

**Lake Champlain Fish and Wildlife Management Cooperative
Policy Committee Meeting Minutes
Burlington Community Boathouse
Burlington, Vermont
May 5, 2005**

Welcome

Chairman Marvin Moriarity called the meeting to order. Introductions were made and an attendance sheet was passed around. The following members were in attendance:

<u>Policy Committee</u>	<u>Fisheries Technical Committee</u>	<u>Advisors</u>
Gerry Barnhart (NYSDEC) ¹	Bill Schoch (NYSDEC)	Ken Kogut (NYSDEC)
Marvin Moriarity (USFWS) ²	Lance Durfey (NYSDEC)	Paul Pajak (USFWS)
Wayne Laroche (VTFWD) ³	Craig Martin (USFWS)	Ken Gillette (USFWS)
	Bradley Young (USFWS)	Henry Bouchard (USFWS)
	David Nettles (USFWS)	John Gobeille (VTFWD)
<u>Fisheries Management Committee</u>	Nicholas Staats (USFWS)	Tom Wiggins (VTFWD)
	Wayne Bouffard (USFWS)	Gavin Christie (GLFC) ⁵
Doug Stang (NYSDEC)	Brian Chipman (VTFWD)	Dale Burkett (GLFC)
Dave Tilton (USFWS)	Chet MacKenzie (VTFWD)	Marc Gaden (GLFC)
Eric Palmer (VTFWD)	Shawn Good (VTFWD)	Edmund Sander (GLFC)
	Ellen Marsden (UVM) ⁴	Michael Ryan (GLFC)

¹New York State Department of Environmental Conservation

²U.S. Fish and Wildlife Service

³Vermont Fish and Wildlife Department

⁴University of Vermont

⁵Great Lakes Fishery Commission

Discussion of Agenda Items:

1. Development of a Strategic Plan for Fishery Resources in Lake Champlain

Craig Martin discussed the Fisheries Technical Committee's progress in development of a more comprehensive strategic plan to replace 1977 strategic plan, which focused solely on salmonid restoration. He distributed a summary of the plan development process and a draft plan outline (see Handout #1).

Ellen Marsden summarized development of guiding principles for the strategic plan. The guiding principles will include biological and socio-cultural aspects such as genetics, ecological integrity, fishery sustainability, angler demand, economic development and other values of Lake Champlain fisheries. The plan will be modeled after guiding principles and fish community objectives in the five Great Lakes plans.

Gerry Barnhart noted that the outline appears to primarily address ecological aspects of fish communities, and he stressed that the importance of providing sportfisheries should not be overlooked in development of fish community objectives. Craig & Ellen agreed.

Dale Burkett noted that stocking allocations and access are the big sport fishery-related issues on Great Lakes.

Marvin Moriarity asked the Policy Committee if the outline should be changed to ensure fishery and other socio-cultural benefits are adequately addressed. Gerry Barnhart answered yes, and recommended adding “Fishery Management” to appropriate headings on the outline.

Action Item: The Policy Committee approved the strategic plan outline with the addition of the above recommendation.

2. Lake Champlain Salmonid Production

Dave Tilton commented on the erosion of base funding and operations in the USFWS budget. USFWS has been forced to consolidate operations of the White River and Pittsford National Fish Hatcheries, with the intent to continue meeting Lake Champlain salmonid production objectives. All federal landlocked Atlantic salmon production is now at White River.

Marvin Moriarity reported that the budget should allow keeping Pittsford operating through FY 2006. Beyond 2006, the budget picture is less optimistic. Salmon production will remain at White River for the foreseeable future, however, due to different disease classifications at the two hatcheries, and uncertainty over continued operation of Pittsford.

Eric Palmer reported that Vermont production is going forward as scheduled but unfilled hatchery vacancies are causing workload issues.

Doug Stang reported that New York hatchery production is currently in good shape for Lake Champlain; however, there are some concerns about salmon production at Adirondack Hatchery, and the lake trout broodstock population in Little Clear Pond appears to be declining.

Marvin Moriarity suggested there is a need for updating the economic value of Lake Champlain fisheries, to lend support to maintaining and enhancing the fish production budget. He latest economic figures are from the 1997 experimental sea lamprey control program assessment (estimated \$200 million in angler expenditures). Could the 1997 figure be indexed up to date?

Doug Stang reported that a New York statewide angler survey to be conducted next year will generate economic data specific to the Lake Champlain fishery, but will include New York waters only. An idea to commission an updated basin-wide fishery economic study, funded from GLFC’s Lake Champlain account was also discussed.

