural reproduction. Standard sites on Springwater Creek have been sampled 13 times since 1962. Mean density of young-of-year rainbow trout was 1,910 per acre, which is lower than the long term average (3,808/acre) and ranked 10th among all years sampled. Mean density of yearling and older rainbow trout was 396 per acre, which is lower than the long term average (1,239/acre) and ranked 11th among all years sampled. Juvenile brown trout abundance appears to be increasing, especially in the lower reaches of the stream. Brown trout are likely competing with rainbow trout.

Region 9

Wild Brook Trout Monitoring in Allegany County

In June, 2009, an electrofishing survey of the wild brook trout population in Spring Mills Creek, located in southeastern Allegany County, was conducted. In 1992, a brown trout stocking policy was removed, eliminating further stocking, due to the existence of a wild brook trout population. Adult brook trout were found at all five sites and YOY brook trout at the upper four sites. DEC staff found an estimated 150 adult brook trout per mile of stream. The population appears to be relatively stable compared to the 1992 and 2002 surveys.

SPECIES MANAGEMENT

Coldwater Fisheries Management: Rivers and Streams

Famed Wiscoy Creek Trout Populations Evaluated

In August, 2009, an electrofishing survey of Wiscoy Creek and two of its major tributaries, Trout Brook and the N. Branch Wiscoy Creek, was conducted. On Wiscoy Creek, the number of yearling and older wild brown trout/mile averaged 956/mile which is considerably lower than was found in 2006 (1,432/mile). In Trout Brook, the number of yearling and older wild brown trout averaged 1,869/mile, higher than the 1,144/mile found in 2006. Yearling and older wild brook trout averaged 475/mile, higher than the 269/mile in 2006. The N. Branch of Wiscoy Creek was sampled at 3 sites with a wide variation in the numbers of yearling and older adult trout found depending on the amount of habitat at each site, ranging from 789/mile to 6,475/mile. The average 2,385/mile was higher than the 1,424/mile in 2006.

Wiscoy Creek brown trout.

Surveys Evaluate Wild Brook Trout in Improved Habitat

In June, 2009, an electrofishing survey of the wild brook trout populations in McIntosh and Beehunter creeks in Allegany State Park was conducted to determine the status of the wild brook trout population in the first year after habitat enhancement in McIntosh Creek. In both streams the abundance of adult brook trout dropped in half from 2008 to 2009. Both streams had few young-of-year and yearlings collected in 2008, so expectations were for low abundance of adults in 2009. A high abundance of young-of-year brook trout was found in both streams in 2009. The good 2009 hatch of trout combined with the enhanced habitat should increase the system's capacity to support wild brook trout.

Electrofishing MacIntosh Creek near a habitat improvement structure.

Surveys for Reclassifying Streams in Region 9

In the summer of 2009, surveys were done on small streams in Cattaraugus and Allegany Counties resulting in 14 streams in need of having their water classifications upgraded from class "C" to "Cts" (ts=trout spawning). Wild brook trout populations were found in these streams indicating they now meet the higher water quality classification. Once reclassified, permits will be required for persons wishing to disturb or encroach on the banks of the creeks, giving the DEC enhanced ability to protect the trout populations in the streams.

Native Brook Trout Collected in Cryder Creek, Allegany County

In September, 2009, an electrofishing survey of five tributaries to Cryder Creek was conducted. Four of the streams had never been sampled, and one of those was previously unknown. In the previously unknown stream, DEC staff found several wild brook trout and brook stickleback, a fairly uncommon species in western NY streams. One of the other previously unsurveyed streams contained a good wild brook trout population below a road culvert, but no fish were found above the culvert. This culvert is acting as a barrier to fish movement farther up the stream. The other two previously unsurveyed streams did not have any trout in the sites we sampled. The other stream that had been surveyed in the past still contains a good population of wild brook trout. All streams where we discovered wild brook trout populations will be included in a list of streams to have their water classifications upgraded to "supporting trout reproduction" (cts).

Inland Creel and Angler Surveys

Region 3

Kensico Reservoir Angler Diary Program 2009

Anglers recorded 217 trips totaling 573 hours of fishing, catching a total of 368 trout. The overall catch rate was 0.64 trout per hour. This is an increase compared to 2008, and still above the average catch rate of 0.51 trout per hour achieved by cooperators fishing from 1987 to 2008. Lake trout dominated the catch, comprising 96% of the total catch. Based on the data reported in 2009, approximately 85% of the lake trout are wild fish. This percentage is the highest we have seen during the diary program.

Region 5

Batten Kill Creel Survey

A creel survey of trout anglers on the Batten Kill was conducted from March to November 2009. This survey was conducted to compare to a similar creel survey conducted in 2002 and to evaluate catch and release regulations and stocking changes. Effort estimates range from 3 hours per acre in an unstocked and inaccessible reach to 585 hours per acre in a stocked and accessible reach. Overall catch rate was 0.60 trout per hour. Ninety-seven percent of anglers surveyed were either neutral or satisfied with the regulations and their angling experience.

Region 6

West Canada Creek Creel Survey

The 1967 creel survey on West Canada Creek reported a 0.5 fish/hour catch rate. Preliminary results from the 2007 creel survey (40 years later) indicate a similar or slightly higher catch rate of 0.54 fish/hour. Satisfaction with the fishing experience is good with 59% of interviewed anglers saying they were satisfied and 39% were very satisfied.

Region 7

2009 Cayuga Lake Angler Diary Program

Coldwater angler participation decreased from 2008 by nine angler cooperators and 325 angler trips. Thirty-four cooperators recorded data from 580 angler trips totaling 2,842 hours of effort for the year. The targeted catch rates of legal size lake trout (0.22/hour) and brown trout (0.04/hour) were similar to the previous year and remained in the range observed over the past several years. The targeted catch rates of legal size rainbow trout (0.006/hour) and landlocked salmon (0.02/hour) were lower than the previous year but within the range observed over the past several years.

2009 Owasco Lake Angler Diary Program

Coldwater angler participation decreased from 2008 by six angler cooperators and 15 angler trips. Thirteen cooperators recorded data from 124 angler trips totaling 608 hours of effort for the year. The targeted catch rates of legal size lake trout (0.20/hour) and brown trout (0.002/hour) were lower than the previous year and lower than the range observed over the past several years. The targeted catch rate of legal size rainbow trout (0.01/hour) was higher than the previous year and remained in the range observed over the past several years.

2009 Skaneateles Lake Angler Diary Program

Coldwater angler participation decreased from 2008 by four angler cooperators and 12 angler trips. Twenty-seven cooperators recorded data from 390 angler trips totaling 1,560 hours of effort for the year. The targeted catch rates of legal size lake trout (0.11/hour) and rainbow trout (0.17/hour) were similar to the previous year and remained in the range observed over the past several years. The targeted catch rate of legal size landlocked salmon (0.01/hour) was lower than the previous year and lower than the range observed over the past several years.

2009 Otisco Lake Angler Diary Program

Angler participation increased in 2009 and effort more than doubled. Fifteen cooperators recorded data from 316 angler trips totaling 1,306 hours of fishing effort for the year. The targeted catch rate of tiger musky (0.13/hour) was the best it's been in more than a decade while targeted catch rates for walleye (0.20/hour) and bass (0.59/hour) remained in the range we've observed over the past several years.

Region 8

Conesus Lake Warmwater Angler Diary Program

The angler diary program was continued on Conesus Lake for the 10th year. Fishing effort by angler diary keepers in 2008-2009 was lower than previous years despite the higher catch rates in 2009. Angler diary keepers caught largemouth bass (60% of the catch), smallmouth bass (18%), northern pike (18%) and walleye (4%). Most bass were between 12 and 15 inches. Northern pike averaged an impressive 30 inches. Anglers specifically targeting walleyes caught 0.25 walleye per hour, the best rate in recent years.

Honeoye Lake Warmwater Angler Diary Program

The angler diary program was continued on Honeoye Lake for the 21st year. Angler participation was similar to the two previous years but remains somewhat low. On average, anglers took 0.85 hours to catch one legal gamefish, very similar to last year's catch rate. Anglers who were specifically targeting largemouth bass continue to have an excellent catch rate of 3.9 bass/hour. Anglers who were specifically targeting walleye had a catch rate of 0.15 walleye/hour. This catch rate is down from last year and is below

SPECIES MANAGEMENT

Inland Creel and Angler Surveys

the target for New York State waters (0.25 walleye/hour). The walleye population will need to be assessed in the near future to determine the cause of the low catch rates.

Coldwater – Seneca, Keuka, Canandaigua, Candice, and Hemlock Lakes

The Angler Diary programs on Seneca Lake (37 years), Keuka Lake (42 years), Canandaigua Lake (37 years), Canadice Lake (19 years) and Hemlock Lake (19 years) were continued in 2009. The number of hours to catch a legal trout or salmon increased slightly from previous years for Seneca, Keuka, Canandaigua, and Candice Lakes, but catch rates remained good. Lake trout comprise over 90% of the trout and salmon catch in Seneca and Keuka Lakes and over 80% in Canandaigua, Canadice and Hemlock Lakes. The Atlantic salmon catch was up in Seneca Lake with over 100 legal Atlantic salmon reported. Seneca, Keuka, and Canandaigua Lakes appear to be predator heavy and forage poor; therefore fish were more willing to strike anglers offerings.

Region 9

Open Day of Inland Trout Season-Angler Counts

On April 1, 2009, (opening day of the regular trout season), an angler vehicle count survey on trout streams and lakes across Region 9 was conducted to determine relative angler use. Use rates on opening day is a good indicator of the intensity of seasonal angler use. DEC staff counted angler vehicles on 52 stocked streams, 8 stocked ponds and 4 wild trout streams. Whether or not a stream had been stocked pre-season did not appear to have as much to do with the number of angler vehicles counted as the size of the stream and its proximity to population centers did. The three streams with the heaviest use, Ischua Creek (98 vehicles), East Koy Creek (72 vehicles) and Cattaraugus Creek (58 vehicles), are large streams and are within an hour's drive of large population centers. Many smaller streams that had been stocked pre-season had either very low numbers of vehicles or in some cases none at all. Use was not particularly high on the stocked ponds. The four wild trout streams included in the angler count showed lower angler use than the major stocked streams, but higher use than many of the smaller streams that had been stocked.

