

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

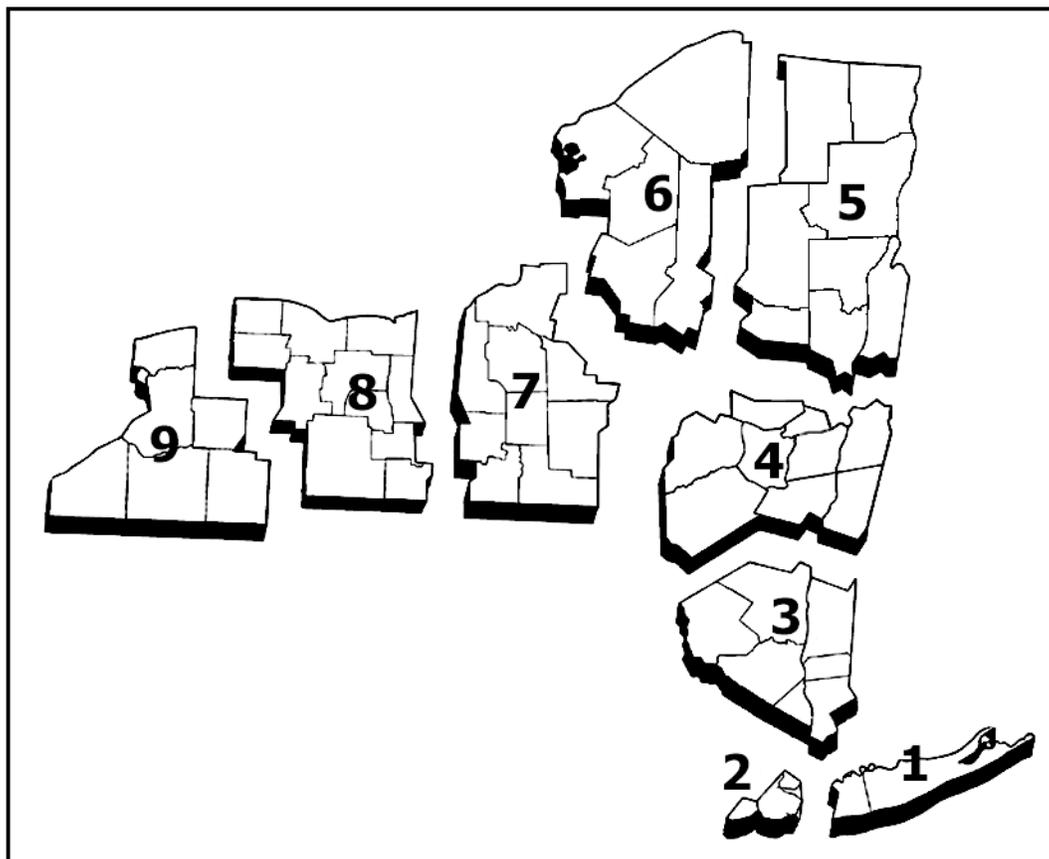
BUREAU OF FISHERIES

2011-12 Annual Report





DEC REGIONS



Region 1

Stony Brook University
50 Circle Road
Stony Brook, NY 11790-3409
(631) 444-0280
fwfish1@gw.dec.state.ny.us

Region 2

1 Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101-5407
(718) 482-4922
fwfish2@gw.dec.state.ny.us

Region 3

21 S. Putt Corners Road
New Paltz, NY 12561-1696
(845) 256-3161
fwfish3@gw.dec.state.ny.us

Region 4

65561 State Highway 10
Suite 1
Stamford, NY 12167-9503
(607) 652-7366
fwfish4@gw.dec.state.ny.us

Region 5

Route 86, P.O. Box 296
Raybrook, NY 12977-0220
(518) 897-1200
fwfish5@gw.dec.state.ny.us

Region 6

State Office Bldg.
317 Washington Street
Watertown, NY 13601-3787
(315) 785-2263
fwfish6@gw.dec.state.ny.us

Region 7

1285 Fisher Ave.
Cortland, NY 13045-1090
(607) 753-3095
fwfish7@gw.dec.state.ny.us

Region 8

6274 East Avon-Lima Road
Avon, NY 14414-9519
(585) 226-2466
fwfish8@gw.dec.state.ny.us

Region 9

182-East Union St., Suite 3
Allegany, NY 14706
(716) 372-0645
fwfish9@gw.dec.state.ny.us

Lake Erie Fisheries Unit

178 Point Drive North
Dunkirk, NY 14048
716-366-0228

Lake Ontario Fisheries Unit

514 East Broadway
P.O. Box 292
Cape Vincent, NY 13618
315-654-2147

Central Office

Bureau of Fisheries
625 Broadway
Albany, NY 12233-4753
(518) 402-8890
fwfish@gw.dec.state.ny.us

2011-12 Annual Report

New York State Department of Environmental Conservation Bureau of Fisheries *Phillip J. Hulbert, Chief*

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 2011-2012 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.

Table of Contents

DEC Regions	1
Introduction/Table of Contents	2
Common Acronyms, Definitions and Units of Measure	3
Region 1	4
Region 2	6
Region 3	8
Region 4	10
Region 5	12
Region 6	14
Region 7	16
Region 8	18
Region 9	20
Inland Section	22
Lake Ontario Research Unit.....	26
Lake Erie Research Unit	28
Public Use Section	30
Fish Culture Section.....	32
Summary of Fisheries, Creel and Angler Surveys	35
Bureau of Fisheries Reports and Presentations.....	47
Summary of Permits and Licenses Reviewed or Issued	49

2011-12 Annual Report

Common Acronyms, Definitions and Units of Measure

Common Acronyms

ACOE: Army Corps of Engineers

BEF: Boat electrofishing

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.

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

OMNR: Ontario Ministry of Natural Resources

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.

Centrarchid/Centrarchidae: members of the sunfish family, including large and smallmouth bass, bluegill and pumpkinseed.

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 by the Bureau of Fisheries to develop stocking rates for trout streams that takes into account biological measures of the stream, stream carrying capacity, angling pressure and wild trout abundance.

Dreissenid mussels: 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.

HUC: Hydrologic Unit Code. A categorization of watershed boundaries from the basin to the sub (small) watershed level (HUC12).

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

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.

Percid/Percidae: members of the perch family, including walleye and yellow perch.

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 hemorrhagic 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 fahrenheit (f) = $(f - 32) \times \frac{5}{9}$.

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

µg/l: micrograms per liter; equivalent to ppb,

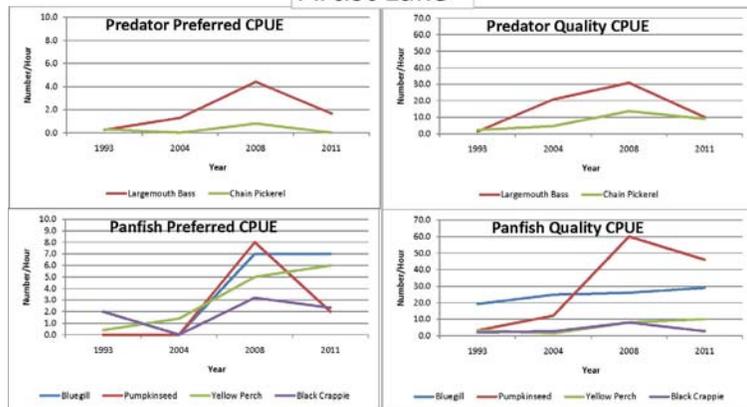


Surveys of two waters show community level benefits from bass catch and release regulation

Electrofishing surveys of Grant Park Pond (Nassau County) and Artist Lake (Suffolk County) were completed to assess the impact of a catch and release regulation on the largemouth bass population. This regulation was put in place on Grant Park Pond in 1998 and Artist Lake in 2004 in an effort to improve the quality of the bass population. While overall Catch per Unit Effort (CPUE) for most species declined after the regulation change in both waters, CPUE for quality and preferred size fish increased for most species. At Grant Park Pond, the overall largemouth bass CPUE dropped from 60 bass/hour in 1991 to 33 bass/hour in 2011, but the CPUE of bass over 12 “ (quality size) increased from 1.8 to 9.6 bass/hour and the CPUE for bass over 15” (preferred size) increased from 0 to 6.0 per hour. Over the same time period the overall bluegill CPUE decreased from 152/hour to 117/hour while bluegill over 6” (quality size) increased from 18.4/hour to 39.2/hour and bluegill over 8” (preferred size) increased from 0 to 31.2/hour.

Artist Lake has a more diverse fish community than Grant Pond and the results are more nuanced. In addition to largemouth bass and bluegill the lake also supports chain pickerel, pumpkinseed, yellow perch and black crappie. In 2008, the CPUE for quality and preferred size fish increased for nearly every species. However, in 2011 the CPUE for quality and preferred size bass, pickerel, and black crappie all declined. Bass and pickerel CPUE declined to near or below pre-regulation change levels while crappie and pumpkinseed CPUE remained above pre-regulation change levels. CPUE for quality and preferred size bluegill and yellow perch continued to increase from 2008 to 2011.

Artist Lake



In both ponds the number of desirable size fish of all species has increased, though the increase has been more variable in Artist Lake. The most likely explanation for this is that the catch and release only regulation leaves more large bass in the population. These large bass are more effective at thinning small panfish, so that those remaining

can grow larger, providing a more desirable size distribution of all species of fish for the angler.

PIT Tagging Project- Carmans River, Southaven County Park:

Staff completed the construction and installation of eight antennas along the Carmans River to track the passage of PIT tagged alewife, brook trout, brown trout, rainbow trout and American eel. Of particular interest is the passage of these fish species over the fish ladder at Hards Lake and over the dam at Southaven Park Gate C. These antennas will track the passage of any of these fish that contain a small Passive Integrated Transponder (PIT) tag. PIT tags are relatively small, internal, and have an indefinite lifespan. When a tagged fish passes through an antenna, the fish's tag number is recorded, along with the date and time, by a data logger attached to the antenna. This information is stored and then later uploaded onto a laptop. Staff have also partnered with Cornell Cooperative Extension of Suffolk County in order to increase the number of antennas in place in the Carmans River and to increase the number of fish tagged. They have designed and built antennas for the tidal section below the Hards Lake dam and for two locations further upstream. Cornell staff will also tag white perch, yellow perch, brown bullhead, and common carp to determine their movement within the upper and lower (tidal) river.

In 2011, DEC staff successfully tagged 100 brown and 100 rainbow trout at the Catskill Hatchery with zero mortality. These fish represent 10% of the trout destined for this section of the Carmans River. Wild fish were also tagged and released, including four alewives and one American eel. More wild fish will be caught and tagged using Fyke nets and electrofishing in April 2012.

Threatened Fish Assessment

Ten waters in the Peconic River Drainage were surveyed during July and August to search for banded sunfish *Enneacanthus obesus* and swamp darter *Etheostoma fusiforme*. Both species are threatened in New York State and are currently only known to exist in the Peconic Drainage on Eastern Long Island. Banded sunfish were collected from all ten waters. Swamp darters were found in two ponds. This was the first record of swamp darter from both waters. The ponds are within Suffolk County Parklands in the Town of Brookhaven. A single specimen from each location was collected for the New York State Museum. During each survey, a fin clip was collected from ten banded sunfish at each location for DNA sequencing. Brookhaven National Laboratory will be conducting the sequencing in an effort to determine the different strains of banded sunfish within the population. This information will be useful should any restocking efforts be undertaken as part of the recovery plan associated with the New York Comprehensive Wildlife Conservation Strategy. Surveys to determine the presence or absence of swamp darter will continue through the summer of 2012. A poster summarizing all of the banded sunfish data since the beginning of the project in 2006 was presented by Heidi O'Riordan at the New York



Banded Sunfish

Chapter of the American Fisheries Society meeting this past February. Information included capture methods, environmental and habitat preferences, population data, potential threats to these populations and an update on its current distribution. A copy of "In search of the Banded Sunfish *Enneacanthus obesus*" is available upon request.

I FISH NY Long Island

In 2011, the I FISH NY program reached approximately 6,350 people through fishing clinics and conservation day events. The I FISH NY program also worked with an additional 625 public school students through in class programs and charter boat fishing programs in collaboration with Nassau BOCES. Fishing clinics were offered to the public at Lake Ronkonkoma, Hempstead Lake State Park, Town of Brookhaven Corey Beach, and Town of Brookhaven Cedar Beach. A total of nine conservation day activities were held at local schools and parks.

Summer months are particularly busy. Activities include events for local Girl Scout and Boy Scout troops. Of note is the Deep Pond Fishing Clinic, which is held annually in June for Nassau County Boy Scouts. In 2011 the event was held in conjunction with the NYS DEC Free Fishing Weekend. This allowed parents to fish along with their children and made for a very enjoyable experience. This past summer 85 Boy Scouts earned their fishing badge through participating at this event. This year, every participant caught a fish, and for most this was their first time catching a fish.



In recent years due to staffing issues, I FISH NY in Region One has become dependent upon volunteer service. Our larger events would not be possible without this assistance. This past year we were fortunate enough to have over 75 volunteers at the Belmont Fishing Festival, and 50 volunteers assist at the Fall Fishing Festival. Public events have continued to show success without permanent DEC staffing. However, our in school programs have declined significantly from over 20 events per year (with three staff members), to 5 events per year (with one seasonal staff member). Our goal is to double the number of in school programs in the next fiscal year.

Invasive species control and monitoring continues

Region 1 Fisheries Staff in conjunction with the Peconic Estuary Program and numerous volunteers completed two water primrose (*Ludwigia*) removal operations in the Peconic River in 2011. The first, on August 5, covered most of the river with volunteers in canoes covering the river and DEC staff filling jon boats on Peconic Lake. The second operation on Sept 9, pulled the known remaining patches of Ludwigia from Grangebel Park on the Peconic River. These patches had grown

substantially since they were documented in August. Each work day yielded a full pickup truck load of Ludwigia, for a total of nearly 6 cubic yards.

Follow up surveys of Peconic Lake showed some regrowth of Ludwigia in the areas where it was removed, and also

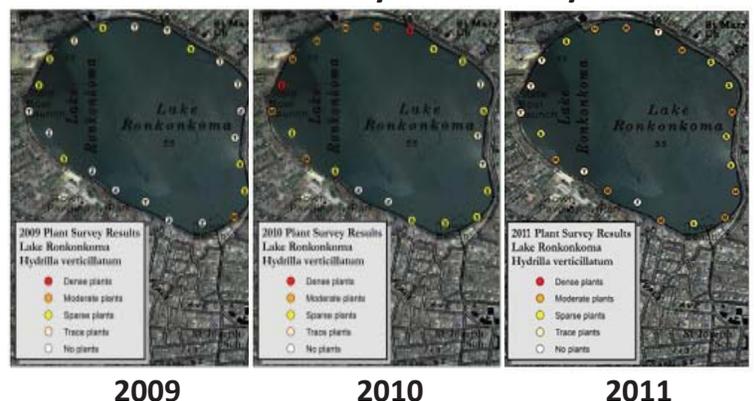


revealed several patches upstream from the areas that were cleared. These areas will have to be addressed in 2012. It has become apparent that

the total eradication of Ludwigia is not feasible. However the level of infestation is only about 10% of what it was at its peak in 2006 and 2007. Continued vigilance along with a continued hand removal effort should keep the infestation under control. Hand removal efficiency can be maximized by concentrating removal efforts in July when Ludwigia growth is sufficient to make it visible, but before biomass growth accelerates in August.

The annual August survey of the hydrilla infestation in Lake Ronkonkoma showed a less dense infestation than 2010. While there were more sites with moderate plant growth in 2011, the two sites with dense growth in 2010 had only trace vegetation in 2011. The hydrilla infestation doesn't reach nuisance levels until late September, when use of the lake is declining. It then dies back completely over the winter. At the present time the hydrilla is not interfering with the use of the lake, so management is limited to monitoring and public education oriented towards preventing its spread to other water bodies.

Lake Ronkonkoma Hydrilla Survey Results



2011-12 Region 1 Fisheries Staff

- | | |
|------------------|-------------------------------------|
| Charles Guthrie | Biologist 2 (Aquatic) |
| Heidi O'Riordan | Biologist 1 (Aquatic) |
| Charles Vullo | Seasonal Laborer (4/1/11 – 9/30/11) |
| Ann Ezelius | Environ. Education Assistant |
| Garrett Cacciola | SUNY ESF Intern (6/15/11-8/20/11) |
| Kathleen Marean | Seasonal Fish & Wildlife Technician |
| Chris Scott | Seasonal Fish & Wildlife Technician |



Warmwater Fisheries Surveys

Oakland Lake

An electrofishing survey of Oakland Lake, Queens was performed on 4/18/11. The last DEC electrofishing survey of this water body was in 1996. Fish species captured included largemouth bass, black crappie, bluegill and pumpkinseed. Chain pickerel, a relatively uncommon NYC fish species, were also collected. Catch per unit effort (CPUE) of all fish was 385/hr. CPUE for largemouth bass 12" and longer was 8 fish/hr and 5 fish/hr for bass 15" and longer. The heaviest bass captured was almost 6.5 lb. CPUE of chain pickerel 15" and greater was 3 fish/hr. Combined bluegill and pumpkinseed CPUE was 226 fish/hr for fish six inches and greater in length and 5 fish/hr for fish eight inches and greater in length. Fish were also collected for disease testing as part of the DEC statewide fish disease surveillance program. Collected fish did not test positive for any of the diseases they were tested for.

Wolfe's Pond

An electrofishing survey of Wolfe's Pond, Staten Island was performed on 4/21/11. The majority of species collected were warmwater fish species: black crappie, largemouth bass, pumpkinseed, bluegill, golden shiner, brown bullhead and common carp. CPUE of all fish was 357 fish/hr. CPUE of largemouth bass 12 inches and longer was 11 fish/hr and 3 fish/hr for bass 15" and longer. CPUE of black crappie eight inches and longer and 10 inches and longer was 7 fish/hr and 3 fish/hr, respectively. Combined bluegill and pumpkinseed CPUE was 50 fish/hr for fish six inches and longer. Due to its close proximity to Raritan Bay, Wolfe's Pond was also home to saltwater-tolerant fish such as gizzard shad, American eel and white perch. Unfortunately, the berm separating Wolfe's from the marine waters of Raritan Bay was breached during Hurricane Irene and the pond was overcome by salt water, destorying the freshwater fish population. The NYC Parks Department has plans to reconstruct the berm and restore Wolfe's pond. Data from our 4/21/11 survey should be helpful towards pond restoration.

Northern Snakehead Surveys

DEC Region 2 Fisheries has been monitoring the invasive species northern snakehead in Meadow and Willow Lakes of Flushing Meadows Corona Park since 2006. Until 2011, catch per unit effort (CPUE) of snakeheads has remained the same and that of other fish species has remained the same or increased. Fish data from electrofishing surveys on 10/18/2011 (Willow Lake) and 11/3/11 (Meadow Lake) showed a slight increase in CPUE for nearly all fish species in these lakes, including northern snakeheads. The increase in CPUE was likely due to improved water clarity which enhanced the collection of fish. Largemouth bass were found in 2011, as they were in 2010. This



is significant as largemouth bass represent the only other top predator in these lakes.

Green Sunfish found in Central Park

Green sunfish (*Lepomis cyanellus*) were found during a 10/25/2011 electrofishing survey of the Harlem Meer in Central Park. This was the third survey of this water body in four years but the first time green sunfish have been found in any water body surveyed in Region 2. Other species of fish found during the survey included largemouth bass, black crappie, bluegill, pumpkinseed and yellow perch.



I FISH NY

NYC School Fishing Program

Spring In-School fishing program: 61 classes, 1338 total students. Highlights include:

Gantry Park

After years of spring season fishing with the I FISH NY program, PS 148 (Queens) students were able to take advantage of the potentially great fishing the fall season offers in New York City. Each of three classes of elementary students caught fish with a blitz occurring during the final class where striper after striper was hauled over the railing, sometimes two at a time. Teachers, students and, especially, R2 fisheries staff were very pleased with the trip.

South Richmond High School

The majority of Region 2's fishing outreach program is implemented in elementary and middle schools. In 2011, the program expanded into two high schools. One of these schools, South Richmond High School, is located across Hylan Boulevard from DEC's Mt. Loretto Unique Area. While the students from this school had experienced the trails, grasslands and forests of Mt. Loretto, they had not experienced the area's salt and freshwater resources. Through the I FISH NY program, the students learned of the diverse fishery resources of New York State and experienced them firsthand through both seining and fishing at one of the most valued open space areas of Staten Island. While the students did not catch any fish during their fishing trip, a few seine hauls in Raritan Bay yielded juvenile windowpane flounder, bay anchovies, and an assortment of marine invertebrates. These outdoor experiences, along with tree planting on April 29th, have increased South Richmond HS's connection to the local natural resources across the street.

Other Fishing Programs

PS 199, Saturday Environmental Program fishing at 68th St. Pier, Manhattan

Harlem YMCA, fishing at 125th St. Pier, Manhattan

Baisley Pond Family Fishing Clinic, Queens

Raritan Bay Festival at Conference House Park, Staten Island

National Park Service, Junior Ranger Program, Ocean Breeze Pier and Wolfe's Pond Park, SI

CAMBA, fishing at Canarsie Pier, Brooklyn

Snapper Derby with NYC Parks, 68th St. Pier, Manhattan

PS 52, Summer School Program, Fishing at Prospect Park, Brooklyn

City of Water Day, Governor's Island, Manhattan

Workshops and Trainings**Harbor School Fishing Club**

The NYSDEC I FISH NY program partnered with The Harbor School in New York City to establish a fishing club at the school's site on Governor's Island. The club will hold monthly meetings from January to April and then weekly meetings from April to the end of the school year. The I FISH NY program's aim is to establish an ethical approach to angling within the club while offering instruction to students and teachers alike, with an emphasis on training the teachers to provide fishing tutelage to future students. Training the teachers will allow the club to become self sustaining, allowing I FISH NY program staff to act in a supporting, rather than tutoring, role in years to come.

National Park Service, New York City Parks Staff Training

Region 2 Fisheries staff led an angling training workshop for outreach professionals from both the National Park Service (NPS) and New York City Department of Parks and Recreation (NYC Parks). The workshop taught participants the fundamentals of setting up a fishing rod, aquatic education, fresh and saltwater recreational fishing regulations and fish consumption advisories. National Park Service staff are gearing up to implement fishing clinics for new anglers within Gateway National Recreation Area, and DEC's I FISH NY program is providing the angler training for the future angler trainers. The NPS and NYC Parks staff members were enthusiastic and followed instruction well. By the end of the class, they were familiar with basic knot tying and setting up a fishing rod, fish identification, rules and regulations that apply to New York City waters, and the basics of finding fish to catch in New York City. R2 staff hopes to coordinate events with both the NPS and NYC Parks in the future and has plans for additional train-the-trainer programs. An additional training was also held for Prospect Park Alliance staff.

