Meeting Minutes

Lake Champlain Fish and Wildlife Management Cooperative
Policy Committee Meeting

U.S. Fish and Wildlife Service Northeast Regional Office
300 Westgate Center Drive, Hadley, Massachusetts
Date: 14 May, 2013

Introductions, announcements

U.S. Fish and Wildlife Service Regional Director Wendi Weber welcomed Vermont Fish and Wildlife Department Commissioner Patrick Berry, New York Fish, Wildlife and Marine Resources Director Patricia Reixinger, and managers and technical staff in attendance from the agencies, the Lake Champlain Basin Program, and the U.S. Department of Agriculture, Wildlife Services. See attached list of participants. The U.S. Fish and Wildlife Service was assigned to prepare the meeting minutes.

Brief agency staff and budget updates

U.S. Fish and Wildlife Service (Service): Wendi described the effects of ongoing budget cuts in the Service under sequestration (6.5%) and the budget that was eventually finalized in 2013 (another 5% cut). The Service is under a partial hiring freeze; exceptions are granted through a restrictive waiver process. Travel, training, and conference attendance is also limited based on whether the activity is mission critical.

New York Department of Environmental Conservation (DEC): Patty described three years of severely restricted hiring and spending, and flat budgets in New York DEC. One impact of this is that restricted staffing and operations expenditures are making it difficult to use the State Conservation Fund to get conservation work done, in spite of the fact that the Fund has a $50 million balance. Patty expressed appreciation for the work by John Organ in support of New York's successful effort to protect the State Conservation Fund. Patty noted a successful effort by New York DEC to restructure the State's hunting and fishing licenses and adjust hunting and fishing seasons. The effort will simplify the licensing system in New York.

Vermont Fish and Wildlife Department (DFW): Pat announced that Vermont's legislature had doubled the Vermont DFW general fund appropriation for the current year, better reflecting the actual staffing, equipment, and operations costs of accomplishing fish and wildlife resource conservation. He expects to be able to fill a few important vacant positions this year. One new and unexpected funding problem, however, is the cost of cormorant control operations on Lake Champlain. Cormorant control has been a very high priority for some Vermont DFW constituents. Pat will find a way to continue cormorant control operations this year, working with U.S. Department of Agriculture (USDA Wildlife Services).

USDA Wildlife Services
Martin Lowney announced that his agency has lost funding and positions, eliminating their ability to do cormorant management in New York. USDA Wildlife Services has cancelled cormorant management nation-wide, except where states or others provide the necessary funding.

Sea Lamprey Control

Overview, budget and accomplishments

Steve Smith discussed 2012 sea lamprey control treatments. Five rivers were treated: the Winooski River, Mt Hope Brook, Mill Brook, Great Chazy River, and the Missisquoi River. All the treatments were conducted with

few problems and minimal non-target impacts. Two deltas were treated in 2012 with the Service's new "space shuttle" baylucide application boat. Steve emphasized the new boat required fewer staff, applied chemical at a more precise, controlled rate, and reduced the time of treatments. Fifty-four acres of the Saranac River delta were treated in 7 hours and 27 acres of Mill Brook were treated in only 1.5 hours.

Steve presented the sea lamprey control program's budget, which currently depends on $700,000 annually from the Great Lakes Fishery Commission (GLFC). Vermont Senator Patrick Leahy's active involvement in the budgeting process each year has ensured the funding since the program began. Given a $700,000 annual allocation and planned future treatments, the program would be fully funded until the year 2020, when the projected treatment cost would exceed available funds. The funds would run out much faster if annual allocations did not continue. The Policy Committee acknowledged the need for more secure annual funding. Three formal arrangements that would ensure more secure funding are 1) Lake Champlain is included in the Great lakes Fisheries Act of 1956, 2) the treaty known as the Convention on Great Lakes Fisheries between the United States and Canada is amended to include Lake Champlain, and/or 3) the Administration includes annual funding in the US Fish and Wildlife Service's budget. A three member team was formed consisting of Dave Tilton (Service), Patty Riexinger (New York DEC) and Eric Palmer (Vermont DFW) to explore these and other funding possibilities. The committee will develop a report to define the current state of funding arrangements for Lake Champlain sea lamprey control, the desired state of funding, and recommendations and deliverables to improve annual funding security.

Plans in 2013 for Lamoille River lamprey control

Steve Smith presented lamprey survey results and estimated cost for a treatment this year on the Lamoille River. The recent lamprey larval survey suggests a population of less than 4,000 animals, a relatively small number compared to the target population in other large river treatments. The cost for lampricides to treat the Lamoille River this year is about $130,000. This would calculate to approximately $33.00 per lamprey killed, which is very high. For example, this compares to $0.07 to $2.90 per lamprey killed for treatments conducted in 2012. Several participants emphasized that it is important to treat all lamprey populations as long as wounding rates remain above target levels. Others voiced concern about substantial protests from stakeholders if no treatment is conducted and wounding rates increase. Dave Tilton said that decisions to treat or not to treat should be based on data, and expressed the opinion that the Lamoille lamprey population estimate does not warrant the high treatment cost. Wendi Weber proposed to move forward with the treatment but to develop clearer, more detailed criteria for the determination of whether to treat or not to treat in the future.