Wiscoy Creek Angler Diary Program

In 2009, the Region 9 Fisheries Office conducted an angler diary program for Wiscoy Creek in Wyoming and Allegany Counties. The 2009 diary program duplicated studies done in 1997, 2001 and 2006. Overall catch rates on Wiscoy Creek in 2009 (0.77 trout/hour) were significantly lower than in the past three diary programs, adding to the electrofishing findings that the wild brown trout population in the creek is lower than in recent surveys.

Endangered/Rare Fishes

Region 1

Banded Sunfish and Swamp Darter Surveys

In 2009, Region 1 Fisheries Unit completed twenty-six rare and endangered species surveys to characterize the distribution of the banded sunfish (*Enneacanthus obesus*) and the swamp darter (*Etheostoma fusiforme*). Only one water was documented as having banded sunfish present. This unnamed water is within the Peconic River drainage area. No new locations were identified for the presence of swamp darters.

Region 6

Black River Lake Sturgeon Studies

In 2009 a total of 5 adult fish (CPUE= .04 fish/hr) were captured and tagged. A fish previously tagged (Floy Tag #1764) in 2006 was recaptured. Information from this recapture demonstrates potential spawning site fidelity or that a portion of the population is resident.

Black River lake sturgeon.

Paddlefish Recovery Program

Paddlefish rearing and stocking completed its 12th year in 2009. Production in 2009 was conducted at Oneida Hatchery. A companion rearing effort at SUNY Cobleskill was launched in 2009.

Lake Sturgeon Recovery

Lake Sturgeon eggs were taken at the St. Lawrence River below the Moses-Saunders Power Dam and were delivered in June 2009 to the Oneida Hatchery and to the SUNY Cobleskill Hatchery. Unfortunately there was no hatching of the eggs. Egg takes will still be pursued in Spring of 2011.

SPECIES MANAGEMENT

Endangered/Rare Fishes

Round Whitefish Recovery

Round whitefish were reared in 2009 to be stocked in Spring, 2009, in a previously inhabited but declining water, Chapel Pond.

Longear Sunfish Recovery

Longear sunfish have been reared in ponds in Jefferson County by the Region 6 DEC Unit. The Tonawanda strain was moved to other winter quarters (including S. Otselic Hatchery) in 2009-10. Late in 2009, fingerlings were stocked into Cayuga Creek in Buffalo.

Longeared sunfish.

Region 9

Radio-transmitters Surgically Implanted in Paddlefish

Paddlefish gill netting in the upper Allegheny River caught a total of 19 adult paddlefish, 14 of which were implanted with radio transmitters. To date, 30 paddlefish have received radio-transmitters: 29 were males and 1 female. By tracking the fish, biologists hope to identify spawning habitat in the upper Allegheny River. Paddlefish were extirpated from New York State until stocking efforts were initiated in 1998 in the Allegheny River system. The objective of the stockings is to establish a self-sustaining population of paddlefish in the section of river upstream of Kinzua Dam.

Adult paddlefish.

Young Paddlefish Implanted with Coded Wire Tags

Approximately 160 YOY paddlefish raised at the Oneida Hatchery received coded wire tags. The paddlefish were stocked in the fall of 2009 in a tributary of the Allegheny River as part of an effort by New York to restore paddlefish to the upper Allegheny River system.

Biologists Coauthor Scientific Manuscript on Paddlefish Restoration in NY and PA

DEC Biologists partnered with biologists from Pennsylvania to summarize efforts by Pennsylvania and New York to restore paddlefish to the Allegheny River system. The manuscript is included in the American Fisheries Society proceedings; Paddlefish Management, Propagation and Conservation in the 21st Century.

Longear Sunfish Stocked in Little Buffalo Creek

One thousand ninety four longear sunfish, classified as a threatened species in New York State, were stocked in sections of Little Buffalo Creek that contained preferred habitat for this species. The longears were raised at a rearing pond near Watertown. Biologists hope that these fish will eventually be capable of sustaining themselves through natural reproduction.

Gilt Darters Shipped to Tennessee

DEC biologists, assisted by PA Fish Commission biologists, collected gilt darters (extirpated from New York) from the Allegheny River in Pennsylvania (near East Brady). The darters were shipped overnight to a laboratory in Tennessee for subsequent breeding. If artificial propagation is successful, the offspring will be stocked in the Allegheny River in New York State.

Gilt darter in spawning colors.

FISH CULTURE

Hatchery Improvements

Caledonia Hatchery

Water supply dam repaired

A breach in the water supply dam at Caledonia Hatchery has been repaired so water levels can be maintained to provide maximum water to the water supply intake for the hatchery.

Salmon River Hatchery

New fish pump

A new fish pump was built at Salmon River Hatchery and used to move fish from inside rearing units to the marking trailer for marking 1.6 million Chinook salmon. The new pump saves a considerable amount of manual labor and time.

Composting Fish Carcasses

For the second consecutive year at Salmon River Hatchery, all fish carcasses from the fall salmon egg collection were composted. This has proved to be a more "green" way to dispose of fish carcasses. Approximately 9,100 carcasses were composted.

Rome

Pond enclosures a success

Two east pond enclosures at Rome Hatchery which were built in 2008 have been a great success. An average of 50,000 fish per year have been saved from bird predation.

Construction of Hatchery Rearing Building Begins

A ground breaking ceremony took place in September 2009 at the Rome Hatchery for a new hatchery rearing building. Commissioner Grannis attended the ceremony along with many local dignitaries. The building will house an early rearing area, office, conference room, and visitor center.

Hatchery System Wide

Vehicle Emission Retro-fits

To comply with new air emission standards, all diesel powered fish stocking and waste hauling vehicles are in the process of having diesel emission retro fits installed on their exhaust systems.

Experimental Evaluations

Bath Hatchery

Fish Food Evaluation

A fish food trial was conducted for 5 months on rainbow trout at Bath Hatchery to compare food conversion vs. cost from four different manufacturers. The food used came from BioOregon, Melick Aquafeeds, Silver Cup, and Zeigler Bros. The fish grew the fastest with BioOregon, but the most cost effective feed was from Zeigler Bros.

Chautauqua Hatchery

Egg disinfection experiment

An egg disinfection experiment was conducted at Chautauqua Hatchery to determine the effects of different concentrations of iodine on muskellunge eggs during the water hardening process to control VHS and other viruses moving between parent and egg. Two concentrations were used, and no significant difference in survival was observed. Given the results of the testing, muskellunge eggs will be disinfected at a 50 ppm concentration of iodine during water hardening.

Muskellunge Fingerling Transfer to Vermont

Chautauqua Hatchery raised and transferred 10,000 muskellunge fingerlings to the State of Vermont for restoration efforts in the Missisquoi River where historically there was a muskellunge fishery.

Onieda Hatchery

Special Stocking Program

A new program was established at Oneida Hatchery to produce 50-day walleye fingerlings for stocking. In the first year of this program, 254,000 fifty-day fingerlings were produced and stocked into nine study waters in New York State. The fish were marked as fry in an oxytetracycline bath, so in the future biologists can collect data from the marked walleyes.

Hatchery trucks meet new air emission standards.

FISH CULTURE

Egg Takes from Wild Fish

Landlocked Atlantic salmon

The egg take for landlocked Atlantic salmon at the Adirondack Hatchery met targets with about 1.2 million eggs collected. The collections from Little Clear were disappointing; the take relied heavily on brood stock maintained in the hatchery.

Lake trout

The egg take for Adirondack strain lake trout (from Raquette Lake) was poor; the number of eggs collected was roughly half of the target. Apparently the lake trout were ripe several days earlier than in past years, so the egg collection started after many of the lake trout had spawned.

Windfall Heritage strain of brook trout

Good numbers of eggs were collected for the Windfall strain of brook trout from both Mountain and Black Ponds (Town of Brighton in Franklin County). These eggs will be reared at South Otselic.

Horn Lake Heritage strain of brook trout

On November 4, a very successful egg take of Horn Lake strain brook trout from Fishbrook Pond in Washington County was conducted, collecting more eggs than were targeted. Nearly 34,000 eggs were transferred to Warren County Hatchery for rearing.

Oswegatchie River Walleye Egg Take

Adult walleye in spawning condition were captured in April 2009 to supply fertilized eggs to the St. Lawrence Valley Sportsman's Club as part of an ongoing cooperative project initiated circa 1986. Walleye were collected by boat electroshocking at a rate of 391/hour, some of the highest densities ever encountered during this spawning run. Approximately 1 million eggs were fertilized and reared, with progeny returned to the St. Lawrence River.

Taking eggs from a large walleye.

Cayuga Lake Egg take

A total of 105,000 wild rainbow trout and 24,000 hybrid rainbow trout eggs were collected and transported to the NYS Bath Fish Hatchery for hatching and rearing.

Lake Sturgeon Egg Take

Lake sturgeon, a state threatened species, have been the subject of an active restoration program since 1993. An egg take attempt was made from St. Lawrence River fish at Massena in 2009. A total of 92 sturgeon were collected, of which 2 females and 9 males were held for spawning. Eggs were taken and fertilized (approximately 114,000) and split between two culture facilities. Unfortunately there were problems in fertilization, and no progeny were produced.

Heritage Strain Brook Trout Egg Take

In an effort to maintain genetically distinct populations of Adirondack brook trout (heritage strains), Region 6 completed egg takes for Little Tupper strain, primarily at Boottree Pond in the Massawepie Easement. Besides helping to maintain heritage genetics, these fish are thought to have a higher potential to thrive and spawn in the water conditions common to Adirondack ponds. Region 6 is in the process of establishing new brood waters for the various heritage strains in order to facilitate a greater reliance on heritage strain fish in the DEC stocking program.

Little Tupper strain brook trout from Boottree Pond.