NYSMEA Share-A-Thon

Region 2 Fisheries staff participated in a New York State Marine Educators Association "Share-A-Thon" workshop at Columbia Teachers College. The workshop provided useful, natural resource-focused, lesson plans to teachers. R2 staff presented the Fish Anatomy and Diversity lesson plans used in its I FISH NY classroom program and received an enthusiastic response from the teachers. These lesson plans utilize I FISH NY Go Fish playing cards and are a simple and effective way to teach students of different ages about fish anatomy and the diversity of

fish found in New York State. Teachers of Kindergarten through high school participated in the workshop and will hopefully help get the word out to their students about the wonderful diversity of fish found in New York State.

**2011-12 Region 2 Fisheries Staff**

Melissa Cohen
Darin Alberry
Diallo House
James MacDonald

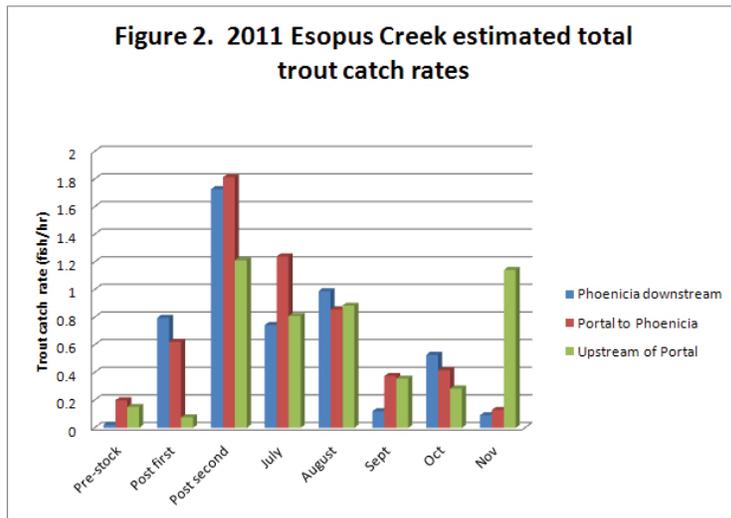
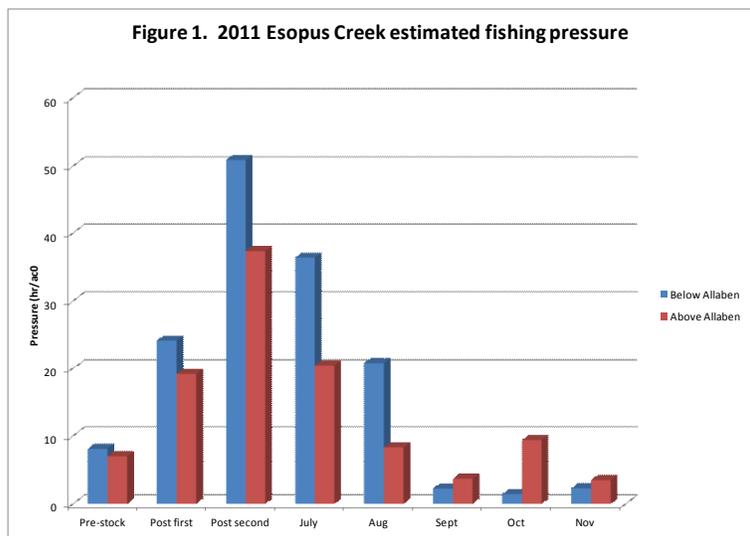
Biologist 2 (Aquatic)
Environmental Education Assistant
Environmental Education Assistant
Environmental Education Assistant



Esopus Creek Creel Survey

A full season (April 1 – November 30) creel survey was conducted on Esopus Creek during the 2011 season. The surveyed reach includes the 11.9 mile section from the Ashokan Reservoir to the Allaben portal (broken into two sub sections), along with the section from the portal upstream to Lost Clove (5.0 mi). A total of 134 days were sampled in 2011. The defining event(s) in 2011 were Hurricane Irene in late August, followed by tropical storm Lee shortly thereafter. The Esopus watershed was absolutely devastated by record flooding from Irene, and the creel schedule was reduced in the two weeks following the storm in response to no fishing pressure being observed in the watershed.

The overall season pressure estimate for the Esopus was 146 hr/ac below the portal, and 109 hr/ac above the portal. For analytical purposes, the “post second” period is the period of time from the second increment of stocking (generally late May) through June 30. Fishing pressure predictably rises after the first and especially second stocking increments, likely in response to both the placement of the fish as well as the onset of warmer weather. It is interesting that post-Irene, the five mile “above portal” section attracted more pressure than the 16 mile “below portal” section, since both were devastated by the flooding (Figure 1). Total trout estimated catch rates (Figure 2) follow a similar pattern as fishing pressure, with the highest catch rates following the placement of the two stocked increments. It is interesting that the “above portal” section showed such a high catch rate in November, however, this is likely skewed by a low sample size for that month. It will be interesting to see how the 2012 catch rates develop after the flooding of late 2011.



Kensico and Rondout Reservoir Lake Trout Management

Due to the abundance of wild lake trout noted by angler diary cooperators and recent fisheries surveys in Kensico Reservoir and Rondout Reservoir, lake trout stocking will be terminated in both waters. In Kensico Reservoir, 93% of the lake trout were determined to be of wild origin. In 2010, the angler catch rate for lake trout was 0.57 per hour and the fish averaged 19.3” in length.

Lake trout were first introduced into Rondout Reservoir in 1976, with a stocking of 40,000 surplus Adirondack strain fall fingerlings. This increment survived to spawn around 1981. Starting in 1981, an annual stocking policy of 6,800 yearling lake trout was instituted. Gillnet survey data collected between 1990 and 2011 have documented a wild lake trout component of 64% to 89% in five survey samples through this time period, with the most recent surveys (2010 and 2011) containing 89% and 74% wild lake trout, respectively.

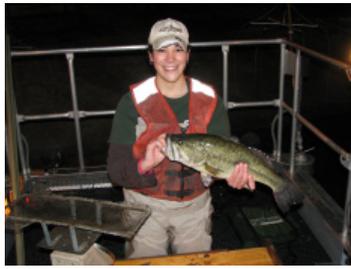
Tidal Esopus Creek Black Bass Monitoring

In early April, a boat electrofishing survey was conducted to monitor the overwintering population of black bass in the tidal Esopus Creek and the effect of the 15 inch minimum size regulation. This portion of the Esopus Creek is adjacent to the Hudson River and is known to be one of



five important wintering areas for largemouth bass in the Hudson River Estuary. During the previous fall and winter, multiple flood events occurred within this watershed. These floods created a high level of turbidity in Ashokan Reservoir, resulting in New York City Department of Environmental Protection releasing turbid water into the lower Esopus Creek for an extended period of time. This survey resulted in 132 total black bass (117 largemouth and 15 smallmouth) being collected in 1.96 hours of electrofishing (67.4 bass/hour). This catch rate was down from previous years, however, poor water clarity of about 1 foot undoubtedly affected electrofishing efficiency. Despite the poor water clarity through the winter, the bass collected appeared to be healthy. Both largemouth and smallmouth bass averaged 16.1”. Nearly 69% of the bass were over 15” and 97.7% of the bass were over 12”.

Sylvan Lake Bass Assessment



A boat electrofishing survey was conducted in May 2011 to assess the largemouth bass fishery in this 115 acre lake in Dutchess County. A total of 161 largemouth bass were collected, for a catch rate of 159 bass per hour. Forty eight percent of the bass collected were over 12 inches in length. Sylvan Lake currently has a healthy population of largemouth bass. Triploid grass carp were stocked in the spring of 2008 to help control Eurasian milfoil in the lake. The fisheries unit has documented a decline in the aquatic vegetation since this stocking and will continue to monitor the potential impacts on the bass fishery.

Rio Reservoir Walleye Assessment

Rio Reservoir (Sullivan/Orange Counties) was sampled by boat electrofishing on April 1, 2010 to investigate the presence of walleye. A total of 48 walleye were collected in approximately 45 minutes of electrofishing. Subsequent scale analysis during the past year indicated that these fish were four to six years of age, which provides evidence that they likely outmigrated from Swinging Bridge Reservoir (upstream) during a time when it was drastically drawn down to facilitate repair of its failing earthen dam. Swinging Bridge Reservoir is somewhat unique in that its walleye population exhibits successful year class recruitment during most years in the face of an abundant alewife population. It is suspected that the morphometry of Swinging Bridge Reservoir provides spatial separation of the two species, allowing larval walleye to evade alewife predation. Rio Reservoir does not exhibit this morphometry, and a Fall 2011 electrofishing survey failed to collect any young-of-year walleye. Given the demonstrated survival of introduced walleye in Rio Reservoir, a stocking policy of 8,700 fall fingerling walleye has been established. Stocking will commence during late summer 2012.

Stream Disturbance and Article 15 Permit Review

Following Tropical Storms Lee and Irene, Fisheries staff were called upon to issue General Permit Authorizations for emergency work along protected streams. During the period immediately following these storms through the end of March 2012, the Bureau of Fisheries, Bureau of Habitat, and Division of Environmental Permits staff issued a total of 496 General Permit authorizations in Region 3. Additionally during the first 30 days of the emergency, 295 Emergency Authorizations were recorded for work conducted before the General Permit was required. By the end of March, the total number of sites that were either visited or where some form of authorization was given had reached 888 sites.

Due to a shortfall in staff within Region 3 Division of Environmental Permits and Bureau of Habitat, staff participated in an experimental initiative to expedite the issuance of Article 15 permits by authorizing Region 3 Fisheries staff to draft and sign permits. The initiative would reduce the in house labor devoted to processing Article 15 permits by having only one agency staff member involved in the environmental review and procedure processing of this category of permit.

Tappan Zee Bridge Replacement

The NYS DOT, NYS Thruway Authority and the Federal Highway Administration joined forces to gain the needed approval to construct a new three mile long bridge and demolish the existing Tappan Zee Bridge span. Fisheries staff were assigned by the Division of Fish Wildlife and Marine Resources to coordinate DFWMR review of the DEIS and permit application for the work; including the Sediment Test Borings and the Pile Installation Demonstration Project (PIDP) as well as the full bridge construction, slated to begin in August 2012.

The major potential impacts identified by staff stem from the underwater sound and pressure waves from the pile driving, dredging of approximately 175 acres of Hudson River shoal habitat and the suspension of sediment.

Fisheries staff are actively participating in the PIDP to ensure that measures are developed to minimize the effects of underwater sound from pile driving. This has the potential to harm millions of fishes, including the endangered Atlantic and shortnose sturgeon, if it is not reduced by sound attenuation systems.



Champlain Hudson Power Express (CHPE)

In February 2012, a Joint Proposal was signed by parties to a Department of Public Service (DPS) application process for the construction of a 1000 MW bipole transmission facility proposed by Transmission Development Inc. (TDI). The CHPE will consist of two eight inch diameter cables, extending from the Canadian border across Lake Champlain, down the Hudson and Harlem Rivers and across the East River terminating in Astoria, Queens. Over a two year period, DEC staff negotiated several alterations to the proposed construction of the project that will minimize the impacts to the affected waters. The burial depth was increased and the cable will be buried in a single trench, which will greatly reduce the magnetic field emanating from the system. The cable route was significantly modified, avoiding sections of the Hudson River used for Atlantic and shortnose sturgeon spawning, feeding and overwintering habitat. In addition, to ensure that any needed mitigation of impacts is identified in the future, TDI has agreed to create an environmental trust fund totaling \$117.5 million. Details of the project are available at: www.chpexpress.com/index.php.

2011-12 Region 3 Fisheries Staff

Mike Flaherty	Biologist 2 (Aquatic)
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	Seasonal Fish & Wildlife Technician
Ryan Burns	Laborer 1 (seasonal)
Indie Bach	Laborer 1 (seasonal)



Upper West Branch Delaware River Creel Survey

A creel survey on the 30 mile reach of the upper West Branch Delaware River between Bloomville and Walton was conducted from April 1 through July 4, 2011, to document fishing pressure and trout catch rates. This reach was stocked with a total of 12,820 yearling and 1,400 2-year



old brown trout. Fishing pressure totaled 9,336 hours for an average of 47.5 ±1.2 hours which was down about a third from the 75 hours/acre recorded on the same reach during creel surveys conducted in 1984 and 1985. The catch rate (released+creeled) for trout in 2011 was 0.5 fish/hour and the creel (harvest) rate averaged 0.2 fish/hour which was comparable to the catch rate of 0.6 fish/hour and the creel rate of 0.3 fish/hour recorded during the 1984 and 1985 creel surveys. An estimated 5,266 trout were caught in 2011 of which 1,248 trout were creeled. Hatchery trout comprised over 90% of the creeled catch in 2011. During the 1984-85 surveys, wild trout comprised 30% of the creeled catch.

Common Merganser Diet Studies

A diet study of common mergansers on the 36.4 mile reach of the upper West Branch Delaware River between the villages of Walton and Hobart was conducted between April 9 and June 26, 2011. Daily merganser abundance during the study period ranged



from 5 to 141 birds and averaged 50±7 birds/sample day. These mergansers ate an estimated 7,330 (± 1,928) yearling stocked brown trout which represents 53% of the fish stocked. This high predation mortality by mergansers may be a major contributing factor to the low survival of stocked trout in streams. During another element of this study, a 14 inch brown trout was regurgitated by a captured merganser. In 2010, a 14-15 inch two year old stocked brown trout was observed being eaten by a merganser. Thus, large trout are also vulnerable to merganser predation.

Susquehanna River Rock Bass

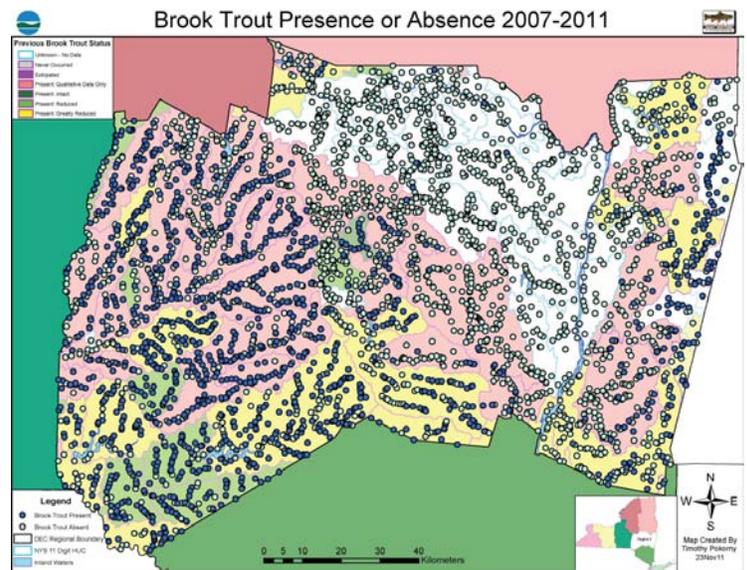
Following several complaints from anglers concerning the scarcity of rock bass in the upper Susquehanna River, the five mile long Wells Bridge pool in Otsego County was boat electrofished. During an intensive 1992 fish population study on this pool, the catch of rock bass

per sampling day ranged from 10.0 to 41.5 rock bass/hour for an overall average of 20.5 fish/hour. In the 2011 sampling effort, the catch of rock bass over the two day sampling effort ranged from 1.0 to 4.2 fish/hour for an overall average of 2.6 fish/hour. The catch of other warmwater game fish and panfish species were comparable with the earlier study. Region 7 and Pennsylvania fisheries biologists also report major declines in rock bass abundance in their reaches of the Susquehanna River which indicates that the decline is riverwide. Reasons for the decline in rock bass abundance are not known. Further studies are warranted.



Eastern Brook Trout Joint Venture Project

The fifth year of a five year project to survey many of the smaller streams throughout Region 4 to determine the presence or absence of brook trout was completed in 2011. A federally funded two man survey team sampled 506 streams between June 2 and Sept 28 including 174 streams where trout were collected. Brook trout were found in 136 streams, brown trout in 75 streams, and rainbow trout in 41 streams. For the five year period from 2007 through 2011, a total of 3,475 small streams were surveyed throughout Region 4 including 1,468 streams that support trout. Brook trout were found in 1,226 streams, brown trout in 779 streams, and rainbow trout in 173 streams. One of the immediate benefits of this effort is that it identifies streams or stream segments that warrant upgrading of their water quality classification. Protected streams require a NYSDEC permit to work on the bed or banks of a stream. Unprotected streams generally do not require a stream disturbance permit. This study found that a total of 585 unprotected streams are now eligible for upgrading to protected status.



Tropical Storms Irene and Lee

Heavy rains, up to 13 inches in places, associated with Tropical Storms Irene and Lee on Aug 28 and Sept 7 resulted in major flooding and damage to all nine counties comprising Region 4, an area the size of Connecticut. The most widespread damages occurred in the upper East Branch Delaware River and throughout the Schoharie Creek watershed. At Schoharie Creek in Gilboa (RM 53.0), stream flow went from 10 cfs

to an estimated peak of 108,000 cfs in less than 24 hours and was considered a 500 year flood event. Flood damage throughout the region was extensive. Hundreds of homes were destroyed. Many reaches of state, county, and town roads were washed away or badly damaged. Clean up and repair began immediately once flood waters receded. This effort remains ongoing and is expected to continue through 2012. Regional fisheries and habitat staff were extensively involved in the issuing of emergency Article 15 permits for work on the bed and banks of streams throughout the region. As of Feb 29, 1,417 emergency permits had been issued in Region 4 of which 744 were issued by regional fisheries/habitat staff. The Article 15 workload is expected to be much higher in 2012 because of the extensive and widespread flood damage last August and September.



Before



After

Upper West Branch Trout Population Studies

Mark and recapture trout population estimates with a portable boat shocker were conducted on four sections of the upper West Branch Delaware River between Bloomville and Walton in either late May and/or early June, depending upon flow conditions. Study reaches ranged from 4,917 to 12,689



ft long and covered 6.9 to 29.8 acres. A total of 427 trout (excluding 19 recaptures) were collected including 210 wild brown trout, 5 wild brook trout, 1 wild rainbow trout, 184 hatchery yearling brown trout, and 27 two year old hatchery brown trout. Trout density and biomass at Bloomville (RM 64.2) averaged 19.7 fish/acre and 8.5 lbs, respectively in June. At Delhi (RM 56.1), trout density and biomass in May averaged 9.3 fish/acre and 6.9 lbs/acre compared to 17.4 fish/acre and 6.6 lbs/acre in June. Trout density and biomass at Hamden (RM 46.3) averaged 15.0 fish/acre and 11.1 lbs/acre in June. At Walton (RM 38.8), trout density and biomass in May averaged 18.5 fish/acre and 11.0 lbs/acre compared to 9.7 fish/acre and 2.9 lbs/acre in June. Since this was the first study of its kind on the upper Delaware River, it is not possible to say whether the 2011 results are better or worse than that which oc-

curred historically. However, the trout populations are comparable to those in other larger regional trout streams.

Fish Health Collections

Trout (minimum sample size 60 fish of all sizes per water) were collected from Horton Brook (tributary to the Beaver Kill), Sands Creek (tributary to the lower West Branch Delaware River), and the Roeliff Jansen Kill in Columbia County for fish health testing. These fish were all shipped to the USFWS Lamar Fish Health Center in Pennsylvania where they were tested. This collection is part of an ongoing statewide effort to monitor fish health in waters across New York. All trout tested negative for viral hemorrhagic septicemia (VHS), spring viremia of carp, furunculosis, enteric redmouth, infectious pancreatic necrosis (IPN), whirling diseases, bacterial kidney disease, and infectious hemotopoietic necrosis (IHN). Both warmwater and salmonid fish species have been collected from a variety of waters throughout the region since 2008 for fish health testing. To date, wild fish populations throughout Region 4 remain free of these diseases.

Oriental Weatherfish (Loach) Assessment

In a second season of monitoring New York's Oriental weatherfish (loach) populations, Region 4 Fisheries collected 2000 specimens in the Manor Kill headwaters alone. This population appears to be growing exponentially despite efforts to reduce its size using dozens of baited fish traps. A trial to determine if loach can be successfully controlled with rotenone is tentatively planned for summer 2012, if permission and permits are obtained in time. Lab experiments on loach at SUNY Cobleskill resulted in 100% mortality although some specimens survived for up to 1.5 h. Known loach waters in Regions 7 and 9 were also sampled and loach were reconfirmed in Ball Creek (R9). A new population was discovered in R7 above the one found in 2010 suggesting that the Susquehanna River below Bainbridge is now infested with loach. Furthermore, collaboration at the AFS conference in Seattle (loach poster) revealed many states/provinces have loach problems and they can be a disease vector (flatworm).



2011-12 Region 4 Fisheries Staff

Norm McBride	Region 4 Fish Manager
Dan Zielinski	Biologist 1 (Aquatic)
Scott Wells	Biologist 1 (Aquatic)
Dennis Wischman	Fish and Wildlife Technician 3
Dave Cornwell	Fish & Wildlife Technician 1
Tim Pokorny	Seasonal Fish & Wildlife Technician
Rob Poprawski	Seasonal Fish & Wildlife Technician
Kevin Cronin	Seasonal Fish & Wildlife Technician
Jeff Strassenburg	Seasonal Fish & Wildlife Technician
Steve Swenson	Stream Protection Biologist (contract)



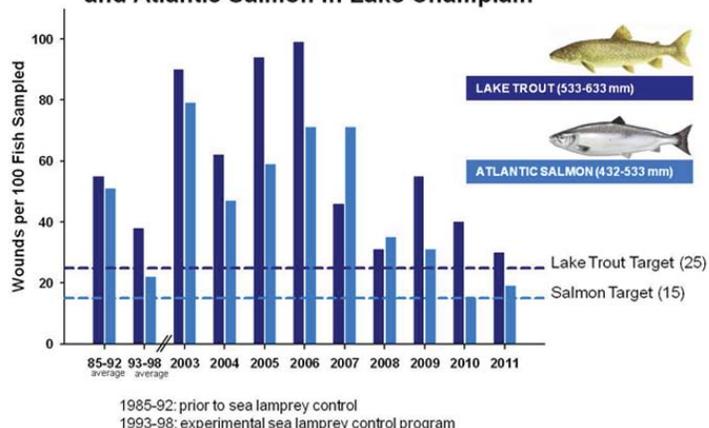
Lake Champlain Lamprey Control

The abundance of, and fishing opportunities for, lake trout and landlocked Atlantic salmon continue to improve in Lake Champlain. Re-establishing salmon and lake trout is a cooperative effort of the US Fish and Wildlife Service (FWS), the Vermont Fish and Wildlife Department (VTFWD), and the New York State Department of Environmental Conservation (NYSDEC). Controlling the abundance of parasitic sea lamprey is critical to these management efforts.

Lake Champlain sea lamprey treatments were conducted on the Boquet River, Ausable River delta, and the Poultney River, as well as Lewis Creek in Vermont. High lake levels prevented treating Putnam Creek, and Mount Hope Brook. For the delta treatment, the US Fish and Wildlife Service (FWS) has improved both the process of identifying where lamprey larvae are abundant, and the ability to precisely apply lampricide to those locations. These technical improvements probably made this the most effective treatment of the Ausable delta to date. The Boquet River treatment was the first treatment in the Champlain basin to utilize TFM in combination with Niclosamide. The combination provides the same level of effectiveness while using roughly half the amount of chemical that would be required for a TFM only treatment. In addition to chemical treatments, barriers and trapping were employed to control spawning lamprey on Beaver Brook, Mullen Brook, and the Great Chazy River in New York, as well as several streams in Vermont.