3. Coordinated Cormorant Management in Lake Champlain

Ken Kogut summarized the multi-agency cormorant research & management program. Cooperating agencies include NYSDEC, VTFWD, USDA-Wildlife Services, University of Vermont, The Nature Conservancy (TNC) and others. Vermont is ahead of New York in active management to control cormorants on State-owned islands. The major colonies in New York are on the Four Brothers Islands, owned by TNC. TNC has not been supportive of cormorant control at Four Brothers, but it is cooperating in a cormorant research project there. The long-term goal is to involve the states and other island landowners (TNC, etc.) to develop a management plan including lake wide cormorant population objectives.

John Gobeille gave a summary of Vermont's cormorant management activities. Cormorant egg-oiling has been conducted annually on State-owned Young Island since 1999. Lethal control started in 2004, with the objective to remove 10% of the cormorants in the Young Island colony. This effort resulted in 208 adults killed (7% of the colony). Recently, the cormorant population has been expanding into the Lake Memphremagog basin.

The Cooperative is participating in a regional research program studying cormorant movements between Lake Champlain, the Great Lakes and St. Lawrence River, using satellite transmitters on the birds. In-lake movements are also being monitored with radio-tagged birds to determine if the different Lake Champlain colonies are separate or mixing in one large meta-population. Cormorant movements related to management efforts on Young Island are also being monitored.

Handout #2 contains more details on the Cooperative's current cormorant management activities.

4. Status of Sea Lamprey Control and the Salmonid Fishery

Bill Schoch and Brian Chipman distributed summaries of lamprey wounding rate trends, lampricide treatments conducted in 2004, and major sea lamprey management activities planned for 2005 (See Handouts #3 and #4). Three stream TFM treatments and one delta granular Bayluscide treatment were completed in 2004; no lampricide treatments are planned in 2005. Brian Chipman also presented a summary of the effects of the October 2004 Winooski River TFM treatment (See Handout #5) sea lamprey and non-target species. NYSDEC is working with the US Army Corps of Engineers (ACOE) to increase the effectiveness of the Great Chazy River barrier (Frog Farm dam). The plan to construct a barrier/trap in Morpion Stream (Pike River system, Quebec) is also moving forward.

Gerry Barnhart proposed we revisit the current wounding rate objectives in the Strategic Plan process. He believes we need to go down to 5 marks per 100 lake trout to achieve rehabilitation of a self-sustaining lake trout fishery, based on the Great Lakes experience. There was general consensus with Gerry's proposal, but it was also noted that the Cooperative would have to determine if it is realistically feasible to reach the lake trout rehabilitation goal level of 5 wounds per 100 fish in Lake Champlain. Gerry also commented that it would be beneficial to

the program to have key Lake Champlain sea lamprey control staff regularly attend GLFC Sea Lamprey Integration Committee (SLIC) working sessions. Gavin Christie welcomed the Cooperative's participation in SLIC.

Action Items: 1. The Fisheries Technical Committee shall investigate the feasibility of reducing sea lamprey abundance in Lake Champlain to a level that would result in attaining a target of 5 wounds per 100 lake trout, and make a recommendation to the Management Committee.
2. Encourage Lake Champlain staff participation in the Great Lakes SLIC.

5. Alternatives in State Regulatory Procedures for Sea Lamprey Control.

Dave Tilton explained the background. VTFWD has struggled with a high staffing requirement and difficult *ex parte* provisions associated with inter and intra-agency regulatory review and interpretation of statutory requirements, to obtain permits authorizing lampricide treatments in Vermont tributaries. Specifically, an aquatic nuisance control permit is issued by the Vermont Department of Environmental Conservation (VTFWD's sister department under the Agency of Natural Resources) with input from the Vermont Department of Health and Vermont Agency of Agriculture, Food and Markets; an Endangered and Threatened Species Taking permit is issued by the Agency of Natural Resources. During the Lake Champlain Fish and Wildlife Management Cooperative's Policy Committee meeting in February 2004, USFWS agreed to examine the issues associated with accepting assignment of the responsibility for obtaining these permits.

The Service's Lake Champlain Office worked with the Interior Department's Office of the Solicitor and determined that it could not be an applicant for state permits. The Supremacy Clause of the U.S. Constitution protects the Federal government from regulation by State governments. Since States don't have the authority to regulate the Federal government, the Service would be establishing an unacceptable precedent if it voluntarily subjected itself to such regulation.