Annual Production

Report Date 5/4/2010

ANNUAL STOCKING REPORT - BY SPECIES

January 1, 2009 - December 31, 2009

	LESS THAN 1"		1" - 4.24"		4.25" - 5.74"		5.75" - 6.74"		6.75" - 7.74"		7.75" Plus		TOTAL	
SPECIES	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT
Cold Water														
Brook Trout			154,320	3,404	235,065	8,677			400	54	160,580	50,614	550,365	62,749
Brown Trout			136,490	1,983	123,650	8,214	116,000	10,716	13,490	2,369	1,833,725	537,057	2,223,355	560,339
Rainbow Trout			55,100	743	75,100	4,838	50,660	4,217	15,000	2,500	356,402	103,490	552,262	115,788
Steelhead			80,000	1,067	599,150	23,990	246,160	20,108					925,310	45,165
Lake Trout					81,200	3,401	243,160	16,912	356,700	30,679	94,500	13,929	775,560	64,921
Splake											8,500	2,921	8,500	2,921
Landlocked Salm	677,810	23,314					51,100	5,113	96,770	12,105	390	1,854	826,070	42,386
Coho			155,000	3,832			95,420	7,340					250,420	11,172
Chinook			1,721,410	19,910	27,000	692							1,748,410	20,602
Cold Water Total	**677,810**	**23,314**	**2,302,320**	**30,939**	**1,141,165**	**49,812**	**802,500**	**64,406**	**482,360**	**47,707**	**2,454,097**	**709,865**	**7,860,252**	**926,043**
Warm Water														
Walleye	197,324,000	2,630	811,800	761	38,000	1,434							198,173,800	4,825
Muskellunge							2,450	70			19,590	1,514	22,040	1,584
Tiger Muskellung											77,760	9,167	77,760	9,167
Panfish											500	100	500	100
Paddlefish											160	53	160	53
Warm Water Total	**197,324,000**	**2,630**	**811,800**	**761**	**38,000**	**1,434**	**2,450**	**70**			**98,010**	**10,834**	**198,274,260**	**15,729**
Grand Total	**198,001,810**	**25,944**	**3,114,120**	**31,700**	**1,179,165**	**51,246**	**804,950**	**64,476**	**482,360**	**47,707**	**2,552,107**	**720,699**	**206,134,512**	**941,772**

Stocking loon lake

FISH HEALTH

Fish Health Collections/Fish Kill Investigations

Fish Health Collections

Fish Health

The NYSDEC Rome Fish Disease Control Center maintains a fish health program for the DEC hatchery system. No regulated diseases were found in any DEC hatchery and the overall health of the fish is excellent. To monitor the relative health of wild fish across the state, the Fish Disease Control Unit and the USFWS collaborated to conduct a statewide surveillance of regulated fish diseases and various emerging diseases from 27 locations, and no pathogens have been found.

New York City Reservoir tailwater mercury analyses

Fish samples were collected from Rondout Creek, Honk Lake, Neversink River, East Branch Croton River and West Branch Croton River as part of a mercury sampling program. The sections sampled were downstream of New York City operated reservoirs located on those rivers. The fish samples were analyzed for mercury, and approximately half of the samples were analyzed for PCBs and selected pesticides. Analyses were conducted by the Analytical Services Unit at Hale Creek Field Station. All results were below actionable levels.

Region 4 Fish Health Collections

Thirty game fish and 60 panfish (all the same species) were collected from Alcove Reservoir, Canadarago Lake, and the Mohawk River (below Lock 8) for fish disease testing. All fish tested negative for Viral Hemorrhagic Septicemia (VHS), spring viremia of carp (SVC), frunculosis, enteric red mouth, and infectious pancreatic necrosis (IPN).

Delaware Tailwater Mercury Testing

Brown and rainbow trout in the West and East Branches of the Delaware River downstream of Cannonsville and Pepacton Reservoirs had mercury concentrations averaging less than 0.2 ppm. Walleye from the West and East Branches averaged 0.63 and 0.7 ppm, respectively. Special health advisories for the consumption of fish from these two rivers are not necessary at this time.

Delta Lake – National Wild Fish Health Survey

Due to its proximity to the Rome Fish Hatchery, Delta Lake continues to be selected for the National Wild Fish Health Survey on an annual basis. Yellow perch, smallmouth bass, walleye, northern pike and chain pickerel were sent to the federal Lamar Fish Health Center as part of the survey. Lab results show that this water remains clear of significant fish diseases.

Hinckley Reservoir - National Wild Fish Health Survey

Hinckley Reservoir was sampled as part of the National Wild Fish Health Survey. Sixty yellow perch and 28 smallmouth bass were sent to the federal Lamar Fish Health Center as part of the National Wild Fish Health survey. Results of this and other surveys indicate that efforts to prevent the spread of important fish diseases such as VHS into the Mohawk watershed have, so far, been successful.

Region 7 - National Wild Fish Health Survey

Yellow perch were collected from Owasco Lake, bluegills and largemouth bass were collected from Panther Lake and walleyes were collected from Whitney Point Reservoir. These collections were shipped to the USFWS Fish Health Center in Lamar, Pennsylvania for health inspection. All these fish tested negative for a wide range of pathogens including VHS.

Cayuga Inlet Fish Health Inspection

Rainbow trout collected at the Cayuga Inlet fishway were transported to the Rome Lab for health inspection. The rainbow trout tested negative for a wide range of pathogens including VHS.

Fish Kill Investigations

Peconic River Fish Kill/Disease investigation

In March of 2009 the Peconic River experienced a fish kill for the second year in a row. In both years the primary species killed were bluegill and pumpkinseed sunfish, and the Regional Fisheries Unit was able to collect distressed fish and ship them to Cornell University for diagnosis. The fish sampled were found to have a heavy infestation with the gill fluke *Dactylogyrus* and a systemic infection with the bacterium *Pseudomonas putida*. To follow up, collections of apparently healthy sunfish were made from the area of the fish kill and an area where the kill did not occur in September and sent to Cornell. These fish were found to have light Dactylogyrus infestations and heavy internal parasitism of the renal, hepatic and cardiac tissues by digenean organisms (parasitic flatworms). No difference was found between the fish in the area where the kill occurred and where it didn't. Cornell's conclusion was that the heavy parasite burdens carried by these fish made them very susceptible to secondary infection and subsequent kills during stressful periods.

PUBLIC USE & OUTREACH

Fishing/Boating Access

Region 4

FWMA Cooperative Agreement-Susquehanna River

DEC entered into a cooperative agreement with the Otsego County Land Trust to provide anglers with 1,400+ feet of public fishing rights on the upper Susquehanna River. Development will include a parking area, footpath, information kiosk, and a cartop boat slide at this new site south of Cooperstown.

FWMA Cooperative Agreement-West Branch Delaware River

DEC entered into a cooperative agreement with the Deposit Wood Pellet LLC to keep open 1,200 feet of shoreline on the No Kill reach of the West Branch Delaware River tailwater trout fishery in Deposit. A 10-12 car parking area will be developed.

West Branch Delaware River Boat Launch

A trailered boat launch on the West Branch Delaware River tailwater by Deposit was completed in July. It involved the construction of an approximately 1,000 foot roadway, a 100 x 120 foot parking area, and a gravel launch. Hopefully, this access site will reduce conflicts between the wade and boat anglers in the 3.5 miles of river above the access site when river flows are boatable.

Region 9

Angler's Lot Completed on Noted Steelhead Stream

Fisheries staff coordinated with the Village of Westfield and NYS-DOT in the construction of a parking lot in the "catch and release" steelhead section of Chautauqua Creek. Chautauqua Creek, a premier steelhead stream that enters Lake Erie in Westfield, NY, in one of the most popular steelhead streams in Western New York.

Niagara River Aquatic Habitat and Access Projects Continue

Expansion of the parking lot at the Niagara Power Project fishing/observation platform overlooking the lower Niagara River began in 2009. This access improvement resulted from re-negotiation of the Federal Energy Regulatory Authority (FERC) license that expired in 2007. Parking was expanded from several exclusively ADA spots to a substantially larger number of ADA and all-use spots. Previously, anglers and observers had to park at the top of the Niagara escarpment and walk approximately ½ mile downhill to the platform. This unique fishing platform, situated over the massive power project discharge, provides outstanding angling for numerous sport fish, including muskellunge, salmon, trout, bass and walleye.

Lewiston (Niagara River) Launch Restored With Oxi-NRD Funds

Replacement of the Lewiston Boat Launch, the key boat launch site on the Lower Niagara River, began during the first week in October. Construction of new concrete pads and floating, universal access docks was funded through the Occidental Chemical/Natural Resource Damages Settlement. In addition to replacement of the platform, the grinder at the fish cleaning station was replaced and improvements to the cleaning table were completed. The launch pad construction followed a push-slab design where the concrete was poured into a form on-site and then pushed into position.

Central Office

Public Fishing Rights (PFR)

Just under 3 equivalent miles of PFR were acquired and purchase agreements were signed on another 3.2 miles. Waters include Hoosic River (Region 4), Black River (Region 6), Goodell Creek and N. Branch Wiscoy (Region 9) Two parking areas were also acquired on the Willowemoc Creek (Region 3) and Black River (Region 6).

RBFF/DEC Direct Mail Marketing of Lapsed Anglers

New York is one of over 30 states cooperating in this program to encourage lapsed anglers to once again purchase a fishing license. The overall response rate to the program in NY increased from 9.6% in 2008 to 10.8% in 2009. Despite this higher response rate, lift (the difference in response rate between the control and treatment group) was poor, not exceeding 1.5% in any of the cooperating states. New York had a lift of 0.5% in 2009. The poor lift was primarily attributed to the fact that fishing license sales were up nationwide this year as a positive response to poor economic conditions and license buyers were not influenced by the direct mail effort as they typically would have been.

New York State Boat Launch Directory Updated

Last printed in 2005, the New York State Boat Launching Sites Guide was recently updated and reprinted. Produced in cooperation with NYS Parks & Recreation and Canal Corp., the guide contains a listing of over 500 state and municipal access and boat launching sites. The boat launch coverage was also included in the DEC mapping gateway, providing anglers and boaters detailed driving directions to each site.

PUBLIC USE & OUTREACH

Aquatic Education/Outreach

Region 1

Region1 I FISH NY

The Region 1 Fisheries Unit I FISH NY Program conducted 36 out-of-school outreach and education programs reaching over 9,000 people during 2009-10. The Annual Spring Fishing Festival attendance topped 5,000 people for the second year in a row. Over 1,000 people attended 13 fishing clinics and 800 children were given fishing instruction in 11 programs at five different summer camps.

I FISH NY in school programs were conducted in 20 different schools, providing fishing instruction to nearly 2,000 children. Nearly all of these children went fishing as part of the program. This is a 33% increase in the number of schools and a 17% increase in the number of children taught from the previous year.

