

Lake Champlain Basin Program
Steering Committee Meeting
Tuesday, September 9th and Wednesday, September 10th 2008
Auberge West Brome, West Brome Quebec

Draft Minutes

In Attendance: Steering Committee Members: Roseanne Murphy (NYS Empire State Dev. Corp), Steve Garceau (Ministere de Ressources Naturelles), Judy Doerner, Bruce Hyde, Kenny Miller, Jane Gregware, Mario DelVicario, David Lane, Erik Beck, Betsy Lowe, Daniel LeBlanc, George Crombie (& John Sayles), Dave Tilton, Gina Campoli, Mary Watzin, Larry Forcier, Buzz Hoerr, Bob Kiss, Pierre Leduc **Staff:** Bill Howland, Nicole Ballinger, Jim Brangan, Meg Modley, Kris Joppe-Mercure, Colleen Hickey, Martin Mimeault, Michaela Stickney, Mario Paula, Seth Ausubel **Guests:** Bob Paquin, Therese LaCombe, Willem Brakel (IJC-US), Murray Clamen (IJC-CANADA), Pixley Tyler Hill, Julie Moore (VT ANR), Mike Winslow (LCC), Mike Rapacz (CLF), Tom Berry (TNC), and Paul Madden (FMB).

The Committee was welcomed at 10:05 AM by Steering Committee Chair, Daniel LeBlanc. Daniel welcomed and introduced the two IJC members, Willem Brakel and Murray Clamen, and all present introduced themselves.

Action Item: *Buzz Hoerr moved to approve the draft June 2008 Steering Committee minutes amended to add Bruce Hyde and Pierre Leduc to those present, and to delete from the list Larry Forcier, Buzz Hoerr and Dave Tilton. The motion was seconded by Dave Tilton. The motion passed by unanimous vote.*

Public Comments

Pierre Leduc commented personally to express his disappointment about severe algae blooms on Missisquoi Bay this year. He also noted that the Committee should be aware of the recent report by Smeltzer and Simoneau showing that P has been reduced in recent years on the Pike River, but that the Missisquoi River load has increased, probably due to an increase in precipitation. If load is adjusted for rain the results would show a 25% reduction on the QC side and an 8% reduction on the US side. He asked for increased management actions on the Vermont side of the border.

Pixley Hill, as a business owner on Missisquoi Bay, commented on difference in algae blooms between 2007, which was nearly ideal, and 2008, which was terrible for blooms. She pointed out the different timing of the rains in each year, and that more cover had developed in 2007. She noted that the Rock River watershed is nearly all in agriculture, that most P comes from there, and that she appreciated the LCBP highlighting the problem there.

Mike Winslow presented the (nonprofit organization) Lake Champlain Committee's (LCC) three recommendations for the revision of *Opportunities for Action* (OFA).

1 - Keep action items specific, measurable and achievable within a timeframe. This would give LCBP staff and partners clear direction about what to work on and help all parties respond to critics.

2- Please identify responsible parties who will ensure specific actions are implemented.

3- If it takes longer than needed to develop a clear and good final product, the Steering Committee should take whatever time is needed. There is a lot of pressure to get it revised by 2009, but that is a tight timeline to include public feedback. LCC suggests making 2009 a time for public comment, rather than a goal for completion.

Mike Rapacz, Conservation Law Foundation (CLF) brought written comments on the phosphorus loading section, prepared in coordination with the VT Natural Resource Council. Mike read the comments of his text, which is appended to these minutes as a part of the record.

Paul Madden, Friends of the Missisquoi Bay, commented that the draft chapter text proposed, doing too little too late. He noted there are 69 draft actions, up from over 40 in the 2003 document, and questioned why the Steering Committee would be considering 69 actions to be priorities? His group would rather see a more clear and limited focus, with measurable objectives. Mr. Madden felt that actions should target the most troubled parts of the north and south lake, include a phosphorus accounting system and identify critical source areas.

Tom Berry, The Nature Conservancy (TNC), spoke of the TNC's developing program to look at conservation in a time of changing climate. Over the next 1-2 years they will be studying what climate changes are likely in the LC Basin and how they will affect stewardship efforts over the next 20 years.

Steering Committee Discussion

Buzz asked how blue green algae affected business in Quebec this year. Kenny noted that people leave if an advisory is issued for the Venise area. Pierre noted that business owners in the area were angry that Montreal reported the advisory for the whole bay, when it was restricted to the eastern shoreline.