Dale Burkett described the Great Lakes process. GLFC, through its agents (USFWS in U.S., and Department of Fisheries and Oceans in Canada), voluntarily elects to meet state and provincial regulatory requirements. USFWS works closely with Great Lakes state regulatory agencies to address their concerns, and has developed a long history of trust with them. The lampricide SOP manual also helps with state agency understanding of the treatment process. Dale cited an example where USFWS successfully negotiated with Michigan to exempt four streams from sturgeon protocol treatments.

The option of the Cooperative being the primary applicant for state permits was proposed, and the Policy Committee supported looking into it.

Action Item: Legal counsel from all three agencies in Cooperative need to work together to determine if it would be legally & practically feasible to have the Cooperative be the permit applicant.

6. Budget Plan: The Great Lakes Fishery Commission's Account for Sea Lamprey Control in Lake Champlain

Craig Martin handed out the 2005-2008 sea lamprey control budget projection (See Handout #6). GLFC received an \$845K congressional appropriation into the Lake Champlain account this year; the balance is \$833,700 after rescissions. We will need another appropriation of at least \$327K by Fall 2006 to continue the program in 2007. Senator Leahy is requesting \$850K for Lake Champlain sea lamprey control in the FY2006 federal budget.

Gavin Christie requested that the Cooperative submit a 5-year projection of lampricide needs to GLFC by September 30 annually.

7. Progress Reports

U.S. Army Corps of Engineers (ACOE) support with Great Chazy Barrier work: Handout #7 is an updated ACOE fact sheet on this project.

Lake Champlain Lamprey "Summit": Dave Tilton reported that each Agency has parties assigned to an "outreach team" to work on this process: Kathi Bangert (USFWS), Dave Winchell (NYSDEC), John Hall (VTFWD) and Brian Chipman. Brian will provide technical assistance to the team. The goal is to have the Lamprey Summit this fall to communicate the Cooperative's professionalism and success, solicit ideas to develop more permanent funding sources, and generate political and public support.

Morpion barrier update: Brad Young reported that the barrier plan has been submitted to the Lake Champlain Basin Program for approval. The final engineering design is near completion and the Cooperative plans to contract with a Quebec-based consultant to obtain the necessary Canadian federal, provincial and/or local permits. If permits are obtained this year, the barrier/trap will be built in 2006, the first spawners would be blocked in 2007, and transformer out-migration should be suppressed by 2011.

New research suggesting sea lamprey native to Lake Ontario and Lake Champlain: Craig Martin led the discussion of these findings and their potential implications for the program. Some may challenge the control program if sea lampreys are thought to be native. Craig suggested that the Cooperative produce a position paper on the need to continue program whether sea lamprey are indeed native or not. Gavin Christie noted that the GLFC approach is: (1) review the science and (2) present the policy side: The need for achievement of fish community objectives makes need for sea lamprey control straightforward.

Alewife issue: Dave Tilton and Eric Palmer discussed concerns with 1997 discovery of Alewives in Lake St. Catherine, Vermont, which is drains into the Champlain canal via the Mettowee River, a direct threat for Alewife spread into Lake Champlain. Eric mentioned that Vermont will not be pursuing the preferred alternative in the Alewife EA (whole-lake reclamation of Lake St Catherine). There were two confirmed collections of alewives in northern Lake Champlain in 2004. It is unlikely that Lake St. Catherine was the source of these

fish. Craig Martin reported that USFWS staff are doing an extensive electrofishing survey for alewife in Lake Champlain this spring. Marvin Moriarity asked what is the trigger point for action regarding reclamation of Lake St. Catherine. A trigger point has not been defined.