Spring Fishing Festival at Belmont Lake State Park.

Region 2

Region 2 I FISH NY

The Region 2 Fisheries Unit I FISH NY Program conducted 177 in-school events, creating 4,130 educational contacts (many students were given more than one lesson). Approximately 1,200 NYC public school students received two in-class lessons on fish anatomy, diversity, or freshwater ecology and were taken fishing at a local water body. In addition, 20 out-of-school outreach and educational programs were also conducted, reaching over 1,500 people.

Hutton Junior Fisheries Program Student Joins R2 Fisheries

A Brooklyn high school student accepted to the American Fisheries Society (AFS) Hutton Junior Fisheries Biology Program worked with R2 Fisheries during the summer of 2009. The AFS-sponsored Hutton Program seeks to encourage interest in fisheries careers in underrepresented groups by placing junior and senior high school students with fisheries professionals and awarding scholarships to these students. The student placed in Region 2 participated in fisheries surveys and fishing events while completing a project involving correlating fish age data with length and weight measurements obtained in the field. Both the student and Region 2 staff benefited from this program.

American Fisheries Society Hutton Scholarship student, Vincent Tao, helping students fish.

Fishing Club at Lincoln Square Community Center

Approximately 15 youth participated in the Region 2 I FISH NY program's first fishing club. Participants were taught fishing and aquatic education at a more advanced level than that provided in our one-day programs. An assessment and "graduation" were included in the club program.

Urban Park Ranger Aquatic Resources Training

Approximately 20 NYC Urban Park Rangers received a third training from I FISH NY staff on October 22, 2009. This training focused on local freshwater and saltwater fish identification and distribution, dangers of releasing invasive species, and fresh and saltwater fishing regulations, including information on the saltwater fishing license requirement. Staff from the NYS Department of Health also participated in this training and provided detailed information on fish consumption advisory information for the New York City area. Trainings such as these are invaluable in disseminating DEC information to a wider public than we can reach directly.

Website

Web pages for five New York City fishable water bodies were created. Pages describe fish species present with fishing advice, transportation directions and relevant regulations.

PUBLIC USE & OUTREACH

Aquatic Education/Outreach

AFS NY Chapter Presentation

The presentation "Program Assessment for Angling Outreach in an Urban Area: A Case Study from NYC Schoolchildren" was given by staff at the New York Chapter meeting of the American Fisheries Society in Lake George, NY. The presentation highlighted the importance of collecting baseline data on angling stewardship and attitudes and using multiple evaluation approaches where feasible. Results of the assessment indicated that students had an increased interest in fishing after the in-school program. Evaluated students showed retention of lessons teaching reducing harm to fish caught and the need for regulations to keep fishing sustainable.

NYC Getting Started Fishing Brochure Produced

Staff developed the brochure "Getting Started Fishing in NYC" which provides the basics necessary for NYC residents to get started fishing in New York City (equipment, methods used to catch fish, regulations and contacts for more information).

Region 3

Suffern Sportsman Show

On March 4-7, 2010, thousands of anglers gathered at the Suffern Sportsman Show in Rockland County. Region 3 Fisheries Staff was on hand daily to promote fishing and to sell fishing licenses. People who visited the booth were able to talk fishing with our staff, receive literature, view mounts of our state record fish, and the kids were entertained while playing velcro-fishing! License sales totaled $14,280.

Region 3 Web Pages

A total of 18 new pages under "Places to Fish" were created for Region 3 waters. Additionally Region 3 continually updates a fishing hotline page weekly.

I FISH NY

Region 3 fisheries staff conducted 8 school programs reaching 610 kids, 8 fishing clinics reaching 650 people, 3 fishing festivals reaching 225 people and 4 summer camps reaching 235 campers. A total of 1,720 people were reached through these events.

Region 6

Jefferson County Environmental Awareness Days

Over 1,200 sixth graders were presented with information regarding Jefferson County waters and fish communities. Despite marginal weather and warnings that the fish were cold, slimy and attracting bees, hands on activities with iced fish generated great enthusiasm and many good questions.

Region 7

Outreach and Education Events

Regional staff conducted or assisted with 22 fishing education programs that reached almost 2,400 participants, including 12 school related programs/events reaching 1,455 students.

Surpise! This large grass carp was caught during a fishing clinic at the South Otselic Fish Hatchery.

New York State Fair

Regional fisheries staff worked at the fair helping man the Division of Fish, Wildlife and Marine Resources booth inside the DEC Aquarium building. Hunting and fishing licenses were sold using the DECALS automated licensing system which operated with very little down time. Questions from the public were answered during the license sales process.

Website

Regional staff added 32 new pages and 7 PDFs to the DEC web site. The pages were a mix of "Places to Fish" and "Biologist Reports." In addition, the Central New York hotline page was updated weekly. This page is the second most popular fisheries page, receiving over 113,000 page views in 2009-10.

Region 8

Local High School Students Learn About Fisheries Management

For the eighth consecutive year, Region 8 Fisheries staff cooperated with Delta Laboratories' Adopt-a-Stream program to provide about 80 Environmental Studies students from four area high schools a hands-on demonstration of fisheries management techniques. Boat electrofishing was demonstrated in Thousand Acre Pond in Mendon Ponds Park. Demonstrations were also given in water quality, benthic in-

Aquatic Education/Outreach

vertebrates, fish seining, and fish scale aging and data interpretation. Students had the opportunity to capture, handle, identify, and measure live native fish, and age fish scales.

Fishing Rod Lending Program

Regional Fisheries staff teamed up with the New York State Conservation Officers Association (NYSCOA), Shikar Safari, Dansville Rod and Gun Club and the Dansville Public Library to establish a library fishing pole lending program. Pole and reels, purchased with funds from the Federal Sport Fish Restoration Act, were supplied by the DEC. The Dansville Rod and Gun Club provided bobbers and hooks (with spares) and have agreed to service and repair the rods and reels. NYSCOA reprinted the "Getting Started, A beginner's Guide to Freshwater Fishing" booklets with funds from Shikar Safari. It is hoped that this effort will spread to other communities in Region 8.

Region 9

Outreach and Education Events

Regional staff conducted or assisted with 10 fishing education programs that reached almost 1,040 participants, including 2 school related programs/events reaching 220 students. Six promotional shows were attended, providing fishing related information to show attendees.

Teaching fish ID at the Tifft Fishing Clinic.

Website

Regional fisheries staff added 13 new webpages and 3 new PDFs to the DEC website. The webpages included "Smallmouth Bass Fishing on Lake Erie" and "Steelhead Fishing in Lake Erie Tributaries," both important fisheries in Western New York. Ice fishing pages were posted in response to inquiries by website visitors and anglers. Additionally, 30 PDF maps of Public Fishing Rights streams were updated to a more user friendly format that is the new state standard. Two fishing hotlines covering the major fishing waters of Region 9 and the western half of Region 8 were updated on a weekly basis. Those pages received 96,005 page views during the year, increasing 5 to 24 percent over the 2008-09 page views.

Central Office

Website

Central office staff posted 15 new web pages, 68 new PDF files and made 156 web page revisions during 2009-10. Most of the page revisions were updating the Spring Stocking Lists (what will be stocked in the current year) and the "Fish Stocking Lists" (what was stocked in the past year). Information varied, but many much needed web pages were added to our "Places to Fish" section and "Biologist Reports" section of the website. There are now over 600 pages of fisheries related content on the website.

Central Office I FISH NY

Central Office fisheries staff conducted 46 fishing education programs that reached approximately 1,850 participants, including 30 programs at summer camps reaching 879 campers.

Conservationist for Kids!

The spring 2010 "Fish" issue of the New York State Conservationist for Kids! (C4K) was produced and printed during 2009-10. The publication provided information about fresh and salt water fish, fish features, the aquatic food chain, a one page introduction to fishing, 15 common sportfish of New York, and fish related activities. The C4K is an insert that goes into every Conservationist magazine that is sent out by the DEC. In addition, this issue was sent to 260,000 fourth graders across New York. An additional 100,000 copies were printed for distribution at DEC Regional Offices, Fish Hatcheries and at events and fishing clinics.

Getting Started manuals

The "Getting Started: A beginners guide to freshwater fishing" manual was reprinted. The manual, first produced in 1992, has been revised several times. A total of 3,500 copies of the 73 page manual were produced. These manuals will be used to support fishing clinic activities.

Angler Education Kits

Angler Education Kits were assembled, consisting of a plastic tote with 25 rigged collapsible spincast rods, eye bolts with rope for teaching knots, several backyard bass for teaching casting, laminated fish for teaching fish identification, extra hooks and bobbers, and various literature for education purposes. The totes will easily fit into the trunk of a car, so the fishing clinic kits are highly mobile and can serve a greater audience as a result. They are intended to be loaned out to groups from Regional Offices.

HABITAT PROTECTION/MANAGEMENT

Region 1

Region 1 Fisheries Unit coordinates cooperative water chestnut eradication in Swan Pond -

In 2008 the Region 1 Fisheries Unit conducted a water chestnut (*Trapa natans*) removal effort in Swan Pond in Calverton, removing about 120 plants. A follow up survey in 2009 was conducted to determine if any water chestnut remained in the pond. The survey found only two small patches of water chestnut, each consisting of less than 20 plants which were removed. Based upon the findings of this survey, it appears that this infestation was caught early enough that complete eradication will be possible.

Water chestnut, an invasive species, was pulled from both Swan Pond, Region 1, and Otisco Lake, Region 7 to prevent further spread.

Peconic River Ludwigia Removal

The Regional Fisheries Unit continued its cooperation in the effort to remove Ludwigia (floating primrose willow) from the Peconic River. Fisheries staff participated in both days of hand removal operations, providing instruction on identifying and pulling the plant and leading the downstream removal. This was the fourth year of hand removal operations and the success in Ludwigia control continued in 2009. After removing 60 cubic yards of Ludwigia in each of 2006 and 2007, only 6 cubic yards were found and removed in 2008 and only 4 cubic yards in 2009.