Larry asked about the new Smeltzer/Simoneau report and how it might be made available to the Steering Committee. Martin and Pierre spoke about the report and its conclusion that best management practices are reducing nonpoint source phosphorus load in parts of the Missisquoi Basin. The report will be presented to the TAC at its October meeting, and subsequently to the Steering Committee in November.

Updates from the Jurisdictions and Committees

New York, Betsy introduced Tom Hall a long-time NYSDEC staff recently reassigned to deal with Lake Champlain issues. NY has been very focused on balancing the state budget and still is trying to fill the NY Coordinator position. Tom mentioned that he was beginning a strong level of participation in LCBP activities to get up to speed as fast as possible, so that he can provide support to the program.

Vermont, John reported that ANRs center for climate changes, Agency of Agriculture and NRCS have been discussing the draft OFA changes in preparation for the meeting today, and have prepared some suggestions. The Clean and Clear Center has released a request for pre-proposals for 2009 Ecosystem Restoration projects - one-page proposals are due by October 10th for up to \$50,000. CLF has petitioned EPA to take over NPDES permit responsibilities from Vermont. The VT Environmental Court ruled recently about stormwater in Chittenden County and directed the agency to take action in next 90 days; VT ANR is reviewing the matter now. Medium farm operations inspections are underway in Vermont and Agency of Agriculture staff are out in the field monitoring buffers. A new Center for Clean and Clear office is open in St. Albans, housing the Agency of Agriculture and ANR staff. Positive discussions are underway between the VT ANR the US EPA, and communications have improved. John expressed interest in forming a new LCBP program implementation committee to keep the Steering Committee apprised of the status of implementation of the programs called for in OFA.

US EPA, Erik reported that communications with VT have improved. EPA is carefully reviewing the petition concerning taking over NPDES permitting. The grant to ECHO and the LCBP Cultural Heritage programs grants for 2008 have been made. The larger (Section 104) LCBP grant is still in preparation and the NY grant is almost complete.

Quebec, Daniel reported on \$360,000 in new funds to apply new P reduction technology in the region to control eutrophication. Lacs Brome and Waterloo will have work done for this region. The Ministry hopes the same techniques, if successful, eventually can be applied to the Missisquoi Bay watershed.

Committee Reports

Bill noted that to save time with discussions, written summaries of activities of advisory committees are in the binders for review.

Legislative Update

Bob Paquin reported that Senator Leahy has introduced between \$10-12 million in appropriations for the program, other than funds for the Farm Bill. Some items are tied up with the off-shore oil drilling issue and are not yet moving. It now looks like the FY09 appropriations will be held over in a continuing resolution into the new administration, which may mean a late start for 2009. Congress may stay in session after the election, but it is unlikely that funding initiatives will move prior to 2009.

Manager's Report

Bill reviewed the staff and committee activity updates in the binder. He noted the RFP for local grants was issued and the due date for proposals is in early October. The main new work item is based on the new IJC Reference, signed in August and included in the meeting workbook. The reference has resulted in contract negotiations now underway between the IJC and NEIWPCC for new work on the Missisquoi Bay watershed. The work is described in general in the concept

paper included in the meeting workbook. Funds for the IJC involvement were secured by Senator Leahy in each of the last two years. The contract needs to be signed by the end of September. Bill introduced Willem Brakel (IJC US), who described the IJC's 99-year history working on the border, and noted the 'watershed approach' to be taken in this task. Willem thanked Bill for taking him onto Missisquoi Bay to see the areas of concern first-hand. IJC is creating a study board to oversee the projects and have nominated four people for the Board. Murray Clamen (IJC Canada) also spoke about the IJC and the benefits of new Federal US-Canadian involvement in the issues facing Lake Champlain.

Opportunities for Action Revision - Phosphorus

Mary reviewed TAC's feedback on the draft priorities and actions identified by the Steering Committee in earlier meetings. While TAC could use additional time to consider specific actions, it supports a mass balance approach and believes identification of critical source areas is most important. Specific TAC comments were provided to the Steering Committee in strikeout version in the meeting binder. Mary emphasized the need to tune the plan to accommodate differences in approach among jurisdictions. The plan also should consider how climate change could change P-loading amounts.

The Steering Committee discussed phosphorus mass balance issues pertaining to blue green algae blooms in the northern Lake. Too much phosphorus being brought onto farms is not leaving the farm in dairy products, but rather is being handled in ways that result in nonpoint source load in adjacent tributaries. A growing population also results in more phosphorus going to waste water treatment plants, significant disturbance of the ground during the construction process, and an increase in impervious surfaces that speeds up runoff processes. These changes offset many of the gains that are simultaneously being made in wastewater plant capacity and in nonpoint source management practices. Moreover, climate change, expressed here as increasing precipitation and major storm events, makes the problem more challenging and must be considered in the plan; we need to work on strategies that deal with high-flow.

