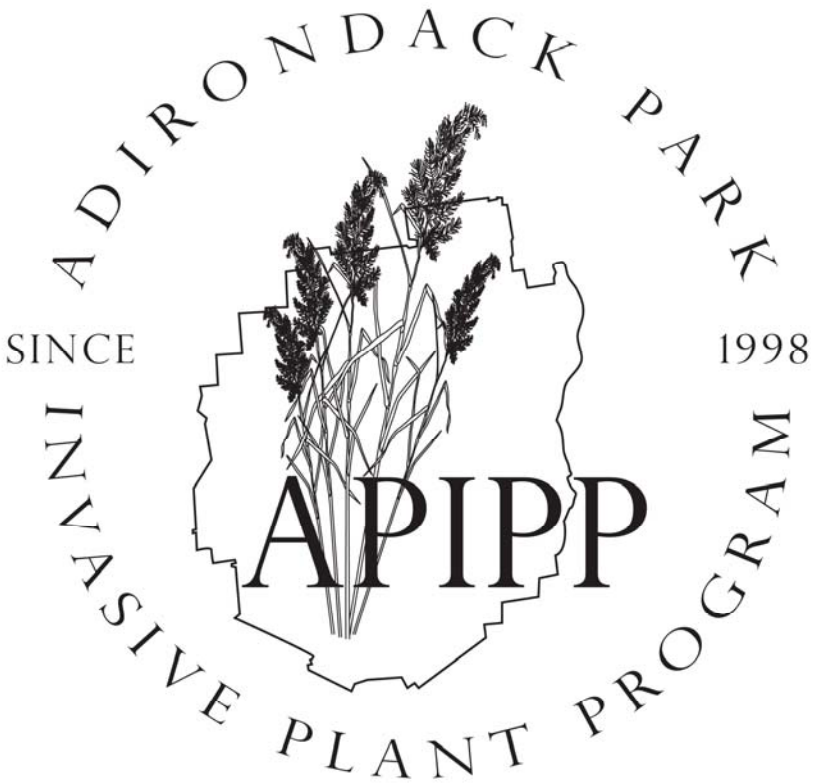


2009 Annual Report

Prepared by

Hilary Smith, Director
Tyler Smith, Aquatic Invasive Species Project Coordinator

Adirondack Park Invasive Plant Program
the Adirondack Partnership for Regional Invasive Species Management

Adirondack Chapter of The Nature Conservancy
Keene Valley, New York

APIPP operates under contract with the Department of Environmental Conservation and utilizes Environmental Protection Funds which support APIPP's core coordinating services.

The Adirondack Park Invasive Plant Program (APIPP) values the contributions of more than 30 cooperating organizations and more than 300 volunteers who participate in the program and share their ideas, time, and resources to protect the Adirondacks from invasive species.

In spring 2009, we were honored to receive the U.S. Environmental Protection Agency's Environmental Quality Award, marking APIPP's third national award received.

We would like to recognize the media for their important coverage of invasive species issues in the Adirondacks in 2009.

Thank you.

Due to limited staff capacity after August 2009, please note that several Terrestrial sections of the 2009 Annual Report will be included as an addendum in 2010.

Table of Contents

Program Mission, Goals, and Distribution Summary..…… 5

Project Reports (Aquatic / Terrestrial) …… 5

Training Sessions

Target Species, Watched Species

Monitoring

Rapid Response, Management

Distribution Analysis

Voucher Specimens

Data storage and Website Development

APIPP Activities …… 11

Stewardship

Training Events

Education Efforts

Outreach Efforts

Regional Planning and Coordination

Research

Funding

Species Distribution Alerts

Regional and Statewide Milestones

Resources to have on the Radar

2010 Objectives …….. 16

Cooperators ……..... 16

Appendices (Aquatic Tables, Figures, and Maps)

Mission

The Adirondack Park Invasive Plant Program (APIPP) serves as the Adirondack Partnership for Regional Invasive Species Management (PRISM) whose mission is to protect the Adirondack region from the negative impacts of non-native invasive species. Initiated in 1998 and housed by the Adirondack Chapter of The Nature Conservancy, the program coordinates two regional projects that integrate prevention and management strategies: the Aquatic Invasive Species Project and the Terrestrial Invasive Species Project.

Goals

- *Prevent new introductions of invasive species.*
- *Coordinate a region-wide early detection rapid response program to detect and eradicate new infestations.*
- *Manage existing priority infestations to mitigate impacts.*

Distribution Summary

Aquatic

- At least 74 waterways have aquatic invasive plants in the Adirondack Park; and, in eight seasons, more than 392 APIPP Invasive Plant Volunteers surveyed 243 distinct waters (Map 1). With your assistance, APIPP has successfully established baseline information about the distribution of aquatic invasive plants in the Adirondack region. Thank you for your substantial contribution to invasive species prevention, detection and response efforts!

Terrestrial

- To be included as an addendum.

Project Reports

The following activities were accomplished in 2009 through the Aquatic Invasive Species Project and the Terrestrial Invasive Species Project with the assistance of partner organizations, resident groups, and volunteers:

2009 Training sessions

Aquatic

- Provided three training sessions in invasive and native aquatic plant identification and monitoring techniques. Partners who assisted the sessions included Larry Eichler, Darrin Fresh Water Institute (DFWI); Scott Kishbaugh, New York State Department of Environmental Conservation (NYS DEC); Lenny Croote and Caitlin Stewart, Hamilton County Soil and Water Conservation District (HCSWCD), and Mike Clark, Hudson River – Black River Regulating District. Thank you for making these sessions a success!
- Trained 70 participants in 2009 (Figure 1): 18 participants in Bolting Landing, 28 in Tupper Lake, and 24 in Mayfield.

- Invited by several lake associations to lead training sessions including Lower Saranac Lake (trained 11 volunteers) and Canada Lake (15 volunteers).
- Distributed training manuals and secondary education resources for volunteer use.

Terrestrial

- Trained DEC's Student Conservation Association team members, two APIPP DEC SCA invasive plant stewards, and the APIPP invasive species steward.

Target Species

Aquatic Plants

- Aquatic Project volunteers surveyed for Eurasian watermilfoil, water chestnut, curlyleaf pondweed, fanwort, European frog-bit, and yellow floating heart. In 2009, brittle naiad was detected for the first time in the Adirondack Park in Hadlock Lake and Lake George. It had known to be in Lake Champlain.

  Brittle or slender naiad (*Najas minor*)
  http://www.weedscience.ncsu.edu/aquaticweeds/facts/apfs006-99.pdf

  The Project continues to elevate awareness about other plant threats listed below, which have not yet been detected within the PRISM boundaries. There are native look-alikes, and web links are cited for species information and identification tips.