Wendi noted that this is a good example of an issue that would benefit from a structured decision making process. To this end, the Fisheries Technical Committee will form a subgroup to begin the process. Patty Riexinger advised that outside help may be useful. Terri Donovon (UVM) was suggested as a source of expertise on structured decision making. It was noted that Brad Young is currently attending a structured decision making class, which also has participants engaged in sea lamprey control management in the Great Lakes.

2013 treatment/permit status

Steve Smith reported that there are four streams scheduled for sea lamprey control treatments in 2013. They are the Saranac River, Stone Bridge Brook, Putnam Creek and the Lamoille River. Neither the Saranac nor Stone Bridge have been treated since the experimental program, but lamprey populations within these streams now warrant treatments. Putnam Creek is being treated a year early in order to align it with other southern Lake Champlain rivers to make future treatments easier logistically. Permit applications for the 2013 treatments have been submitted for Stone Bridge and the Lamoille in Vermont while the Saranac and Putnam treatments need only amendments to existing permits. No complications are foreseen in the process.

Lake Champlain investigations in lamprey control

Steve Smith reported that Ellen Marsden (University of Vermont) is currently working on 2 projects. One involves micro-elemental analysis of lamprey and the other looks at sea lamprey transformer out-migration.

Wounding rate assessment

Brian Chipman (Vermont DFW) presented sea lamprey wounding date from 2012. Sea lamprey wounding rates calculated for both lake trout and salmon collected in 2012 were up from 2011, but they are still near or lower than wounding rates observed during the experimental sea lamprey control program. The 2012 lake trout wounding rate increased to 40 wounds per 100 fish, from a low of 30 in 2011. Wounds on Main Lake salmon increased slightly again in 2012 to 21 wounds per 100 fish and to 26 wounds per 100 fish on Inland Sea and Malletts Bay salmon.

Lunch presentation: Landlocked Atlantic salmon restoration investigations

The Service is leading a large adaptive management experiment focused on restoring and enhancing river-runs of landlocked salmon to Lake Champlain. The goals of this program are to: (1) Increase returns of hatchery-origin salmon to rivers; (2) Enhance the tributary fishery for salmon in Lake Champlain; (3) Restore naturally spawning populations of salmon. Lab and field experiments have been initiated in the Winooski River, Vermont and Boquet River, New York to increase river-runs of hatchery-origin salmon and to monitor success of natural reproduction. Partners include U.S. Senator Patrick Leahy, the Service, Vermont DFW, New York DEC, U.S. Geological Survey-Conte Lab, Dartmouth College, Vermont Cooperative Fish and Wildlife Research Unit, University of Vermont, Middlebury College, Trout Unlimited and Lake Champlain International. Funding is provided by the Great Lakes Fishery Commission, the Service, Vermont DFW, and Dartmouth College.

2012 activities include:

Optimize Smolt Rearing and Release Time

- Outplanted first of three year classes in Spring 2012.
- Boquet River – March vs May stocking.
- Winooski River – Constant vs natural water temps Jan – April.

Identify Physiological Indicators of smoltification

- USGS: McCormick Lab

Characterize and Restore River Imprinting

- Dartmouth College: Kapuscinski Lab – Welker Ph.D.

Determine Impacts of Thiamine Deficiency

- University of Vermont: Marsden Lab – Ladago M.S.

Information Exchange with Lake Ontario Atlantic Salmon Restoration Efforts

- Ontario, New York DEC, Service, Vermont DFW
- Program overviews – Feb. Hatchery overviews - July

Assess Fitness of Domestic and Feral Broodstocks

- Vermont DFW: On going experiment at Ed Weed Hatchery.

Morphometrics of Parr to Smolt Development in Hatchery and Wild

- Photos of fish from fry – smolt.

Common Garden: Ed Weed and Eisenhower Smolts

- Assess smolt to adult survival in Winooski River.

Characterize Spawning Success in Boquet River.

- Identify successful natural reproduction or barriers to it
- Fish passage, spawning gravel, temp, thiamine.

River-run Restoration of Landlocked Salmon Action items

The Service, New York DEC and Vermont DFW support and are committed to river run restoration of landlocked salmon in Lake Champlain. New York DEC questioned need to continue stocking brown trout in the lake and asked if they could be replaced by additional landlocked salmon stocking. Vermont DFW said a small number of brown trout are stocked in the lake and they are not a targeted fish in the fishery. The technical committee will examine befits (e.g., diversity of salmonid species in lake) vs risks (e.g., non-native species and dangers of hybridization and competition with landlocked salmon during river run restoration efforts).