Julie Moore shared recommendations for 11 actions prepared by staff from the VT ANR and the Agency of Agriculture, encouraging a strong agency role in identifying goals and milestones. Dave Tilton stressed the need to identify within the plan how actions will be implemented, and by whom, so that the signatory process would hold each agency accountable for their part. The Steering Committee agreed that targets, lead partners and implementation responsibilities should be clearly detailed in the plan. Mario noted that those agencies with regulatory roles in phosphorus reduction should be noted in the plan, so that their work is viewed as part of the whole approach, and the lead must be identified. Buzz noted the need to identify critical source areas, and to ensure fairness, so that everyone knows they have a role, even if they are in a part of the Basin that does not have as much pollution. People living in critical source areas need to know that it is just not their area that has to make sacrifices, and that it is equally important not to let good areas become more polluted. Mary noted the need to know more about the amount of P we can reduce from each action in order to hold ourselves accountable. Gina spoke of the need to look at the costs and benefits of both regulatory and voluntary actions, in order to prioritize investments of management resources. There was general agreement on the need for better ways to measure both loading issues and the effects of management practices.

Following a lunch recess, the committee reconvened in break-out groups to consider the draft phosphorus reduction chapter of the management plan.

Group 1 (Buzz facilitating) felt that a more adaptive management plan is needed with mechanism for frequently revisiting strategic management decisions. The group also felt it important to have quantifiable measures of progress, to be more responsive to the public. Prioritizing specific lake segments and watersheds that need the most work is a key responsibility that should not diminish the amount of work that is needed to maintain higher water quality in the rest of the Lake. A mass balance assessment of nutrient movement on farms is essential. The group felt that some kind of standardization of practices and processes would be helpful and would allow more equity among citizens. The key issue for nonpoint source is to better sequester dissolved P in critical source areas facing increasing precipitation and flow. The group recommended an analysis of the current regulations to see if we need anything new.

Group 2 (Judy facilitating) felt the management plan for phosphorus should be tied to the TMDL and the QC/VT agreement. Group 2 also supported a mass balance perspective on decreasing P inputs into the basin in order to decrease P tributary run-off, but instead of breaking out the farm barn uses, to focus on general P input reduction. The group supported inclusion of measurable actions concerning livestock exclusion, buffers and soil erosion control, having a top priority of eliminating all farmstead discharges by 2015. Group 2 also targeted non-farm priorities issues, including control of surface hydrology by reducing impervious surfaces, P applied to lawns, and construction-related runoff. Stronger enforcement of compliance programs was considered a key priority that should be fit into the language of OFA, with mention of enforcement tools and responsible jurisdictions.

Group 3 (Gina facilitating) felt the SC needs to work more on reducing the number of priorities to be considered in the plan. Among the highest priorities is the identification of Critical Source Areas, targeting of work to those areas, and an effective accounting system that would guide management. A comprehensive basin-wide array of best-management strategies is needed to manage streambanks and stormwater runoff in urban, rural and agricultural settings. The plan should encourage agronomic practices such as cover cropping, manure injection, no-tillage and low-tillage practices to reduce erosion. Compliance with agricultural best management practices and a verification component should be enforcement priorities. Smart growth to reduce nonpoint source P runoff should be encouraged. The plan should identify a more effective role for the LCBP in coordinating the implementation of these practices among jurisdictions. More attention should be paid to the education and outreach role of the LCBP.

The Steering Committee discussed the reports of breakout groups and recognized that the three different approaches taken by these groups resulted in several important commonalities. Everyone was moving away from the laundry list of actions to a broader view of mass balance and accounting for phosphorus, clearer jurisdictional responsibility for both articulating the strategic tasks and resulting accountability. An informal workgroup was established for an evening session to consolidate the core messages of group reports.

The meeting recessed at 5:00 PM. Following Dinner, a talk on Lake Champlain cultural heritage was presented by Art Cohn, Director of the Lake Champlain Maritime Museum.

The Steering Committee reconvened at 8:30 on September 10th

The Committee considered the protocol to go into Executive Session to review proposals for support under Section 542 of the Water Resource and Development Act.