  Didymo
  http://www.invasivespeciesinfo.gov/aquatics/didymo.shtml
  Starry stonewort (*Nitellopsis obtusa*)
  http://www.co.cayuga.ny.us/wqma/weedswatchout/plants/starrystonewort.htm
  Parrotfeather (*Myriophyllum aquaticum*)
  http://plants.ifas.ufl.edu/myaqpic.html
  Hydrilla (*Hydrilla verticillata*)
  http://aquat1.ifas.ufl.edu/hyvepic.html
  Brazilian elodea (*Egeria densa*)
  http://aquat1.ifas.ufl.edu/egdepic.html
  For a good comparison of hydrilla, Brazilian elodea, and look alikes
  http://www.des.state.nh.us/wmb/exoticspecies/HydrillaLook-alikes.pdf

Non-plant Aquatic Species

- A monitoring program for non-plant aquatic invaders is being developed. Priority species may include quagga mussel, New Zealand mudsnail, rusty crayfish, tench, rudde, ruffe, and goby. Other invaders known to be in the region include zebra mussel, spiny waterflea, Asian clam, Chinese mystery snail, and alewife.

Terrestrial Plants

- In the late 90s, Terrestrial Project partners identified four primary invasive plants present in the Park that had high likelihoods of spreading: Japanese knotweed, purple loosestrife, common reed grass, and garlic mustard. Surveys are ongoing for these and several

additional species that have isolated infestations in the Park: yellow iris, swallow-wort spp., giant hogweed, and Indian cup-plant. For a more complete list of invasive terrestrial plants present in the region, log on to http://adkinvasives.com/PlantList.html.

The Project continues to elevate awareness about other plant threats listed below, which have not yet been detected within the PRISM boundaries.

Japanese stiltgrass (*Microstegium vimineum*), not yet detected in the Park
http://nbii-nin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=12
Mile-a-minute vine (*Polygonum perfoliatum*), not yet detected in the Park
http://nbii-nin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=13

Non-plant Terrestrial Species

- A monitoring program for non-plant terrestrial invaders is being developed in cooperation with the Department of Environmental Conservation and Department of Agriculture and Markets. Priority species include Asian longhorn beetle, emerald ash borer, and feral hogs. Further information about impacts of non-native earthworms is also being investigated.

Aquatic Plant Status Raised from "Watched Species" to "Invasive Species"

- Variable-leaf milfoil is native to the U.S. and may be native to some areas of New York. It is listed as invasive in New England states and evidence in 2009 showed that it spread to new waters in the Adirondacks, including Lake Placid and Lake Champlain. It has been confirmed in 26 waters (Table 3).
  Variable-leaf milfoil (*Myriophyllum heterophyllum*)
  http://www.umext.maine.edu/onlinepubs/htmpubs/2530.htm

Potential Plant Threats – "Watched Species"

Aquatic

- The plants listed below are native to the U.S. and may be native to some areas of New York. They are listed as non-native invasive species in some regions of the U.S., are reported in several waters in the region, and can grow locally aggressive.
  Southern naiad (*Najas guadalupensis*)
  http://aquat1.ifas.ufl.edu/nagupic.html
  Swollen bladderwort (*Utricularia inflata*)
  http://plants.usda.gov/java/profile?symbol=UTIN

Terrestrial

- The plant listed below is not native to the U.S. and reported to grow aggressively in riparian settings in some New England states. One occurrence is reported in the northern Adirondacks. Additional information is required to determine its invasibility in the region.
  Himalayan balsam (*Impatiens glandulifera)*
  http://nbii-nin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=58

2009 Monitoring

***Aquatic Plants* – 8th Season Summary**

- Coordinated regional volunteer monitoring for aquatic invasive plants.
- Since the start of the Aquatic Project in 2002, the number of waters monitored annually has nearly doubled and volunteer participation has nearly quadrupled (Figure 2).
- In 2009, 173 volunteer monitors and partner staff surveyed 111 Adirondack waterways (Table 1, Figure 3).
- Accrued more than 800 volunteer monitoring hours.
- Volunteer recruitment and retention remains high (Figure 4). Since 2002, the program has retained an annual average of 75 core volunteers and recruited an annual average of 49 new volunteers.
- Collaborated with partners to map and assess milfoil infestations in Lower Saranac Lake and Hadlock Lake.
- Collaborated with NYS DEC Operations to survey the Saranac River system between Lower Saranac Lake and Lake Flower for a possible water chestnut infestation.

List of species confirmed in new waters in 2009

- **Spiny waterflea** - Peck's Lake (30 miles west of Great Sacandaga Reservoir)
- **Eurasian watermilfoil** - Second and Fourth Lakes in the Fulton Chain and First and Second Ponds (Lower Saranac Lake). (First and Second Ponds are not new infestations, just new to the monitoring database).
- **Curlyleaf pondweed -** Paradox Lake and Lake Luzerne
- **Brittle naiad -** Hadlock Lake and Lake George
- **Water chestnut** - Hadlock Lake; aside from Lake Champlain, this is the first known waterbody infested with this species in the interior of the Adirondack region.
- **Variable-leaf milfoil** - added to the monitoring database in 2009 for the following lakes:
    - Lake Placid, new infestation, Essex County
    - Lake Champlain, new infestation, Essex County
    - Union Falls Flow, Scattered Locations, Clinton County
    - First Lake Fulton Chain, Common Plant, Herkimer County
    - Second Lake Fulton Chain, Common Plant, Herkimer County
    - Third Lake Fulton Chain, Common Plant, Herkimer County
    - Fourth Lake Fulton Chain, Common Plant, Herkimer County
    - Fifth Lake Fulton Chain, Common Plant, Hamilton County
    - Second Pond, Scattered Locations, Franklin County
    - Stark Reservoir, Scattered Locations, St. Lawrence County
    - Carry Falls Reservoir, Few Scattered Locations (limited survey area), St. Lawrence County
    - Union Falls Flow, Scattered Locations, Clinton County

Terrestrial Plants

- To be included as an addendum.

Terrestrial Non-Plant

- Assisted USDA to deploy and monitor emerald ash borer (EAB) traps.

- Conducted surveys within private campgrounds for signs of forest pest damage by EAB and Asian longhorn beetle with partners in Lake George.