The abundance of lamprey wounds on trout and salmon during 2011 was low relative to previous years. Angler reports and electrofishing results show that the abundances and average sizes of trout and salmon increased dramatically with the decrease in lamprey wounding. Similarly, returns of spawning salmon to the Willsboro Fishway on the Boquet River were the best in more than a decade: a total of 69 adult landlocked Atlantic salmon were collected during the fall. For additional information on the salmon fishing visit the DEC website at: www.dec.ny.gov/outdoor/38369.html.

Sea Lamprey Wounding Rates on Lake Trout and Atlantic Salmon in Lake Champlain



Management of Inland Waters

Various surveys were conducted on about 33 lakes, ponds, and streams. About 11 of the pond surveys were simple water chemistry checks to monitor acidification. Of those, two ponds (Benz and St Germain) were found to have pH values that may warrant liming.

Lake Algonquin Walleye Assessment

Lake Algonquin in Hamilton County was surveyed to evaluate the effectiveness of walleye fingerling stockings that occurred from 2002-2006. Unfortunately, no walleye were captured so the stocking effort was a failure. The lake does support trophy largemouth bass, and chain pickerel were common. Yellow perch brown bullhead, rock bass, pumpkinseed, smallmouth bass, golden shiner, white sucker and fallfish were also caught.

Middle Saranac Lake Survey

Middle Saranac Lake, a shallow productive 1,300 acre lake in Franklin County, was surveyed to evaluate its potential for walleye stocking. The lake was last surveyed in 1975, so a new survey was necessary to determine quality of the fish community. Nine sites were netted around the lake in a variety of habitats in late June. Unusually high numbers of fish were caught, particularly yellow perch and smallmouth bass. The yellow perch size structure was impressive with many perch over 10 inches long and some as large as 14 inches. Smallmouth bass were abundant in rocky habitat and averaged over 1.5 pounds. Only a few northern pike were caught. Rock bass, pumpkinseed, brown bullhead and white sucker were also captured. A single lake trout was a surprise capture in the deepest net set. Middle Saranac Lake has a maximum depth of 21 feet. Dissolved oxygen levels were excellent at all depths, and no thermocline (area of rapid temperature change) was present. This windswept lake has constant water mixing. The high quality of the yellow perch and smallmouth bass fishery in the lake negates thoughts of adding walleye. The fish community is in good balance and bass predation on stocked walleye fingerlings would be high.

Regional Egg Takes/Broodstock Management

Brook trout restoration and management continued with egg takes for the Heritage strains, and repairs and maintenance to various fish barriers that control invasions by non-native fishes. Egg takes were completed for Horn Lake strain brook trout on Fishbrook Pond (Washington County) and Windfall Strain on Mountain Pond and Black Pond (Franklin County). At Raquette Lake, the lake trout egg take resumed in the fall of 2011 after a one-year hiatus. Raquette Lake provides Adirondack strain lake trout eggs for hatchery production. Resuming collections in 2012 means that only one year's stocking will have been missed.

Public Access

Northville Fishing Pier

A universally accessible fishing pier was installed at the Northville Boat Launch Site on Great Sacandaga Lake. The Great Sacandaga Lake Advisory Council purchased the pier and gifted it to the DEC for all the people around the lake to enjoy and use. DEC will be responsible for maintaining the pier including annual installation in spring, and removal prior to ice formation in the fall. The pier has a 40 foot gangway, 24 x 6 foot fishing area and a strong arm for support.



Finch Pruyn Acquisition

Recent easement acquisitions on Finch Pruyn lands in Hamilton County will improve access to Barker Pond and Cranberry Pond in the Town of Indian Lake to the north of Lake Durant. Staff hiked/bush whacked into both ponds in early July and determined that brook trout were abundant and in good condition.

Habitat Restoration

Tropical storm Irene caused severe flooding in eastern portions of the region in August. Staff consulted with local municipalities in an attempt to minimize habitat damage from instream work conducted after the flood. A cooperative effort with DEC, the Department of Transportation, and the US Fish and Wildlife Service resulted in the installation of cross weirs, rock vanes and bankfull benches near four bridge sites. It is hoped that these demonstration projects will provide examples to local municipalities of structures which have a natural appearance yet protect infrastructure and restore habitat for fish. Elsewhere in the region, similar projects constructed over a period of years survived, and functioned well through Irene's flooding. Prior to Irene, staff, with help from Dr. John Braico of Trout Unlimited, worked to increase awareness of natural channel design concepts. Such approaches were recommended at meetings with various elected officials and landowners in Franklin and Clinton Counties for streams including the Lake Titus Outlet, the Trout River, and the North Branch Chazy River.

Batten Kill Habitat Restoration Work Receives National Recognition

The Batten Kill has been listed as one of ten "Waters To Watch" by the National Fish Habitat Action Plan. For more information, visit www.fishhabitat.org. The river was recognized due to the efforts of the Batten Kill Watershed Alliance, US Fish and Wildlife Service, US Forest Service, NRCS, VT Fish and Wildlife, several Trout Unlimited Chapters, states, colleges, private and commercial donors and NYS-DEC to re-establish habitat in the Batten Kill for brook trout. These projects have also been supported by the Eastern Brook Trout Joint Venture and the Partners for Fish and Wildlife Program. Several projects have been undertaken in recent years to create instream habitat for trout, to stabilize banks and riparian areas, and to work with the stream to achieve more stable geomorphology and improve river dynamics. Several more such projects are planned for 2011 and 2012.

Nonnative Species Introduction

Fisheries staff have been informed of an unfortunate nonnative species introduction which could have damaging impacts on the Raquette River watershed. Numerous black crappie were reported caught in an ice fishing derby held on Raquette Lake in early February. This confirms earlier reports received last summer from several anglers. Black crappie have been implicated in the demise of naturally reproducing walleye in other Adirondack lakes, particularly Black Lake in St. Lawrence County. Walleye in Tupper Lake, Piercefield Flow and Carry Falls Reservoir may ultimately pay the price for this illegal introduction.



2011-12 Region 5 Fisheries Staff

Bill Schoch	Regional Fisheries Manager
Rich Preall	Senior Aquatic Biologist
Emily Zollweg	Senior Aquatic Biologist (transferred to Cortland 1/12)
Jim Pinheiro	Senior Aquatic Biologist (transferred from New Paltz 1/12)
Rob Fiorentino	Senior Aquatic Biologist
Jennie Sausville	Fish and Wildlife Technician 3
Beth Kress	Environ. Educator Assistant (Seasonal)
Adam Kosnick	Seasonal Fish and Wildlife Technician
Doug Peck	Seasonal Fish and Wildlife Technician



Eastern Lake Ontario/St. Lawrence River Warmwater/Coolwater Fish Stock Assessments

Over one-third of fishing effort in Region 6 occurs on eastern Lake Ontario or the St. Lawrence River. Warm/coolwater fish stock assessments are conducted by the regional fisheries management unit on the St. Lawrence River and by both regional and Lake Ontario units on eastern Lake Ontario. The assessments track condition of fish stocks in these waters. In the St. Lawrence River Thousand Islands area abundance of legal size smallmouth increased from record lows 1996-2004 and has varied at moderate levels since 2006. Much of this increase has been due to faster growth and earlier recruitment of young fish probably due to increased availability of round goby forage. Northern pike abundance in the Thousand Islands remains depressed largely due to habitat changes resulting from water level regulation. Walleye numbers remain above the long term average for Lake St. Lawrence. Smallmouth bass catch declined 30% from recent (2006-2010) levels, although remaining well above the record-low levels experienced from 2000-2004. Recent increases in eastern Lake Ontario and St. Lawrence River yellow perch abundance has been attributed partly to reduced cormorant predation. Regional cormorant management and a switch to round goby prey have reduced cormorant consumption of sport and panfish.



Brook Trout Management

Heritage Strain Egg Takes

In an effort to help maintain genetically unique native populations of Adirondack brook trout (heritage strains), Region 6 completed an egg take for Little Tupper strain brook trout. Besides helping to maintain heritage genetics, the use of these fish in stocking is thought to provide fish that are better able to thrive and spawn in the water conditions common to Adirondack ponds. This year's Little Tupper strain egg take occurred primarily at Boottree Pond in the Massawepie Easement. This was the fourth year that we were able to do an egg take from



Boottree Pond since this population of brook trout was established in 2005. Region 6 has four waters that serve as brood waters and is in the process of establishing new brood waters for the various heritage strains. This will eventually allow greater reliance on heritage strain fish in the DEC stocking program.

Offsetting the Effects of Acid Precipitation

In an effort to counter the effects of acid rain, Little Otter Lake and Pitcher Pond were treated with agricultural lime during the month of February. The lime is applied during the winter so it can be spread out over the surface of the pond ice. The Region 6 liming program monitors a set of 21 brook trout ponds and lakes suitable for treatment under guidelines formalized in 1990. Without periodic liming, these waters would acidify to levels lethal to brook trout.



Management of Rare and Endangered Fishes

Lake Sturgeon Restoration

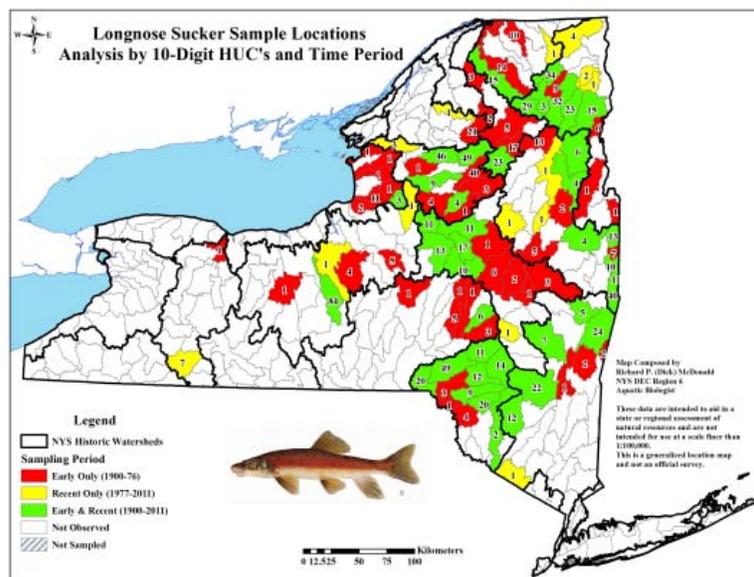
Lake sturgeon *Acipenser fulvescens* is a Threatened species in New York State. Restoration activities have been ongoing since 1991. A tagging study began in 2010 to acquire biological data and provide the basis for movement studies throughout Lake Ontario and the St. Lawrence River. A total of 247 sturgeon were collected in 2011 from the eastern basin of Lake Ontario and the St. Lawrence River to just below the Robert Moses Power Project. The majority of fish (226) were new captures and were tagged with Passive Integrated Transponders (PIT tags). Two recaptured sturgeon had moved from upper St. Lawrence River areas to a spawning congregation below the Robert Moses Power Project, either by surviving a trip through the hydro facility turbines or by navigating the Eisenhower and Snell shipping locks. Lake sturgeon eggs (600,000) were taken in early June at the Robert Moses Power Project, Massena NY, with eight egg bearing females providing eggs. Unfortunately eggs failed to show any sign of development after egg take.



Mapping of Rare and Endangered Fish Species

Region 6 Biologist Dick McDonald and ETS Biologist Doug Carlson produced maps identifying the locations of 41 rare fish species in New York State. Geographical Information Systems (GIS) software was used to construct the maps of the locations of these rare fish. The software was also used to analyze changes in their distribution from 1900-2011 within 18 historic watersheds.

Rare species are often under-represented in routine sportfish surveys. Therefore, Doug Carlson compiled all the records from the New York State Museum and the DEC Watershed Surveys to use in the analysis. Field biologists made special efforts to survey these rare species, and in many cases, detailed written location descriptions were converted to map coordinates to allow for the “atlasing” of data used in these newly created maps. This information was combined with that from the earlier comprehensive reviews of these species from the 1930s and late 1970s. The latest maps developed are being used to determine whether populations have reduced or expanded their distribution in New York State.



Habitat Restoration

Tropical Storms Irene and Lee proved to be extremely destructive to streams in the Mohawk River Valley. The steep gradient of the streams in the Mohawk Valley, coupled with the increasing urbanization of the region, led to widespread flooding and stream bank erosion. Region 6 fisheries staff responded to numerous calls from local municipalities and private land owners who had been flooded or had lost property due to streams eroding and changing course. The majority of problem sites were located in heavily populated areas or areas where roads and streams ran parallel to each other.

For example, major stream damage occurred in Oneida County in the Town of Paris, when Sauquoit Creek cut around an existing dam and then washed out a section of the NYS&W railroad bed located just a few hundred feet downstream. The railroad track was left suspended in the air, while the stream was forced to flow onto an adjacent apple orchard. The stream has been restored to its original location and work is planned to stabilize the site.

Public Access

During 2011-12 two important sites providing fishing access to Lake Ontario were completed: Mud Bay and Three Mile Bay (on Chaumont Bay). A new Fishermen's Parking Area on Stony Creek, a Lake Ontario tributary, was also opened.



Public Outreach

Regional outreach efforts included outdoor expos, conservation field days, environmental awareness days, fishing clinics, Envirothon and Earth day events which reached thousands of anglers, students and families and throughout the region.



2011-12 Region 6 Fisheries Staff

Frank Flack	Biologist 2 (Ecology)
Russ McCullough	Biologist 1 (Aquatic)
Rodger Klindt	Biologist 1 (Aquatic)
Chris VanMaaren	Biologist 1 (Aquatic)
Dick McDonald	Biologist 1 (Aquatic)
Dave Erway	Biologist 1 (Aquatic)
Dave Gordon	Fish & Wildlife Technician 2
Les Ressiguie	Seasonal Fish & Wildlife Technician
Amanda Velzis	Seasonal Fish & Wildlife Technician
Michael Stewart	Seasonal Fish & Wildlife Technician
Trevor Parisian	Seasonal Laborer
Kate Smith	Seasonal Laborer
Doug Carlson	Biologist 1 (Aquatic) ETS Unit
Robert D'Argenio	Seasonal Fish & Wildlife Technician



Spring 2011 Cayuga Inlet Fishway Monitoring

Operation of the Cayuga Inlet fishway continued in spring 2011. A total of 196 rainbow trout were handled. Thirty-two percent of the rainbow trout handled at the fishway had a hatchery fin clip indicating that stocked fish comprise a significant portion of the rainbow trout fishery. Propagation efforts continued with the collection of 153,530 wild and 24,630 hybrid rainbow trout eggs. Also handled were 3,777 white suckers and 802



adult sea lampreys on their spawning runs. The suckers were released upstream while the lampreys were killed to prevent them from spawning upstream. All rainbow trout handled at the fishway were examined for the presence of sea lamprey wounds. Only five wounds were observed on the 196 rainbow trout examined. No wounds were observed on the 18 rainbow trout in a 500-549 mm (19.7-21.6 inch) index group. The incidence of wounding on these fish was considered low and indicative of a small adult lamprey population in relation to the combined populations of host species (e.g., lake trout, rainbow trout, brown trout and landlocked Atlantic salmon).

Finger Lakes Angler Diary Cooperator Program

Angler catch data for the 2011 fishing season on the four eastern Finger Lakes were summarized and provided to participating cooperators. The summaries are available on the DEC website at www.dec.ny.gov/outdoor/27875.html. The legal game fish catch rate of 1.2 fish/trip at **Otisco Lake** was higher than in 2010 and within the range observed over the past several years. Angler cooperators caught 160 legal size smallmouth bass which was the highest number caught in the 33 year Otisco Lake angler diary program. The walleye and largemouth bass catches were much higher than in the previous year while the brown trout and tiger musky catches were similar to the previous year. The legal salmonid catch rate of 1.0 fish/trip at **Skaneateles Lake**, was lower than in 2010 but within the range observed over the past several years. Lake trout comprised 61% of the legal salmonid lake catch while rainbow trout and Atlantic salmon comprised 35% and 3%, respectively. The average size of kept rainbow trout (20.0 inches) and Atlantic salmon (21.8 inches) were the largest ever recorded. The legal salmonid catch rate of 1.4 fish/trip at **Owasco Lake**, was lower than in 2010 but within the range observed over the past several years. Lake trout comprised 96% of the legal salmonid catch and the average size of kept lake trout was 21.1 inches. Only four legal size rainbow trout and one legal size brown trout were caught in the open lake fishery. The average size of kept rainbows (25.0 inches) was the largest ever recorded. At **Cayuga Lake**, the legal salmonid catch rate of 1.8 fish/trip was higher

than in 2010 and higher than the range observed over the past several years. Lake trout comprised 83% of the legal salmonid lake catch while rainbow trout, brown trout and Atlantic salmon comprised 2%, 4% and 11%, respectively. The average size of kept brown trout (22.8 inches) was the largest ever recorded.

Cayuga Lake Standard Gang Gill Netting

During late July and early August 2011, a total of 578 fish were collected including 399 lake trout, 15 brown trout and seven Atlantic salmon from Cayuga Lake using standard Finger Lakes gang gill nets. The main objectives of the 2011 survey, as in the previous surveys, were to evaluate the lake trout stocking policy, growth rate and the incidence of sea lamprey attacks on lake trout. Other species collected included alewife, yellow perch, white suckers, rainbow smelt, sculpin, and trout perch. Of the 399 lake trout collected, 363 had a hatchery fin clip indicating that the majority of the lake trout population continues to be represented by hatchery fish. The catch of 12.5 lake trout/ net in 2011 was slightly lower than the longterm average of 13.4 lake trout/ net. Overall, the lake trout catch in the standard gang surveys is indicative of a stable, medium density population maintained almost entirely by stocking. The growth rate of lake trout collected in the 2011 survey was good and similar to the growth rate found in the 2007 survey. Only one adult sea lamprey wound was found on the 44 lake trout in the 23.6 in. to 25.5 in. index group. This was the lowest incidence of wounding ever observed on lake trout in this index group collected during a Cayuga Lake standard gang survey. Beginning in 2013, the annual lake trout yearling stocking of 20,000 will be reduced to 15,000 in an effort to reduce predation on other sportfish species.

50-Day Walleye Fingerling Assessments of Otter and Otisco Lakes

Otter Lake

The second Otter Lake 50-day old walleye fingerling stocking was carried out on June 27, 2011 when 5,200 fingerlings were boat stocked in the mid-lake area. No walleye were collected or observed during a fall electrofishing survey. Competing fish species were abundant and likely a very significant contributor to the observed absence of walleye.

Otisco Lake

A night electrofishing survey conducted along three miles of Otisco Lake shoreline in early November captured only two young of year walleye. Both were in good condition and both had grown well (in excess of 7 inches). Sampling was likely influenced by the cold water temperatures and was probably not a good representation of the survival of the 44,000 50-day old stocked during the early summer. In recent years survival and growth of stocked walleye in Otisco Lake has been very good and we believe that abundance of adult walleye has increased substantially relative to the mid-2000's.



Whitney Point Reservoir Fish Community Assessment

Sampling was conducted at this 1,200 acre reservoir in order to monitor long term trends in species abundance. Walleye and crappie abundance were of particular interest because the Department was contemplating

a change in the walleye regulation at the reservoir that would replace the existing 18-inch minimum size and 3 per day daily limit regulation with the more liberal statewide regulation of 15-inches and 5 per day. This change was being considered because the walleye population has increased dramatically since the late 1990's while the abundance of white crappie (historically the lake's premier species) declined over the same period. However sampling results revealed that walleye numbers, though still high, appear to have dropped substantially from what was observed in 2009. Furthermore, fair numbers of one-year-old white crappie were also captured indicating that walleye predation on young crappie may not be as problematic as suspected. Based on these findings, along with angler feedback regarding the proposed change (mostly in opposition), the Department decided to retain the existing special walleye regulation at the reservoir.

Fall 2011 Cormorant Hazing on Oneida Lake

Environmental Conservation Officers (ECO's) and Fish and Wildlife staff from Regions 6 and 7, along with trained volunteers completed another successful fall hazing effort at Oneida Lake. ECO's conducted hazing activities once per week during the month of September while Fish and Wildlife staff conducted weekly lake-wide cormorant counts from the last week in August through the first week of October. Cormorant abundance progressively declined from approximately 500 birds in late August and early September to a low of just 90 birds on September 29. Abundance increased to 218 birds on October 7, a week after the final hazing effort was conducted. A total of 104 cormorants were collected by DEC staff to gather information on cormorant diets. Stomach content analysis, conducted by Cornell University researchers at Shackleton Point, revealed that sportfish comprised a significant portion of the diet of fall cormorants despite the presence of an extremely abundant year class of young-of-year gizzard shad in the lake. In past years, diet analysis indicated that cormorants fed almost exclusively on young gizzard shad when they were abundant in the fall. Researchers suspect that the exceptionally small size of young gizzard shad in 2011 caused cormorants to utilize other fish species more frequently than in past years.



Cayuga Lake Sea Lamprey Assessment

Brief high water periods in 2007 and 2011 allowed limited numbers of adult lampreys to escape over the Cayuga Inlet fishway dam and spawn upstream. In 2011, regional fisheries staff found 74 lamprey nests in Cayuga Inlet and tributaries. This represents the tenth lowest count in 33 years and was well below the long-term average of 215 nests. An electrofishing survey was carried out in Cayuga Inlet and confirmed the presence of both a 2007 and 2011 lamprey year class. The density of 2007 year class lampreys was considerably lower than 1985 and 1995, the years preceding the only two lampricide treatments in Cayuga Inlet. This indicates that the number of juvenile lampreys produced in 2007 was likely not large enough to require an expensive lampricide treatment. However, the presence of a second year class is very problematic and a lampricide treatment may yet be required.

Characteristics of Salmon River Salmonids

Spawning populations of Lake Ontario Chinook and coho salmon (fall) and steelhead rainbow trout (spring) have been monitored annually since the mid-1980s at the NYSDEC Salmon River Hatchery in Altmar. Condition of chinook salmon, coho salmon and steelhead, as reflected by their average weight at various ages, were generally within the long-term average for each species. Unlike prior years when age 3 Chinooks typically dominated the returns, age 2 fish returned in record numbers in 2011. The coho and steelhead runs were similar to recent years with age 2 fish dominating the coho returns and age 3 and 4 fish dominating the steelhead run.

Extension, Education and Outreach

The Central New York fishing hotline www.dec.ny.gov/outdoor/9218.html, which is updated weekly, had 119,000 visits to the web page and another 8,733 telephone calls to the recorded hotline (607-753-1551). Seventeen new web pages and 15 PDF files were added for Central New York, and 36 existing pages were revised. Outreach events included seven sport or boat shows, six fishing clinics reaching over 750 new anglers, eight fishing festivals reaching over 230 people, and 18 school or camp related events that included over 1,000 students. These events included County Conservation Days, 4-H groups, Trout Unlimited Camp, Envirothon events and school events at the Salmon River Fish Hatchery.