Action Item: *Buzz Hoerr moved to enter Executive Session to review a proposal for support and to review recommendations for appointments to committees. Betsy Lowe seconded the motion. The motion passed unanimously.*

Entered Executive Session 8:35 AM

Returned to Open Session 9:00 AM

Action Item: *Larry Forcier moved that the Steering Committee recommend U S Army Corps of Engineers support for a proposal to explore the feasibility of approaches to mitigate phosphorus contamination of St. Albans Bay, and to recommend that the task specifically address issues associated with the amount of land-side phosphorus source control needed before any implementation would be effective. Dave Lane seconded the motion. The motion passed unanimously, with John Sayles abstaining.*

Action Item: *John Sayles moved to add Ed Snizek to the Technical Advisory Committee. Roseanne seconded the motion. The motion passed unanimously*

Statement of Partnership: NY State Canal Corporation

Meg described an important meeting to be held on November 6 sponsored by LCBP and the New York State Canal Corporation (NYSCC). The meeting will explore options to prevent the spread of aquatic invasive species through the Champlain Canal system to infest Lake Champlain. Dave and Bill spoke of the positive nature of discussion with the NYSCC, and also of the concerns the Corporation has regarding the types of potential barriers. The Steering Committee considered a draft Statement of Partnership between the LCBP and the NYSCC and felt it was a strong positive step.

Action Item: *Betsy moved that the LCBP approve the Statement of Partnership in concept, subject to the approvals of the three jurisdictions: Vermont ANR, New York State DEC and Quebec MDDEP. Judy seconded the motion. The motion passed unanimously.*

Opportunities for Action Revision - Phosphorus continued

On the morning of September 10th, Steering Committee members continued their discussion of phosphorus reduction chapter. Using the Phosphorus chapter as a model for the larger plan, they agreed that *Opportunities for Action* revisions should be closely focused on the overarching themes of highest priority and that within themes, the leading jurisdictions should more closely coordinate implementation activities and maintain a clear method of reporting progress.

The plan would be more responsive to real needs by being reviewed and adjusted annually in the

context of "adaptive management" so that actions reflect the best and latest experience and information. Specific implementation actions should be proposed to the Steering Committee periodically by the states, the province and the federal partners, with named responsible parties, start and end dates, and a commitment to an annual review. One possible format for the revised *Opportunities for Action* would be an approved plan published primarily as an on-line document referencing the overarching goals and objectives priorities. Within this approved management plan framework, the Steering Committee could annually determine the highest priority implementation actions to be taken - which could be added to the website. Web links to reports of accomplishments would be maintained for each priority action, and be updated as they occur. *Opportunities for Action*, when printed off the website and accompanied with the current information about implementation, would be a much more dynamic and adaptive document than it presently is.

The Steering Committee continued its discussion of updates to the phosphorus chapter. Mary presented a summary of the efforts of the after-hours workgroup to consolidate the discussion of phosphorus priorities. A summary of those discussions are summarized in ***Appendix 1 - Draft Phosphorus Management Plan Updates - September 10, 2008***

Opportunities for Action Revision - Aquatic Invasive Species

The committee convened break-out groups to consider the draft Aquatic Invasive Species chapter of the management plan.

Group 1 (Dave facilitating) felt the four main categories of actions should remain. The plan's focus should be on sharing information to prevent introductions and spread of AIS. The LCBP ANS Management Plan should be updated to reflect increased emphasis on developing and maintaining a strong rapid response capability. The group felt that introduced pathogens should be considered an invasive species. Improved inter-jurisdictional consistency in regulations should be encouraged, and management should include better law enforcement of existing regulations. There remains a heightened concern about the canals. Better monitoring, with annual surveys of key species would improve knowledge about the movement of potential new AIS towards the Basin. The group felt that climate change was important enough to merit its own chapter in the plan, rather than be a sidebar in the AIS chapter. The plan should consider the introduction of certain exotic species as a management tool where no other effective tools are available to mitigate the damage of certain AIS.

Group 2 (Judy facilitating) considered that the title might better reflect "healthy and sustainable living natural resources". The group felt that the chapter could call for further action on both the Champlain and Chambly Canals to prevent invasions, and that an economic impact analysis might be helpful in shaping acceptance of interventions. The group felt the focus on spread prevention was essential and noted special concern for the impact of aquaculture as a potential vector in addition to the pet, plant and aquarium trade. There should be a continued participation in the Northeast Aquatic Nuisance Species (NEANS) panel and the National Task Force. Early detection and spread prevention through rapid response are continuing priorities.

Group 3 (Pierre facilitating) felt the plan should prioritize more coordination of implementation efforts, to provide a better view of who is doing what and how available funds are being spent. This would help to better focus implementation on getting results basin-wide, and would improve accountability. The group felt the management of the canals as pathways should be a higher priority, calling them a “point source” for invasive species. Educational work at boat launches is very important, and enforcement of AIS laws should be a priority. The plan should acknowledge the impact of changing climate on AIS invasions.