2009 Rapid Response

Aquatic Plants

- The Lake Placid Shoreowners organized a quick response to a new infestation of variable leaf watermilfoil and hired a contractor to implement rapid response activities.
- The Darrin Freshwater Institute organized a quick response to a new infestation of brittle naiad in Lake George and handpulled all plants.
- Paul Smith's College Adirondack Watershed Institute organized a quick response to two new infestations of Eurasian watermilfoil; one in Fourth lake and the other in Second Lake of the Fulton Chain. The two infestations were relatively small in size and believed to have established within the last 1 or 2 years.

Terrestrial Plants

- To be included as an addendum.

2009 Management

Aquatic

- Implemented Year 3 of the European frog-bit eradication project on the Grasse River near Lampson Falls. The infestation was initially less than one quarter acre in size. Thirty-six 5-gallon buckets of plant material were harvested in 2007; seven buckets were harvested in 2008; and less than two buckets were harvested in 2009. The official project has concluded, but additional surveys and maintenance work will be conducted by the Aquatic Coordinator.
- Collaborated with Paul Smith's College Adirondack Watershed Institute to implement Year 2 of Eurasian watermilfoil management in Follensby Clear Pond. In Year 1, divers removed 479 bags of milfoil over 21 days (582 hours). The main infestation was near the canoe launch; satellite plants were harvested at the boat ramp and Spider Creek. In Year 2, divers removed 106 bags of milfoil over 76 hours. Additional surveys and maintenance work will be organized by the Aquatic Coordinator in 2010.
- Began planning education, outreach, and management programs with the Hadlock Lake Association in response to newly discovered populations of Eurasian watermilfoil, curly leaf pondweed, water chestnut, and brittle naiad.

Terrestrial

- To be included as an addendum.

Distribution Analysis

Aquatic Plants

- The number of "weed-free" lakes surveyed by APIPP volunteers is nearly three times that of infested lakes (Figure 5).
- Fewer than half of the 74 infested waters in the Park have state boat launches:
    - 65 DEC launches in the Park (approximately)

- 30 waters infested (11 waters have variable-leaf watermilfoil, six of which have only variable-leaf reported and no other aquatic invasive plants)
- 30 waters surveyed by volunteers, no infestations observed
- 5 waters still to be surveyed

Terrestrial Plants

- Analysis of the jurisdictional distribution of terrestrial invasive plants:
  - To be included as an addendum.

Voucher Specimens

Aquatic Plants

- Collected, identified, pressed, mounted, and labeled samples of invasive plants observed in surveyed waterbodies. A voucher specimen verifies the presence of the invasive plant, serves as a comparison for additional plant samples, and aids plant research activities. A voucher specimen is needed only if invasive or suspicious plants are observed (Table 2).

Terrestrial Plants

- The Terrestrial Invasive Species Project does not maintain an herbarium of voucher specimens by site.

Data Storage and Website Development

Aquatic Plants

- Updated the Adirondack Park Aquatic Invasive Plant Project database. The database is a permanent record of the distribution and abundance of aquatic invasive plants in the Adirondack region as well as management activities on individual waterbodies.
- The development of digitized lake maps for waterbodies surveyed in 2009 is still underway and will be available online in the coming months.
- Maintained the Adirondack Park Invasive Plant Program website, http://www.adkinvasives.com. The site provides Program information, invasive plant descriptions, images, and survey data and maps from the Adirondack region.
- Utilized GIS to update aquatic plant database allowing for more in depth analyses of distribution, pathways, abundance levels, and threats to conservation targets.

Terrestrial Plants

- Partially updated the Adirondack Park Terrestrial Invasive Plant Project database.
- Collaborated with DOT to update the Park-wide, county, and USGS quad maps illustrating terrestrial invasive plant occurrences from 2008. 2009 data will be updated soon.

APIPP Activities

Below is a summary of APIPP's achievements in 2009 that included both the Terrestrial Invasive Species Project and the Aquatic Invasive Species Project.

APIPP Seasonal Stewardship

- Offered three seasonal stewardship positions: Dan Mullane and April Vrba, Student Conservation Association Forest Preserve Stewards (DEC funded); and, Amy Ignatuk, APIPP's invasive species steward.
- Collaborated with DEC Operation's Invasive Species Specialist Wayne Blanchard.
- Collaborated with SUNY Plattsburgh and the Ausable River Association on an Environmental Protection Agency wetlands grant and their interns Jaysen Dickinson and Adrian Sellars.

APIPP co-sponsored, or was invited to participate in, training sessions for the following audiences:

- Paul Smith's College Watershed Stewardship Program (WSP)
- Paul Smith's College Volunteer Lake Steward Program
- Lower Saranac Lake Shoreowners Association
- Canada Lake Association
- Paradox Lake Property Owners' Association
- The Nature Conservancy and USDA forest pest training session in Lake George

2009 APIPP Education efforts

- Prepared and distributed APIPP's 2008 Annual Report.
- Collaborated with DEC to post infested waters in the Adirondack region with signage.
- Submitted bi-weekly invasive species column to the Adirondack Daily Enterprise July-October.
- Helped to celebrate the 4th Annual Adirondack Invasive Species Awareness Week. http://www.adkinvasives.com/InvasiveSpeciesAwarenessWeek.html; organized two invasive plant paddles.
- Helped to celebrate the 1st northeastern Asian Longhorn Beetle Awareness Month in August, http://dontmovefirewood.com/blog/asian-longhorned-beetle-awareness-month.html.
- Distributed two newsletters:
  http://adkinvasives.com/documents/ROOTSSpringSummer09.pdf
  http://adkinvasives.com/documents/ROOTSFallWinter09_000.pdf
- Developed and distributed poster to partners and Scenic Byway communities:
  http://adkinvasives.com/documents/APIPPposter.pdf
- Collaborated with specific groups on invasive species awareness projects in the following ways:
  - Participated in the 90 Miler by providing educational materials and conducting voluntary inspections at key portages.

  - Contributed invasive species information to a new publication, "Embark," a joint effort with the Adirondack Daily Enterprise, and the Adirondack Outdoors group that includes DEC, Wildlife Conservation Society, Adirondack Mountain Club, and the Adirondack Forest Preserve Education Partnership.
  - Participated in planning and implementation of the first annual Green Up festival in Keene Valley sponsored by the Garden Club of America.
  - Helped to design education and outreach brochures for the following organizations: Hadlock Lake Association, Schroon Lake Association, and the Adirondack Watershed Stewardship Program
  - Met with several core volunteers to provide additional assistance with aquatic plant identification and survey techniques.
- Reached nearly 2,100 individuals through presentations by APIPP staff.
- Distributed two APIPP brochures, one about the program and another about our target plants.
- Highlighted in numerous newspapers and newsletters, and featured in the following venues: Natural History Museum of the Adirondacks and Adirondack Park Agency Visitor Interpretive Centers.
- Maintained website, www.adkinvasives.com.