Hydrilla in Lake Ronkonkoma

In June of 2009, Division of Water staff discovered Hydrilla growing at two locations in Lake Ronkonkoma, Suffolk County. A follow up survey by Regional Fisheries Unit staff found Hydrilla at 16 of 22 sites sampled, but only at trace or sparse densities in all but one of the samples. Because the Hydrilla was so widespread in the lake, it is likely that it had been in the lake for several years at low levels without being detected. The wide distribution, sparse density and poor water clarity in the lake make hand removal impractical. Therefore, the best course of action was to raise public awareness of the problem and monitor it over time. To raise public awareness an invasive species drop box and signs were installed at the Lake Ronkonkoma Fishing Access Site. The Regional Fisheries Unit also agreed to monitor the infestation by conducting annual SAV surveys of Lake Ronkonkoma.

Region 5

New York Provided Rotenone to Help Stop Asian Carp

In concert with other Great Lakes States, New York did its share of preventing the spread of Asian Carp into the Great Lakes by providing 1,500 gallons of rotenone to Illinois to eliminate the dangerous invasive from a portion of the Chicago Sanitary and Shipping Canal. The hope is to prevent Asian carp from entering the Great Lakes, including NY portions of Lakes Erie and Ontario.

Brook trout and round whitefish restoration in Ledge Pond

The Bureau of Fisheries reclaimed Ledge Pond in the St. Regis Canoe Area on October 20-23, 2009 to remove non-native fishes. Expectations are to restock the pond with the Windfall Heritage strain of brook trout and with the endangered round whitefish.

Stream habitat structures in Kayaderosseras Creek at Kelly Park

As part of the permit for the Saratoga County Water Authority to run a water line from the Hudson River in the Town of Moreau to Malta, funds for stream habitat and restoration were provided for the Kayaderosseras and Snook Kill watersheds. Two J-hooks were placed in Kayaderosseras Creek to help stabilize the banks and create much needed fish habitat. Boulder clusters were created with extra stone that was not used for the J-hooks. The clusters create areas of cover and pockets of slow water for resting and feeding.

Region 6

Ecosystem-Based Management

As a member of the Sandy Creeks Ecosystem-Based Management Steering Committee, Regional Fisheries staff continued activities involving riparian and streambank restoration as well as education and outreach through the implementation of kiosks and interpretive panels.

HABITAT PROTECTION/MANAGEMENT

Region 7

Otisco Lake Water Chestnut Control

In contrast to the previous three summers, Region 7 Fisheries staff did not have to spend any time pulling water chestnut from Otisco Lake in 2009. Instead, a volunteer group of approximately 10 individuals spent just a single evening hand pulling the relatively small patch of water chestnut plants from Turtle Bay. Fisheries staff spent just a half-day inspecting the entire lake shoreline for the presence of any satellite plants but found none. The labor intensive, annual hand pulling effort started in 2006 by Region 7 Fisheries staff has succeeded in dramatically reducing the number of water chestnut plants in Turtle Bay by approximately 85-90%. Continued hand pulling efforts in coming years are expected to eventually result in complete eradication of this invasive aquatic plant.

Ninemile Creek RR Tunnel Repair

Staff worked with owners of the Finger Lakes Railway Corporation to minimize negative impacts to Ninemile Creek, in Marcellus Falls, during emergency repairs to a pair of 100+ year old tunnels that carry the creek under the railroad. To help design a plan to reconstruct the stream approach to the tunnels, an expert on "Natural Stream Design" from the U.S. Fish and Wildlife Service was brought in at the urging of DEC Fisheries staff. The resulting design is expected to reduce the chances of future tunnel failure and has created quality trout habitat through the impacted reach of stream.

Mead Brook Fish Passage Improvement

Fisheries staff worked with local highway department officials to develop and implement a solution which improved fish passage and eliminated a scour hole at this known brook trout stream located in the Town of Cincinnatus, Cortland County. Through the addition of a double cross vane structure set downstream of the culvert at an elevation slightly higher than the invert of the culvert, a ten inch drop was eliminated which should allow for fish passage during almost any flow condition.

Gilmore Brook Culvert Fish Passage Project

Fisheries staff worked with local highway department officials to develop and implement a solution which improved fish passage and stabilized a failing rock retaining wall at a culvert on Gilmore Brook, in the Town of Norwich, Chenango County. The solution incorporated a single cross vane at the tail-out of the culvert plunge pool that was set at an elevation which eliminated a 9 inch drop at the culvert. The cross vane, in conjunction with the addition of a splash apron, is expected to eliminate undermining of the walls footer and improve fish passage through the culvert in this documented wild brook trout stream.

Mead Brook before fish passage improvement.

Mead Brook after fish passage improvement.

Region 8

Catharine Creek Aquatic Habitat Restoration, Revisited.

Catherine Creek aquatic habitat restoration projects were completed in 1999. A 10 year post construction photographic documentation effort was conducted in November 2009. Most sites appeared to be stable and performing as designed.

Region 9

Genesee River Bank Erosion Stabilized

Fisheries Staff and the ACOE designed and implemented a bank stabilization plan for the Genesee River near Scio, NY. Severe bank erosion had threatened County Rt 219 and caused siltation downstream of the site. Improvements included the towing in of large stone, the construction of bend-way weirs and the planting of vegetation cover (vegetation had not expanded as of spring, 2009). The weirs will move the thalweg (deepest part of the stream channel) away from the eroding bank, deepening the central channel, and providing fisheries habitat.

HABITAT PROTECTION/MANAGEMENT

Niagara River Shoreline Restored

Biologist Wilkinson and Environmental Conservation Officers investigated a report of fill placed along the banks of the Upper Niagara River. The material was removed and the bank stabilized, vegetated and restored to its original slope.

Experimental Vegetation Planted To Stabilize Stream Banks

An experimental planting of dwarf sand cherry along Chautauqua Creek was evaluated. The dwarf sand cherry were planted in April 2008 in an effort to reestablish the plant in WNY and determine its effectiveness. The plant is used in streambank stabilization and will tolerate inundation. The plants survived through a number of flood events and an ice-choked channel during the winter and should provide riparian cover, stability and aesthetic improvements.

Sprouted dwarf sand cherry.

DEC and DOT Partner on Cattaraugus Creek Bridge Protection

DEC staff provided oversight and support during the riprapping of a section of Cattaraugus Creek under the Route 16 bridge. Prior to stone placement, willow poles were planted to enhance habitat in the riparian zone.

Frog Island Design in the Niagara River

DEC biologists provided guidance towards the design for the Frog Island/Wetland habitat improvement project in the Upper Niagara River. The project consists of a new complex of emergent and submergent aquatic vegetation in an existing five acre area located between Strawberry Island and Motor Island that currently supports minimal aquatic vegetation. The primary goal is to protect emergent/submergent aquatic habitat that is being eliminated along the river due to water fluctuations, ice and recreational activities. The project is one of about a dozen habitat improvement projects that were negotiated as part of the settlement for the New York Power Authority (NYPA) Niagara Power Project.

Violation leads to Fish Habitat Improvements

Biologist Galati assisted in the final resolution of an enforcement action on Clear Creek (Ellington), a protected water that supports wild brown trout. The resolution involved restoring and enhancing a 2,500 foot reach with rock toe protection, bend-way weirs, vanes, tree revetments and willow pole planting. The enforcement action also resulted in monetary fines totaling $15,000.

Biologists Review Beaver Island/Niagara River Improvement Project

Biologist Galati provided comments to NYPA regarding the Beaver Island habitat project. As part of the Robert Moses relicensing, the southern tip of Beaver Island will be restored to its pre-existing wetland condition. Biologists expect this habitat to be heavily used by wading birds and as spawning and nursery habitat for fish.

Repairs completed to stream restoration project on Wiscoy Creek

In late April, Region 9 Fisheries assisted USFWS staff in repairing a stream diversion structure on Wiscoy Creek in Wyoming County. The structure was built in late summer, 2009, to return stream flow to the stream's original channel which contained high quality trout habitat. The structure was designed to allow bank full stream flows to overtop it. The overflow area, which had not had time to vegetate, was damaged during very high runoff in January, 2010. New fill was placed in the overflow area. Sod containing reed canary grass was placed over the fill and live willow clumps were also incorporated.

DEC Fisheries/Forestry Partner with Conservation Groups For Tree Plantings

This spring, Region 9 Fisheries staff coordinated with three local Trout Unlimited groups, a county highway department and a local university to plant over 3,200 shrubs and shade trees along public trout streams in the region. The shrubs, mostly streamco willow and red osier dogwood, have extensive root systems that help to hold stream banks in place and reduce erosion while the larger shade trees such as silver maple will eventually provide shading to help cool the streams. These trees were provided by the DEC Bureau of Forestry tree nursery in Saratoga.

FISHERIES/ANGLER SURVEYS

Name	Purpose
Region 1	
Beaver Brook	Brook Trout Assessment
Randall Pond	Centrachid survey/TSMP
Forest City Park Pond	TSMP/Disease/Centrarchid
Forge Pond	DOH/BNL/USFWS
Spring Lake	TSMP/Disease/Centrarchid
Freeport Reservoir	TSMP
Peconic Lake	Fish Kill
Upper Mills Pond	Fish Kill
Peconic River (BNL)	Radiation
Lake Ronkonkoma	Physical/Chemistry
Little Neck Run	Brook Trout Assessment
Yaphank Creek	Brook Trout Assessment
Beaverdam Creek	Brook Trout Assessment
Connetquot River	CROTS/Disease
Lake Ronkonkoma	Centrarchid survey
Sunken Meadow Creek	Other
29 Regional Waters	Rare/Endangered Species
Region 2	
Unnamed Waters (Staten Is.)	Rare/Endangered Species
Van Cortlandt Lake	Centrarchid Survey/Wild fish health study
Harlem Meer	Centrarchid Survey/Northern snakeheads
Central Park Lake	Centrarchid Survey
Meadow Lake	General Biological Survey/ Snakehead collection
Clove Lake	General Biological Survey/ wild fish health study
Region 3	
Beaver Kill	Disease testing
Alder Creek	Disease testing
Philipsburg Creek	Article 15 assessment
Braden Brook	Article 15 assessment
Fowlwood Brook	Article 15 assessment
Esopus Creek	Trout collection for radio telemetry study
Sylvan Lake	Water chemistry profile
Wappingers Creek	CROTS survey
Unnamed stream D-1-22-3-3	Article 15 assessment
Unnamed stream D-1-22	Article 15 assessment
Unnamed stream D-1-22-3-1-1	Article 15 assessment
Unnamed stream D-1-22-3-1	Article 15 assessment
Unnamed stream D-1-22-3	Article 15 assessment
Rondout Reservoir	Trout assessment
Neversink River	TSMP - Mercury
Honk Lake	TSMP – Mercury
Rondout Creek	TSMP – Mercury
Willowemoc Creek	Stocking evaluation