Discussion

The Steering Committee reviewed the progress of the two days of meeting and affirmed the adjustment of its planning philosophy to a more adaptive management model. The committee intends that the plan revision include more specific recognition of lead partner roles and frequent or continuous reporting of progress (or setbacks) in implementing the plan. The approach to the Phosphorus chapter was felt to be equally applicable to the Aquatic Invasive Species and several other chapters of the plan. The emerging issue of Climate Change was felt to merit an additional chapter.

Concluding discussions of the Aquatic Invasive Species Management section of *Opportunities for Action*, and related flipchart pages, are summarized in **Appendix 2 - Draft AIS Plan Updates -September 10, 2008**

The Committee assigned staff, (with the help of Mary, as TAC Chair) to consolidate the records of breakout and plenary groups into minutes to be shared back with the Executive and Steering Committees for further discussion and development. The sense of the Steering Committee was that it should review and adjust the September meeting report at its November meeting, before continuing on with revision of remaining chapters.

Action Item: *Buzz moved to adjourn; Erik Beck seconded the motion. The motion passed by unanimous vote.*

Meeting Adjourned at 2:00 PM

These Draft minutes of the September 9 & 10, 2008 meeting include two appendices and one attachment

Appendix 1 - Draft Phosphorus Management Plan Updates - September 10, 2008

Appendix 2 - Draft Aquatic Invasive Species Management Plan Updates - September 10, 2008

Attachment 1- Letter from CLF and VNRC (attached as a .pdf scan)

See Next Page for Appendix 1

Appendix 1 - Draft Phosphorus Management Plan Updates September 10, 2008

CHAPTER TWO: WATER QUALITY AND THE HEALTH OF THE LAKE

REDUCING PHOSPHORUS POLLUTION

GOAL: Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake.

OBJECTIVES (not listed in priority order) [sidebar]

- 1) Attain phosphorus loading targets for lake-segment watersheds that are consistent with the phosphorus reduction agreement with Quebec
- 2) Attain the in-lake phosphorus criteria specified in the TMDL.

OVERARCHING THEMES:

- 1) Use Critical Phosphorus Source Area Assessment and a Phosphorus Mass-Balance (accounting system) approach to guide actions.
- 2) Target those lake segments that are furthest from their water quality standards (Missisquoi Bay, St. Albans Bay, South Lake)
- 3) Develop and follow an Adaptive Management approach.
- 4) Identify those steps needed to create change:
 - a. identify positive economics
 - b. empower general public to take action through education/culture change
 - c. follow up with enforcement
- 5) Identify a set of basic practices and implement/require these everywhere.
- 6) List assigned responsibilities and specific goals for major actions to create accountability
- 7) While emphasizing restoration, protect riparian corridors, intact/working natural forests, wetlands, etc, to keep the problems from getting worse.
- 8) Aware/compensate for land use change
- 9) Consider climate change and adapt strategies to meet changing precipitation, hydrologic, and phosphorus loading patterns.

- 10) Have each state develop its own workplan and commit to specific actions that will be incorporated into this document and be consistent with the overarching themes.

PRIORITY ACTIONS (not listed in priority order)

1. Provide a Framework for Critical Source Analysis and Provide a Basis for Targeting Management Actions

- a. Create a decision tree for short term action on Critical Source Analysis and Targeting by using information from existing pilot and demonstration projects

Lead Partners:

Potential Funding Sources:

- b. Estimate load reductions from nonpoint source P control practices and use this information to evaluate progress

Lead Partners:

Potential Funding Sources:

2. Perform an Overall Assessment of Compliance with Water Quality Regulations

General Strategy:

- I. Make sure we are enforcing what we have before considering new regulation
- II. New regulation – when put in place, be prepared to enforce consistently

3. Provide Education and Outreach to the Public on Ways to Reduce Phosphorus

4. Aggressively Reduce the Nonpoint Source P Load That Is Being Generated by Developed Land Uses (Urban and Suburban Land, Roads, etc) in the Basin

General strategy:

- I. Control hydrology (encourage infiltration)
- II. Reduce P inputs (fertilizer)
- III. Control P loss

- a. Perform effective impervious area inventories and prioritize treatment retrofits every 5 years starting in 2010. Implement appropriately.

Lead Partners:

Potential Funding Sources:

- b. Invest in new technology and approaches to manage nonpoint source pollution. (What technologies/approaches should we invest in?)

Lead Partners:

Potential Funding Sources:

Remaining Questions:

How should we work more aggressively – locally by zoning and planning and/or state level by regulation? Federal role??