2009 Outreach Efforts

- Contributed underwriting messages to North Country Public Radio. Messages were advisories for Scenic Byways travelers about invasive species (funded by the Scenic Byways Program).
- Participated in more than 40 community events and workshops.
- Presented to groups at the following schools: Potsdam College, Au Sable Valley, Minerva, Lake Placid Highschool, Saranac Lake Highschool, SUNY Plattsburgh, Paul Smith's College.
- Presented at the Indian Lake and Friend's Lake Associations' annual meetings about aquatic invasive species spread prevention.
- Presented to local schools at the Adirondack Natural History Museum's Conservation Day.
- Presented to 4th and 6th graders at the Essex County 4H Conservation Field Day.
- Presented during the following conferences*: National Transportation Research Board, International Conference on Aquatic Invasive Species, Odum Conference, New York State Federation of Lake Associations, Hamilton County Water Quality Workshop, New York Association of Conservation Districts.*
- Received more than 50 "cold call" inquiries from the general public.
- Utilized PRISM E-list Listserve, hosted by Cornell cce-apipp-l@cornell.edu, to reach interested audiences.
- Contributed information to the NYS Invasive Species Council.

Regional Planning and Coordination

- Continued planning for regional response teams and submitted proposals for workplans and budgets.
- Assisted spread prevention and monitoring programs on Great Sacandaga Lake for spiny waterflea. Worked with the DEC to implement spiny waterflea spread prevention measures during a fishing tournament on Great Sacandaga Lake.
- Collaborated with the Lake Champlain Basin Program and partners to explore opportunities for implementing spread prevention measures on the Glens Falls Feeder Canal and Champlain Canal.
- Initiated discussions with members of Pecks Lake about spread prevention measures to take for spiny waterflea.
- Worked with partners to draft an implementation plan and budget for a region-wide spread prevention program at boat launches utilizing boat ramp stewards, the Adirondack Watershed Stewardship Program.
- Established a team to update the PRISM strategic plan.
- Formed a team to organize a PRISM-wide conference in 2010, the Adirondack Forum on Invasive Species.
- Chaired the Adirondack Park Aquatic Nuisance Species (ANS) Committee and assisted the implementation of the ANS Management Plan.
- Held one principal partner meetings, five aquatic committee meetings, and two joint meetings of aquatic and terrestrial committees.
- Participated on the Lake Champlain Basin Program's ANS Subcommittee to continue development of a Rapid Response Plan for ANS in the Lake Champlain basin.
- Collaborated with other PRISMs (Partnerships for Regional Invasive Species Management) and Office of Invasive Species Coordination staff.

2009 Research

- APIPP completed the assessment of its research project funded by the NYS Biodiversity Research Institute: Is restoration necessary following invasive plant removal? Assessments of three species in the Adirondack Park.
- APIPP appreciates research in the region conducted by the following partners which will deepen understanding of invasive species' biology, impacts and/or management.

  Paul Smith's College: Eurasian watermilfoil post-treatment monitoring on Upper Saranac Lake, supported by Upper Saranac Lake Foundation, Inc. (Dan Kelting)

  SUNY ESF: Assessing Private Landowner Knowledge of and Attitudes towards Invasive Species in the Adirondack State Park (graduate student Suzanne Conrad, SUNY ESF)

  SUNY ESF: Salamanders and invasive earthworms in the Adirondack Park (graduate student Caitlin Marie Snyder and Stacy McNulty, SUNY ESF AEC)

  Lake Champlain Sea Grant: Assessing freshwater angler AIS awareness in New York State (Mark Malchoff (LCSG), Tyler Smith (APIPP), and Burnie Haney (B.A.S.S.))

  Lake Champlain Sea Grant: Focus group on the use of Genetically Modified Organisms to control AIS infestations (Mark Malchoff, LCSG)

Please let us know if you or others are involved in invasive species research in the Adirondacks.

2009 Funding

- In 2009, APIPP was funded in part by the US Federal Highway Administration Scenic Byways Program (administered by the DOT and managed by the Adirondack North Country Association), Biodiversity Research Institute, the Adirondack Chapter of The Nature Conservancy, Department of Environmental Conservation, and several donors.
- APIPP helped secure $34,677 in funding from the US Fish and Wildlife Service to continue co-implementation of the Adirondack Park Aquatic Nuisance Species Management Plan. Funding was used to aid in the continuation and expansion of the Paul Smith's College Watershed Stewardship Program.
- APIPP participated in the 2009 Invasive Species Information Day in Albany to raise awareness about invasive species and priority programs.

2009 Species Distribution Alerts

Information provided by the Office of Invasive Species Coordination

New Introductions into New York State

- Emerald ash borer, Randolph, New York

Significant Range Expansions in New York State

- Spiny waterflea, had been known from Erie, Ontario and Oneida; reported in Great Sacandaga Lake in 2008 and Peck Lake in 2009.
- Feral hogs, known to be in 16 counties.
- Hemlock woolly adelgid, had been known from eastern NY and urban Rochester; new to central and western NY at Cornell Plantations.
- Hemimysis (bloody red shrimp), had been known in Lake Ontario; new to Finger Lakes, Oneida Lake in 2009.
- Oriental weatherfish (*Misgurnus anguillicauatus*), previously identified in Allegany drainage (Alleghany Co) and confirmed on Long Island (Suffolk Co) and in the Wallkill R. Drainage (Ulster Co)
- Kudzu, common on Long Island, identified in 2008 on site in Rockland Co. (Plans are being made to attack this infestation)

Reoccurence

- Snakehead, on 6/16/09 snakeheads (2 adult) were confirmed in an area treated in 2008. Re-treatment of most of the area treated in 2008 with rotenone using "Marshmaster" (tracked amphibious vehicles with low impact) in a ~50 ac wetland that was very difficult to treat using backpack sprayers (as was done the prior year). A total 28 NSH (~ 10% of previous collection) were collected of which most were juveniles.
- Chronic Wasting Disease (CWD), had been known from Oneida County in 2005; no re-occurrences to date.

Elevated Threat

- Didymo, identified in Battenkill (WA county) and East + West branches of Delaware in 2007, mainstem Delaware in 2008 and in Esopus Cr (Ulster Co) in 2009.