Name	Purpose
Neversink River	Population estimate
East Branch Croton River	TSMP – Mercury
West Branch Croton River	TSMP – Mercury
Swinging Bridge Reservoir	Percid Plan assessment
Rondout Creek (tidal portion)	Black bass pop. assessment
Toronto Reservoir	Warmwater fish assessment
Esopus Creek (tidal portion)	Black bass pop. assessment
Catlin Creek and tributaries	Northern snakehead eradication effort and follow-up assessment
Region 4	
Shaver Pond	Stocked trout assessment
Alcove Reservoir	Fish health collections
Canadarago Lake	Fish health collections
Mohawk River (below Lock 8)	Fish health collections
Otsego Lake	Walleye population study
Huggins Lake	Brook trout population study
West Branch Delaware River	TSMP
East Branch Delaware River	TSMP
Schoharie Creek (below B-G dam)	TSMP
Travis Pond	Centrarchid survey
Snyders Lake	Centrarchid survey
Upper Blenheim-Gilboa Reservoir	Percid sampling
Mohawk River (3 locations)	Adult blueback herring assess.
Snyders Lake	Percid survey
East Branch Delaware River	Trout population study
West Branch Delaware River	Trout population studies
Vly Creek	CROTS survey
West Kill	CROTS survey
Bear Swamp Pond	Biological survey
Vale Park Pond (lower and upper)	Biological survey
Pea Brook	CROTS survey
Beauchoix Brook	CROTS survey
Kinderhook Lake	Percid survey
Delaware River	Snorkel survey
Spring Brook (2 sites)	Trout population studies
Canadarago Lake	Percid survey
Hudson River (2 sites)	Bass wintering area assess.
Small stream surveys	Eastern brook trout joint venture project (776 streams)
Region 5	
Rock Pond	Other, see comments
Little Rock Pond	Post-Reclamation survey
Union Falls Pond	Other, see comments
Rainbow Lake	Whirling disease sampling
Oliver Pond	General biological survey
Clear Pond	General biological survey
Long Pond	Post-liming survey
Benz Pond	Post-liming survey
Icehouse Pond	Post-liming survey

FISHERIES/ANGLER SURVEYS

Name	Purpose
Lake Champlain	Centrarchid sampling plan
Lower Sargent Pond	General biological survey
St. Germain Pond	Pre-liming survey
Cooler Pond	Post-liming survey
House Pond	Pre-liming survey
Winch Pond	General biological survey
Duck Pond	Pre-liming survey
Holmes Lake	Post-liming survey
Grass Pond	General biological survey
Fishhole Pond	General biological survey
Unnamed Water	General biological survey
Coldspring Pond	Evaluate exp stocking water
Thirteenth Lake	General biological survey
Batten Kill	CROTS survey
Upper Chateaugay Lake	General biological survey
Loon Lake	Evaluate exp stocking water
Fishbrook Pond	Egg take
Lake George	Other
Lower Cascade Lake	Rare/endangered species
Castle Creek	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Charter Brook	General biological survey
Black Creek	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
West Branch Black Creek	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Dead Creek	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
Unnamed Water	General biological survey
East Hebron Brook	General biological survey
Unnamed Water	General biological survey
Schuyler Creek	General biological survey

Region 6

Delta Reservoir	TSMP/Wild Fish Disease
Hinckley Res	General Biological Survey
Mohawk River	Walleye Spawning Survey
Sauquoit Creek	Trout Population Survey
Lansing Kill	Trout Population Survey
Unnamed Trib to Otsquago Creek	General Biological Survey
Cold Brook	General Biological Survey
Hinckley Reservoir	Wild Fish Disease Survey
White Creek	General Biological Survey
Unnamed Water/Prospect Pond	General Biological Survey
Lake Ontario	Warmwater Fish Stock Asses.

Name	Purpose
Lake Ontario	Lower Trophic Level Samp.
Lake Ontario	White Perch Dist. Study
Staplin Creek	Stream Reclassification Surv.
Black River	Stocked Steelhead Monitoring
St. Lawrence River	Warmwater Fish Stock Asses.
Butterfield Lake	Walleye Pop. Evaluation
Red Lake	Walleye Pop. Evaluation
Red Lake	Walleye Stocking Evaluation
Black Lake	Walleye evaluation
Hart Brook	Trout Spawning Assessment
Taylorville Res.	Contaminant Survey
Beaver Lake	Contaminant Survey
Norwood Reservoir	Walleye Pop. Evaluation
Norwood Reservoir	Contaminant Sampling
Unnamed Trib to Tannery Creek	Env. Impact Survey
Green Pond	Hybrid Brook Trout Study
Clear Pond	Hybrid Brook Trout Study
Little Salmon Lake	Hybrid Brook Trout Study
Unnamed Trib to Twitchell Lake	Hybrid Brook Trout Study
Twitchell Lake	Hybrid Brook Trout Study
Trib of N Branch Moose River	Heritage Strain Brook Trout
Unnamed Outlet of Windfall Pond	Heritage Strain Brook Trout
Brandy Lake	Hybrid Brook Trout Study
Church Pond	Hybrid Brook Trout Study
Long Pond	Hybrid Brook Trout Study
Blue Pond	Hybrid Brook Trout Study
Razorback Pond	Hybrid Brook Trout Study
Clear Pond	Hybrid Brook Trout Study
Allen Pond	Hybrid Brook Trout Study
Lilypad Pond	Hybrid Brook Trout Study
Long Pond	Hybrid Brook Trout Study
Streeter Lake	Hybrid Brook Trout Study
Nicks Pond	Hybrid Brook Trout Study
Piercefield Flow	Contaminant Sampling
Glasby Pond	Hybrid Brook Trout Study
Cat Mountain Pond	Hybrid Brook Trout Study
Cowhorn Pond	Hybrid Brook Trout Study
Cleveland Lake	Hybrid Brook Trout Study
Payne Lake	Hybrid Brook Trout Study
Little Otter Lake	Liming Water Sample
Evies Pond	Hybrid Brook Trout Study
Long Pond	Hybrid Brook Trout Study
Pitcher Pond	Hybrid Brook Trout Study
Trout Pond	Hybrid Brook Trout Study
Little Trout Pond	Hybrid Brook Trout Study
Raquette River	Contaminant Sampling
Hedgehog Pond	Hybrid Brook Trout Study
Curtis Pond	Hybrid Brook Trout Study
Dog Pond	Hybrid Brook Trout Study
Clear Pond	Hybrid Brook Trout Study
Tamarack Pond	Hybrid Brook Trout Study
Bridge Brook Pond	Hybrid Brook Trout Study

FISHERIES/ANGLER SURVEYS

Name	Purpose
Bear Pond	Hybrid Brook Trout Study
Gregg Lake	Hybrid Brook Trout Study
Tied Lake	Hybrid Brook Trout Study
Buck Pond	Hybrid Brook Trout Study
Olmstead Pond	Hybrid Brook Trout Study
Spectacle Pond	Hybrid Brook Trout Study
Simmons Pond	Hybrid Brook Trout Study
Buck Pond	Hybrid Brook Trout Study
Brewer Lake	Hybrid Brook Trout Study
Round Pond	Hybrid Brook Trout Study
Pine Pond	Hybrid Brook Trout Study
Black Pond	Hybrid Brook Trout Study
Horseshoe Pond	Hybrid Brook Trout Study
Round Pond	Hybrid Brook Trout Study
Townline Pond	Hybrid Brook Trout Study
Fish Pole Pond	Hybrid Brook Trout Study
Boottree Pond	Hybrid Brook Trout Study
Deer Pond	Hybrid Brook Trout Study
Darning Needle Pond	Hybrid Brook Trout Study
Pine Pond	Hybrid Brook Trout Study
Middle Settlement Lake	Hybrid Brook Trout Study
Middle Branch Lake	Hybrid Brook Trout Study
Wolf Pond	Hybrid Brook Trout Study
Silver Dawn Lake	Hybrid Brook Trout Study
Round Lake	Hybrid Brook Trout Study
Long Lake	Hybrid Brook Trout Study
Cage Lake	Hybrid Brook Trout Study
Horn Lake	Liming Water Sample
Quiver Pond	Liming Water Sample
Evergreen Lake	Liming Water Sample
Hidden Lake	Liming Water Sample
Peaked Mountain Lake	Liming Water Sample
Big Hill Pond	Heritage Strain Brood Stock Management
Boottree Pond	Heritage Strain Brood Stock Management
Deer Pond	Heritage Strain Brood Stock Management
Evergreen Lake	Liming Water Sample
Oswegatchie River	Walleye Egg Take
Black River	Lake Sturgeon Monitoring
Stark Falls Res	Comp. Biological Monitoring
St. Lawrence River	Creel Survey
St. Lawrence River	YOY Esocid Index
Lake St. Lawrence	Warmwater Fish Stock Asses.
Lake St. Lawrence	Lake Sturgeon Monitoring
St. Lawrence River	Lake Sturgeon Monitoring and Egg Take
Five Falls Res.	General Biological Survey
N.Br. Sandy Creek	Stream Reclassification Surv.
Payne Lake	Wild Fish Disease Monitoring

Name	Purpose
Region 7	
Panther Lake	Centrarchid sampling plan
Whitney Point Reservoir	General biological survey
Bosket Lake	Fish kill investigation
Oakley Corners Pond	Fish kill investigation
Otisco Lake	Esocid sampling
Canasawacta Creek	Other, see comments
Susquehanna River	Fish disease monitoring
Owasco Lake	General biological survey
Green Lake	Percid sampling
Susquehanna River	Compare catch rate of small-mouth bass to those of past years
Whitney Point Reservoir	Percid sampling
Otisco Lake	Percid sampling
Chittenango Creek	CROTS survey
Cayuga Inlet	Spring rainbow trout/ lamprey/white sucker run assessment at fishway
Unnamed Water	Stream protection
Beaverdam Brook	Spring steelhead spawning run biological assessment.
Small stream surveys	Eastern brook trout joint venture project (28 streams)
Region 8	
Waneta Lake	Muskie population assess.
Brick Pond	Invasive species investigation
Sodus Bay	Fish disease investigation
Seneca Lake	Biological data collection from salmonids during lake trout derby
Canandaigua Lake	Biological data collection from salmonids during lake trout derby
Canandaigua Lake	Standard coldwater assess-ment with lake trout primary target
Irondequoit Bay	Walleye population assess.
Catharine Creek	RT production study
Springwater Creek	RT production study
Limeklin Creek	RT production study
Canisteo River	Walleye population assess.
Sleepers Creek	RT production study
Conesus Lake	Warmwater fish assessment
Waterport Reservoir	Walleye population assess.
Waneta lake	General biological survey
Lamoka Lake	General biological survey
Seneca Lake	Fish disease investigation
Springwater Creek	RT spring spawning run asses.
Catharine Creek	RT spring spawning run asses.