How are Federal and State programs helping with the vision?

What should the action be regarding new development? How do you promote Smartgrowth, Green development, LID, etc and maintaining infrastructure?

What should the action be regarding existing development?

5. Aggressively Reduce the Nonpoint Source P Load That Is Being Generated by Agricultural Land Uses in the Basin

General Strategy:

I. Overall approach should be input-output based (P coming in vs. P leaving in product and runoff).

- a. Incorporate requirement for livestock exclusion into AAPs (VT) and NY regulations by 2012.

Lead Partners:

Potential Funding Sources:

- b. Establish vegetated riparian and shoreland buffers for all surface waters wide enough to reduce P inputs and improve streambank stability. (30ft minimum?)

Lead Partners:

Potential Funding Sources:

- c. Inventory and increase the number of acres using one or more soil erosion control practice by 20% by 2012.

Lead Partners:

Potential Funding Sources:

- d. Create a program to encourage and support grassland agriculture and rotational grazing in the basin and develop incentives for conversion by 2010.

Lead Partners:

Potential Funding Sources:

- e. Eliminate all direct farmstead discharges by 2014.

Lead Partners:

Potential Funding Sources:

- f. Develop, Implement, and Properly maintain NMPs on all farms to achieve a P balance by 20xx. (comprehensive NMP) ultimately, mass balance not just farm, but basin

Lead Partners:

Potential Funding Sources:

- g. Invest in new technology and approaches to manage nonpoint source pollution. (What technologies/approaches should we invest in?)

Lead Partners:

Potential Funding Sources:

6. Aggressively Reduce In-Stream and Geomorphic Nonpoint Source P Loading Sources in the Basin

- a. Adopt river corridor protection requirements basinwide for both urban and agricultural land by 2011

Lead Partners:

Potential Funding Sources:

- b. Identify phosphorus storage areas and target restoration efforts to identified areas.

Lead Partners:

Potential Funding Sources:

Remaining Questions:

How do we deal with roads and development that already exists along river corridors??

7. Address Sewage Treatment Plant Phosphorus Reductions

- a. Fully fund remaining point source upgrades specified in the TMDL

Lead Partners:

Potential Funding Sources:

- b. Determine which lake segments may benefit from additional point source treatments beyond the TMDL (based on P load or opportunity)

Lead Partners:

Potential Funding Sources:

8. Encourage the Protection of Land that Has a Low Phosphorus Input and Land that Protects Water Quality (Formerly: Encourage Continued Implementation of State Management Practices for Forestry Activities)

General strategy:

- I. Overall protection should be for all “at risk properties” that protect water quality

Remaining Questions:

- Should this include both easements and good management?
- Should this be moved to the front?

Potential Lead Partners for this chapter include:

Adirondack Park Agency (APA), Agroenvironmental clubs, Farm Service Agency (FSA), Farmers, Lake Champlain Basin Program (LCBP), Natural Resource Conservation Districts (NRCDD), Natural Resource Conservation Service (NRCS), New York State Department of Agriculture and Markets (NYSDAM), New York State Department of Environmental Conservation (NYSDEC), New York Department of Transportation (NYDOT), New York State Soil and Water Conservation Commission (NYSSWCC), NY Soil and Water Conservation Districts, US Army Corps of Engineers (USACE), US Environmental Protection Agency (USEPA), US Fish and Wildlife Service (USFWS), Universities, VT Agency of Natural Resources, VT Department of Agriculture Food and Markets (VTDAFM), VT Department of Environmental Conservation (VTDEC), VT Department of Transportation (VTDOT), VT League of Cities and Towns, VT Regional Planning Commissions, QC Department of Agriculture Fisheries and Foods (QC MAPAQ), QC Ministry of Sustainable Development, Environment and Parks (QCMDDEP)

Potential Funding Sources for this chapter include:

Farm Service Agency (FSA), Federal appropriations, Natural Resource Conservation Service (NRCS), NY Environmental Protection Fund, New York State Department of Agriculture and Markets (NYSDAM), State and provincial appropriations, University Extension and Sea Grant Programs, US Environmental Protection Agency (USEPA), VT Department of Agriculture Food and Markets (VTDAFM), QC Ministry of Sustainable Development, Environment and Parks (QCMDDEP)

Remaining Questions Regarding Lead Agency Identification:

Lead agency is the agency(s) that is in charge of completing the task in a jurisdiction and/or the agency that must ensure other agencies assist?