2009 Regional and Statewide Milestones

- Received Environmental Quality Award from the U.S. Environmental Protection Agency.
- Invited speaker at Senator Schumer invasive species press event at the Wild Center.
- Abundant media coverage of invasive species issues, including forest pests, terrestrial plants, boat launch stewardship, and aquatic and terrestrial management efforts.
- Implemented year 2 of the 5-year contract with DEC for coordination of the Adirondack PRISM.
- APIPP continues to serve as the PRISM representative to the NYS Invasive Species Advisory Committee.
- The FY09 State Environmental Protection Fund included $5 million to implement the recommendations of the Invasive Species Task Force, though these funds were reduced to $4.78 million due to fiscal constraints.
- NYSDEC was a leader in reviewing and commenting on US Coast Guard Ballast Water Discharge Rule-making.
- NY PRISMs continued to meet and develop regional initiatives.
- Work teams advanced the development of a 4-tier listing process, as described in the 2007 invasive species legislation and to be submitted for review in 2010.
- Work teams prepared recommendation for a statewide law to prevent the transport of aquatic plants and animals, to be submitted for review in 2010.
- The DEC facilitated monthly statewide invasive species conference calls.
- The New York Invasive Species Council and Advisory Committee met quarterly.
- The DEC maintained four staff in the Office of Invasive Species Coordination; and the Department of Agriculture and Markets maintained its invasive species coordinator.

Resources to have on the Radar

- The American Wildlife Conservation Foundation which is active in the Capital – Mohawk PRISM has just produced a forest pests CD, http://www.vimeo.com/8981916.
- DEC's baitfish regulations http://www.dec.ny.gov/docs/fish_marine_pdf/baitfishofny.pdf and updated its website with more aquatic invasive species information http://www.dec.ny.gov/animals/50121.html and terrestrial invasive species information http://www.dec.ny.gov/animals/6986.html.
- New York Invasive Species Clearinghouse, http://nyis.info/.
- New York State Invasive Species Research Institute, http://nyisri.org/.
- iMap invasives, http://imapinvasives.org/.
- At the federal level, the US Forest Service produced a video on spread prevention methods for hunters and fishermen, http://www.fs.fed.us/invasivespecies/prevention/defending.shtml.

2010 Objectives

- Please see APIPP's 2010 Annual Workplan for a complete list of objectives and tasks. http://adkinvasives.com/publications.html
  Highlights include:
  - Inviting new principal partners to join the partnership.
  - Completing the PRISM Strategic Plan.
  - Organizing the Adirondack Forum on Invasive Species, http://adkinvasives.com/Forum.html .
  - Formalizing regional response plans, developing regional response teams, and prioritizing response workplans.
  - Identifying invasive species prevention zones to focus early detection and rapid response efforts.
  - Working with partners to develop a region-wide spread prevention program at boat launches.
  - Collaborating with the NYS invasive species database and mapping coordinator.

Please see attached document with tables, figures, and maps.

Thank you for your help to protect the Adirondack region from invasive species.

With thanks to past and present cooperating partners!

More than 300 Volunteers!
Adirondack Association of Towns and Villages
Adirondack Cooperative Loon Program
Adirondack Council
Adirondack Lake Alliance
Adirondack Lake Survey Corporation
Adirondack Landowners' Association
Adirondack Mountain Club
Adirondack Museum
Adirondack North Country Association
Adirondack Park Agency
Adirondack Park Agency Visitor Interpretive Centers
Adirondack Watershed Alliance
Association for the Protection of the Adirondacks
Au Sable River Association
Bass Angler Sportsmen Society
Becket-Chimney Corners YMCA
Boquet River Association
CAP-21
Clinton and Essex County Master Gardeners
Cornell Cooperative Extension County Offices
(Clinton, Essex, Hamilton, St. Lawrence and Warren)
Cornell University
Darrin Fresh Water Institute
Department of Agriculture and Markets
Department of Environmental Conservation
Department of Transportation
Essex County Garden Club
Federal Highways Administration
Franklin County Network of Shoreline Associations
Garden Club of America
Great Sacandaga Lake Advisory Committee
Hamilton College
Hamilton County Soil and Water Conservation
District
Hudson River Black River Regulation District
Invasive Plant Council of NYS
Lake Champlain Basin Program
Lake Champlain Sea Grant
Lake George Land Conservancy
Lake George Park Commission
Lake George Watershed Conference
Lake Placid/Essex County Visitors Bureau
Massawepie Scout Camps
National Grid
Natural History Museum of the Adirondacks
NYS Invasive Species Council
North Country School and Camp Treetops
Paul Smiths College Adirondack Watershed Institute
Regional Inlet Invasive Plant Program

Residents Committee to Protect the Adirondacks
Saranac Waterkeeper
Student Conservation Association
St. Regis Mohawk Tribe
SUNY ESF Wanakena, Newcomb
SUNY Plattsburgh
The Nature Conservancy
Town of Inlet
Town of Webb, DPW
Trout Unlimited
United State Department of Agriculture,APHIS/PPQ
Village of Saranac Lake
Warren County Soil and Water Conservation District
Wildlife Conservation Society

Shoreowner groups including, but not limited to
6th and 7th Lakes Association
Bellmont Mountain View Indian Lakes Foundation
Big Moose Property Owners' Association
Big Wolf Lake Association
Blue Mountain Lake Association
Brandreth Lake Association
Brant Lake Association
Brantingham Lake Association
Canada Lake Association
Chateaugay Lakes Association
Chazy Lake
Cranberry Lake Boat Club
East Caroga Lake Protective Association
East Schroon Lake Association
Friends Lake Association
Fulton Chain of Lakes Association
Great Sacandaga Lake Association
Gull Pond Association
Hadlock Lake Association
Horseshoe Pond/Deer River Flow Association
Indian Lake Association
Jones Pond Association
Lake Colby Association
Lake George Association
Lake Placid Shoreowners Association
Lake Pleasant Sacandaga Association
Lake Luzerne
Lewis Creek Association
Little Long Lake Association
Livingston Lake Association
Long Lake Association
Long Pond Association
Loon Lake Association
Lower Saranac Lake Association
Minerva Lake
Mirror Lake Association
Mt Arab Eagle Crag Association
Mt View and Indian Lakes Association
Osgood Pond Association
Paradox Lake Association
Piseco Lake Association
Rainbow Lake Association
Raquette Lake Property Owners' Association
Schroon Lake Association
Silver Lake Association
St. Regis Chain of Lakes Association
Star Lake Protective Association
Spy Lake Association
Upper Saranac Lake Foundation
Upper Saranac Lake Association
West Caroga Lake Association
And More!