Meeting Adjourned

Minutes recorded by Brian Chipman

HANDOUT #1

Strategic Plan – Fish Community Objectives

- **WHAT:** Memorandum of Understanding establishing the Management Cooperative (January 1995 and as amended July 1996) calls for coordinated fish and wildlife programs of interstate significance in Lake Champlain. The MOU directs the Management Cooperative to “develop a comprehensive fish and wildlife management plan for species of interstate significance.”
- **WHY:** The Cooperative is currently working under its outdated 1977 strategic plan: “A Strategic Plan for the Development of Salmonid Fisheries in Lake Champlain.”
- **WHO:** Management Committee tasked the Fisheries Technical Committee to develop a Strategic Plan outline. Currently a subcommittee consisting of Lance Durfey (NYSDEC), Brian Chipman and Bernie Pientka (VTDFW), Craig Martin (USFWS), Dr. Ellen Marsden (UVM), and Dr. Doug Facey (St. Michael’s College) are working on the outline and the development of *Guiding Principles*. It is expected that the full Fisheries Technical Committee will author the plan for Management Committee approval.
- **HOW:** We are relying heavily on the Great Lakes Fishery Commission’s Fish-Community Goals and Objectives but are tailoring the plan to Lake Champlain.
- **WHEN:** 2004 Policy Committee directed the Management Cooperative to finalize a strategic plan outline for a 2005 Policy Committee approval. A finalized draft strategic plan was to be finalized by the 2006 Policy Committee meeting.

Lake Champlain Fish Community Objectives Draft Outline

- I. Executive Summary
- II. Introduction
- III. Goal Statement
- IV. Guiding Principles
- V. Description of Lake Champlain
- VI. Historical Fish Community and Fisheries
- VII. Current Fish Community and Fisheries
 - a. Habitats & Fish Communities (set the stage for the following chapters)
- VIII. Habitat & Fish Community Objectives
 - a. Tributary Zone (Lake to fall line/catadromous & anadromous corridor)
 - b. Nearshore Zone (littoral/wetlands/shoreline)
 - c. Offshore Zone (benthic/pelagic)
- IX. Major species management objectives
 - a. Landlocked Atlantic salmon
 - b. Lake Trout
 - c. Other salmonids
 - d. Walleye
 - e. Yellow perch
 - f. Forage
 - g. Sea lamprey
- X. Species Diversity
 - a. Rare/Threatened/Endangered Species
 - b. Exotics

Action: It is recommended that the Policy Committee approve the draft outline for the Strategic Plan - Fish Community Objectives. A draft plan should be finalized for approval by the 2006 Policy Committee meeting.

HANDOUT #2 (1 of 3)

Lake Champlain Fish and Wildlife Management Cooperative Cormorant Management Plans for the 2005 Field Season

March 18, 2005

Vermont Fish and Wildlife Department

Management Objectives. Young Island: Cormorant population reduced and/or maintained at levels allowing for the recovery and propagation of island vegetation as stated in Lake Champlain Islands Management Plan. Prevent the establishment of any new colonies on Vermont state lands in Lake Champlain. Communicate and provide assistance to other landowners on Lake Champlain involved with cormorant control activities.

1) Population Control Methods

Vermont Fish and Wildlife Department and USDA Wildlife Services will provide most of the staffing for field operations. The agencies plan to make a conscientious effort to minimize the number of trips to Young Island, and therefore the amount of disturbance, in implementing control methods.

Egg oiling. 100% egg-oiling of DCCO nests on Young Island, oil up to 3000 RBGU nests. Timing - early May to mid-June

Lethal control methods. Reduction of up to 20% of the Young Island breeding colony.
Suppressed firearms - Young Island

Minimize No. visits

Timing- late June/July

Perform control work at dusk or night

Shotguns and decoys-Young Island

Minimize No. visits

Shotguns and decoys-Other identified lake locations (island or boat)

2) Habitat Management Methods

Nest substrate removal (mechanical removal or burning) during late summer-fall

Planting trees, shrubs, and grasses during late summer-fall

Vegetation monitoring (exclosures, photo-plots, plot sampling)

3) Off Island Activities

Monitor and prevent pioneering attempts to other Lake Champlain locations

Methods: harassment, shooting, and nest removal/destruction.

HANDOUT #2 (2 of 3)

4) Research Activities

Regional - Assess cormorant movements and responses to management actions through the use of satellite telemetry. Assist in regional study of Great Lakes cormorant control. Ten transmitters to be placed on Lake Champlain cormorants.

Local – Monitor Lake Champlain cormorant movements through the use of VHF telemetry data, boat surveys, and fixed-wing aircraft monitoring. Sixty transmitters placed on Lake Champlain cormorants.

New York Department of Environmental Conservation

1) Monitoring, Coordination and Information

- Respond to public inquiries regarding cormorant management.
- Provide assistance to Federal agencies, the State of Vermont, non-governmental organizations, landowners, and researchers as requested.
- Monitor cormorant nesting occurrences in heron rookeries.
- Conduct nest counts at the Crown Point cormorant nesting colony.
- Provide pathological evaluation of any deceased specimens collected by staff.
- Participate in regional and interjurisdictional planning and assessment of cormorant population management.