Invasive Species

Meg Modley, Lake Champlain Basin Program Invasive Species Coordinator, discussed the activities of the Lake Champlain Rapid Response Task Force, especially spiny waterflea spread prevention in the Champlain Canal and Lake George. The Task Force goal is to ensure and facilitate the availability of protocols, personnel, equipment, permits, and other resources to contain or potentially eradicate a newly detected nonnative invasive aquatic plant or animal introduction. Meg emphasized that, generally – and particularly when there is no ongoing rapid response, it is more important and effective to focus on invasive species ***vectors*** rather than on specific problem species. This point is emphasized by the Rapid Response Task Force's experience with species invasions to date: variable-leaf milfoil in summer, 2011; spiny water flea in Champlain and Glens Falls Feeder Canals in July, 2012; spiny waterflea in Lake George in August, 2012, and brittle naiad in Waterbury Reservoir in September, 2012. In each case, rapid response/eradication was already infeasible when the infestations became known. The Lake Champlain Basin Program and the Lake Champlain Rapid Response Task Force are continuing to refine approaches to enhance response decision-making, actions, and media interactions to improve natural resource outcomes.

Fisheries

Fisheries Technical Committee Annual Report

Chet MacKenzie, Chair of the Fisheries Technical Committee, presented a brief overview of the Tech committee annual report for 2012. The Annual Report of the Fisheries Technical Committee is intended to be a brief synopsis of fisheries activities in 2012. The author of each section is listed so that interested readers can contact that person for more in-depth information. Some highlights of the 2012 report are as follows:

Salmonid Restoration:

Tech committee finalized pre-stocking smolt assessment protocol for all landlocked salmon.

Walleye

Continued development of intensive culture program at Ed Weed fish culture facility for stocking of fry, advanced fry and fingerlings. Continued assessment of stocking success of various life stages.

Centrarchids

Expanded bass surveys in response to concern over fishing tournaments.

Esocids

Increase in northern pike spring trap-netting surveys.

Ongoing musky stocking in Vermont in cooperation with New York DEC.

Eels

Many members of cooperative are encountering eels during other sampling activities.

Smelt, alewife assessment

Nick Staats and Bernie Pientka gave a report on the forage fish monitoring program. For historical perspective Nick explained that the forage fish surveys began in 1990 and were originally contracted through UVM. Historically smelt dominated the forage base, until the arrival of alewives in 2003. Survey consists of 2 parts. The first is a continuation of the historical survey with stepped 55 minute mid-water trawl at 5 stations. The second is a hydro-acoustic survey. The acoustic survey is used to estimate abundance and biomass of forage fish.

Results of the mid-water trawl survey indicated smelt numbers have increased in the main lake from 2011 though the smelt present appear to be mostly one year class. In the Northeast Arm and in Malletts Bay smelt numbers continue to be very low, but those that are present are of balanced year classes. Alewife abundance is high in both areas.

Acoustic surveys show similar results. In the Northeast Arm and Malletts Bay smelt numbers are low, but of various age classes and alewife numbers are up over 2011 and they are showing up in deeper water. Overall forage biomass is lower in the Northeast Arm compared to 2011 and in Malletts Bay the biomass of forage seems to be cycling up and down. In the Main Lake smelt numbers are up in 2012 and dominated by a single year class.

Work continues with floating gill nets to better understand the forage community in the near surface layer which is difficult to sample with trawling gear.

Salmonid assessment

Brian Chipman presented results of salmon and lake trout assessment surveys in 2012. Sampling sites included adult returns to fish passage facilities on the Winooski and Boquet rivers, electrofishing adult returns to Hatchery Brook, and nearshore electrofishing near the Grand Isle ferry landing, Willsboro and Whallon bays. Adult returns to the fish passage facilities were down considerably from 2011. Very low lake level and stream flow in late summer 2012 likely contributed to the low numbers.

Nearshore and Hatchery Brook electrofishing show lower numbers of the cohort of salmon smolts stocked in 2011. Higher proportions of older larger salmon were encountered both in the lake and in hatchery brook. The extremely high water and turbidity levels encountered in 2011 may have had negative impacts on the salmon stocked that year.

Bill Ardren gave a brief overview of Ellen Marsden's ongoing salmonid research. Currently Ellen has a project focused on thiamine levels in lake trout and landlocked salmon. Salmon and lake trout eggs are being monitored for thiamine levels. Salmon and trout eggs are also being incubated without thiamine treatment to assess levels of Thiamine Deficiency Syndrome (TDS). Results of eggs tested in 2012 show a decline in thiamine levels in salmon eggs and a slight increase in thiamine in lake trout eggs. Salmon eggs that did not receive thiamine treatment exhibited high mortality. Lake trout eggs incubated without thiamine treatment showed low mortality.