FISHERIES/ANGLER SURVEYS

Name	Purpose
Naples Creek	RT spring spawning run asses.
Cold Brook	RT spring spawning run asses.
Sleepers creek	RT spring spawning run asses.

Region 9

Rock City Brook	Reclassification/Brook trout population assessment
Mutton Hollow , T-6	Reclassification/Brook trout population assessment
Christian Hollow	Brook trout population asses.
Spring Brook	Brook trout population asses.
Spring Brook, T-2	Brook trout population asses.
Spring Mills Creek and tribs	Reclassification/Brook trout population assessment
McIntosh Creek	Habitat improvement eval/ Brook trout population asses.
Beehunter Creek	Brook trout population asses.
Ford Brook and tribs	Reclassification/Brook trout population assessment
Cheney Brook, T-1	Fish kill investigation
Trout Brook	BT & ST population asses.
N. Branch Wiscoy Creek	Brown trout population asses.
Cryder Creek tributaries	Reclassification/Brook trout population assessment
Goodell Creek	Habitat improvement eval.
Oatka Creek tributaries	Fish kill investigation

Lake Erie Unit

Lake Erie Commercial Fishery Assessment	Sampling to characterize Harvest & age composition of Lake Erie's commercial yellow perch fishery
Lake Erie Lower Trophic Monitoring Program	Index of lower trophic Indicators seasonally, including zooplankton density, nutrient concentrations, temperature and water transparency
Lake Erie Open Lake Sport Fishing survey	Creel survey measure of Sport fishing catch and effort from Lake Erie's boat fisheries for walleye, smallmouth bass and yellow perch
Lake Erie Tributary Angler Diary Program Diary	Index of fishing quality for Lake Erie's tributary steelhead fishery
Lake Erie Tributary Sea Lamprey Nest Density	Annual count to index the Concentration of sea lamprey nests in selected Lake Erie tributaries
Lake Erie Pelagic Forage	Hydro-acoustic survey

Name	Purpose
Fish Assessment	Program to characterize abundance and distribution of pelagic forage fish densities in eastern Lake Erie
Lake Erie Coldwater Community Assessment	Gill net index abundance, age composition, growth, and diet of lake trout, burbot and lake whitefish
Lake Erie Warmwater Community Assessment	Gill net index abundance, age composition, growth, and diet of walleye, yellow perch and smallmouth bass
Lake Erie Wild Steelhead Assessment	Electrofishing index abundance of juvenile wild steelhead perch in selected Lake Erie tributaries
Lake Erie Forage and Juvenile Fish Assessment	Bottom Trawl index of abundance, age composition and growth, of juvenile yellow perch and an array of forage fish species

Rare Fish Unit

Eightmile Creek	Pugnose Shiner Survey
Irondequoit Creek	Pugnose Shiner Survey
Johnson Creek	Pugnose Shiner Survey
Marsh Creek	Pugnose Shiner Surveyy
Salmon Creek	Pugnose Shiner Survey
Sodus Bay	Pugnose Shiner Survey
Salmon Creek	Pugnose Shiner Survey
Trib. of Tonawanda Creek	Pugnose Shiner Survey
Blind Sodus Creek	Pugnose Shiner Survey
Mudge Creek	Pugnose Shiner Survey
Sodus Creek	Pugnose Shiner Survey
Wolcott Creek	Pugnose Shiner Survey
Eighteenmile Creek	Longear Sunfish Survey
Allegheny River	Longear Sunfish Survey
Cayuga Creek	Longear Sunfish Survey
Ischua Creek	Longear Sunfish Survey
Johnson Creek	Longear Sunfish Survey
Niagara River	Longear Sunfish Survey
Tonaawanda Creek	Longear Sunfish Survey
W. Br. Conewango Creek	Longear Sunfish Survey
Watershed Update Stream Surveys:	143 surveys across NY documenting presence or absence of fish species.

TECHNICAL REPORTS/PRESENTATIONS

Region 1

Latremore, Erik. 2009. Nassau/Western Suffolk County Creel Survey. Job: 3-1 – Nassau/Western Suffolk County Creel Survey, Study: Coldwater Lake and Stream Creel Surveys Grant F-53-R – Coldwater Fisheries. New York State Department of Environmental Conservation, Stony Brook, NY. 66 pp.

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Region 6

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James H. Johnson, R.M. Ross, R.D. McCullough, A. Mathers. 2010. Diet shift of double-crested cormorants in eastern Lake Ontario associated with the expansion of the invasive round goby. Journal of Great Lakes Research 36: 242-247.

Region 7

Prindle, S.E. 2009. Panther Lake Centrarchid Survey 2009. New York State Department of Environmental Conservation, Cortland, NY. 19 pp.

Region 8

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Sanderson, M. J. 2009. A recreational fishery survey of Irondequoit Bay. New York State Department of Environmental Conservation. Federal Aid Report. F-56-R, Study 2, Job 2-2. 40pp.

Sanderson, M. J., B. E. Hammers, and P. C. Austerman. 2010. Angler opinions and attitudes towards fisheries management on Hemlock and Canadice Lakes and Springwater Creek. New York State Department of Environmental Conservation. Federal Aid Report. F-48-R, Study 8, Job 110. 34pp.

Hammers, B.E, D. Kosowski, and W. Pearsall. 2009. Honeoye Lake fish stock assessment, 1997-2000. New York State Department of Environmental Conservation, Avon, NY. 53 pp.

Hammers, B.E. 2009. Honeoye Lake fish stock assessment, 2003. New York State Department of Environmental Conservation, Avon, NY. 51 pp.

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TECHNICAL REPORTS/PRESENTATIONS

Region 9

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Lake Erie Unit Reports

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Einhouse, D.W and T.M. MacDougall. 2010. An Emerging View of the Mixed-Stock Structure of Lake Erie's Eastern-Basin Walleye Population. In Status of walleye in the Great Lakes: proceedings of the 2006 Symposium. Great Lakes Fish. Comm. Tech. Rep. 69. pp. 151-164. Available from http://www.glfc.org/pubs/TechReports/Tr69.pdf

	# Licenses and Permits Issued/Reviewed in 2009/10										
Permit Name	CO	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	**Total**
Farm Fish Pond	-	-	-	7	320	25	11	176	95	78	**712**
Stocking	-	5	-	174	13	50	51	25	19	8	**457**
Triploid Grass Carp	-	12	-	284	302	50	66	261	410	669	**2054**
Overland Transport of Bait	-	-	-	28	13	-	8	4	12	-	**65**
Fish Possession (over daily limit)	-	-	-	-	-	-	2	-	-	-	**2**
Piranha	-	2	8	-	-	2	2	-	1	-	**15**
Baitfish	-	-	-	72	50	-	69	-	80	-	**149**
Temporary Revocable Permit (TRP)	-	8	-	2	2	25	4	-	7	-	**48**
Article 15 Review	-	3	2	201	315	200	242	-	52	-	**1015**
Article 24 Review	-	25	-	146	-	-	5	-	-	-	**176**
Pesticide Permit Review	-	30	-	12	5	5	4	-	-	-	**56**
Bass Hatchery Permits (C.O)	13	-	-	-	-	-	-	-	-	-	**13**
Trout Hatchery Permits (C.O)	39	-	-	-	-	-	-	-	-	-	**39**
Trout Import Permit	7	-	-	-	-	-	-	-	-	-	**7**
Bass Import Permit	3	-	-	-	-	-	-	-	-	-	**3**
Fishing Preserve Licenses (C.O)	55	-	-	-	-	-	-	-	-	-	**55**
Fish Health Certificates (C.O)	19	-	-	-	-	-	6	-	-	-	**25**
Commercial Fishing Licenses	3	-	-	14	-	-	-	-	-	-	**17**
License to Collect and Possess (C.O)	-	-	5	-	-	-	-	-	-	-	**5**
Trout in the Classroom	-	-	-	112	23	-	-	-	-	-	**23**
Dangerous fish permit	-	-	-	-	-	-	1	-	-	-	**1**
Fish tagging (St. Lawrence River carp)	-	-	-	-	-	-	1	-	-	-	**1**
Totals	139	85	15	980	993	357	472	466	676	755	4938

BUREAU STAFF

Central Office

Administration

Arthur Newell	Biologist 4 (Aquatic)

Public Use and Extension

Woltmann, Ed	Biologist 3 (Aquatic)
Kozlowski, Greg	Biologist 2 (Aquatic)
Ernst, Joelle	Biologist 1 (Aquatic)
Disarno, Mike	Seasonal Fish & Wildlife Tech 1

Inland Fisheries

Keeler, Shaun	Biologist 3 (Aquatic)
Daley, James	Biologist 2 (Aquatic)
Loukmas, Jeff	Biologist 2 (Aquatic)
Holst, Lisa	Biologist 2 (Aquatic)
McKelvey, Amy	Env. Program Specialist 1
Richmond, Linda	Agency Program Aide
Sweeney , Paul	Calculations Clerk 2
Festa, Casey	Seasonal Fish & Wildlife Tech 1

Great Lakes Section

Culligan, William	Biologist 3 (Aquatic)

Fish Culture

Hulbert, Phil	Fish Culturist VI
Buell, Henry	Fish Culturist V
Armstrong, Dave	Fish Culturist V (through 11/10/09). Returned to Region 5 on 11/11/09.
LaBoissiere, Mary	Secretary 1