Table 1. APIPP lakes surveyed in 2009 and aquatic invasive plants observed. ***Alphabetized by county and town. Please refer to website for detailed plant survey reports for lakes listed below, and lakes surveyed to-date. http://www.adkinvasives.com***

Lake Name	Town	County	Invasive Plant Observed
Union Falls Flow	Black Brook	Clinton	Eurasian watermilfoil, Variable-leaf watermilfoil
Augur Lake	Chesterfield	Essex	Eurasian watermilfoil
Russett Pond	Elizabethtown	Essex	None Observed
Mill Pond	Elizabethtown	Essex	None Observed
Murray Pond	Elizabethtown	Essex	None Observed
Tanaher Pond	Elizabethtown	Essex	None Observed
Newport Pond	Elizabethtown	Essex	None Observed
Lincoln Pond	Elizabethtown	Essex	Eurasian watermilfoil
Rich Lake	Newcomb	Essex	None Observed
Woodruf Pond	Newcomb	Essex	None Observed
Sand Pond	Newcomb	Essex	None Observed
Harris Lake	Newcomb	Essex	None Observed
Lake Placid	North Elba	Essex	Variable-leaf watermilfoil
Mirror Lake	North Elba	Essex	None Observed
Bass Lake	North Hudson	Essex	None Observed
Paradox Lake	Schroon	Essex	Eurasian watermilfoil, Curly leaf pondweed
Gull Pond	Schroon Lake	Essex	None Observed
Crane Pond	Schroon Lake	Essex	None Observed
Thurman Pond	Schroon Lake	Essex	None Observed
Moose Pond	St. Armand	Essex	None Observed
Rock Pond	Ticonderoga	Essex	None Observed
Clear Pond	Ticonderoga	Essex	None Observed
Lake Champlain	Wilsboro	Essex	Eurasian watermilfoil
Big Wolf Lake	Altamont	Franklin	None Observed
Little Wolf lake	Altamont	Franklin	None Observed
Barnum Pond	Brighton	Franklin	None Observed
Mountain Pond	Brighton	Franklin	None Observed
Rainbow Lake	Franklin	Franklin	None Observed
Lake Kushaqua	Franklin	Franklin	None Observed
Buck Pond	Franklin	Franklin	None Observed
Stony Creek Ponds	Harietstown	Franklin	None Observed
Lake Clear	Harietstown	Franklin	None Observed
Lake Clear Outlet	Harietstown	Franklin	None Observed
Lower Saranac Lake	Harietstown	Franklin	Eurasian watermilfoil

First Pond	Harietstown	Franklin	Eurasian watermilfoil
Second Pond	Harietstown	Franklin	Eurasian watermilfoil, Variable-leaf watermilfoil
Palmer Pond	North Hudson	Franklin	None Observed
Middle Pond	Santa Clara	Franklin	None Observed
Polliwog Pond	Santa Clara	Franklin	None Observed
Green Pond	Santa Clara	Franklin	None Observed
Hoel Pond	Santa Clara	Franklin	None Observed
Rollins Pond	Santa Clara	Franklin	None Observed
Whey Pond	Santa Clara	Franklin	None Observed
East Pine Pond	Santa Clara	Franklin	None Observed
Little Clear Pond	Santa Clara	Franklin	None Observed
Kit Fox Pond	Santa Clara	Franklin	None Observed
Clamshell Pond	Santa Clara	Franklin	None Observed
Little Long Pond	Santa Clara	Franklin	None Observed
Canada Lake	Caroga	Fulton	None Observed
West Lake	Caroga	Fulton	None Observed
East Stoner Lake	Caroga	Fulton	None Observed
Canada Lake	Caroga	Fulton	None Observed
Forked Lake	Arietta	Hamilton	None Observed
Piseco Lake	Arietta	Hamilton	None Observed
Raquette Lake	Arietta	Hamilton	Variable-leaf watermilfoil
Utowana Lake	Blue Mtn. Lake	Hamilton	None Observed
Eagle Lake	Blue Mtn. Lake	Hamilton	None Observed
Rock Pond (Outlet to Lake Durant)	Indian Lake	Hamilton	Variable-leaf watermilfoil
Indian Lake	Indian Lake	Hamilton	None Observed
Abanakee	Indian Lake	Hamilton	None Observed
6th Lake	Inlet	Hamilton	Eurasian watermilfoil, Variable-leaf watermilfoil
7th Lake	Inlet	Hamilton	Eurasian watermilfoil, Variable-leaf watermilfoil
Eighth Lake	Inlet	Hamilton	None Observed
Browns Tract Ponds (Upper/Lower)	Inlet	Hamilton	None Observed
Fifth Lake, Fulton Chain	Inlet	Hamilton	Eurasian watermilfoil
Echo Lake	Lake Pleasant	Hamilton	None Observed

Whitaker Lake	Lake Pleasant	Hamilton	None Observed
Sacandaga Lake	Lake Pleasant	Hamilton	None Observed
Lake Pleasant	Lake Pleasant	Hamilton	None Observed
Oxbow Lake	Lake Pleasant	Hamilton	None Observed
Lake Lila	Long Lake	Hamilton	None Observed
Brandreth Lake	Long Lake	Hamilton	None Observed
Sagamore Lake	Long Lake	Hamilton	None Observed
Deer Pond	Long Lake	Hamilton	None Observed
Little Lily Pad Pond	Long Lake	Hamilton	None Observed
Lily Pad Pond	Long Lake	Hamilton	None Observed
Shingle Shanty Pond	Long Lake	Hamilton	None Observed
South Pond	Long Lake	Hamilton	None Observed
South Pond Outlet	Long Lake	Hamilton	None Observed
Sperry Pond	Long Lake	Hamilton	None Observed
N. Branch Shingle Shanty Brook	Long Lake	Hamilton	None Observed
Lake Eaton	Long Lake	Hamilton	None Observed
Thayer Lake	Long Lake/Webb	Hamilton	None Observed
Willis Lake	Wells	Hamilton	None Observed
Rose Pond	Webb	Herkimer	None Observed
Stillwater Reservoir	Webb	Herkimer	None Observed
Twitchell Lake	Webb	Herkimer	None Observed
First lake, Fulton Chain	Webb	Herkimer	None Observed
Second Lake, Fulton Chain	Webb	Herkimer	Eurasian watermilfoil, Variable-leaf watermilfoil
Third Lake, Fulton Chain	Webb	Herkimer	None Observed
Fourth Lake, Fulton Chain	Webb	Herkimer	Eurasian watermilfoil, Variable-leaf watermilfoil
Brantingham Lake	Greig	Lewis	None Observed
Chases Lake	Watson	Lewis	None Observed
Cranberry Lake	Clifton	St. Lawrence	Variable-leaf watermilfoil
Stark Reservoir	Colton	St. Lawrence	Variable-leaf watermilfoil
Carry Falls Reservoir	Colton	St. Lawrence	Variable-leaf watermilfoil
Star Lake	Fine	St.	None Observed