Biological indicators for assessing salmonid stocking rates

Chet MacKenzie presented some of the work being done by a sub-group of the Fisheries Technical Committee to develop a method to use biological indicators to assess salmonid stocking rates. The group was put together following a charge of the Policy Committee several years ago to develop a plan for collection and reporting of indicators that will assist managers in making stocking and harvest management decisions. The group has been working on prioritizing indicators that could be useful and that can be obtained from ongoing work. Indicators

were broken down into several categories. Categories are listed below and specific metrics that can be used in a category under #2 growth.

1. Pre-stocking smolt assessment
2. Growth indicators
    a. Length at age 0+ LLS sampled from nearshore electrofishing
    b. Length at age 1+ LLS from fall fish passage returns
    c. Condition factors (K) for LLS less than 480 mm.
    d. K of Lake trout from LCI derby and fall electrofishing samples
    e. K of age 3 walleye
3. Abundance
4. Forage
5. Harvest
6. Fish health
7. Other

International affairs

Sea lamprey barrier construction on Morpion Stream

Dave Tilton announced that the Service plans to begin trapping lamprey in Morpion Stream in the spring of 2014. The project has moved ahead with the selection of a contractor (Claude Chagnon, Inc., Saint Hyacinth, Quebec). Bids were higher than expected, but several consistent bids were received. The Service accepted the bid for about $1.2M given that savings from delta treatments and the current budget status made this amount affordable. $235,000 has been spent to date on engineering, surveying, land acquisition, consulting, permitting, and legal fees, the total project cost is expected to be about $1.6M when complete. A formal contract is in development. All permits are in place, and in-stream work is scheduled to begin on August 1st. The work should be complete by September or October. The USFWS will develop procedures for operating the structure and teach local municipal employees how to operate it. The local municipality (Notre Dame de Stanbridge) will receive a stipend of $10K each year to hire employees who will serve as our technicians in trapping operations.

Updates from Quebec

Pierre Bilodeau, Daniel Hatin and Nathalie Vachon from the Ministry of Natural Resources in Longueuil, Québec participated in the meeting by speaker phone to describe their work in the Lake Champlain region. Fourteen stations in Missisquoi Bay were sampled by gill nets producing mostly yellow perch and pumpkinseed, as well as large numbers of non-native white perch and one tench. The results were similar to a survey conducted in 2003. They also caught a few walleye.

Wildlife

Martin Lowney reported that the Lake Champlain Waterbird Management Plan and Environmental Assessment were completed in fall of 2012. The current density of cormorants on Lake Champlain is estimated to be 25 birds / km2. Martin suggested a more appropriate density for conditions around the lake would be 2-4 birds / km2, or a total of about 2000 - 4000 cormorants on the lake. In 2012 Vermont DFW killed 12,000 cormorants, and New York DEC killed 500 cormorants and oiled cormorant eggs on nesting islands.

Martin indicated that USDA Wildlife Services' budget has been greatly reduced and they can no longer fund cormorant control efforts on Lake Champlain. The large return of cormorants to Lake Champlain evident in the spring of 2013 emphasizes the need for control to protect island ecosystems, shorelines, fisheries, and other species of nesting waterbirds.

Vermont DFW has started control efforts in 2013 and is looking for additional funding sources to support this work as a top priority. NYDEC agrees that cormorant control is a high priority and will try to identify funding to help with cormorant control efforts in 2014.

Cormorant management action items:
New York DEC will work with Vermont DFW to seek funding sources for cormorant control efforts on Lake Champlain. The Service will work with both states on permitting issues associated with these control efforts. USDA Wildlife Services will continue to provide technical assistance and potently help with control efforts if additional funding can be secured.

The meeting adjourned at 4:00pm

Attachment

List of participants
Lake Champlain Fish and Wildlife Management Cooperative Policy Committee meeting
May 14, 2013
USFWS Northeast Regional Headquarters, Hadley, Massachusetts

Name	Affiliation
Bill Archambault	U.S. Fish and Wildlife Service
Bill Ardren	
Deb Rocque	
Steve Smith	
Nick Staats	
Dave Tilton	
Wendi Weber	
Phil Hulbert	New York Department of Fish, Wildlife, and Marine Resources
Bill Schoch	
Patty Riexinger	
Pat Berry	Vermont Fish and Wildlife Department
Brian Chipman	
Chet MacKenzie	
Eric Palmer	
Bernie Pientka	
Meg Modley	Lake Champlain Basin Program
Martin Lowney	U.S. Department of Agriculture, Wildlife Services

Pierre Bilodeau, Daniel Hatin and Nathalie Vachon from the Ministry of Natural Resources in Longueuil, Québec participated in part of the meeting by speaker phone.