2011-12 Region 7 Fisheries Staff

Dave Lemon	Biologist 2 (Aquatic)
Jeff Robins	Biologist 1 (Aquatic)
Scott Prindle	Biologist 1 (Aquatic)
Jim Everard	Biologist 1 (Aquatic)
Emily Zollweg-Horan	Biologist 1 (Aquatic)
Ian Blackburn	Fish & Wildlife Technician 2
Denise Richardson	Seasonal Fish & Wildlife Technician
Eric Boyden	Seasonal Fish & Wildlife Technician
Rose Greulich	Seasonal Fish & Wildlife Technician
Cathy Gumtow	Seasonal Fish & Wildlife Technician
Althea Heider	Secretary



Seneca Lake Sea Lamprey Control

In a continuing effort to control sea lamprey in Seneca Lake, staff from DEC Regions 4-8, the Division of Lands and Forest; and the Bureaus of Fisheries, Wildlife, and Habitat applied lampricide to Catharine Creek and some of its feeder streams. Sea lamprey are parasitic fish that have the potential to severely impact fish populations in the lake, particularly lake, rainbow, and brown trout. An 8.6-mile stretch of Catharine Creek has been recently treated with lampricide. The lampricide targets larval sea lamprey, killing them before they can transform into their parasitic adult form. In 2011, the stream treatment area was reduced from 8.6 miles to 7.6 miles based on improvements in lamprey migration barriers and pre-treatment survey data. After treatment, lamprey mortality was substantial and was effective across the target area. The next treatment is planned for 2014. Additional migration barriers should be in place that will further reduce the area requiring treatment. It is also anticipated that United States Fish and Wildlife Service will assist with the next treatment.

Lake Trout Assessment - Keuka Lake

The lake trout population in Keuka Lake was assessed during a two week period in August using standardized Finger Lakes gill nets. This was the 10th survey conducted since 1979. Thirty-two nets were set resulting in the catch of 264 lake trout. Although data has not yet been analyzed, preliminary observations indicate that the population consists of a lot of fish in the 12 to 16 inch size range. Few large fish were collected, with the largest only 4.4 lbs. This is considerably smaller than maximum weights found for lake trout in other Finger Lake nettings. Only 11% of lake trout were larger than 20 inches. Mean relative weights of various size classes of lake trout ranged from 87 to 90, an indication that fish condition is low but not poor. Age and growth indices have yet to be determined. Mysids, or freshwater shrimp, were found in the majority of smaller lake trout stomachs. Larger lake trout stomachs were mostly empty, however those that were not contained sculpin, mysids, and a few alewives.

Preliminary observations suggest that the lake trout population in Keuka Lake is increasingly dominated by smaller fish. Angler diary results from recent years seem to suggest that fish are hungry and abundant, with catch rates being exceptional, but quality sized fish low in number. Regulations have been proposed increasing the allowable harvest of lake trout from 3 to 5.

Wild Trout Surveys

Electrofishing surveys were completed on 172 streams in 2011. Over a two year period, trout have been collected in 92 streams. The numbers of streams with each trout species combination collected are listed in Table 1. Wild trout were documented for the first time in 50 streams. These streams will be added to a list of streams that qualify for reclassification as wild trout streams.

Table 1. Trout combinations found during 2011 surveys of Region 8 streams.

Species	# Streams
Brook Trout only	37
Brown Trout only	28
Brook Trout and Brown Trout	15
Rainbow Trout Only	4
Rainbow Trout and Brook Trout	1
Rainbow Trout and Brown Trout	6
Rainbow Trout, Brown Trout, and Brook Trout	1
Total	92

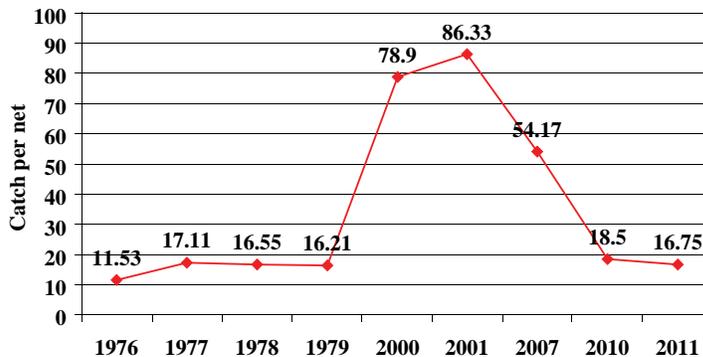


Great Lakes Research

Sodus Bay's Fish Community Assessed

A survey of Sodus Bay was conducted from September 12 to 20, 2011, to assess the overall fish community and the success of the fingerling walleye stockings that have been conducted periodically since 1996. Sodus Bay has been surveyed approximately every five years, most recently in 2006. One thousand nine hundred and five individuals of 19 species of fish were collected from eight gill net sites (238/net), including four game and eight pan fish species. Most of the walleye caught were larger, older fish that were likely the result of stockings that took place from 1996-2000. Only two walleyes were collected in the 15.75-17.75 inch range, which are likely age 2, suggesting that the survival of fingerlings stocked in 2009 was poor. The pan fish catch was dominated by gizzard shad, yellow perch, and white perch.

Smallmouth bass index at Pultneyville



Near-shore Warm Water Fish Community Assessment at Pultneyville

Index gill netting in Lake Ontario at Pultneyville showed the rock bass index of abundance was similar to the 2000-2001 level, the smallmouth bass index was slightly lower than 2010 and similar to the 1976-1979 level, and the yellow perch CPUE was the highest observed and 85% above the average estimates of all previous surveys. Three of the most common species from the 1976-1979 period (alewife, gizzard shad, and white perch) continued to decline through 2011. Two hundred and sixteen yellow perch (54.0 yellow perch per net) accounted for 60% of the 2011 catch. The second and third most frequently caught fish were smallmouth bass (19% of the catch, 16.75 smallmouth bass per net) and rock bass (15% of the catch). All smallmouth bass from Pultneyville that were sent for testing in both 2010 and 2011 were negative for VHSV.

Angling Outreach and Education

Local High School Students Learn About Fisheries Management

For the tenth consecutive year, staff cooperated with Delta Laboratories' Adopt-a-Stream program to provide about 120 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 Monroe County's Mendon Ponds Park. Demonstrations were also given in fish identification, water quality, freshwater mussel ID, fish seining, and fish scale aging and data interpretation. Students had the opportunity to capture, handle, identify, and measure live native fish, age fish scales, and handle and identify benthic invertebrates.



Fishing Rod Lending Program

Four partnering local libraries are finishing up the second year of the Region 8 Fishing Rod Lending Program. Each library has a partner who is responsible for supplying bobbers, hooks and sinkers and to provide maintenance of the rods and reels. We were extremely lucky that the first group to sign on, The Dansville Rod and Gun Club provided all the information necessary to obtain necessary material for the program on their website www.dansvillefishandgame.org.

Participating libraries and their local partners:

Dansville Public Library - Dansville Fish and Game Club. Rods checked out 10 times.

Wood Library, Canandaigua - Clearly Aquatic Pond Services, Ultrafab Inc., and the Canandaigua Lake Duck Hunters Association. Rods checked out 50 times.

Pultney Public Library - Paul Schnipelsky, President, Board of Directors Pultney Public Library and Donna Colvin. Rods checked out 22 times.

Woodward Memorial Library, LeRoy - Oatka Fish and Game Club, No report yet

While not all the Libraries have reported their use numbers for 2011 yet, all report positive responses from the communities

Public Fishing and Boating Access

Catharine Creek Fishing Parking Area Developed

Regional Operations staff developed a 10 vehicle Fishing Parking Area (FPA) on Catharine Creek in Chemung County. This area receives high fishing pressure during the spring and the new FPA will help get anglers off the side of State Route 14. There are approximately 1.1 miles of contiguous public fishing easements upstream and downstream of this FPA.

2011-12 Region 8 Fisheries Staff

Web Pearsall	Biologist 2 (Aquatic)
Matt Sanderson	Biologist 1 (Aquatic)
Brad Hammers	Biologist 1 (Aquatic)
Peter Austerman	Biologist 1 (Aquatic)
Amy Mahar	Biologist 1 (Ecology)
Bob Deres	Fish and Wildlife Technician 1
Dan Mulhall	Fish and Wildlife Technician 1
Eric Olsowsky	Seasonal Fish & Wildlife Technician
Mike Wermer	Seasonal Fish & Wildlife Technician
Kevin Mazanec	Seasonal Fish & Wildlife Technician
Bobby Geroux	Seasonal Fish & Wildlife Technician



Warmwater Fisheries Management

Cuba Lake Electrofishing Survey

Cuba Lake was electrofished on June 8 and 9, to assess the overall fish community, with special emphasis on walleye, smallmouth bass, and yellow perch. Catch rate for walleye was 43/hour, which is a high catch rate and is comparable to the long-term average of 45/hour. Walleye growth rates were slow as they have been for the past 60 years. About 75% of walleye collected were yearlings from the 2010 year class, indicating that abundant natural reproduction is occurring. Smallmouth bass catch rate was 26/hour, which is lower than a 2003 survey (39/hour), but is still double the New York State average smallmouth bass catch rate of 13 fish/hour. Yellow perch are by far the most abundant panfish in Cuba Lake (355/hour) followed by bluegill, pumpkinseed, and rock bass. Cuba Lake provides an excellent smallmouth bass and panfish fishery. Although no largemouth bass and few black crappie were collected, according to angler reports, a fishable population of both does exist in Cuba Lake.

Chautauqua Lake Trawl Survey

In an effort to assess the status of the forage fish community in Chautauqua Lake, Region 9 staff conducted trawl sampling twice per month in September and October of 2011. A standard 16 ft bottom trawl was towed at 14 standardized locations, 7 located in the north basin and 7 in the south basin. Age-1 yellow perch dominated the catch in 2011, which was not unexpected following the huge yellow perch year class (Age 0) found in 2010. The survey also indicates that black crappie, bluegill and pumpkinseed are continuing on an upward trend. White perch numbers continue on a downward trend, as catches have been way down from past surveys.

Great Lakes Fishery Management

First Report of Abundant Rudd Populations in North America

A technical journal article with this title was published in February 2012 as a management brief in the North American Journal of Fisheries Management. The article was authored by Dr. Kevin Kapuscinski, SUNY College Environmental Science and Forestry (SUNY ESF) and co-authored by Dr. John Farrell (SUNY ESF) and Michael Wilkinson, Region 9 Fish Unit. The article describes unexpected findings of abundant rudd, a non-native member of the minnow family, in the Buffalo Harbor and Upper Niagara River during trap netting activities in 2007 and 2008. Rudd were the most frequently caught fish during both years of spring netting and constituted 48% of the fish caught during those years. Unlike most



North American temperate fishes, the introduced rudd typically consumes a large portion of its annual diet as submerged aquatic plants. Rudd have been associated with changes to aquatic plant assemblages in other parts of the world.

Buffalo Harbor Sturgeon Netting

Lake sturgeon numbers seem to be increasing in the New York waters of Lake Erie. On June 6, 2011, six gill nets were deployed in the near shore area of Buffalo Harbor to determine if the gear can be used to survey adult lake sturgeon. The nets were fished for four hours and two adult male sturgeon were captured and processed. It has been determined that a spawning stock survey of the Upper Niagara River/ Buffalo Harbor area would be possible and a survey is planned for spring 2012.



Coldwater Fisheries Management

Eastern Brook Trout Joint Venture Surveys

Regional staff visited 548 streams in 2011 in an effort to document the presence of brook trout in small streams in Region 9. Of this total, 79 were found to be dry. In the 469 streams surveyed wild brook trout populations were found in 46 of the streams, wild brown trout in 78 streams and wild rainbow trout in 21 streams. Wild brook trout in these streams face threats to their existence such as competition with brown and rainbow trout, elevated water temperatures and poor land use practices. On the positive side, several surprisingly large specimens of wild brook and brown trout have been found in these mostly very small streams.

After two field seasons, the entire upper Genesee watershed (286 surveys) and most of the Erie-Niagara watershed (419 surveys) in Region 9 have been completed. A portion of the Allegheny watershed (222 surveys) has also been completed. A total of 934 streams have been assessed since 2010, of which 803 (86%) have never been surveyed before. Wild brook trout were found in 90 streams, wild brown trout in 120 streams and wild rainbow trout in 21 streams. Of the 195 streams sampled that contained wild trout, 175 (90%) need to have their water quality classifications upgraded in order to offer the streams maximum legal protection from disturbance. Man made barriers (mainly road culverts) potentially impassible to trout and other fish were identified on 158 streams in the surveys. This project is currently planned to continue through 2013.

East Koy Creek Angler and Fisheries Surveys

From April 1 to October 15th, 2011, an angler use survey was conducted on East Koy Creek in Wyoming County. A total of 83 days were surveyed throughout the season, resulting in 552 angler interviews. The vast majority of these interviews were in April, with low angler use noted through the summer and into the fall. Anglers reported catching a total of 852 trout, of which 74% were released, resulting in an average angler catch rate of 0.44 fish/hour (Table 1). The goal for a stocked stream in NY is to have an average catch rate of 0.5 fish/hour (one trout caught for 2 hours of fishing).



A total of 11,769 hours were estimated to have been spent fishing East Koy Creek by anglers in 2011 (235 hours/acre of stream). This is considered light to moderate fishing intensity and is considerably less than was found in 1996 and 1997 studies on the creek (Table 1). In depth data analysis of the angler use and electrofishing surveys is being completed by Cornell University, as part of the state-wide “fate of stocked trout” study.

The angler use study was done in conjunction with fish population sampling. In mid-May and again in late-August, Region 9 Fisheries staff, assisted by angler volunteers and a researcher from Cornell University, conducted trout population sampling on East Koy Creek. The same four sites were electrofished in both months. Preliminary analysis showed fair numbers of hatchery trout remained in the stream in May and also in August, similar to surveys conducted in 1996 and 1997 (Table 1). Remaining hatchery trout included fish from all three stocking increments (March, April and May). This was good to see after such a brutally hot, dry summer. Substantial numbers of wild brown trout (higher than 1996 and 1997) were also sampled and wild trout outnumbered hatchery fish at three of four sites.

Although plenty of trout remained in the stream to provide good fishing, the angler use survey showed very little angling use occurred from mid-August to mid-October. Anglers are missing out on a good time of year to fish in East Koy Creek.

Although plenty of trout remained in the stream to provide good fishing, the angler use survey showed very little angling use occurred from mid-August to mid-October. Anglers are missing out on a good time of year to fish in East Koy Creek.

Table 1. Results from angler use and fish sampling studies on East Koy Creek in 1996, 1997 and 2011.

Year	Angler use hrs/acre	Catch rate (fish/hour)	Percent of fish released	Hatchery brown trout per mile	Wild brown trout per mile
1996	418	1.08	68%	220	367
1997	831	1.06	78%	241	251
2011	235	0.44	74%	219	494

North Branch Wiscoy Creek Habitat Enhancement Project

The North Branch of Wiscoy Creek in Wyoming County is a high quality wild brown trout stream. Farming activities along the stream have left it abnormally wide and very shallow in many areas, providing very little in-stream shelter for adult trout. In 2009, a 0.6 mile section of public fishing rights was purchased on the stream, making it eligible

for habitat work in 2011. The habitat enhancement work took advantage of the stream’s potential to support a high abundance of quality size wild brown trout by decreasing the average width, increasing the depth and greatly increasing the amount of overhead bank shelter for adult wild trout.



In May, 2011 Trout Unlimited volunteers planted 1,110 shade trees along the project area to provide shade and future large woody structure for the stream. Over a two week period in mid-July 2011, Region 9 Fisheries staff, with extensive cooperation from USFWS, Wyoming County SWCD, NYS DOT and over 325 hours of volunteer effort from WNY Chapter of Trout Unlimited, installed fish habitat structures, including 57 “LUNKER” structures (456 total feet) along a 2,300 foot section of public fishing area on the North Branch. The crib-like structures were installed along the outside of bends, held in place by rebar and then had a new stream bank constructed over top of them, forming an artificial undercut bank. Areas where the structures were installed were deepened to approximately two feet and the stream width was narrowed by 1/4 to 1/3. Shade trees will be planted in areas where structures were installed in 2012. Funding for this project came from a Great Lakes Basin Fish Habitat Partnership grant (Great Lakes Restoration Initiative).

Angler Outreach

Fishing Hotlines

The Lake Erie Fishing Hotline and the Western NY Fishing Hotline are updated every Friday to provide anglers with current information on where fish are biting and how to catch them. These popular angling resources cover the major fishing waters of Region 9 and parts of Region 8. Each hotline is available on the DEC website at www.dec.ny.gov/outdoor/fishhotlines.html or can be heard at (716) 855-FISH. Between April 1, 2011 and March 31, 2012, anglers visited the Lake Erie hotline 72,809 times, the Western NY hotline 52,406 times and the automated phone line 24,482 times. In all, anglers visited the hotlines 149,697 times during reporting period, for an average of 410 times per day.

2011-12 Region 9 Fisheries Staff

Mike Clancy	Biologist 2 (Aquatic)
Scott Cornett	Biologist 1 (Aquatic)
Mike Todd	Biologist 1 (Aquatic)
Mike Wilkinson	Biologist 1 (Aquatic)
Jim Zanett	Fish & Wildlife Technician 3
Rob Roth	Fish & Wildlife Technician 1
Justin Brewer	Fish & Wildlife Technician 1
Amanda Wagner	Fish & Wildlife Technician 1
Eric Stratton	Fish & Wildlife Technician 1
Jon Sztukowski	Fish & Wildlife Technician 1
Rebecca Segelhurst	Fish & Wildlife Technician 1



Changes to Baitfish Regulations

The Department's baitfish regulations restricting the overland transport of uncertified baitfish by anglers were amended. They now allow for the overland motorized transport of personally collected baitfish within specified transportation corridors, as long as the baitfish are used in the same waters from which they are collected. Three transportation corridors were established: Lake Erie-Upper Niagara River; Lower Niagara River-Lake Ontario-St. Lawrence River, and Hudson River (between the Federal Dam at Troy and the Tappan Zee Bridge). In addition to providing for personally collected baitfish, the new regulations make allowances for the overland motorized transport of uncertified baitfish purchased by anglers with the same restrictions.

Bureau Field Surveys Entered Into Statewide Fisheries Database

Data from 2,133 fishery field surveys were received by the Bureau's Biological Survey Unit during 2011-12. Approximately 1,619 Eastern Brook Trout Joint Venture surveys were conducted. A total of 1,445 surveys were finalized and added into the Bureau of Fisheries Statewide Database. Data updates were distributed in September 2011 and December 2011.

Sportfish Regulations for October 2012

A Notice of Proposed Rule Making (NPR), containing proposed changes to the freshwater sportfishing regulations, was announced in February 2012, initiating a 45 day public comment period, which extended into FY 2012-13. Proposed changes include modifications to the current seasons, size limits, and creel limits on certain waters for popular game fish species such as trout, salmon, walleye, black bass, pickerel, muskellunge, and tiger muskellunge. Additional proposed changes pertain to ice fishing on selected waters, as well as establishing specific gear requirements for certain angling practices. The comments received will be reviewed and assessed during the first quarter of FY 2012-13. Subsequently, a Final Rule Making will be packaged and submitted to the Department of State. Once adopted, the regulation changes will become effective October 1, 2012.

Proposed Changes to Regulations Governing the Sale/Transport of Black Bass

During 2011-12, a Notice of Proposed Rule Making (NPR) containing proposed changes to current regulations restricting the sale of black bass was prepared. More specifically, changes to the regulations governing the possession, transportation and sale of hatchery reared black bass in New York State were being considered to allow for the sale of black bass for human consumption. Under current Environmental Conservation Law (ECL), black bass may only be sold by holders of a Black Bass Hatchery License, or Fishing Preserve License. Regulations pertaining to the transportation of hatchery-reared bass would be expanded to provide for proper identification of these fish through

retail markets while minimizing the opportunity for wild New York black bass to enter the market. The NPR is expected to be filed during the first quarter of 2012-13 initiating a 45 day public comment period. The comments received would then be reviewed and evaluated as part of the Department's decision on establishing a new regulation.

Warmwater Fisheries Management

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

Abundance of adult walleye (age 4 and older) in 2011 was estimated at 459,500, which was a decline from the 2010 estimate of 498,000. Over the full course of the 56 year data series the adult walleye population has experienced a significant decrease, but has shown a significant increase in the last decade, partly driven by a large 2001 year class and three years with more restrictive harvest regulations combined with cormorant management. The adult population also benefitted from a higher than expected contribution from the 2006 year class; however, the 2007-09 year classes are expected to provide fewer adult fish. The population is expected to persist at levels between 350,000 and 450,000 over the next few years. Early indications are that the 2010 year class may be among the largest in recent years and if it remains strong it may offset the smaller 2007-09 year classes and help maintain the population above 400,000.

The adult yellow perch population was estimated to be just over 1 million fish. This represents a slight increase from the 2009 and 2010 estimates, but well below 2008. Long term trends show a significant decline in adult yellow perch population size, but no trend is detectable over the last decade, suggesting a more or less stable, but much smaller population than was present in the lake in the 1960s – 1980s. It is expected that yellow perch numbers will fluctuate around 1 million fish in the near future.

Walleye, yellow perch and white perch are the three most commonly caught species in standard fish community gill netting surveys, representing over 80% of the catch in most years. Walleye and yellow perch represented 51% of the total gill net catch in 2011, whereas white perch were 33% of the catch. Catches of white perch in recent years suggest that they are as abundant as yellow perch in Oneida Lake.

Increased water clarity due to filter feeding by zebra and quagga mussels has caused an expansion in the shoreline littoral habitat that favors species such as black bass, sunfish, and pickerel. The monitoring program for Oneida Lake was recently adjusted to account for the anticipated changes in the fish community. In 2011, shoreline fyke net sampling resulted in the capture of approximately 26 different species. Catches of most species were within the range of past years, with the exception of a particularly large year class of gizzard shad. Some other commonly caught species were yellow perch, white perch, pumpkinseed, bluegill, rock bass, smallmouth bass and black crappie. The fyke nets continue to produce catches of littoral species not represented in

the traditional gears used in the long-term studies. They have provided the only index of young of the year largemouth bass, and also show potential as an index for chain pickerel.



In spring 2011, a shoreline electrofishing survey was initiated with the goal of obtaining additional baseline data on the expanding littoral fish community, with a particular focus on largemouth bass, a species not routinely sampled with other gears. In all, 2,208 fish representing 30 different species were collected. Yellow perch were the most commonly caught species, followed by pumpkinseed, brown bullhead, bluegill, and logperch. Largemouth bass and walleye were the most prevalent predators collected. This survey will be conducted 2 of every 3 years and will be used as a littoral community index and provide comparative data for other survey techniques.