2) Population Control

Population control methods will be limited to eliminating new cormorant nesting occurrences. Egg oiling and lethal take of adults will be utilized at any new nesting occurrences on New York State land, and at new nesting occurrences on private land, at the request of the landowner.

U.S. Fish and Wildlife Service – Missisquoi National Wildlife Refuge

Since 1999, Missisquoi National Wildlife Refuge (Refuge) has enlisted the assistance of the University of Vermont through Dr. David Capen to monitor and observe the annual nesting activity of colonial nesting birds on the Shad and Metcalfe Islands portions of the Refuge. This agreement was initiated to 1) determine the impacts of cormorant nesting attempts on great blue heron nesting success; 2) evaluate and establish baseline levels of rookery ecology; and 3) evaluate cormorant impacts on the long term health and vitality of the vegetation at the rookery.

HANDOUT #2 (3 of 3)

The following table indicates nest counts for Double-crested Cormorants, Great Blue Herons, and Great Egrets since 1999. Cormorants failed in all nesting attempts except in 2003 and 2004 where the number in parentheses reflects successful nests. The vast majority of Heron nests are successful except as noted in 2001.

	Cormorant	Heron	Egret
1999	35	580	
2000	144	566	
2001	75	350 (all failed)	
2002	27	150	
2003	45 (1)	192	
2004	142 (15)	275	2

In 2005 we will continue to monitor nesting activity of these species. Some funding decisions are still pending, but we are hopeful the work can continue as it has in the past few years. A heron nest count will be made early in the season before leaf growth impedes viewing. We will also try to document number and first arrival of cormorants, count nests and look for leg bands before the leaves are out. Once the leaves are out, we will look for cormorant nest success and timing of any abandonment. Post season, in August, we will map and count, in detail, the number of nests.

Additionally, we anticipate other UVM researchers (Duerr et al) will spend time on the Refuge looking for bands as they did last year.

Finally, depending on field and rookery conditions, we intend to work with Wildlife Services to explore the feasibility of future cormorant control options. At this point we do not know what control options might be effective without negatively impacting the heron rookery. Egg oiling and nest removal are not viable options due to the inaccessibility of the nests at this site and the potential for catastrophic disturbance to nesting herons. Other control options will have to be utilized if we ultimately determine that control of cormorant numbers is necessary at the Refuge.

HANDOUT #3

Wounding rates on Lake Champlain lake trout and salmon

Species	Number of lamprey wounds per 100 fish					
	Objective	Pre-control	Eight-year control	2002	2003	2004
Lake trout ^a	25	55	38	72	90	62
Landlocked salmon ^b	15	51	22	62	86	45

^a Lake trout in the 533-633 mm (21.0-24.9 inches) length interval.

For lake trout, pre-control included 1982 - 92, while eight-year control includes 1993 - 97.

^b Salmon in the 432-533 mm (17.0-21.0 inches) length interval.

For salmon, pre-control included 1985 - 92, while eight-year control includes 1993 - 98.

Treatments conducted during 2004

The Great Chazy River, Winooski River, and Mount Hope Brook were treated with TFM. The Great Chazy River was treated from Moores downstream (about 21 miles of river instead of the 7.5 miles that would be treated if the Waterworks Dam were acting as a barrier).

The Saranac River Delta was treated with granular Bayluscide, spread by boat.

The Boquet River Delta was not treated based on deepwater electrofishing surveys indicating a very low abundance of ammocoetes.