The identified agency is accountable – Fed and/or State

- lead agency and supporting agencies?
 - “lead” is agency responsible for coordination and reporting back to LCBP?
 - lead partner must clearly know they are in the lead and it must be clear what each partner is doing and can do
 - Agencies must assign roles for their Lake Champlain staff
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See Next Page for Appendix 2

Appendix 2 - Draft Aquatic Invasive Species Management Plan Updates - September 10, 2008

CHAPTER THREE: HEALTHY SUSTAINABLE LIVING NATURAL RESOURCES

THIS CHAPTER INCLUDES:

Managing Fish and Wildlife

Protecting and Restoring Wetlands, Streams, and Riparian Habitats

Managing Nonnative Aquatic Invasive Plants and Animals

[3.2] MANAGING NONNATIVE AQUATIC INVASIVE PLANTS AND ANIMALS

GOAL: Control the introduction, spread, and impact of nonnative aquatic invasive species in order to preserve the integrity of the Lake Champlain ecosystem.

PRIORITY ACTIONS (not listed in priority order)

1. Prevent the Introduction and Spread of Aquatic Invasive Species in the Lake Champlain Basin

EDUCATION and OUTREACH

Limit the introduction and spread of aquatic invasive species within the Lake Champlain basin through education, outreach, and informational exchange at the resource room and special events.

- a. Initiate aquatic invasive species training as a requirement to obtain a boater license in VT, NY, and QC.

Lead Partners: LCBP, NYSDEC, VTANR, QC MNR

Potential Funding Sources: EPA, LCBP, VTANR, and NYSDEC

Continue an effective boat launch steward program in the basin

- a. Quantify in other terms- placeholder

Encourage voluntary efforts to control the transport of nonnative invasive species and enforce existing laws

- a. Initiate X social marketing campaign(s) targeted at anglers, fishing tournament organizers, and fishing tournament participants to encourage proper procurement and disposal of bait fish by 20XX.

Lead Partners: LCBP, Lake Champlain Sea Grant, VTANR, NYSDEC

Potential Funding Sources: EPA, National ANS Task Force, VTANR, NYSDEC

- b. Initiate X social marketing campaigns targeted at marina-users to encourage good spread prevention practices (boat washing, live well drainage, self-inspection etc.).

Lead Partners:

Potential Funding Sources:

- c. Offer biennial AIS identification programs for law enforcement officers.

Lead Partners: LCBP, Lake Champlain Sea Grant, NYSDEC, VTANR

Potential Funding Sources: EPA, ANS Task Force

INTERJURISDICTIONAL CONSISTENCY

Prevent the introduction of aquatic invasive species and pathogens via the pet and aquarium trade, aquaculture, bait industry, and horticultural nurseries.

- a. Develop, implement and enforce comprehensive invasive species transport laws for VT, QC and NY to prevent the introduction and spread of all species.

Lead Partners: National ANS Task Force

Potential Funding Sources:

- b. Support the enforcement of existing invasive species laws and regulations through law enforcement grants.

Lead Partners: VTANR, NYSDEC, LCBP

Potential Funding Sources: VTANR, NYSDEC, National ANS Task Force

- c. Support development of NY state restricted species lists (noxious, banned, etc.) by 2010.

Lead Partners: APIPP, ADK PRISM, NYSDEC, LCBP

Potential Funding Sources: NYSDEC

- d. Evaluate the impact of aquatic invasive species education and outreach campaigns.

Lead Partners:

Potential Funding Sources:

- e. Support watershed based consistent bait fish regulations for all three jurisdictions.

Lead Partners:

Potential Funding Sources:

Continue regional and national aquatic invasive species coordination

CANALS

Manage the Champlain and Chambly canals as aquatic invasive species vector pathways and evaluate and demonstrate effective exclusion devices

- a. Initiate a social marketing campaign targeted at canal boaters to encourage good spread prevention practices (boat washing, live well drainage, self-inspection etc.).
 - i. Post Champlain and Chambly canal locks with AIS signage by 20XX
 - ii. Develop a bilingual AIS pamphlet for distribution to Champlain and Chambly canal visitors by 20XX
 - iii. **Develop** and distribute a coordinated bilingual PSA regarding AIS in canal ways by 2014

Lead Partners: QC MNRF, NYSDEC, LCBP and NYSCC partnership, Sea Grant, VTANR

Potential Funding Sources: NYS EPF, EPA, NYSDEC

- b.** Conduct a feasibility assessment (engineering, social, economic) of at least one barrier strategy for the Champlain Canal by 2012. If assessment results are encouraging, begin construction of barrier.