Creel surveys have not been a regular part of the sampling program, but have been conducted periodically, most recently from 2002-07. In 2011, a "limited" creel survey was conducted as a means to provide a reliable, yet low cost, annual estimate of the walleye catch and harvest. Surveys consisted of boat counts from a tower and angler exit interviews. Effort in 2011 was 214,660 boat hours, which was higher than observed in any year during the 2002-07 survey and continued a trend of increasing effort for the period 2002-11. 54% of anglers targeted walleye or walleye and other species and 35% of anglers targeted bass or bass and other species. The estimated catch and harvest rates for walleye during the open water season were 0.22/hour and 0.13/hour, respectively. The estimated annual walleye harvest was 54,094. Bass harvest rates were less than 10% of estimated catch rates, typical for this fishery, which is largely catch and release.

Canadarago Lake

Walleye fry abundance was low again in 2011, continuing a trend which began in 2005. The low abundance of fry is attributable to a steadily increasing population of alewife, which are known predators of fish fry and often have dramatic impacts on walleye reproduction. Yellow perch fry abundance was also reduced, but the impacts from alewife predation were not as severe. Walleye fry may be more vulnerable to alewife because they are less abundant and are present earlier in the season when fewer larval fish of other species are present to buffer predation. The reduction in fry abundance appears to be having an impact on the adult population as fall electrofishing surveys have documented a decline in the number of adult walleye during the past several years.

In response to the almost complete lack of successful walleye reproduction over the last 7 years and a declining adult population, a walleye stocking pro-



gram was initiated in 2011. Approximately 40,000 advanced walleye fingerlings will be annually stocked in August for 5 years. The goal of this program is to boost walleye recruitment by offsetting some of the losses of young walleye to alewife predation. Annual assessments of the fish community will allow up to date tracking of stocking success.

Post Tournament Dispersal of Black Bass in Lake Champlain

The increasing popularity of large-scale black bass tournaments on Lake Champlain has led to concerns about fish dispersal post-tournament. A study funded through a Sportfish Restoration Grant and conducted by SUNY Plattsburgh and Lake Champlain Sea Grant was initiated in 2011 to track movements of black bass following release from tournaments held at Plattsburgh. Largemouth and smallmouth bass were collected post weigh-in at 5 tournaments and anglers were interviewed to determine the approximate capture location of the fish. Over 1,500 bass were marked with external T-bar tags and 41 bass were implanted with radio transmitters. The majority of bass were originally caught by tournament anglers 10-30km from the tournament weigh-in site at Plattsburgh and less than 15% were originally captured less than 10km from the weigh-in site. The T-bar tag return rate was about 11% and the majority of these fish moved less than 3km from the release point. Only 10% of largemouth bass and 7% of smallmouth bass were recaptured more than 10km from the release point. The radio telemetry results were similar to the T-bar tag return data. Eighteen radio tagged fish were tracked over the summer and the majority moved less than 3km from the release point. Only 9% of largemouth bass and no smallmouth bass moved more than 10km from the release point. The radio tagged fish were tracked through the winter and results are pending analysis. A similar complimentary study will be conducted in 2012 and combined results from the 2 studies will allow for the development of recommendations to minimize the impacts of tournaments on the Lake Champlain bass fishery.

Statewide Black Bass Population Assessment

Black bass are the most sought after species of fish by New York anglers, but the last comprehensive statewide population assessment



occurred nearly 30 years ago. Since then black bass fisheries have become more tournament based and catch and release angling has become more prevalent. A 3 year study funded through a Sportfish Restoration Grant and conducted by the New York Cooperative Fish and Wildlife Research Unit was initiated in 2011 to compile black bass data from various large datasets and comprehensively assess population and environmental metrics. Initial efforts have focused on determining and selecting standardized data for further analysis. Multiple population parameters (relative abundance, growth, condition, etc.) will then be summarized for specific waterbody types (e.g, large rivers, small inland lakes, Great Lakes, etc.) and spatial and temporal trends will be

assessed. This study will greatly enhance our current understanding of New York's bass populations and will result in the development and implementation of a management strategy.

Stocking Evaluation of 50 Day Old Walleye Fingerlings

An experimental walleye stocking program, initiated in 2009, was continued using 50-day old tank raised fingerlings from Oneida Hatchery. Eleven lakes throughout the northern, central and western regions of the State were stocked in June with about 299,000 1.5 inch long fingerlings. Waters stocked included Loon Lake in Region 5, Black, Red, and Payne lakes in Region 6, Otisco and Otter lakes in Region 7, and Chautauqua, Redhouse and Upper, Middle and Lower Cassadaga lakes in Region 9. The success of this program is being assessed through annual monitoring in the fall and with a full fish community assessment at the end of a five-year stocking schedule. Annual fall surveys from 2009-11 have documented the presence of stocked walleye at Loon, Otisco, Redhouse and Chautauqua lakes.

Annual Meeting of the New York Chapter of the American Fisheries Society

Bureau of Fisheries staff, including Ed Woltmann (Chapter President), Joelle Ernst (Arrangements Chair), Gregory Kozlowski (AV Chair) and Program Chairs Jeff Loukmas and Donald Einhouse organized and implemented the 2012 meeting of the American Fisheries Society. The meeting was held February 1-3 at the High Peaks Resort in Lake Placid and drew 150 participants. The general theme for the meeting was "Partnerships - Working collaboratively to effectively manage our fisheries." and included speakers from the United States Fish and Wildlife Service, Great Lakes Fishery Commission, United State Geological Survey, Southwick Associates and the Eastern Brook Trout Joint Venture. DEC Commissioner Joe Martens provided the opening remarks.



A special session on northern black bass management, held in conjunction with the meeting, included many prominent bass researchers from the U.S. and Canada. DEC oral presenters during the meeting included Chart Guthrie, Don Einhouse, Doug Stang, Doug Carlson, Geoff Eckerland, Shaun Keeler and Rich Preall. Heidi O'Riordan and Doug Carlson also provided poster presentations.

Coldwater Fisheries Management

CROTS Review & Fate of Stocked Trout Study

The Bureau of Fisheries completed the first year of fieldwork for a multi-year statewide study to verify and update the key biological and fishery factors used to calculate trout stocking rates under our Catch Rate Oriented Trout Stocking (CROTS) method. This research, conducted in partnership with the Fish and Wildlife Cooperative Unit at Cornell University, will yield fresh estimates of angling effort, seasonal patterns of angling effort, harvest rates, and total mortality rates of stocked trout.

In 2011, bureau staff completed creel surveys and population estimates on the following streams: Carmans River, Esopus Creek, W. Branch Delaware River (upstream of Cannonsville Reservoir), Oriskany Creek, Big Creek, Otselic River, Meads Creek, and East Koy Creek. The data were provided to Cornell University doctoral student Alexander Alexiades for analysis. The entire research team met twice in 2011 to review lessons learned from the first field season, to view preliminary analyses presented by Cornell, and to plan the 2012 field season.

Preliminary findings include: fewer hours of angling per acre relative to previous creel surveys and higher rates of catch and release for stocked trout. With the exception of the Carmans River and the Otselic River, average hourly catch rates for brown trout were equal to or greater than the CROTS target of 0.5 trout per hour. In the case of the Carmans River, this reflects the relative importance of wild brook trout and stocked rainbow trout to the recreational fishery.

For 2012, Kayaderosseras Creek and Kinderhook Creek were added to the sampling roster. Creel surveys and population estimates will be repeated on all waters sampled in 2011 except for the West Branch of the Delaware which proved incompatible with the study sampling methods. By collecting these data over multiple years we can expect the results of the study to incorporate the inter-annual variation in hydrological, biological, and fishing conditions.

Delaware River Basin Gaging Stations Funded

In order to assure the availability of data essential to the management of the highly productive trout fisheries in the tailwaters of New York City's Delaware River Basin reservoirs, a total of \$49,720 was committed to support the operation of U.S. Geological Survey stream gages at the following locations:

- Diversion from Schoharie Reservoir
- Esopus Creek at Coldbrook
- East Branch Delaware River at Harvard
- West Branch Delaware River at Hale Eddy
- West Branch Delaware River at Hancock
- Delaware River at Lordville
- Delaware River at Callicoon
- Neversink River at Bridgeville

These instruments, which transmit flow and temperature measurements in real time, would otherwise be shut down. The data they collect are particularly important because of the exceptional value of the recreational trout fishery and because they allow monitoring of the biological effects of flow management plans which are frequently altered at the direction of the Delaware River Basin Commission. The data are available to the public at the following website: http://waterdata.usgs.gov/ny/nwis/current/?type=sw&group_key=basin_cd.

Brook Trout Stream Status Surveys

New York is one of 17 states on the eastern seaboard participating in the Eastern Brook Trout Joint Venture. The goal of this effort is to halt the decline of brook trout and restore fishable populations of this native trout. In support of this goal, DEC biologists are conducting stream surveys to determine the status of brook



trout populations in watersheds where information is outdated or absent. Ultimately, on waters where the presence of wild brook trout or other naturally reproducing trout species was previously un-documented, the results of these surveys will allow the DEC to upgrade the water quality classification of these waters to a level affording better legal protection from disturbance. In addition, the information will also allow prioritization of habitat restoration projects or efforts to reestablish brook trout.

In 2011, one thousand six hundred forty-one stream surveys were completed under this federally funded project. The surveys were done in DEC regions 4, 7, 8 and 9. The presence of brook trout was documented in 324 streams; some of which had never been previously surveyed.

DEC Region	Total Streams Surveyed	Streams with confirmed Brook Trout
4	506	131
7	415	137
8	172	10
9	548	46

Lake Ontario Tributary Angler Survey – Fall 2011

Four agents conducted an angler survey of 21 Lake Ontario tributaries across Regions 6-9 from September 2011 through April 2012. The total estimated effort for all tributaries from September through November was 1.1 million angler hours, with the Salmon River accounting for 68% of the total. The estimated number of angler trips during the survey period was 283,912, with the Salmon River contributing 65% of the total. Four other tributaries accounted for large shares of the effort: Eighteenmile Creek in Niagara County, Oswego River in Oswego County, South Sandy Creek in Jefferson County, and Oak Orchard Creek in Orleans County. Seventeen of 21 tributaries surveyed had reported catches of Chinook salmon, totaling an estimated 125,180 and 45,214 caught and harvested respectively. The Salmon River accounted for 68% of the catch and 70% of the harvest. Other top waters for Chinooks were Eighteenmile and Oak Orchard creeks as well as the Oswego and Black rivers. An estimated 30,676 Coho salmon were caught in 11 of the 21 tributaries surveyed and the Salmon River accounted for 95% of this total. Seventeen of the 21 tributaries had reported catches of steelhead totaling an estimated 58,846 fish with 5,366 harvested. The Salmon River had the highest estimated steelhead catch (67% of total) and harvest (68% of total). Other tributaries producing substantial steelhead catches included South Sandy, Maxwell and Oak Orchard creeks. Reported catches of brown trout occurred in 13 of the 21 waters studied, with an estimated 38,050 and 6,613 caught and harvested respectively. The top brown trout tributaries were Eighteenmile, Sandy, and Maxwell creeks. The 2011 angler survey shows that Lake Ontario's tributary fishery has increased substantially and has now sur-



Management of Rare & Endangered Fishes

passed the open lake boat fishery in terms of angling effort. The Rare Fish Unit is responsible for assessment and management of endangered, threatened, and special concern fish species, as well as species of greatest conservation need and otherwise rare and unusual species of fish and freshwater mussels. Highlights of some activities in the past year by Bureau staff are summarized below. Additional highlights of Bureau of Fisheries efforts to manage rare and endangered fishes can be found in the Region 1, 6 and 9 sections of this report.

Paddlefish Restoration

Propagation

2011 was another exceptional year for paddlefish production at Oneida Hatchery. Eggs received from University of Kentucky researcher Dr. Steve Mims resulted in 2,150 juvenile paddlefish being stocked into the Allegheny River drainage. Fish averaging 14 inches were placed into the Allegheny Reservoir, Chautauqua Lake, and Conewango Creek in late July. Over 12,000 juvenile paddlefish have been stocked in these waters since 1998.

Stock Assessment

The results of the four year paddlefish restoration evaluation indicate that the stocking program has created a fairly abundant paddlefish population in the Allegheny Reservoir. A State Wildlife Grant funded project allowed for gill netting and radio tracking of adult paddlefish from 2008 through 2011. During the entire sampling period, 6,839 hours of gill netting effort yielded 79 adult paddlefish, 44 of which were implanted with radio transmitters. No evidence of successful natural reproduction has been documented as of 2011. One female with eggs in her abdomen was collected in 2010. Radio telemetry data shows that some adult fish are migrating upstream in the spring and could be attempting to spawn if conditions are right. DEC staff conducted sampling for wild young of the year paddlefish in 2011 but none were collected. There is a confirmed problem with paddlefish migrating downstream and passing through the Kinzua Dam. However, sampling data and observations suggest that enough fish are staying in the reservoir to eventually restore a self-sustaining population. Periodic sampling will be conducted every 3 to 5 years to monitor the adult population and hopefully confirm natural reproduction in the near future.



Native Mussel Distribution in the Southern Lake Ontario Watershed

Region 8 Fish and Wildlife staff completed the third year of a five-year project to determine distribution, density, and status of native freshwater pearly mussel species in the Southern Lake Ontario watershed. In most of these tributaries, the current status of mussels is unknown.

Mussels stabilize streambeds, diversify stream habitat, provide nutrients to other benthic invertebrates, filter suspended solids and pollutants from water, and are considered indicators of ecosystem health. In spite of the ecological importance of freshwater pearly mussels, they are among the most imperiled groups of animals in North America. Species occurrences will be used to create distribution maps which will help guide future mussel conservation efforts.

To date, 237 sites along 67 streams and 17 Erie Canal sites have been surveyed. Live mussels were found in 38 of the surveyed streams, with Species of Greatest Conservation Need (SGCN) confirmed in 18 streams. Mussels were documented for the first time in 29 streams. Throughout the Erie Canal sites, both native pearly mussels and invasive bivalves were found.

Twenty native mussel species are represented in these surveys; 18 of the 20 species were found live, including ten SGCN. Two species found live, paper pondshell and lilliput, had not been reported from NYS in over 15 years, while a third species, deertoe, was previously unknown from this watershed. Deertoe is ranked by Natural Heritage Program as having only "5 or fewer occurrences" statewide. In addition, green floater mussel, a NYS threatened species was found.

A rare rainbow mussel *Villosa iris* listed as a Species of Greatest Conservation Need in New York State was recently found in Moorman Creek, Monroe County. A YouTube video (www.youtube.com/watch?v=hxoMLCfhzUU) captures this mussel as it displays its lure to mimic a crayfish and attract a hungry fish. When the fish tries to take a bite, its gills are filled with young mussels, termed "glochidia." The glochidia are released when the mussel feels contact with the fish and attach to the fish's gills or fins. The unsuspecting fish provides food and aeration for the young mussels and a ride to a new home. Once metamorphosing into a juvenile, the mussel drops off the fish and burrows into the stream bottom, with the fish none the worse for the experience.



Round Whitefish Stocking and Assessment

Eggs for this endangered fish were taken in trap nets at Upper and Lower Cascade Lakes (Essex County) in late November 2011 and transferred to the Oneida Hatchery for rearing. 2,300 fingerling round

whitefish were produced and stocked in Spring of 2012 in three Adirondack ponds. Recovery progress with this fish has been slow and steady. Based on sampling done through 2011, there appears to now be 10 ponds with self-sustaining populations throughout the Adirondacks.

New to the program this year was an attempt at a captive egg take. Round whitefish spawn under the ice in many of the ponds where they are found, making effective egg takes challenging to say the least. In early December 2011, adult round whitefish were collected by trap net in Little Green Pond near Adirondack Hatchery. These round whitefish were held through December inside one of the hatchery raceways. The fish ripened and attempted to spawn inside the raceway around Christmas. Based on this success, staff at Adirondack will hand strip eggs and sperm from a new batch of round whitefish in December 2012 and send them to the Oneida Hatchery for rearing. If successful, this will reduce the impact on the Cascade Lake's population.



2011-12 Inland Section Staff

Section Head: Shaun Keeler Biologist 3 (Aquatic)

Coldwater Unit:

Fred Henson Biologist 2 (Aquatic)

Warmwater Unit:

Jeff Loukmas Biologist 2 (Aquatic)

Rare Fish:

Lisa Holst Biologist 2 (Aquatic)

Biological Survey Unit:

Linda Richmond Agency Program Aide

Paul Sweeney Calculations Clerk 2

Casey Festa Seasonal Fish & Wildlife Tech 1



The Bureau of Fisheries' Lake Ontario Unit (LOU), based in Cape Vincent, is primarily responsible for delivering a lake-wide fisheries assessment and research program. The mainstay of the program is the Department's 70 ton Research Vessel Seth Green. Lake Ontario's sportfisheries have been valued at over \$100 million annually and successful management requires that fisheries assessments and research be executed collaboratively. Delivery of our comprehensive program requires active partnerships with a number of institutions, including DEC Regions 6, 7, 8 and 9, the U.S. Geological Survey (USGS), the Ontario Ministry of Natural Resources (OMNR), the U.S. Fish and Wildlife Service (USFWS), the Great Lakes Fishery Commission (GLFC), Cornell University and the SUNY College of Environmental Science and Forestry. Our complete annual report can be accessed at: www.dec.ny.gov/outdoor/27068.html.



Sportfishery Monitoring

Each year from April through September, the LOU conducts the Lake Ontario fishing boat survey at 30 access channels from the Niagara River in the west to the Association Island cut in the east. The survey tracks a multitude of trends in the open lake sportfishery, including angler effort, catch and catch rates, harvest and harvest rates, performance of stocked fish and fish growth/condition. Lake Ontario fishing quality is best characterized by the number of trout and salmon caught per fishing boat trip (catch rate). In 2011, the catch rate for all trout and salmon combined was the highest observed since this survey began in 1985. In fact, 6 of the 7 highest combined catch rates were recorded

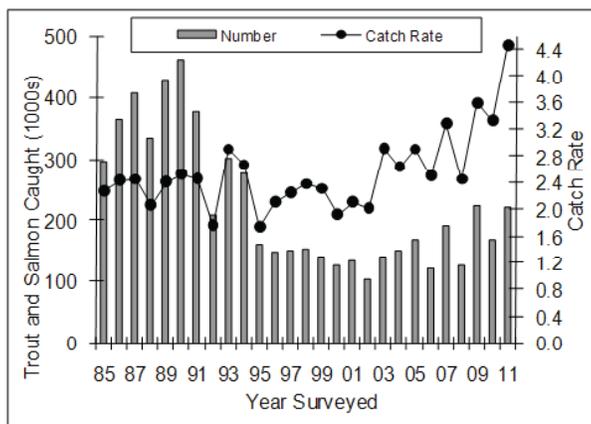


Figure 1. Total trout and salmon catch (bars) and catch rate (line/dots) for boats seeking trout and salmon, 1985-2010.

between 2003 and 2011 (Figure 1). These exceptional catch rates are largely due to record or near record-high catch rates in recent years for Chinook salmon, coho salmon, rainbow trout (steelhead), and brown trout. While fishing quality has been exceptional, angler effort (number of fishing boat trips) has not increased (Figure 2).

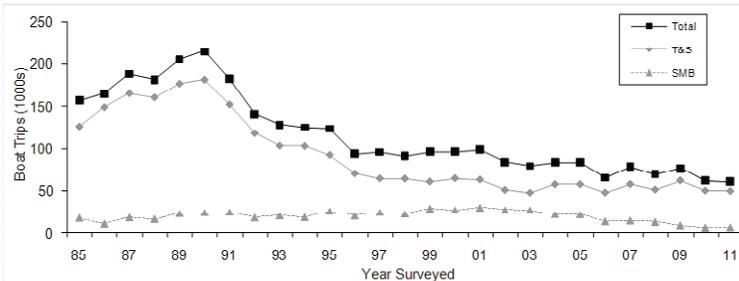


Figure 2. Seasonal estimates of total fishing boat trips, trips targeting trout and salmon (T&S), and trips targeting smallmouth bass (SMB) during the traditional open season (3rd Saturday in June-September 30 when the survey ended).

Preyfish Monitoring and Predator Growth/Condition

With over 5 million trout and salmon stocked annually into Lake Ontario by New York State and the Province of Ontario, it is important to monitor the abundance of bait or preyfish that trout and salmon feed on, as well as growth rates and condition of predators (also see Sportfishery Research). Partnering with USGS and OMNR, the LOU monitors relative abundance of alewife, rainbow smelt, sculpins, and round gobies. Alewife populations are of particular concern, as they are the primary food for Chinook salmon, the top predator in the lake. In 2011, adult alewife abundance and biomass indices increased from the historic low levels recorded in 2010 (Figure 3). Abundance of age-1 (yearling) alewife was above average despite a decreased adult spawning stock. Overall alewife abundance increased contributing to increased or stable size of age-2 and age-3 Chinook salmon (Figure 4). Lake Ontario Chinook salmon continue to be the largest in the Great Lakes, and Lake Ontario predator demand in 2011 appeared to be in balance with available prey.

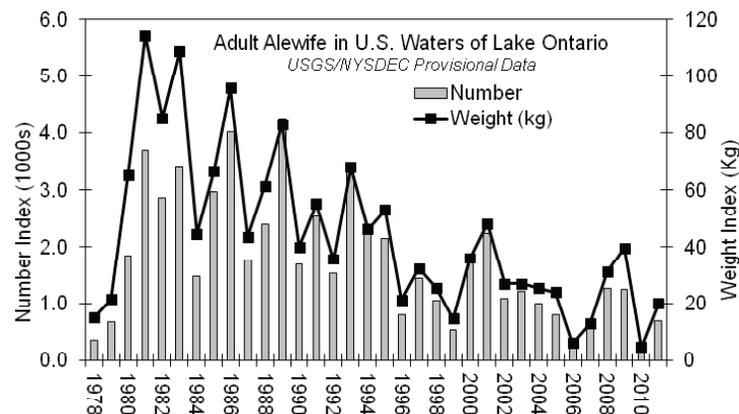


Figure 3. Abundance indices for adult (age-2 and older) alewife in the U.S. waters of Lake Ontario during late April-Early May, 1978-2011. (1 kg = 2.205 lbs)

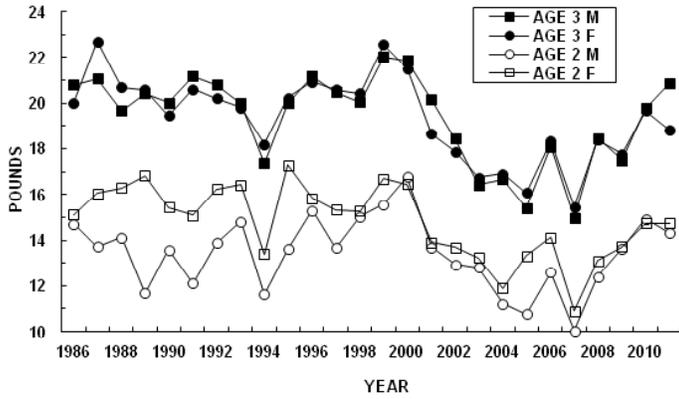


Figure 4. Mean weights of Chinook salmon ages 2-3 at Salmon River Hatchery 1986-2011.