		Lawrence	
Mount Arab Lake	Piercefield	St. Lawrence	None Observed
Eagle Crag Lake	Piercefield	St. Lawrence	None Observed
Gull Pond	Piercefield	St. Lawrence	None Observed
Horseshoe Lake	Piercefield	St. Lawrence	None Observed
Piercefield Flow	Piercefield	St. Lawrence	Variable-leaf watermilfoil
Little Long Lake	Woodgate	St. Lawrence	None Observed
Burnt Pond	Brant Lake	Warren	None Observed
Lily Pond	Brant Lake	Warren	None Observed
Jabe Pond	Hague	Warren	None Observed
Thirteenth Lake	Johnsburg	Warren	None Observed
Garnet Lake	Johnsburg	Warren	None Observed
Livingston Lake	Stony Brook	Warren	None Observed
Crane Mountain Pond	Thurman	Warren	None Observed
Hadlock Lake	Fort Anne	Washington	Eurasian watermilfoil, Curly leaf pondweed, Brittle Naiad, Water Chestnut

* *Myriophyllum heterophyllum* (Variable-leaf watermilfoil). Though native to the U.S., *Myriophyllum heterophyllum* is considered an exotic invasive plant in New England. In 2009, it was elevated from a 'watched species' to an invasive species in the Adirondack region when it was detected in two waters where it was previously not known to exist.

Table 2. APIPP lakes with voucher specimens on file with the Adirondack Park Invasive Plant Program.

Lake Name	Voucher specimen
7th Lake Fulton Chain	Eurasian watermilfoil
Brant Lake	Eurasian watermilfoil
Chazy Lake	Eurasian watermilfoil
Copperas Pond	Eurasian watermilfoil
Cranberry Lake	Variable-leaf watermilfoil
Deer River Flow	Eurasian watermilfoil
East Caroga Lake	Eurasian watermilfoil
Fifth Lake, Fulton Chain	Eurasian watermilfoil
Fish Creek	Eurasian watermilfoil
Fish Creek Pond	Eurasian watermilfoil
Floodwood Pond	Eurasian watermilfoil
Follensby Clear Pond	Eurasian watermilfoil
Franklin Falls Pond	Eurasian watermilfoil, curlyleaf pondweed
Horseshoe Pond, Duane	Eurasian watermilfoil
Grasse River	European frog-bit
Kiwassa Lake	Eurasian watermilfoil
Lake Durant	Variable-leaf watermilfoil
Lake Flower	Eurasian watermilfoil, curlyleaf pondweed
Little Square Pond	Eurasian watermilfoil
Long Lake, Long Lake	Variable-leaf watermilfoil
Long Pond, Willsboro	Eurasian watermilfoil
Meacham Lake	Eurasian watermilfoil
Minerva Lake	Eurasian watermilfoil
Putnam Pond	Eurasian watermilfoil
Raquette Lake	Variable-leaf watermilfoil
Sixth Lake of Fulton Chain	Eurasian watermilfoil
Taylor Pond	Eurasian watermilfoil
Union Falls Pond	Eurasian watermilfoil
Stark Reservoir	Variable-leaf watermilfoil
Carry Falls Reservoir	Variable-leaf watermilfoil

Figure 1. Participants at training sessions for aquatic plant identification and monitoring techniques, 2002-2009.

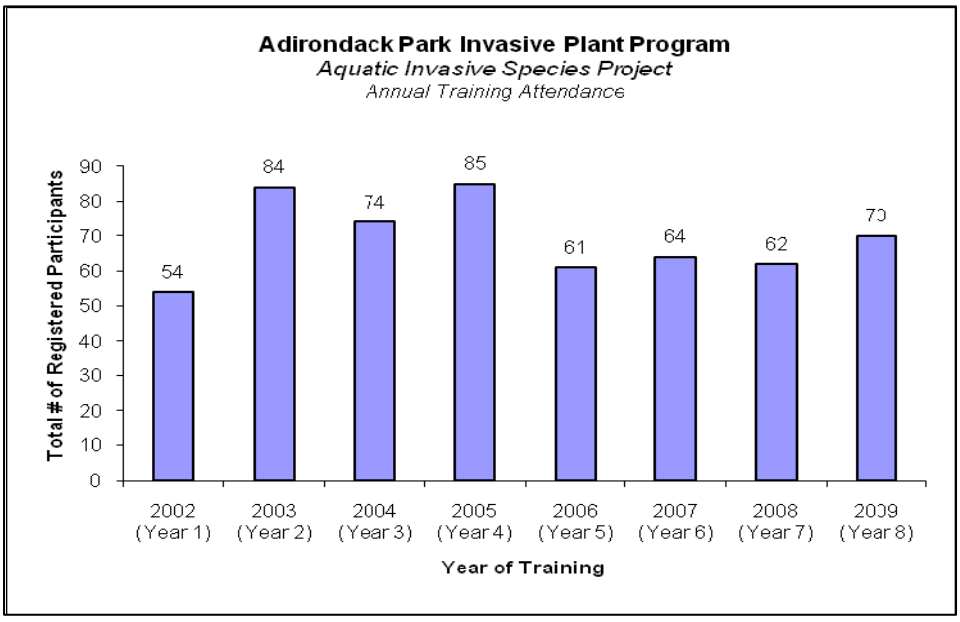


Figure 2. Number of lakes monitored and APIPP volunteers, 2002-2009.