Lead Partners: UVM, LCBP, Sea Grant, USACE

Potential Funding Sources: USACE, EPA

- c.** LCBP establish a Statement of Partnership for Aquatic Invasive Species management in the Champlain Canal with the New York State Canal Corporation by 2010.

Lead Partners: LCBP, USFWS, NYSCC, NYSDEC

Potential Funding Sources: EPA, NYSDEC

2. Support Early Detection of Aquatic Invasive Species and Rapid Management Responses

Support and implement aquatic invasive species early detection and rapid response capacity among basin partners

- a.** Maintain and update the Lake Champlain Basin Aquatic Nuisance Species Management Plan to be eligible for National Aquatic Nuisance Species Task Force funds from the USFWS.

Lead Partners: QC MNRF, NYSDEC, VTANR, LCBP, USFWS

Potential Funding Sources: National ANS Task Force, EPA

Leverage existing monitoring programs to look for aquatic invasive species

- a.** Coordinate existing state and provincial monitoring programs in the basin by 20XX to include AIS and to identify funding gaps and to obtain higher political level engagement.

Lead Partners: NYSDEC, Cornell Cooperative Extension, APIPP, VTANR, LCBP

Potential Funding Sources:

- b.** Provide an invasive species detection curriculum for agency field staff by 2010.

Lead Partners: VTANR, NYDEC, Lake Champlain Sea Grant

Potential Funding Sources:

Adopt the LCBP Aquatic Invasive Species Rapid Response Plan as Part of an Updated Lake Champlain Basin Aquatic Invasive Species Management Plan

- a.** Establish a Lake Champlain Basin Aquatic Invasive Species Rapid Response Task Force by 2010.

Lead Partners: VTANR, NYSDEC, QC MNRF, LCBP

Potential Funding Sources:

- b.** Secure funding to support the implementation of the Lake Champlain Basin Aquatic Invasive Species Rapid Response Plan by 2010.

Lead Partners: LCBP, VTANR, QC MNRF, NYSDEC, USFWS

Potential Funding Sources: EPA, National ANS Task Force

c. Adopt internal procedures and designate personnel at VTANR, NYSDEC, and QC MNRF for processing reports of new invasive species.

Lead Partners: National ANS Task Force, NYSDEC, VTANR, QC MNRF, LCBP

Potential Funding Sources:

3. Manage Aquatic Invasive Species Populations

Implement feasible aquatic invasive species management control strategies

a. Maintain water chestnut management

i. Reduce machine harvestable water chestnut mats in Lake Champlain to a level manageable by surveillance and handpulling only by 2019.

Lead Partners: USACE, VTANR, NYSDEC, LCBP

Potential Funding Sources:

ii. Prevent the establishment of a water chestnut population in the Missisquoi National Wildlife Refuge and other new infestations through coordinated harvesting efforts.

Lead Partners: USFWS, VTANR, NYSDEC, LCBP

Potential Funding Sources:

b. Manage for the impact of alewives without the introduction of exotic species

i. Identify proper disposal options for alewife fish kills

Lead Partners:

Potential Funding Sources:

ii. Support the implementation of Lake Champlain forage fish management with NY, VT, and QC by 2014.

Lead Partners:

Potential Funding Sources:

4. Aquatic Invasive Species Research

Project the impact of Climate Change on lake ecosystems and aquatic invasive species

a. Create a list of high priority aquatic invasive species not yet established in the Lake Champlain Basin and evaluate whether range expansions are likely by 2010.

Lead Partners:

Potential Funding Sources:

b. Re-evaluate by 2014 management procedures for aquatic invasive species in light of predicted climate conditions.

Lead Partners:

Potential Funding Sources:

Characterize the impacts of invasive species in the Lake Champlain basin

- a. Conduct targeted research to understand the implications of new invasions

Lead Partners:

Potential Funding Sources:

- b. Characterize the economic and ecological impacts of current and future invasive species threats to the basin in order to channel resources to those actions that will make the greatest difference

Lead Partners:

Potential Funding Sources:

- c. Compare the cost and benefit of a major investment in water chestnut harvesting

Lead Partners:

Potential Funding Sources:

Identify and test the effectiveness of control and spread prevention methods for aquatic invasive species**Create a central database for aquatic invasive species information and establish a process for data sharing**

- a. Gather records of known populations of invasive species at the HUC 10 watershed level throughout the Basin and place in a GIS database by 2014.

Lead Partners: NYSISC

Potential Funding Sources:

- b. Identify potential invaders and the nearest established populations and assess the ecological risk from each potential invader by 2014.

Lead Partners:

Potential Funding Sources:

Evaluate all aquatic invasive species programs to determine effectiveness