Sportfishery Research

Using Lake Ontario Natural Resources Damages funds, the Bureau of Fisheries purchased a \$1.3 million automated fish marking trailer (“AutoFish”) in 2008.



The AutoFish system is capable of removing a fish’s adipose fin and/or inserting a coded wire tag into the snout of the fish automatically at a high rate of speed and accuracy. Fin clipping and tagging give researchers tools to answer a variety of questions regarding the performance of stocked and wild fish. From 2008-2011, the Department and the OMNR “mass-marked” all Chinook salmon stocked into Lake Ontario with an adipose fin clip to determine the relative contributions of naturally reproduced (“wild”) and hatchery stocked Chinook salmon to open lake and tributary fisheries. Knowing the relative roles of hatchery and wild salmon in the lake is very important for fisheries managers to better understand how stocking decisions can influence Chinook salmon population dynamics and predator/prey balance in Lake Ontario. High numbers of wild Chinook salmon in addition to stocked fish are thought to have contributed to an imbalance between predators and alewife in Lake Huron, greatly reducing growth and condition of Chinook salmon and negatively impacting sportfisheries. In 2011, 42.6% of age-1, 36.9% of age-2, and 35.9% of age-3 Chinook salmon in the New York waters of Lake Ontario were wild. These preliminary results indicate that although wild fish appear to be an important component of the Lake Ontario Chinook population and sportfishery, hatchery fish currently represent the majority, and stocking remains essential for the sustainability of the sportfishery and management of the lake ecosystem.

Native Species Restoration

An international program to restore a naturally reproducing population of lake trout in Lake Ontario is ongoing. To measure progress, cooperative DEC/USGS bottom trawl (juveniles; July) and gill net (adults; Sept.) surveys are conducted annually at 14 sites from the Niagara Bar to Charity Shoals in the Eastern Basin. Catch of age-2 lake trout indicates survival remains well below 1980s levels. Adult lake trout abundance increased in recent years following historic lows observed during 2005-2007, and may have stabilized at levels observed during 1999-2004. Survival of naturally produced lake trout to the fingerling

stage occurred each year during 1993-2007, representing production of 15 consecutive year classes. Wild yearlings captured in 2010 and 2011 were the first caught since 2005.

Four species of deepwater cisco are considered extirpated from Lake Ontario, and the LOU has been collaborating with the OMNR, US-FWS, and the GLFC to re-introduce these fish into the lake. In 2011, LOU staff successfully incubated eggs from Lake Michigan. Eggs were transferred to OMNR’s White Lake Hatchery where additional experiments determined the deepwater cisco’s early feeding/diet requirements, and produced 220 yearlings for future broodstock development. In fall and winter of 2011-12, LOU staff continued collaboration with partners to develop gamete collection and culture techniques for cisco. Plans call for continued culture experiments and eventual reintroduction of these important fish to Lake Ontario.

Two milestones in Atlantic salmon restoration were achieved for a second consecutive year in 2011: during 2010 and 2011 USGS staff captured naturally reproduced Atlantic salmon smolts in the Salmon River, and angler catch rate of Atlantic salmon in the open waters of Lake Ontario remained at a record high level. The cause(s) of improved status of Atlantic salmon is not yet known.

Warmwater Fisheries Assessment

Each year the LOU conducts index gill netting to assess the status of warmwater fish populations in Lake Ontario’s Eastern Basin. In 2011, smallmouth bass catch declined 30% from recent (2006-2010) levels, although remaining well above the record-low levels experienced prior to double-crested cormorant population management. Walleye abundance remained relatively stable, while yellow perch catch increased in recent years with 2011 catches being the third highest observed since 1984. Following a long period of low abundance, white perch numbers appear to be rebounding. At least one lake sturgeon has been collected in 13 of the last 17 years (4 in 2010), suggesting an increase in sturgeon abundance.

2011-12 Lake Ontario Research Unit Staff

- | | |
|----------------|-----------------------------------|
| Steve LaPan | Biologist 2 (Aquatic) |
| Jana Lantry | Biologist 1 (Aquatic) |
| Mike Connerton | Biologist 1 (Aquatic) |
| Chris Balk | Biologist 2 (Ecology) |
| Alan Fairbanks | Fisheries Research Vessel Captain |
| Gaylor Massia | Maintenance Assistant |
| Colleen Grant | Clerk 1 |
| Josh Fisher | Fish & Wildlife Technician 1 |
| Tom Eckert | Fish & Wildlife Technician 1 |
| Ron Harrington | Fish & Wildlife Technician 1 |
| Joe Dallas | Fish & Wildlife Technician 1 |
| Josh Dallas | Fish & Wildlife Technician 1 |
| Rich Chiavelli | Fish & Wildlife Technician 1 |
| Ben Carson | Fish & Wildlife Technician 1 |
| Emily Tucker | Fish & Wildlife Technician 1 |
| John Homberger | Fish & Wildlife Technician 1 |
| Edward Wells | Fish & Wildlife Technician 1 |
| Shane Grant | Seasonal Laborer |
| Gaylor Massia | Maintenance Assistant |

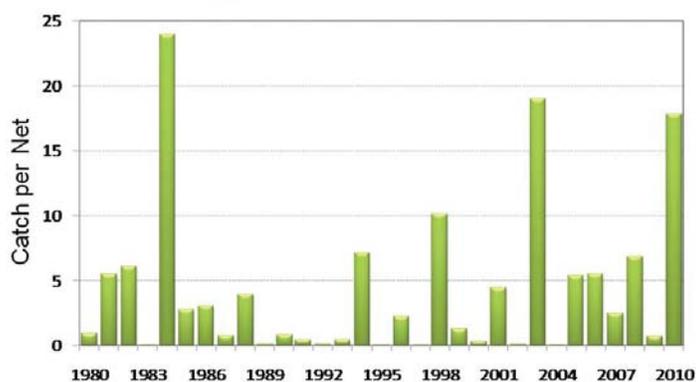


The Lake Erie Fisheries Unit is responsible for fishery research and assessment activities for one of New York’s largest and most diverse freshwater fishery resources. A variety of annual programs are designed to improve our understanding of the Lake Erie fish community to guide fisheries management, and safeguard this valuable resource for current and future generations. The following shares just a few of the highlights from the 2011 program year. The Lake Erie Unit’s complete annual report is available on DEC’s website at <http://www.dec.ny.gov/outdoor/32286.html>

Walleye

Lake Erie’s eastern basin walleye resource is composed of local spawning stocks, as well as contributions from summertime movements from western basin spawning stocks. The annual movement of western basin stocks is now well known via long-term tagging studies conducted throughout the lake. Walleye fishing quality in recent years has generally been very good and largely attributable to excellent spawning success observed in 2003. However, the dominant 2003 year class has now begun to wane. Nevertheless, walleye fishing activity and quality continue to be very good due to average to good spawning success that occurred from 2005 to 2008. Our most recent juvenile walleye survey indicates excellent spawning success in 2010. The good recruitment in recent years, especially from 2010, suggests that walleye abundance in the eastern basin will increase over the next few years.

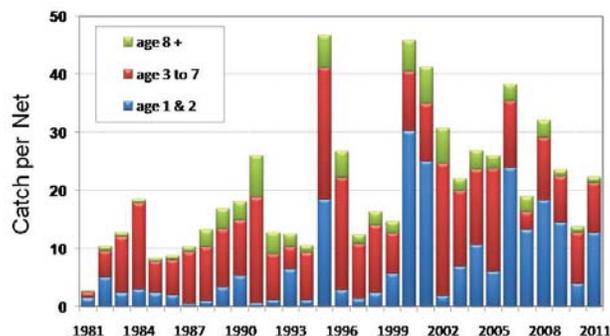
Age-1 Walleye Index



Smallmouth Bass

Lake Erie supports New York’s, and perhaps the country’s, finest smallmouth bass fishery. Generally stable spawning success, coupled with very high growth rates and acceptable survival, produces high angler catch rates and frequent encounters with trophy-sized fish. However, our most recent bass monitoring indicates a recent decline of the particularly large and older individuals. Our juvenile abundance measures indicate poor recruitment is expected from the 2009 year class; otherwise early signals suggest 2010 produced a much more abundant hatch of smallmouth bass.

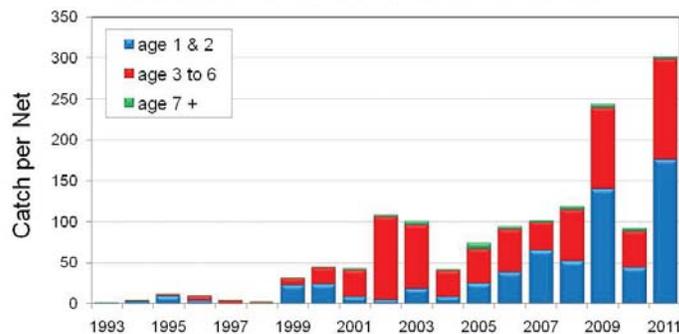
Smallmouth Bass Index



Yellow Perch

Lake Erie yellow perch populations have experienced wide oscillations in abundance over the last 30 years, from extreme lows in the mid-1990’s, to an extended recovery that’s now lasted more than a decade. A large adult population continues to produce good angler catch rates, especially during spring and fall seasons. Abundance of juvenile perch in trawling and gill net surveys has been high in recent years, with record-high abundance of age-1 perch observed in 2011. Overall, this pattern of recruitment suggests that higher and more stable yellow perch abundance will extend at least another few years.

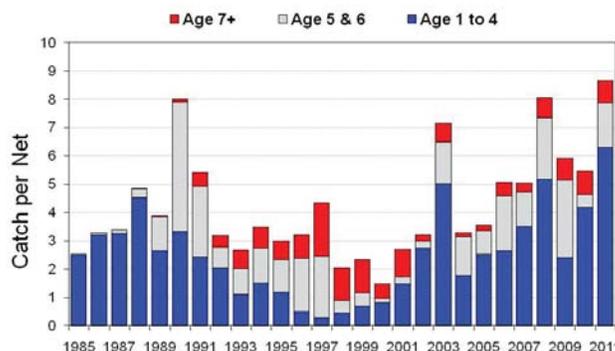
Gill Net Catches of Yellow Perch



Lake Trout

Rehabilitation of a self-sustaining lake trout population in the eastern basin of Lake Erie continues to be a major thrust in New York’s Great Lakes coldwater fisheries management program. Lake trout have been stocked annually since 1978 and assessment programs monitor the status of progress. A revised lake trout rehabilitation plan was completed in 2008 and will guide future recovery efforts. Abundance of lake trout in the New York waters of Lake Erie increased dramatically to a

Gill Net Catches of Lake Trout

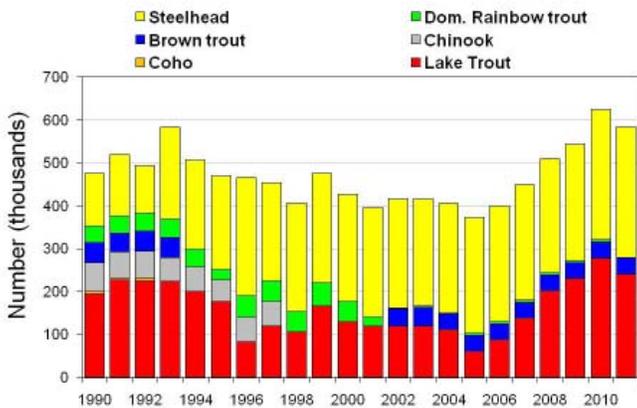


time-series high in 2011. The majority of the increase was observed in younger lake trout ages 1-4, mainly due to increased stocking levels over the past 4 years. Adult stocks remain at relatively low levels primarily due to a high sea lamprey population. Lakewide abundance estimates for all age groups still remain well below targets. Natural reproduction has not been detected in Lake Erie, and continued stocking and effective sea lamprey control are needed to build adult lake trout populations to levels where natural production is viable.

Salmonid Stocking

New York annually stocks around 270,000 steelhead and 35,000 brown trout into Lake Erie and its tributaries to provide recreational opportunities for both lake and stream anglers. Wild reproduction of steelhead also occurs which contributes to the fishery as well. Fall juvenile assessment programs conducted since 2001 confirmed substantial numbers of young-of-year steelhead present in many tributaries. Tributary angling for steelhead, assessed through an angler diary program, showed a sharp decline in fishing quality in 2010. A tributary creel survey is being conducted during the 2011-12 fishing season on the major Lake Erie tributaries. Combined with the 2011 cooperative diary program results, these surveys will help us determine the current status of the fishery.

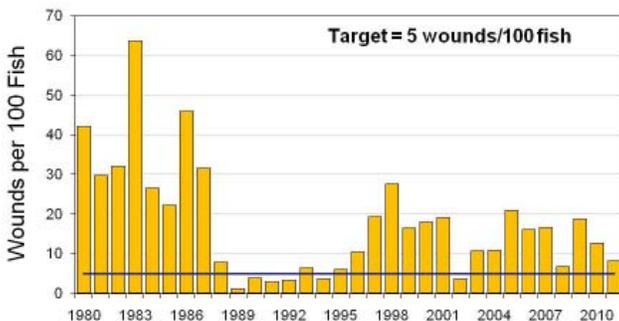
Trout & Salmon Stocking in NY



Sea Lamprey

Sea lamprey invaded Lake Erie and the Upper Great Lakes in the 1920s and have played an integral part in the failure of many native coldwater fish populations. Sea lamprey control in Lake Erie began in 1986 in support of lake trout rehabilitation efforts, and regular treatments are conducted to control lamprey populations. Annual monitoring consists of observations of sea lamprey wounds on lake trout and other coldwater fish species, and lamprey nest counts on standard stream sections.

Sea Lamprey Wounding Rate on Lake Trout >21 inches

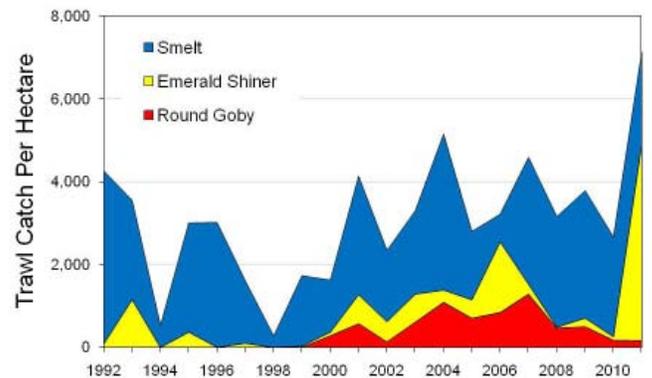


Wounding rates on lake trout continued to decline in 2011, but nest counts increased to their highest level since 1984, indicative of a high sea lamprey spawning population. Surveys indicate that the consecutive lampricide treatments of all key Lake Erie tributaries in 2008 and 2009 were successful in those streams, but the sea lamprey population remains high due to an unknown source of production.

Prey Fish

The Lake Erie Unit also participates in a number of surveys to assess forage fishes and other components of the lake ecosystem. These programs include trawl and sonar surveys of prey fishes, and predator diet studies. A variety of prey fish surveys beginning approximately 20 years ago found rainbow smelt as the dominant component of the open lake forage fish community. Beginning in 2000, there has been a notable increase in prey species diversity accompanied by somewhat lower smelt abundance, and in some years especially high abundances of round gobies and emerald shiners were encountered in both prey fish collections and predator diets. In recent years, overall prey fish abundance trended slightly downward, particularly the contribution by gobies in trawl surveys. In 2011, emerald shiner abundance increased dramatically while gobies remained at low abundance and smelt at average abundance. Over time we expect these investigations to be useful in furthering our understanding of factors shaping the fish community.

Forage Fish Abundance Trends



2011-12 Lake Erie Research Unit Staff

- | | |
|--------------------|-----------------------------------|
| Don Einhouse | Biologist 2 (Aquatic) |
| Jim Markham | Biologist 1 (Aquatic) |
| Doug Zeller | Fisheries Research Vessel Captain |
| Brian Beckwith | Fish & Wildlife Technician 2 |
| Rich Zimar | Fish & Wildlife Technician 2 |
| Ginger Szejwbka | Secretary 1 |
| Mark Dusablon | Fish & Wildlife Technician 1 |
| Carrie Ann Babcock | Fish & Wildlife Technician 1 |
| Paul Andrews | Fish & Wildlife Technician 1 |
| Kyle Nemecek | Fish & Wildlife Technician 1 |
| Jonathon Townsend | Fish & Wildlife Technician 1 |
| Ann Wilcox-Swanson | Fish & Wildlife Technician 1 |



Stocking Trucks get a Makeover

With DEC's hatchery trucks traveling hundreds of thousands of miles each year to stock New York's waters, why not use them for free advertising? The Bureau of Fisheries did just that! The rear tank of 21 DEC stocking trucks was outfitted with a 5' eye-catching decal illustrating fish and/or people fishing with an associated message encouraging people to get out fishing and purchase their fishing license. Costs for the truck wraps were extremely reasonable at \$154 per wrap, including install. In comparison, advertising billboards cost \$600 and up per month. With a life span of 3-5 years, having these decals installed will prove to be an extremely cost effective public outreach project.



I FISH NY Guide to Freshwater Fishing in New York State

The I FISH NY Guide to Freshwater Fishing was designed to promote the outstanding freshwater fishing that New York provides. This folded 36" x 37.5" map/brochure provides information on 320 lakes and 112 rivers found in the 9 DEC regions. The map also includes a host of general information of interest to a New York angler including information on purchasing a license, registering a boat, invasive species, common sportfish species and unique fishing opportunities in New York. The map can be obtained by contacting DEC by e-mail at fwfish@gw.dec.state.ny.us. It is also distributed through DEC offices, DEC fish hatcheries, sports shows and other events, tourism boards and selected Thruway and Northway rest areas. Over 7,700 maps were mailed last year.



In addition to the printed maps, "Public Fishing Lakes and Ponds" and "Public Fishing Rivers and Streams" Google Earth and Google Map files have been posted on the DEC website at www.dec.ny.gov/pubs/42978.html. These files recreate the information presented in the I FISH NY Guide to Freshwater Fishing brochure in a digital format that can also provide viewers with directions to these waters.

Fisheries Website Continues to Expand

Eighty-eight new webpages were posted on the DEC website in FY 2011/12. Pages added (by category) include: Places to Fish (38), regu-

lations (15), biologist reports (12) and stocking (12). The new stocking pages, posted in March 2012, show the brook trout fingerling stocking history in Adirondack ponds. This new information will help brook trout anglers review several years of stocking history in one place that will help them choose which ponds they want to fish. In addition to the new pages, 68 new PDFs were posted.

Downtown Plattsburgh Boat Launch Opens

The Downtown Plattsburgh Boat Launch on Lake Champlain saw its first full year of operation in 2011. The boat launch is located off Dock Street on the shore of Lake Champlain just south of the mouth of the Saranac River. The facility includes three launching and retrieval lanes with docks on each side of the ramp and along the shoreline. There are 31 vehicle and trailer parking sites, 12 car-only parking sites and additional parking in the adjoining parking lot. This site provides excellent access to a segment of the lake that has been lacking a large, modern boat launching facility. Plattsburgh has traditionally been the home base for many local, state and national bass tournaments. This new site will likely draw increased attention from these groups.



Rogers Island Pool Boat Launch Opens

A new boat launch on the upper Hudson River in the Village of Fort Edward (Saratoga County) opened for use in the Spring of 2011. The Rogers Island Pool Boat Launch provides a two lane concrete launch ramp, floating boarding docks and a gravel parking area for 25 cars and trailers. An information kiosk and invasive species disposal station are also provided. The boat launch provides access to a segment of the Hudson River below Fort Edward that had previously been difficult to access by motorboats. The area provides excellent warmwater fishing opportunities.



Three Mile Bay Boat Launch Opens

A new boat launch on Three Mile Bay (Chautauque Bay - Lake Ontario) was opened for use in the Fall of 2011. The Three Mile Bay Boat Launch provides a 1 lane launch ramp, floating boarding docks and parking for 6 cars/trailer and 10 cars. An information kiosk and



invasive species disposal station is also provided. This new site is a significant improvement over the old marina that was once located on the site and provides convenient access to a very popular fishing location in Lake Ontario. The funding for the project came from the Lake Ontario Natural Resource Damages Account that resulted from a settlement between New York State and the Occidental Chemical Corporation regarding Mirex contamination in Lake Ontario. Projects to be implemented under the settlement were selected after public review and comment and are summarized in the final Sportfishing Restoration and Spending Plan for the Lake Ontario System (2007).

Angler Achievement Awards

Just under 150 Angler Achievement Awards entries were received in 2011. The participation rate was slightly down from previous years, but nonetheless, saw some notable catches. Region 6 received the bragging rights as a new state record brook trout was established on June 15, 2011. The 5 1/2 pounder was caught from South Lake in Herkimer County and measured 22 inches. This is the sixth time the brook trout state record has been broken in seven years! Another impressive catch was a 60" musky caught from the St. Lawrence River in Jefferson County on November 27, 2011. Overall, black bass (smallmouth and largemouth) entries continued to dominate the program with over 50 sent in. All but one of these was in the catch and release category.



Rome Fish Hatchery Visitor Center

In conjunction with the modernization of the Rome Fish Hatchery an interpretative display was installed at the new visitor center. The Visitor Center provides a learning experience for people of all ages. Displays include: A Step Back in Time-the history of the Rome Fish Hatchery; A Fish's Tale-the life stages of trout and the day to day hatchery operations to raise them; Fishing's Great in New York State-promoting fishing opportunities across the state; and a coldwater aquarium including common NY trout species.



Kiosks

Interpretive panels were designed and installed at the newly constructed Plattsburgh Downtown boat launch site. The four full color panels contained information on fish species present in Lake Champlain, historical background, fisheries management, invasive species and angling regulations. The purpose of creating this signage for each site is to give anglers and boaters "one stop shopping" for pertinent information we'd like to convey.



Two panels were created and installed on the South Bay Fishing Pier on Lake Champlain. One panel provides illustrations of fish species present around the pier and the other provides the fishing regulations for the lake. Steve Grabowski of the Rome Fish Hatchery constructed custom frames for each panel.

I FISH NY - Statewide Implementation

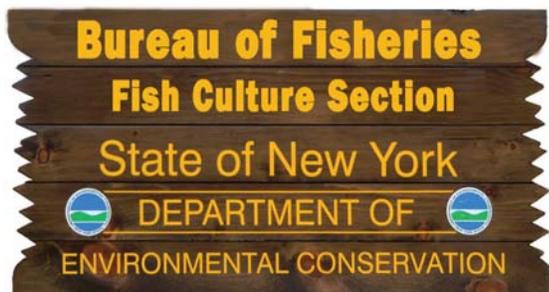
In-School Fishing Education Programs: One hundred sixty-three formal education programs were conducted between April 1, 2011, and March 31, 2012, in DEC Regions 1, 2, 3, 7 and 9. Of those, there were 147 in-school programs and 16 County Conservation Days where schools come to go through environmental programs in a round robin fashion. Most of those programs (120) were done in DEC Region 2. A total of 7,464 contacts with school kids were generated from these programs, including 5,039 in-school contracts and 2,425 contacts at County Conservation Days.