Major activities scheduled for 2005

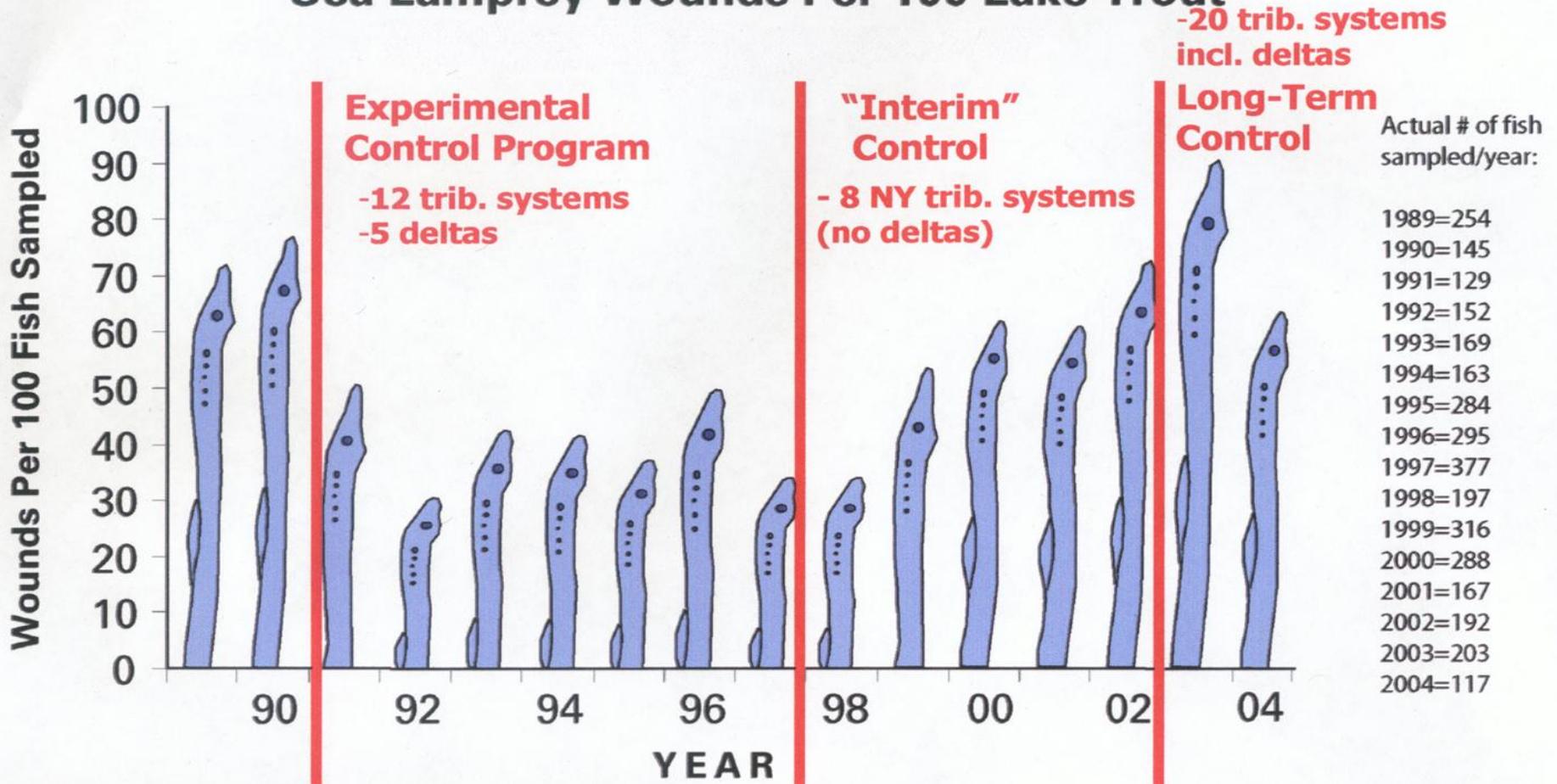
No TFM or Bayluscide applications are scheduled for 2005; the four year rotation of applications will begin anew during the fall of 2006.

Rewrite the strategic plan.

Work with the USACOE on increasing the effectiveness of the Frog Farm Dam as a barrier.

Toxicity testing of the TFM/Niclosamide combination on non-target species.

Sea Lamprey Wounds Per 100 Lake Trout



The fish sampled were Lake trout, 533-633mm (21-25 in) in size.
They were sampled in October-November.

DATA SOURCE: Lake Champlain Fish and
Wildlife Management Cooperative

HANDOUT #5 (1 of 2)

2004 Winooski River TFM Treatment Non-Target Effects (Sturgeon Protocol; target concentration = 1.0 x MLC)

Post-Treatment Mortality Assessment

Results of the 1st survey included below. The 2nd survey required by permit revealed lower numbers and fewer species (no T&E species found).