Region 1

Guthrie, Charles	Biologist 2 (Aquatic)
O'Riordan, Heidi	Biologist 1 (Aquatic)
Latremore, Erik	Fish & Wildlife Technician 2 (Promoted to Bio 1 in R6 - Jan. 2010)
Punzi, Amanda	Seasonal Env. Ed. Asst. (1/2 time)
Vullo, Charles	Seasonal Laborer (1/2 time)
Tenyenhuis, Ann	Sea Grant Extension Aid
Nichol, Malynda	Sea Grant Rec. Fisheries Specialist (Resigned Sept. 2009)

Region 2

Melissa Cohen	Biologist 2 (Aquatic)
Diallo House	Seasonal Environmental Edudcation Asst.
Alexander Brinton	Seasonal Laborer
James MacDonald	Sea Grant Rec. Fisheries Specialist
Darin Alberry	Sea Grant Program Aide

Region 3

Mike Flaherty	Biologist 2 (Aquatic)
Ron Pierce	Biologist 1 (Aquatic) retired 10/2009
Bob Angyal	Biologist 1 (Aquatic)
Larry Wilson	Biologist 1 (Aquatic)
Ryan Coulter	Biologist 1 (Aquatic)
Linda Wysocki	Fish & Wildlife Technician 3
Tim McNamara	Fish & Wildlife Technician 2
Dustin Dominesey	Seaonal Fish & Wildlife Tech 1

Region 4

Norm McBride	Biologist 2 (Aquatic)
Dan Zielinski	Biologist 1 (Aquatic)
Scott Wells	Biologist 1 (Aquatic)
Fred Linhart	Fish & Wildlife Technician 3
Dave Cornwell	Fish & Wildlife Technician 2
Kandy Collins	Keyboard Specialist 2 (ret Oct 09)
Tim Pokorny	Seasonal Fish & Wildlife Tech 1
Ian Kiraly	Seasonal Fish & Wildlife Tech 1
Rob Poprawski	Seasonal Fish & Wildlife Tech 1
Jeff Strassenburg	Seasonal Fish & Wildlife Tech 1

Region 5

William Schoch	Biologist 2 (Aquatic)
Richard Preall	Biologist I (Aquatic)
Emily Zollweg	Biologist I (Aquatic)
Rob Fiorentino	Biologist I (Aquatic)
Jennifer Sausville	Fish & Wildlife Technician 3
Bethany Stephenson	Seasonal Environmental Edudcation Asst.
Armstrong, Dave	Fish & Wildlife Technician 2 (returned from CO on 11/11/09)
Lin Frys	Fish & Wildlife Technician 1
Adam Kosnick	Fish & Wildlife Technician 1

Region 6

Frank Flack	Biologist 2 (Ecology)
Carlson, Doug	Biologist 1 (Aquatic)
McCullough, Russ	Biologist 1 (Aquatic)
Klindt, Rodger	Biologist 1 (Aquatic)
VanMaaren, Chris	Biologist 1 (Aquatic)
McDonald, Dick	Biologist 1 (Aquatic)
Erway, Dave	Biologist 1, Trainee 2 (Aquatic)
Latremore, Erik	Biologist 1, Trainee 1 (Aquatic) (Started January 2010)
Gordon, Dave	Fish & Wildlife Technician 2
Ressiguie, Les	Fish & Wildlife Technician 1
Calhoun, Lea	Fish & Wildlife Technician 1
Balk, Nicole	Fish & Wildlife Technician 1
Cunningham, Aimee	Fish & Wildlife Technician 1
Russell, Andy	Fish & Wildlife Technician 1
Rice, Travis	Seasonal Laborer
Niewieroski, Greg	Seasonal Laborer
Smith, Kate	Seasonal Laborer

Region 7

Bishop, Dan	Biologist 2 (Aquatic)
Lemon, Dave	Biologist 1 (Aquatic)

BUREAU STAFF

Everard, Jim	Biologist 1 (Aquatic)
Robins, Jeff	Biologist 1 (Aquatic)
Prindle, Scott	Biologist 1 (Aquatic)
Blackburn, Ian	Fish & Wildlife Technician 2
Richardson, Denise	Seasonal Fish & Wildlife Technician 1
Heider, Allie	Secretary 1

Region 8

Webster Pearsall	Biologist 2 (Aquatic)
Matt Sanderson	Biologist 1 (Aquatic)
Brad Hammers	Biologist 1 (Aquatic)
Amy Mahar	Biologist 1 (Ecology)
Peter Austerman	Biologist 1 (Aquatic)
Daniel Mulhall	Fish & Wildlife Technician 1
Robert Deres	Fish & Wildlife Technician 1

Region 9

Paul McKeown	Biologist 2 (Aquatic)
Michael Clancy	Biologist 1 (Aquatic)
Scott Cornett	Biologist 1 (Aquatic)
Joseph Galati	Biologist 1 (Ecology)
Michael Todd	Biologist 1 (Aquatic)
Michael Wilkinson	Biologist 1 (Aquatic)
James Zanett	Fish & Wildlife Technician 3
Jon Sztukowski	Fish & Wildlife Technician 1
Eric Stratton	Fish & Wildlife Technician 1

Lake Erie Unit

Einhouse, Don	Biologist 2 (Aquatic)
Markham, Jim	Biologist 1 (Aquatic)
Zeller, Doug	Fisheries Research Vessel Captain
Beckwith, Brian	Fish & Wildlife Technician 2
Zimar, Rich	Fish & Wildlife Technician 2
Szwejbka, Ginger	Secretary 1
Dusablon, Mark	Seasonal Fish & Wildlife Tech 1
Babcock, Carrie Ann	Seasonal Fish & Wildlife Tech 1
Andrews, Paul	Seasonal Fish & Wildlife Tech 1
Draves, John	Seasonal Fish & Wildlife Tech 1

Lake Ontario Unit

Steve LaPan	Biologist 2 (Aquatic)
Chris Balk	Biologist 2 (Ecology)
Jana Lantry	Biologist 1 (Aquatic)
Mike Connerton	Biologist 1 (Aquatic)
Alan Fairbanks	Research Vessel Captain
Gaylor Massia	Maintenance Assistant
Beverly Grant	Secretary 1
Tom Eckert	Fish and Wildlife Technician 1
Shane Grant	Laborer
Rich Chiavelli	Seasonal Fish & Wildlife Tech 1
Ben Carson	Seasonal Fish & Wildlife Tech 1
Aaron Harvill	Seasonal Fish & Wildlife Tech 1
Josh Fisher	Seasonal Fish & Wildlife Tech 1
Mike Siragusa	Seasonal Fish & Wildlife Tech 1
Tom Smith	Seasonal Fish & Wildlife Tech 1
Joe Dallas	Seasonal Fish & Wildlife Tech 1

Adirondack Fish Hatchery

Grant, Ed	Fish Culturist III
Cranker, Neil	Fish Culturist II
Aldinger, Fritz	Fish Culturist I
Klubek, Kenneth W.	Fish Culturist I

Bath Fish Hatchery

Osika, Ken	Fish Culturist III
Sweet, Robert	Fish Culturist II
Klesa, Rodney	Fish Culturist I
Raab, Kelly	Fish Culturist I
Robb, Steven	Fish Culturist I

Caledonia Fish Hatchery

Mack, Alan	Fish Culturist IV
Stein, Robert	Fish Culturist II
Zenzen, Stephen	Fish Culturist I
Schirmer, Jason	Fish Culturist II
Hubbard, Bruce	Fish Culturist II
Krause, Mark	Fish Culturist III
Hayden, Kevin	Fish Culturist I
Ward, Brian	Fish Culturist I

Catskill Fish Hatchery

Covert, Scott	Fish Culturist IV
Anstey, Timothy A.	Fish Culturist I
Judson, James L.	Fish Culturist I
Gennarino, Joseph	Fish Culturist II
Anderson, John	Fish Culturist III
Galbreth, Steve	Fish Culturist I
Weishan, Derek	Fish Culturist I, Trainee II

Chateaugay Fish Hatchery

Brue, Peter	Fish Culturist III
Jackson, Matt	Fish Culturist II
Haley, Adam	Fish Culturist I
McCarthy, Neal	Fish Culturist I
Ventiquattro, Thomas	Fish Culturist II
Goodale, Zachary	Fish Culturist I

Chautauqua Fish Hatchery

King, Larry	Fish Culturist III
DeFries, Eric	Fish Culturist II
Preston, Ron	Fish Culturist I
Gruber, Bradley	Fish Culturist I

BUREAU STAFF

Oneida Fish Hatchery

Babenzien, Mark	Fish Culturist IV
Rathje, Carl	Fish Culturist III
Evans, Bill	Fish Culturist II

Randolph Fish Hatchery

Mellon, Jon	Fish Culturist III
Hohmann, Barry	Fish Culturist I
Rambuski, Jim	Fish Culturist II
Borner, Richard	Fish Culturist II
Hulings, Raymond	Maint. Asst.
Brady, Trevor	Fish Culturist I

Rome Fish Hatchery

Lewthwaite, Robert	Fish Culturist IV
Woodworth, William	Fish Culturist II
Grabowski, Steve	Fish Culturist II
Wanner, Scott	Fish Culturist III
Draper, John Jr.	Fish Culturist I
Balduzzi, Kevin	Fish Culturist I
Matt, Kimberly	Keyboard Spec.
Hajdasz, William R.	Maint. Suprv.
Stercho, Jonathan	Fish Culturist I
Gray, John	Fish Culturist I

Salmon River Fish Hatchery

Greulich, Andreas	Fish Culturist IV
Dolan Stephen	Fish Culturist III
Domachowske, Dave	Fish Culturist II
Hurd, Karen	Keyboard Speci.
Boyer, Brian	Fish Culturist I
Nelson, Robert	Fish Culturist II
Edmonds, Brian	Fish Culturist I
Tabolt, Casey	Fish Culturist I

South Otselic Fish Hatchery

Emerson, Pat	Fish Culturist III
Ryan, Bruce	Fish Culturist I
Kielbasinski, Thomas	Fish Culturist II
Speziale, Mike	Fish Culturist I

VanHornesville Fish Hatchery

Kroon, Larry	Fish Culturist III
DuBois, Craig	Fish Culturist II
Watson, Lauren C.	Fish Culturist I

Fish Disease Control Unit (Rome Fish Hatchery)

Noyes, Andrew	Pathologist 2 (Aquatic)
Henson, Fred	Biologist 1
Batur, Mark	Fish Culturist I