Fishing Clinics/Festivals: One hundred twenty-nine fishing education programs were conducted between April 1, 2011, and March 31, 2012, including 20 fishing festivals, 56 fishing clinics, 47 fishing clinics at summer camps, and 6 fishing clinics at campgrounds. Twenty three of these events were held in conjunction with a free fishing day or designated as a free fishing event. At those 129 fishing events, 10,941 people were reached, including 4,638 at fishing festivals, 3,850 at fishing clinics, 2,338 at summer camps and 115 at campgrounds. People attending fishing festivals generally received little to no fishing education, although there were usually seminars available to those who desired to learn more about fishing. People attending fishing clinics generally received between 30 to 60 minutes of fishing education followed by an opportunity to fish.



2011-12 Public Use Staff

- | | |
|-------------------|------------------------------|
| Edward Woltmann | Biologist 3 |
| Gregory Kozlowski | Biologist 2 |
| Joelle Ernst | Biologist 1 (Aquatic) |
| Michael DiSarno | Fish and Wildlife Technician |



Hatchery Infrastructure Improvements

Adirondack Hatchery – New Docks on Little Clear Pond and Structural Repairs to Manager’s Residence

New docks were installed in the summer of 2011 at the dam house on Little Clear Pond for use during the land-locked salmon egg collection. The old docks were in poor condition. Structural improvements are on-going at the manager’s residence and will be completed during the summer of 2012.



Catskill Hatchery – Replacement of rearing troughs, pipelines, and pole barn roof

Work was started by contractors in May of 2012 on the replacement of deteriorating rearing troughs, associated plumbing, and interior hatch house pipelines. Further work will commence on the exterior pipelines and the leaking pole barn roof will be replaced during the summer or fall of 2012.

Chateaugay Hatchery – Replacement of Inside Raceways

Installation of new fiberglass raceways will commence in July of 2012. A preliminary inspection of the area where the raceways will be installed has taken place and some material has been purchased for the installation process. These new raceways will replace old concrete raceways which have numerous cracks and leaks. Newly hatched fish have been lost recently due to these cracks.

Chautauqua Hatchery – Water Tank Replacement

In the fall of 2011 the old water tank was demolished and a foundation was poured. During the winter, work commenced on the new above ground 80,000 gallon tank. Final work was completed in May 2012. This tank is used to hold water for the earthen ponds and inside raceways which hold walleye and muskellunge from late spring through the fall months.



Randolph Hatchery – Demolish Manager’s Residence

The manager’s residence at the Randolph Hatchery was demolished due to structural deficiencies and asbestos issues. A new modular home will be installed in 2012.

Rome Hatchery – New Rearing Building, Visitor Center, and Visitor Parking Lot

A new rearing building/visitor center was completed and a dedication ceremony was held in September 2011. Displays for the visitor center were completed so that the public will have insight into our fish culture programs. The visitor parking lot was re-constructed with drainage catch basins, drain lines, fabric, and crusher run stone. These improvements have eliminated a chronic drainage problem and have helped contribute to a positive experience for visitors while visiting the hatchery.



Ribbon Cutting Ceremony at Rome Fish Hatchery

On September 23rd a ceremonial ribbon cutting was held at the Rome Fish Hatchery in Oneida County, hailing the renovation of one of the state’s largest and most productive hatcheries. The new \$2.1 million state-of-the-art, energy-efficient facility houses an early fish rearing area, a visitors’ center, offices, a conference room, a workshop, and storage area. The ribbon cutting ceremony was attended by NYS Senator Joseph Griffo, NYS Assemblyman Anthony Brindisi, and Rome Mayor James Brown, along with leaders of NYS sportsman’s organizations.



Each year the Rome Fish Hatchery hatches over 1.2 million trout eggs, and raises 1 million fingerling and 700,000 yearling brown and brook trout, including “heritage” strain brook trout native to NYS. They stock over 330 streams, lakes, and ponds, including 175 remote waters that are stocked by air. The Hatchery is responsible for inland stockings over a large part of central NYS, from Chenango and Madison Counties in the south, to Hamilton and Warren Counties in the Adirondacks.

Rome Fish Disease Control Unit – New Dissection Trailer

A new dissection lab for completing necropsy and disease testing was completed in the fall of 2011. The trailer is sited on fish hatchery property but away and downstream from existing production ponds so harmful pathogens will not be transmitted from fish samples taken from off-site locations. A large portion of the work was completed in-house by Bill Hajdasz.

Salmon River Hatchery – New Deep Production Well and Roof for Assistant Manager’s Residence

Production at Salmon River is currently limited in part due to an insufficient supply of water. From a previous hydrogeological survey, four sites were found to have a high potential for water. One site was picked and a test well was drilled. A production well was drilled next to the test well. Pump tests have been completed and a new pump with a metering system will be installed in June of 2012. A new standing seam metal roof was also installed on the assistant manager’s residence to correct a chronic leaking roof problem.

South Otselic Hatchery – Municipal Water Line Connection

Both the manager’s residence and hatch house were connected to a municipal domestic water line in May of 2011. The line was extended from an existing line and has eliminated the use of a large horse power water pump to supply domestic water to the hatch house. It has also eliminated potential code violations in the hatch house and manager’s residence.

Fall Egg Collections

Lake Trout from Cayuga Lake

The annual Cayuga Lake egg collection of lake trout eggs began October 3 at Taughanock Point on Cayuga Lake. A total of 435,000 eggs were collected over a 3 day period. Of this total, 378,000 were used for lake trout production while 57,000 were fertilized with brook trout to produce splake eggs. The egg collection was completed using personnel from South Otselic Hatchery, Bath Hatchery, and Adirondack Hatchery. The lake trout hatched from these eggs will be stocked throughout the state. The splake will be stocked in the Adirondack Mountain region.



Lake Trout from Raquette Lake

The egg collection for Adirondack strain lake trout began on October 11 at Raquette Lake and continued until October 21. A total of 194,000 green eggs were collected and 103,000 sac fry have hatched from the eggs. These numbers should be adequate to fulfill the 2013 spring stocking requirements.

Salmon River Chinook and Coho Salmon

The annual Salmon River Fish Hatchery’s chinook and coho salmon egg collection began on October 11 and October 14, respectively. The chinook egg collection took four days to complete with a total of 3.5 million eggs taken. The coho egg collection took five days to



complete with a total of 1.6 million eggs taken. The salmon hatched from these eggs will be used in Salmon River Fish Hatchery’s stocking program for Lake Ontario.

Adirondack Hatchery – Landlocked Salmon Egg Collection

The egg collection began on November 7 and ended on November 12. A total of 1.1 million eggs were collected. There were 258,000 collected from wild brood stock from Little Clear Pond and 876,000 from captive brood stock. Target numbers were reached so there should be enough salmon for stocking in the spring of 2013. Landlocked salmon are stocked into many Adirondack waters, as well as the Finger Lakes and other selected waters throughout the state.



Windfall Heritage Strain Brook Trout



Egg collection of the Windfall heritage strain of brook trout took place on October 26, 27, and November 1, 2011 in Mountain and Black Ponds. Personnel from South Otselic Hatchery assisted the Region 5 Fish Management Unit in the egg collection process. A total of 26,000 eggs were collected over the three day

period. The eggs were transported back to South Otselic Hatchery. The fish from these eggs will be stocked in selected waters under the Adirondack Heritage Strain Brook Trout Management Program.

Spring Egg Collections

Salmon River Hatchery

Salmon River Hatchery’s annual steelhead rainbow trout egg collection began on March 22 and continued for 3 days. A total of 2.3 million Washington strain and 102,000 Skamania strain eggs were collected. Target numbers for the egg collection were met and should be adequate to meet stocking requirements in the future. The fish hatched from these eggs will be stocked in tributary waters of Lake Ontario and Lake Erie.

Bath Hatchery

An egg collection of wild rainbow trout from the Cayuga Inlet Fishway began on March 15. Eggs were also taken on March 20, and March 26. A total of 198,000 wild rainbow trout eggs were collected. There were also 31,000 hybrid (wild rainbows x domestic rainbows) rainbow trout eggs taken. Target numbers were reached and should be adequate to meet stocking targets. Last year the egg take started the first week of April and ended the last week of April. So this year there will be close to an extra month of growth for the 2012 year class due to the early start date.

General

New Staff Hired at New York State Fish Hatcheries

Attrition over the last several years reduced staffing to levels too low to maintain full fish production. Fortunately, DEC received approvals to fill eleven vacant hatchery positions. Ten of these were entry-level fish culturist positions to be stationed at hatcheries across the state. Fish culturists assist in all aspects of growing and stocking fish into New York's waters.

Also filled was a aquatic biologist position at the Fish Health Unit, located at the Rome Fish Hatchery. This biologist will assist our fish pathologist in the surveillance and treatment of fish diseases. Keeping fish healthy during the time they spend in the hatcheries is a critical component of overall production. Bringing the hatcheries back to the required staffing levels is a worthwhile investment, since it is estimated that anglers spend \$530 million annually on fishing in New York, and a significant portion of this activity is supported by hatchery fish.

Cooperative Effort with Virginia Results in Brown Trout Fry For New York State

The Rome Fish Hatchery unexpectedly suffered a severe loss of young brown trout due to bacterial infection and parasites, despite repeated therapeutic treatments. The loss would have caused a shortage of this year-class of brown trout, which would be scheduled to be stocked as yearlings in the spring of 2013. To help compensate for the loss numerous states were contacted to determine if they had a surplus of disease free brown trout that could be brought into DEC's fish hatchery system. Officials from the Virginia Department of Game and Inland Fisheries graciously offered to help out by providing approximately 150,000 brown trout fingerlings to DEC at no cost. These fish will be a great help in compensating for our loss of trout. Although it is not common for DEC to need additional fish to meet its program requirements, cooperation such as this among states in time of need is not unusual. The Department of Environmental Conservation has helped other states in the past and will continue to do so when possible.

Fish Disease Control

Fish Disease Control Unit Overview

The NYSDEC Fish Disease Control Unit (FDCU) at Rome Field Station oversees the fish health program for the state. The fish health program includes disease surveillance of both fish residing in the DEC hatchery system and wild fish living in rivers, streams and lakes. The unit also cares for the health of fish in the state hatchery system.



State Hatchery Disease Testing

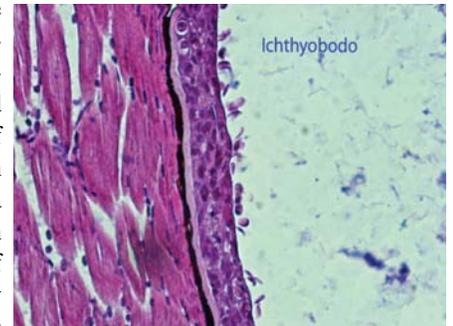
Samples from all lots of fish stocked from DEC hatcheries were tested prior to stocking. In all, 50 different lots of fish were tested from our 12 hatcheries, including both production fish and parental brood stock. No regulated fish diseases were found in any DEC hatcheries.

State Hatchery Fish Disease Epizootics

A number of common fish diseases occur periodically in the DEC hatchery system and are managed by staff. These events can become very serious and result in the loss of significant numbers of fish, particularly if environmental or nutritional conditions are not optimal. Over the past year, disease epizootics occurring in the DEC hatchery system included:

Gyrodactylus infestation: Brook trout at several DEC hatcheries had a persistent skin infestation of the parasite *Gyrodactylus*. *Gyrodactylus* is usually quite treatable, however our brook trout seemed unusually vulnerable to recurrent infestations as treatments only had a very temporary benefit. Brook trout broodstock at Rome Field Station continue to be heavily infested.

Rome Hatchery brown trout fry loss: Fry "pinheadism" can occur when initially feeding fry fail to consume adequate nutrients early in development. These fish typically die. At both Rome and Catskill hatcheries, the occurrence of fry pinheadism in brown trout was unusually high in 2011. In Rome brown trout fry, pinheadism was immediately followed by a very acute and aggressive infestation of *Ichthyobodo* (a protozoan parasite), then *Saprolegnia* (water mold on gills), all in a period of weeks. Both of these parasites are usually treatable, but this epizootic was resistant to any treatments. In all, Rome lost 580,000 brown trout in just a few weeks.



Persistent Bacterial Coldwater Disease: A persistent epizootic of bacterial coldwater disease (BCWD) caused by *Flavobacterium psychrophilum* developed at many of the DEC hatcheries during the reporting period. Certain hatcheries have routinely seen it in the winter, but in 2011-12, BCWD occurred in new species and new locations, such as Bath Hatchery rainbow trout.

Wild Fish Disease Surveillance

Wild fish health is assessed annually as part of a cooperative program with the USFWS and the National Wild Fish Health Survey. Fish from



33 locations were tested at either the DEC Rome Field Station or the USFWS Fish Health Center in Lamar, PA. Locations included sites from all regions in the state and collections included both cold water and cool water fish species. Significant pathogens

were isolated from fish in two collections. In August, 2011, brown trout from Castle Creek (Region 8) tested positive for whirling disease (*Myxobolus cerebralis*) and Lake Ontario lake trout tested positive for epizootic epitheliotropic disease virus (EEDv) in September.

Other Fish Health Projects

Experimental New Animal Drug Studies: The DEC has had an ongoing agreement with the FDA and USFWS to use Chloramine T to treat specific bacterial diseases when they occur. In return, the FDA will apply our treatment results in their drug approval process. Chloramine T was very effective in treating disease epizootics in 2011-12 and the drug should be approved very soon.

Healthy Fish Tissue Atlas: To enhance disease diagnosis accuracy, a healthy fish tissue atlas was prepared which includes all major tissues of fish families propagated in the state hatchery system. Because most of the current fish anatomy and physiology literature focuses on just a few prominent fish species, having an atlas that includes other, less studied species (i.e. walleye and muskellunge) is vital for evaluating

disease occurrence, progression, and management.

Furunculosis-Resistant Trout Project: The DEC's primary domestic brown and brook trout strains (Rome strain) were developed by the FDCU for disease resistance to bacterial furunculosis. Every year, fingerling Rome strain trout at Rome Field Station are infected with a significant dose of *Aeromonas salmonicida* intended to ensure continuance of the disease-resistant trait. In 2011, Rome strain brown trout and brook trout were successfully infected with a cocktail of eight different isolates of *A. salmonicida* from fish in Lake Ontario.

Fish Nutrition Study: The FDCU collaborated with the USGS to determine if essential oils extracted from cinnamon, garlic, and rosemary had nutritional benefit in protecting fish from a bacterial disease called furunculosis (caused by *Aeromonas salmonicida*). Our previous studies indicated that these oils directly suppressed *A. salmonicida* bacterial growth in plate culture, and the current study addressed whether these oils had similar protection when added to fish diets of fish exposed to this pathogen. We determined that none of the oils was effective strictly as a dietary additive, however cinnamon oil may have value in non-dietary applications and further investigation is being planned.



Annual Fish Production

SPECIES	LESS THAN 1"		1" - 4.24"		4.25" - 5.74"		5.75" - 6.74"		6.75" - 7.74"		7.75" Plus		TOTAL	
	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT	NUMBER	WEIGHT
Cold Water														
Brook Trout	550	0	110,865	2,548	122,575	5,897	2,700	310	400	62	159,769	43,203	396,859	52,020
Brown Trout	50	0	350	3	70,040	4,495	11,750	968	250,370	40,119	1,637,513	507,760	1,970,073	553,345
Rainbow Trout			84,000	889	95,850	5,266	69,350	6,600	21,200	3,120	346,884	83,684	617,284	99,559
Steelhead					868,150	37,963	50,990	3,960					919,140	41,923
Lake Trout					57,500	2,645	203,100	13,166	298,150	27,750	163,910	20,444	722,660	64,005
Splake									12,100	1965	5640	1119	17,740	3084
Cold Water	2,966		84862	672	182380	10879	91,688	7,330	100,326	15434	489	1884	462,711	36,199
Landlocked			155,000	3,890	140,750	10,504							295,750	14,394
Coho			1,768,290	21,709									1,768,290	21,709
Chinook			2,203,367	29,711	1,537,245	77,649	429,578	32,334	682,546	88,450	2,314,205	658,094	7,170,507	886,238
Cold Water Total	3,566	0	2,203,367	29,711	1,537,245	77,649	429,578	32,334	682,546	88,450	2,314,205	658,094	7,170,507	886,238
Warm Water														
Walleye	210,402,000	2,806	609,846	796	87,000	2175					31,860	2,486	211,098,846	5,777
Muskellunge			17250	20							105,500	13,941	49,120	2,506
Tiger Muskellunge											500	167	105,500	13,941
Panfish											2,150	717	500	167
Paddlefish											140,010	17,311	2,150	717
Warm Water Total	210,402,000	2,806	627,106	816	87,000	2175	0	0	0	0	140,010	17,311	211,256,116	23,108
Grand Total	210,405,566	2,806	2,830,473	30,527	1,624,245	79,824	429,578	32,334	682,546	88,450	2,454,215	675,405	218,426,623	909,346

2011-12 Fish Culture Staff

CENTRAL OFFICE

Jim Daley Fish Culturist 6
 Dave Armstrong Fish Culturist 5
 Mary LaBoissiere Secretary 1

ADIRONDACK

Matt Jackson Fish Culturist 3
 Fritz Aldinger Fish Culturist 1
 Neil Cranker Fish Culturist 1
 Kenneth Klubek Fish Culturist 1
 Adam Kosnick Fish Culturist 1 (trainee)

BATH

Ken Osika Fish Culturist 3
 Kelly Raab Fish Culturist 1
 Robert Sweet Fish Culturist 2
 Stephen Galbreth Fish Culturist 1
 Adam Haley Fish Culturist 1 (trainee)

CALEDONIA

Alan Mack Fish Culturist 4
 Kevin Hayden Fish Culturist 2
 Mark Krause Fish Culturist 3
 Jason Schirmer Fish Culturist 1
 Robert Stein Fish Culturist 2
 Brian Ward Fish Culturist 1
 Stephen Zenzen Fish Culturist 1
 Steven Robb Fish Culturist 1

CATSKILL

John Anderson Fish Culturist 4
 Tim Anstey Fish Culturist 1
 Steve Galbreth Fish Culturist 1
 Joseph Gennarino Fish Culturist 2
 James Judson Fish Culturist 1
 Nathan Snyder Fish Culturist 1
 Mark Ferron Fish Culturist 1 (trainee II)
 Robert Poprawski Fish Culturist 1 (trainee)

CHATEAUGAY

Neal McCarthy Fish Culturist 2
 Mike Disarno Fish Culturist (trainee)
 Doug Peck Fish Culturist (trainee)
 Mike Sicley Fish Culturist (trainee)
 Nicole Vogt Fish Culturist (trainee)

CHAUTAUQUA

Larry King Fish Culturist 3
 Eric Defries Fish Culturist 2
 Bradley Gruber Fish Culturist 1
 Ron Preston Fish Culturist 1

ONEIDA

Mark Babenzien Fish Culturist 4
 Bill Evans Fish Culturist 2
 Carl Rathje Fish Culturist 3
 John Gray Fish Culturist 1

RANDOLPH

Richard Borner Fish Culturist 3
 Trevor Brady Fish Culturist 1
 Barry Hohmann Fish Culturist 1
 Raymond Hulings Maintenance Assistant
 Jim Rambuski Fish Culturist 2
 Derek Weishan Fish Culturist 1

ROME

Robert Lewthwaite Fish Culturist 4
 Kevin Balduzzi Fish Culturist 1
 John Draper Fish Culturist 1
 Steven Grabowski Fish Culturist 2
 Zach Goodale Fish Culturist 1
 William R. Hajdasz Maintenance Supervisor
 Kimberly Matt Keyboard Specialist
 Jon Stercho Fish Culturist 1
 Scott Wanner Fish Culturist 3
 William Woodworth Fish Culturist 2

FISH DISEASE CONTROL

Andrew Noyes Pathologist 2 (Aquatic)
 Geoffrey Eckerlin Biologist 1 (Ecology)
 Mark Batur Fish Culturist 1

SALMON RIVER

Andreas Greulich Fish Culturist 4
 Brian Boyer Fish Culturist 1
 Stephen Dolan Fish Culturist 3
 David Domachowski Fish Culturist 2
 Brian Edmonds Fish Culturist 1
 Karen Hurd Keyboard Specialist
 Robert Nelson Fish Culturist 2
 Joe Dallas Fish Culturist 1 (trainee)
 Leslie Resseguie Fish Culturist 1 (trainee)

SOUTH OTSELIC

Patt Emerson Fish Culturist 3
 Thomas Kielbasinski Fish Culturist 2
 Bruce Ryan Fish Culturist 1
 Mike Speziale Fish Culturist 1

VAN HORNESVILLE

Larry Kroon Fish Culturist 3
 Craig DuBois Fish Culturist 2
 Lauren C. Watson Fish Culturist 1

Summary of Fisheries, Creel & Angler Surveys

Survey Name	Purpose
<i>Region 1</i>	
Carmans River, spring electrofishing	Fate of Stocked Trout Study
Carmans River Creel Census	Fate of Stocked Trout Study
Artist Lake	Centrarchid survey
11 small ponds in the Peconic Drainage	Banded sunfish, swamp darter surveys
Carmans River summer electrofish	Fate of Stocked Trout Study
Smith Pond	Toxic Substances Monitoring Program
Spring Lake	Toxic Substances Monitoring Program
Wantagh Creek	Coldwater habitat evaluation
Lower Peconic River and tributaries	Alewife monitoring
<i>Region 2</i>	
Oakland Lake	Fish health inspection
Wolfes Pond	General biological survey
Harlem Meer	General biological survey
Willow/Meadow Lake	Snakehead assessment
<i>Region 3</i>	
Tidal Esopus Creek	Overwintering largemouth bass assessment
Sylvan Lake	Centrarchid plan
Wappingers Lake	TSMP Collection
Lake Gleneida	Gill net trout assessment
Esopus Creek	Population estimate
Esopus creek	Fate of Stocked Trout Study assessment
Swinging Bridge Reservoir	Percid plan (October electrofishing)
Rio Reservoir	Percid plan (October electrofishing)
Rondout Reservoir	Gill net trout assessment
Crystal Lake	Trap net trout assessment
Middle Branch Reservoir	Tiger muskie and centrarchid assessment (October electrofishing)
Tidal Wappingers Creek	Overwintering largemouth bass assessment
Tidal Rondout Creek	Overwintering largemouth bass assessment
Lower Esopus Creek	General biological survey (June)
Lower Esopus Creek	General biological survey (August)
<i>Region 4</i>	
T16 to Manor Kill	Loach monitoring
Unnamed water (SR-137-1)	Loach investigation
West Branch Delaware River	Trout population studies
Schoharie Reservoir	Loach investigation
Arnold Lake	Centrarchid survey
Susquehanna River	Rock bass abundance assessment
East Sidney Reservoir	Centrarchid survey
Mohawk River (Lock 7-8)	Contaminant fish collection
Pepacton Reservoir	General biological survey
Cannonsville Reservoir	General biological survey