- Estimated species distribution of 5,369 lampreys counted (based on a sample of 554 identified to species):
 - 4,036 sea lamprey larvae (including 756 transformers)
 - 1,102 silver lampreys
 - 191 American brook lampreys
 - 41 unidentified
- 105 other fishes including:
 - 1 juvenile lake sturgeon (231mm TL; VT-endangered)
 - 4 channel darters (VT-endangered)
 - 1 Eastern sand darter (VT-threatened)
 - 32 logperch
 - 27 minnows/shiners (6 spp.)
 - 22 brown bullheads
 - 7 tessellated darters
 - 3 smelt
 - 2 yellow perch
 - 2 redhorse spp.
 - 2 carp
 - 1 white sucker
 - 1 rainbow trout (395mm TL)
- 66 adult northern leopard frogs (dead and dying frogs were observed pre-treatment)
- 17 juvenile mudpuppies (37-169mm TL)

Cage Studies

- 114 juvenile lake sturgeons from Oneida Hatchery (106-188mm TL) divided evenly among two treatment cages and one control cage: 100% survival.
- 59 channel darters from Grasse R., NY; 30 in treatment cage and 29 in control cage: 100% survival.
- 34 eastern lampmussels from Winooski R.; 24 caged at 2 treatment locations and 10 in control cage. 100% survival and no observed stress.
- 15 pocketbook mussels (VT-endangered) from Winooski R.; 9 in treatment cage and 6 in control cage: 100% survival and no observed stress.
- Larval sea lamprey (SL) and American brook lamprey (ABL) caged at 6 treatment sites and 1 control site; overall, 0% SL survival and 0 to 41% ABL survival (Table 1).

May 4, 2005

HANDOUT #5 (2 of 2)

Table 1. Caged sea lamprey (SL) and American brook lamprey (ABL) observations during the October 20, 2004 Winooski River TFM treatment.

Cage site	Pre-treatment Nos. Oct. 18				Approx. Toxicity Factor (x MLC) ^a	Post-treatment Nos.				% Survival	
	<u>SL</u>		<u>ABL</u>			<u>SL</u>		<u>ABL</u>		SL	ABL
	Alive	Dead	Alive	Dead		Alive	Dead	Alive	Dead		
Control	44	0	22	0	0.0	44	0	22	0	100	100
Station 1	44	0	22	0	0.9	0	44	9	13	0	41
Station 2	44	0	22	0	0.8	0	44	3	19	0	14
Station 3	44	0	22	0	1.1	0	44	0	22	0	0
Station 4	44	0	22	0	1.1	0	44	3	19	0	14
Station 5	44	0	22	0	0.9	0	44	5	17	0	23
Station 6	44	0	22	0	1.0	0	44	3	19	0	14
Mean Treatment % Survival										0	17.4

^a Toxicity factor is 9-hr toxicity test MLC adjusted for site-specific pH and alkalinity data.

May 4, 2005

HANDOUT #6 (1 of 2)

Lake Champlain sea lamprey schedule and cost estimates for 2005 - 2009

Draft: 1/12-B/05 BS/DCN modified by CM 5/3/05

Year	Item or Location	Chemical cost total	Other	Cumulative cost from 2005	Leahy Appropriation Balance	Comments
					\$833,700	
2005	Expanded surveys		\$15,000		\$818,700	
	Morpion Barrier		\$300,000		\$518,700	Consultant included
	VT Storage Bldg		\$70,000		\$448,700	
	Tox testing		\$10,000		\$438,700	Seasonal help
	Alternatives -VM studies		\$20,000		\$418,700	telemetry/egg survival/pheromone
	Alternatives Research		\$30,000		\$388,700	
	Missisquoi dye study		\$20,000		\$368,700	
	5% contingency		\$23,250		\$345,450	
	Totals for 2005	\$0	\$488,250	\$488,250	\$345,450	
2006	Little Ausable R.	\$7,700			\$337,750	
	Ausable River	\$35,600			\$302,150	Budget for TFM if no combination treatment
	Salmon River	\$7,400			\$294,750	
	Putnam Creek	\$15,100			\$279,650	
	Lewis Creek	\$21,250			\$258,400	
	Lampricide Health Risk Studies		\$100,000		\$158,400	
	Pontoon Boat		\$20,000		\$138,400	
	Tox testing		\$10,000		\$128,400	Seasonal Technician
	HPLC supplies		\$400		\$128,00	
	Delta assessment		\$15,000		\$113,000	NY delta assessments
	5% contingency		\$11,623		\$101,378	
	Totals for 2006	\$87,050	\$157,023	\$732,323	\$101,378	

Chemical must be ordered in September of the year prior to the treatment. Thus, by September of 2006 we need to know whether we have funds to cover the chemical costs listed above for 2007. Includes no inflation adjustment. Bayluscide costs projected based on actual chemical costs during the first round of the long-term program.