<i>Region 4 cont.</i>	
Potic Creek	CROTS survey
Mill Creek	CROTS survey
Trout Brook	Fish health collections
Sands Creek	Fish health collections
Downs Brook	Trout stream biological survey
East Branch Delaware River	Trout population study
Roeliff Jansen Kill	Fish health collections
Punsit Creek	CROTS survey
Indian Creek	CROTS survey
Horton Brook	Fish health collections
Trout Brook	Trout stream biological survey
Humphries Brook	Article 15 compliance survey
Schoharie Creek	Snorkel survey
Baxter Brook	Trout stream biological survey
Butternut Creek	CROTS survey
Arnold Lake	Percid netting
Canadarago Lake	Walleye YOY fall survey
Hudson River	Black bass wintering area survey
EBTJV stream surveys (506 streams)	Brook trout presence/absence surveys
<i>Region 5</i>	
Lake Champlain (South Bay)	Walleye egg take and general survey
Little Green Pond (Franklin Co), Bug Lake and Eagles Nest Lake (Hamilton Co)	Round whitefish assessment
Eleven limed waters (three counties)	Annual chemistry monitoring of limed waters
Lake Algonquin (Hamilton County)	Walleye stocking evaluation, TSMP and disease sampling
Center White Creek, Mosely Brook (Washington Co)	EBTJV follow up surveys
Barker Pond, Cranberry Pond (Hamilton Co), Vanderwhacker Pond and Big Cherrypatch Pond (Essex Co)	Brook trout stocking evaluations
Middle Saranac Lake (Franklin Co)	General biological survey, TSMP sampling
Davis Lake (Clinton Co)	Brown trout stocking evaluation, largemouth bass intro evaluation
Mud Pond (Clinton Co)	Evaluate split stocking policy of brook trout and brown trout.
Upper Saranac Lake (Franklin Co)	Collect bass for TSMP (mercury) analysis
Mettawee River (Washington Co)	CROTS habitat survey
Archer Vly (Saratoga Co)	New easement acquisition – general biological survey
Button Brook (Clinton Co)	Article 15 – trout presence verification
Cole Brook (Saratoga Co)	CROTS evaluation
Balfour Lake (Essex Co)	General biological survey (RT stocking evaluation)
Loon Lake (Warren Co)	Walleye stocking evaluation
Lake George	Trapnetting for landlocked salmon
Fishbrook Pond, Black Pond	Brook trout egg take
<i>Region 6</i>	
Moshier Creek	Acidification Recovery Investigation
Big Hill Pond	Brook Trout Egg Take
Boottree Pond	Brook Trout Egg Take

<i>Region 6 cont.</i>	
Deer Pond	Brook Trout Egg Take
Little Hill Pond	Brook Trout Egg Take
North Twin Lake	Brook Trout Egg Take
Baby Lake	Brook Trout Genetics
Honedaga Brook	Brook Trout Genetics
Black Creek Lake	Eastern Brook Trout Joint Venture
Otter Creek ,Unnamed Tributary	Eastern Brook Trout Joint Venture
Skate Creek	Eastern Brook Trout Joint Venture
Skate Creek Tributary	Eastern Brook Trout Joint Venture
Big & Oriskany Creeks	Fate of Stocked Trout Creel Survey
Oriskany Creek	Fate of Stocked Trout Population Surveys
Big Creek	Fate of Stocked Trout Population Surveys
Delta Lake	Fish Disease Investigation
Cranberry Lake	Fish Disease Investigation (2 surveys)
Clear Pond (Tamarack)	General Coldwater Fishery Survey
Clear Pond Outlet (Tamarack)	General Coldwater Fishery Survey
Cold Spring Creek	General Coldwater Fishery Survey
Eagle Creek	General Coldwater Fishery Survey
French Lake (West)	General Coldwater Fishery Survey
Independence Lake	General Coldwater Fishery Survey
Loon Hollow Outlet	General Coldwater Fishery Survey
Salmon Lake	General Coldwater Fishery Survey
Salmon Lake Outlet	General Coldwater Fishery Survey
Sauquoit Creek	General Coldwater Fishery Survey
Sugar River	General Coldwater Fishery Survey
Unnamed Water	General Coldwater Fishery Survey
Unnamed Water	General Coldwater Fishery Survey
West Branch Beaver River	General Coldwater Fishery Survey
West Branch Black Creek	General Coldwater Fishery Survey
Woodhull Lake	General Coldwater Fishery Survey
West Branch St Regis River	General Coldwater Fishery Survey (3 surveys)
Streeter Lake	Hybrid Brook Trout Study
Cleveland Lake	Hybrid Brook Trout Study (3 surveys)
Lake Ontario	Lake Sturgeon - Juvenile Assessment
St. Lawrence River	Lake Sturgeon Egg Take
Black River	Lake Sturgeon Monitoring
St. Lawrence River	Lake Sturgeon Monitoring
Lake Ontario	Lake Sturgeon Monitoring (2 surveys)
Star Lake	Lake Trout Evaluation
Sylvia Lake	Lake Trout Evaluation
Massawepie Lake	Lake Trout Evaluation/Disease Investigation
Trout Pond	Lake Trout Evaluation/Disease Investigation
Boottree Pond	Limed Water Program
Brewer Pond	Limed Water Program

<i>Region 6 cont.</i>	
Buck Pond	Limed Water Program
Cleveland Lake	Limed Water Program
Deer Pond	Limed Water Program
Hedgehog Pond	Limed Water Program
Hidden Lake	Limed Water Program
Horn Lake	Limed Water Program
Horseshoe Pond	Limed Water Program
Little Otter	Limed Water Program
Little Otter Lake	Limed Water Program
Long Lake P162	Limed Water Program
Nicks Pond	Limed Water Program
Payne Lake (Lewis County)	Limed Water Program
Peaked Mountain Lake	Limed Water Program
Pine Pond	Limed Water Program
Quiver Pond	Limed Water Program
Round Pond	Limed Water Program
Townline Pond	Limed Water Program
Evergreen Lake	Limed Water Program (2 surveys)
Pitcher Pond	Limed Water Program (2 surveys)
Lake Ontario	Lower Trophic Level Sampling
Black River	Stocked Steelhead Monitoring
Oswegatchie River	Walleye Egg Take
Black Lake	Walleye Evaluation
Payne Lake (Jefferson County)	Walleye Evaluation
Red lake	Walleye Evaluation
Lake Ontario	Warmwater Fish Stock Assessment, Eastern Basin
St. Lawrence River	Warmwater Fish Stock Assessment, Lake St. Lawrence
St. Lawrence River	Warmwater Fish Stock Assessment, Thousand Islands
Clear Lake	Wild Brook Trout Investigation
Unnamed Water (Clear Lake Outlet)	Wild Brook Trout Investigation
St. Lawrence River	Young-of-the-Year Esocid Index
Baby Lake	Brook Trout Genetics
Big & Oriskany Creeks	Fate of Stocked Trout Creel Survey
Big Creek	Fate of Stocked Trout Population Surveys
Big Hill Pond	Brook Trout Egg Take
Black Creek Lake	Eastern Brook Trout Joint Venture
Black Lake	Walleye Evaluation
Black River	Lake Sturgeon Monitoring
Black River	Stocked Steelhead Monitoring
Boottree Pond	Brook Trout Egg Take
Boottree Pond	Limed Water Program
Brewer Pond	Limed Water Program
Buck Pond	Limed Water Program
Clear Lake	Wild Brook Trout Investigation

<i>Region 6 cont.</i>	
Clear Pond (Tamarack)	General Coldwater Fishery Survey
Clear Pond Outlet (Tamarack)	General Coldwater Fishery Survey
Cleveland Lake	Hybrid Brook Trout Study (3 surveys)
Cleveland Lake	Limed Water Program
Cold Spring Creek	General Coldwater Fishery Survey
Cranberry Lake	Fish Disease Investigation (2 surveys)
Deer Pond	Brook Trout Egg Take
Deer Pond	Limed Water Program
Delta Lake	Fish Disease Investigation
Eagle Creek	General Coldwater Fishery Survey
Evergreen Lake	Limed Water Program (2 surveys)
French Lake (West)	General Coldwater Fishery Survey
Hedgehog Pond	Limed Water Program
Hidden Lake	Limed Water Program
Honnedaga Brook	Brook Trout Genetics
Horn Lake	Limed Water Program
Horseshoe Pond	Limed Water Program
Independence Lake	General Coldwater Fishery Survey
Lake Ontario	Lake Sturgeon Monitoring (2 surveys)
Lake Ontario	Lake Sturgeon - Juvenile Assessment
Lake Ontario	Lower Trophic Level Sampling
Lake Ontario	Warmwater Fish Stock Assessment, Eastern Basin
Little Hill Pond	Brook Trout Egg Take
Little Otter	Limed Water Program
Little Otter Lake	Limed Water Program
Long Lake P162	Limed Water Program
Loon Hollow Outlet	General Coldwater Fishery Survey
Massawepie Lake	Lake Trout Evaluation/Disease Investigation
Moshier Creek	Acidification Recovery Investigation
Nicks Pond	Limed Water Program
North Twin Lake	Brook Trout Egg Take
Oriskany Creek	Fate of Stocked Trout Population Surveys
Oswegatchie River	Walleye Egg Take
Otter Creek ,Unnamed Tributary	Eastern Brook Trout Joint Venture
Payne Lake (Lewis County)	Limed Water Program
Payne Lake (Jefferson County)	Walleye Evaluation
Peaked Mountain Lake	Limed Water Program
Pine Pond	Limed Water Program
Pitcher Pond	Limed Water Program (2 surveys)
Quiver Pond	Limed Water Program
Red lake	Walleye Evaluation
Round Pond	Limed Water Program
Salmon Lake	General Coldwater Fishery Survey
Salmon Lake Outlet	General Coldwater Fishery Survey

<i>Region 6 cont.</i>	
Sauquoit Creek	General Coldwater Fishery Survey
Skate Creek	Eastern Brook Trout Joint Venture
Skate Creek Tributary	Eastern Brook Trout Joint Venture
St. Lawrence River	Lake Sturgeon Egg Take
St. Lawrence River	Lake Sturgeon Monitoring
St. Lawrence River	Warmwater Fish Stock Assessment, Lake St. Lawrence
St. Lawrence River	Warmwater Fish Stock Assessment, Thousand Islands
St. Lawrence River	Young-of-the-Year Esocid Index
Star Lake	Lake Trout Evaluation
Streeter Lake	Hybrid Brook Trout Study
Sugar River	General Coldwater Fishery Survey
Sylvia Lake	Lake Trout Evaluation
Townline Pond	Limed Water Program
Trout Pond	Lake Trout Evaluation/Disease Investigation
Unnamed Water	General Coldwater Fishery Survey
Unnamed Water	General Coldwater Fishery Survey
Unnamed Water (Clear Lake Outlet)	Wild Brook Trout Investigation
West Branch Beaver River	General Coldwater Fishery Survey
West Branch Black Creek	General Coldwater Fishery Survey
West Branch St Regis River	General Coldwater Fishery Survey (3 surveys)
Woodhull Lake	General Coldwater Fishery Survey
<i>Region 7</i>	
Otselic River	Population estimate of stocked trout
Whitney Point Reservoir	General biological survey
Sherman Creek	Demonstrate electrofishing to TU camp
Cayuga Lake (2 surveys)	Evaluate presence of lake sturgeon
Jamesville Reservoir	Walleye recruitment evaluation
Beaverdam Brook/Salmon R. Hatchery (2 surveys)	Steelhead and chinook/coho spawning run surveys
Cayuga Inlet Fishway	Spring rainbow trout spawning run/lamprey control
Cayuga Lake	General biological survey
Otter Lake	Walleye stocking evaluation
Otisco Lake	Walleye stocking evaluation
355 small streams in Oswego, Chenango, and Madison Counties	EBTJV surveys to document trout presence
<i>Region 8</i>	
Seneca lake Trout Derby	Lamprey wounding Rates and general salmonid biological data
Meads Creek	Fate of Stocked Trout Study
172 Streams Region-wide	Surveys to document trout presence
Keuka Lake	Lake trout assessment
Lake Ontario (near-shore)	Water Fish Community Assessment
Beaver Brook	Post stream enhancement work assessment
Seneca- Cayuga Canal	Assist Bureau of Habitat - Fish Collection
Springwater Creek	Rainbow trout production survey
Limekiln Creek	Rainbow trout production survey

<i>Region 8 cont.</i>	
Cold Brook	Rainbow trout production survey
Sodus Bay	Warm water fishery assessment
Keuka Lake	Hydroacoustic cruise
Springwater Creek	Rainbow trout assessment
Catherine Creek	Rainbow trout assessment / lamprey wounding rates
Sleepers Creek	Rainbow trout assessment
McClure Creek	Rainbow trout assessment
Cold Brook	Rainbow trout assessment
Honeoye Lake	Walleye population estimate
Naples Creek	Rainbow trout assessment
<i>Region 9</i>	
East Koy Creek electrofishing and angler use surveys	Part of Fate of Stocked Trout statewide study
548 small streams electrofishing surveys in Wyoming, Cattaraugus and Erie Counties.	EBTJV survey to document brook trout presence
N. Branch Wiscoy Creek	Fish survey prior to habitat improvement work
McIntosh and Beehunter Creeks	Evaluation of habitat improvement project
Stoddard Creek	Collection of brook trout for aging study
Cuba Lake	Warm and cool water fisheries management
Chautauqua Lake trawl	Assess forage abundance and panfish species composition
Chautauqua Lake Electro-Fishing	Evaluation of post-stocking changes on game fish community
Upper Cassadaga Lake	Document stocking survival of 50-day walleye
Middle Cassadaga Lake	Document stocking survival of 50-day walleye
Lower Cassadaga Lake	Document stocking survival of 50-day walleye
Red House Lake	Document stocking survival of 50-day walleye
<i>Lake Ontario Research Unit</i>	
Lake Ontario Alewife Bottom Trawl Survey	Assess yearling and adult alewife in Lake Ontario
Lake Ontario Rainbow Smelt Bottom Trawl Survey	Assess yearling and adult smelt in Lake Ontario
Lake Ontario Juvenile Lake Trout Trawl Survey	Assess juvenile lake trout in Lake Ontario
Lake Ontario Warmwater Fisheries Assessment	Assess warmwater fish populations in the Eastern Basin
Status of Lake Ontario's Lower Trophic Levels	Monitor trends in Lake Ontario productivity, including nutrients, chlorophyll a, and zooplankton populations
Lake Ontario Adult Lake Trout Assessment	Assess adult lake trout populations in Lake Ontario
Lake Ontario Fishing Boat Survey	Monitor trends in angler effort/catch/harvest in the open waters of Lake Ontario
Lake Ontario Chinook Salmon Mass Marking Program	Determine contribution of wild Chinook salmon to Lake Ontario sportfisheries and evaluate success of pen-rearing projects
Northern Pike and Muskellunge Monitoring in the Thousand Islands Region of the St. Lawrence River	Monitor northern pike and muskellunge spawning and nursery areas to assess reproductive success and influence habitat changes
Lake Ontario Hydroacoustic Preyfish Assessment	Use hydroacoustic technology to develop lakewide estimates of alewife numbers and biomass
Lake Ontario Tributary Creel Survey	Monitor trends in angler effort/catch/harvest in major Lake Ontario tributaries. Supervised and reported by Region 7.
<i>Lake Erie Research Unit</i>	
Lake Erie Commercial Fishery Assessment	Sampling to characterize harvest & age composition of Lake Erie's commercial yellow perch fishery

<i>Lake Erie Research Unit cont.</i>	
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 nest counts to index the concentration of sea lamprey nests in selected Lake Erie tributaries
Lake Erie Fish Cleaning Station Monitoring	Annual examination of angler caught walleye processed at cleaning stations to characterize size, age composition and stomach contents
Lake Erie Beach Seine Assessment	A pilot survey to assess abundance and distribution of near shore young-of-year fishes in eastern Lake Erie
Lake Erie Coldwater Community Assessment	Gill net index of abundance, age composition, growth, and diet of lake trout, burbot and lake whitefish
Lake Erie Warmwater Community Assessment	Gill net index of abundance, age composition, growth, and diet of walleye, yellow perch and smallmouth bass
Lake Erie Tributary Angler Survey	Creel survey measure of catch and effort from Lake Erie's tributary fisheries for steelhead.
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
Lake Erie Lake Trout Spawning Survey	Gill net survey to understand site selection by spawning phase lake trout in near-shore and offshore areas

Reports and Presentations

2011 Annual Report. Bureau of Fisheries Lake Ontario Unit and St. Lawrence River Unit to the Great Lakes Fisheries Commission's Lake Ontario Committee. New York State Department of Environmental Conservation. <http://www.dec.ny.gov/outdoor/27068.html>

Coldwater Task Group. 2012. Report of the Lake Erie Coldwater Task Group to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission. [online] Available from www.glfrc.org/lakecom/lec/CWTG_docs/annual_reports/CWTG_report_2012.pdf [Accessed 4 April 2012].

Einhouse, D.W, J.L. Markham, K.L. Kapuscinski and M.T. Todd. 2012. NYS DEC Lake Erie 2011 Annual Report to the Lake Erie Committee. New York State Department of Environmental Conservation, Albany, NY. [online] Available from www.dec.ny.gov/outdoor/32286.html [Accessed 4 April 2012].

Forage Task Group. 2012. Report of the Lake Forage Task Group to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission. [online] Available from www.glfrc.org/lakecom/lec/FTG_docs/annual_reports/FTG_report_2012.pdf [Accessed 4 April 2012].

Geroux, R. C., and M. J. Sanderson, 2011. Diet composition of double-crested cormorants from two Lake Ontario colonies in 2011. New York State Department of Environmental Conservation, Avon, NY 14414. 4 pp. Draft

Guthrie, C.A. and H.N. O'Riordan. 2012. A comparison of two different walleye stocking rates and their effectiveness in controlling over-abundant white perch. New York Chapter, American Fisheries Society Annual Meeting, Oral Presentation.

Habitat Task Group. 2012. Report of the Lake Erie Habitat Task Group to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission. [Online] Available from www.glfrc.org/lakecom/lec/HTG_docs/annual_reports/HTG_AnnualReport2012.pdf [Accessed 4 April 2012].

Hammers, B. and D. Kosowski. 2011. Summary of Salmonine monitoring in Seneca Lake, 1999 – 2009. Final Report. 59pp.

Holeck, K.T., C. Hotaling, J.W. Swan, L.G. Rudstam, R. McCullough, D. Lemmon, W. Pearsall, J. Lantry, M. Connerton, S. LaPan, B. Trometer, B. Lantry, M. Walsh and B. Weidel. 2012. 2011 status of the Lake Ontario lower trophic levels. Section 16 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 28 pp.

Johnson, J. H., R.D. McCullough and I.M. Mazzocchi. 2012. Double-crested cormorant studies at Little Galloo Island, Lake Ontario in 2010: diet composition, fish consumption and efficacy of management activities in reducing fish predation. Section 14 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 11 pp.

Kapuscinski, K.L. D.P. Crane, J.M. Farrell and M.A. Wilkinson. 2011. Surveys of Muskellunge Spawning Habitat, Young-of-the-Year, and Associated Fish Assemblages at Nearshore Sites of the Buffalo Harbor (Lake Erie) and Upper Niagara River. Section O in D. Einhouse, editor. NYSDEC Lake Erie 2011 Annual Report. New York State Department of Environmental Conservation, Albany, New York.

Klindt, R. M. and D.J. Gordon 2012. Lake sturgeon tagging study 2011. Section 18 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Watertown NY, 9 pp.

Klindt, R.M. and D.J. Gordon. 2012. 2011 Lake St. Lawrence warmwater assessment. Section 7 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 13 pp.

Mahar, A. and J. Landry. 2011. Inventory of Freshwater Mussels in New York's Southeast and Southwest Lake Ontario Basins, Oct. 2010 – Sept. 2011. State Wildlife Grants progress report and evaluation to the US Fish and Wildlife Service. Grant T-12-1, Job 1.

Mahar, A. 2011. Habitat Connectivity in Hudson Valley, Sept, 2010 – Sept. 2011. State Wildlife Grants progress report and evaluation to the US Fish and Wildlife Service. Grant T-9-1, Job 4.

Mahar, A. 2011. Southeast Lake Ontario Update - Progress toward achieving conservation recommendations (2006-2011). To be included in NY's Comprehensive Wildlife Conservation Strategy revision.

McCullough, R.D. 2012. Smallmouth bass population in the New York waters of the St. Lawrence River Thousand Islands. Section 24 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 17 pp.

McCullough, R.D. and D.J. Gordon. 2012. Thousand Islands warmwater fish stock assessment. Section 6 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 19 pp.

McCullough, R.D. and I.M. Mazzocchi. 2012. Cormorant management activities in eastern Lake Ontario. Section 13 in Report to the Great Lakes Fishery Commission. New York State Department of Environmental Conservation, Albany, NY. 8 pp.

O'Riordan, H.O. 2012. In search of the Banded Sunfish. New York Chapter, American Fisheries Society Annual Meeting, Poster Presentation.

Sanderson, M. J. 2012. 2010-11 Warmwater fisheries assessment at Webster and Pultneyville, Lake Ontario. Section X in NYSDEC 2011 Annual Report, Bureau of Fisheries, Lake Ontario Unit and Saint Lawrence River Unit to the Great Lakes Fishery Commission's Lake Ontario Committee.

Sanderson, M. J. and J. R. Lantry. 2012. Assessment of the Lake Ontario black bass fishery using cooperator angler diaries. Section 22 in NYSDEC 2011 Annual Report, Bureau of Fisheries, Lake Ontario Unit and Saint Lawrence River Unit to the Great Lakes Fishery Commission's Lake Ontario Committee.

Sanderson, M. J. and B. E. Hammers. 2012. Status of the muskellunge population in Waneta Lake, 2005-2009. New York State Department of Environmental Conservation, Avon, NY 14414. 18 pp.

Walleye Task Group. 2012. Report for 2010 by the Lake Erie Walleye Task Group to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission. [online] Available from www.glfsc.org/lakecom/lec/WTG_docs/annual_reports/WTG_report_2012.pdf [Accessed 4 April 2012].

Wilkinson, M.A., M.J. Sanderson and S.E. Prindle. 2011. 2011 New York Cooperative Trout and Salmon Pen-Rearing Projects in 2011 Annual Report Bureau of Fisheries Lake Ontario Unit and St. Lawrence River Unit to the Great Lakes Fishery Commission's Lake Ontario Committee. New York State Department of Environmental Conservation, Albany, New York.

Yellow Perch Task Group. 2012. Report of the Lake Erie Yellow Perch Task Group to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission. [online] Available from www.glfsc.org/lakecom/lec/YPTG_docs/annual_reports/YPTG_report_2012.pdf [Accessed 4 April 2012].