HANDOUT #6 (2of 2)

Lake Champlain sea lamprey schedule and cost estimates for 2005 – 2009

Draft: 1/12-B/05 BS/DCN modified by CM 3/2/05

Year	Item or location	Chemical cost total	Other	Cumulative cost from 2005	Leahy Appropriation Balance	Comments
2007	Beaver Brook	\$800			\$100,578	TFM treatment
	Boquet River	\$23,400			\$77,178	Budget for TFM if no combination treatment
	Poultney River	\$32,060			\$45,118	If walleye wound rate not achieved
	Little Aus. Delta				\$45,118	In Ausable Delta total
	Salmon Delta				\$45,118	In Ausable Delta total
	Ausable Delta	\$200,000			(\$154,883)	Total for combined delta work
	Missisquoi River	\$136,900			(\$291,783)	Budget for TFM if no combination treatment
	HPLC supplies		\$400		(\$292,183)	
	Delta assessment		\$15,000		(\$307,183)	
	5% contingency		\$20,428		(\$327,611)	
	Totals for 2007	\$393,160	\$35,828	\$1,161,311	(\$327,611)	
2008	Great Chazy R.	\$42,000			(\$369,611)	Budget for TFM if no combination treatment
	Saranac/Boquet Deltas	\$300,000	\$30,000		(\$699,611)	Other = Georgia Pacific water
	Winooski River	\$154,000			(\$853,611)	Budget for TFM if no combination treatment
	Mount Hope	\$1,850			(\$855,461)	
	HPLC supplies		\$400		(\$855,861)	
	5% contingency		\$26,413		(\$882,273)	
	Totals for 2008	\$497,850	\$56,813	\$1,715,973	(\$882,273)	
	Total 2005-08	\$978,060	\$737,913	\$1,715,973	(\$882,273)	

Chemical must be ordered in September of the year prior to the treatment. Thus, by September of 2006 we need to know whether we have funds to cover the chemical costs listed above for 2007. Includes no inflation adjustment.

Bayluscide costs projected based on actual chemical costs during the first round of the long-term program.



**US Army Corps
of Engineers®**
New York District

LAKE CHAMPLAIN SEA LAMPREY BARRIERS, NY

Ecosystem Restoration

FACT SHEET

DESCRIPTION:

The study area is the Lake Champlain watershed, which encompasses portions of the states of New York and Vermont. Environmental degradation of the watershed has resulted in the need for a comprehensive approach to solve problems affecting the watershed. Sea lampreys are contributing to a significant decline in fish stocks and other aquatic ecosystem resources in Lake Champlain. The proposed project would modify structures and/or operations of Corps projects on the New York side of Lake Champlain for improvement of the quality of the environment by limiting sea lamprey access. The Corps has found such measures to be successful solutions to this water resource problem in other geographic areas.

AUTHORIZATION: Section 1135, WRDA 1986, as amended.

STATUS: In cooperation with the U.S. Fish and Wildlife Service and the Lake Champlain Basin Program, New York, the New York District conducted a site visit on Aug. 31, 2004. Corps reps. visited potential lamprey barrier sites around the watershed (NY).

NY District representatives met with the New York State Department of Environmental Conservation and the US Fish and Wildlife Association in June 2005 at the Frog Farm Dam on the Great Chazy River in the Village of Champlain, NY. The Frog Farm Dam has been identified as a priority site for lamprey barrier work.

The Dam was rebuilt in the 1980s to act as a lamprey barrier. Currently lampreys are still breaching the barrier but the reason is unknown. The NYSDEC, which has been identified as the potential non-federal sponsor, has requested that the Corps of Engineers do a study to determine the cause of this breaching and make suggestions for modifications which improve the effectiveness of the barrier.

A Preliminary Restoration Plan is currently being finalized. Upon receipt of the non-federal sponsor's letter of support, a feasibility study will be initiated to analyze potential restoration alternatives focused on sea lamprey barriers under Section 1135, WRDA 1986, as amended.

STUDY COST:

Estimated Federal Cost \$10,000

CONTACT: Jenifer Thalhauser, Project Manager, mail to: jenifer.e.thalhauser@usace.army.mil
917-790-8632
U.S. Army Corps of Engineers, New York District
26 Federal Plaza
New York, NY 10278-0090
<http://www.nan.usace.army.mil/>
District Areas: Senators Clinton (NY) and Schumer (NY), Rep. Sweeney (NY-20)