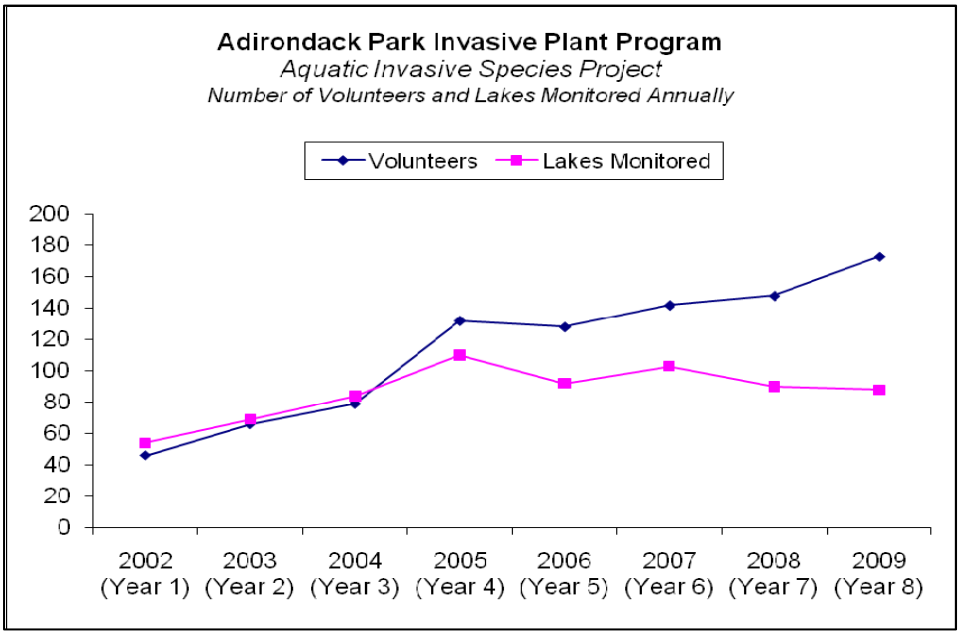


Figure 3. Distribution of lakes monitored by APIPP volunteers, 2002-2009.

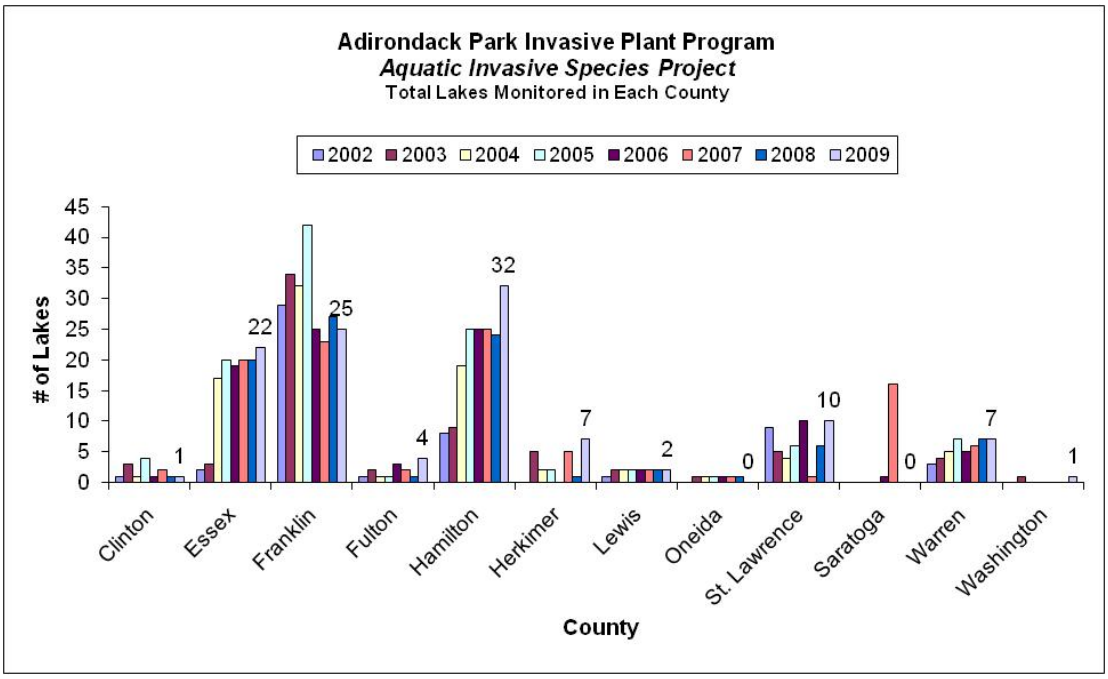


Figure 4. Number of new and returning volunteers by year.

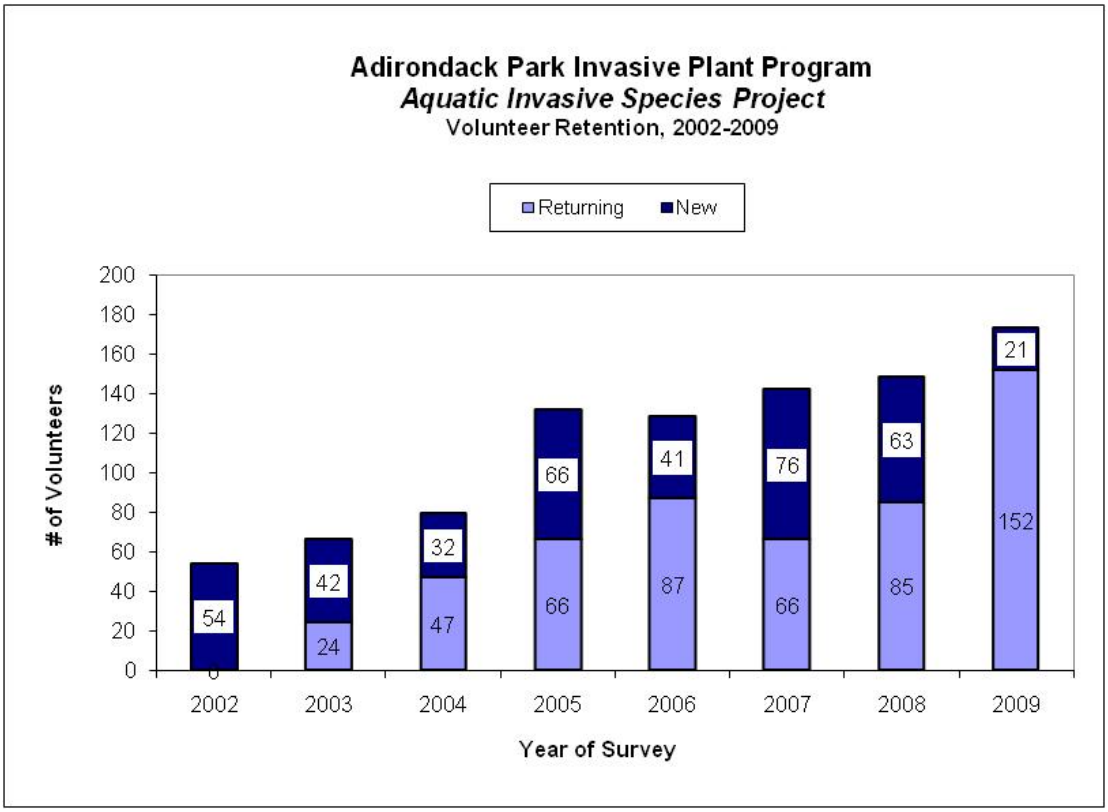
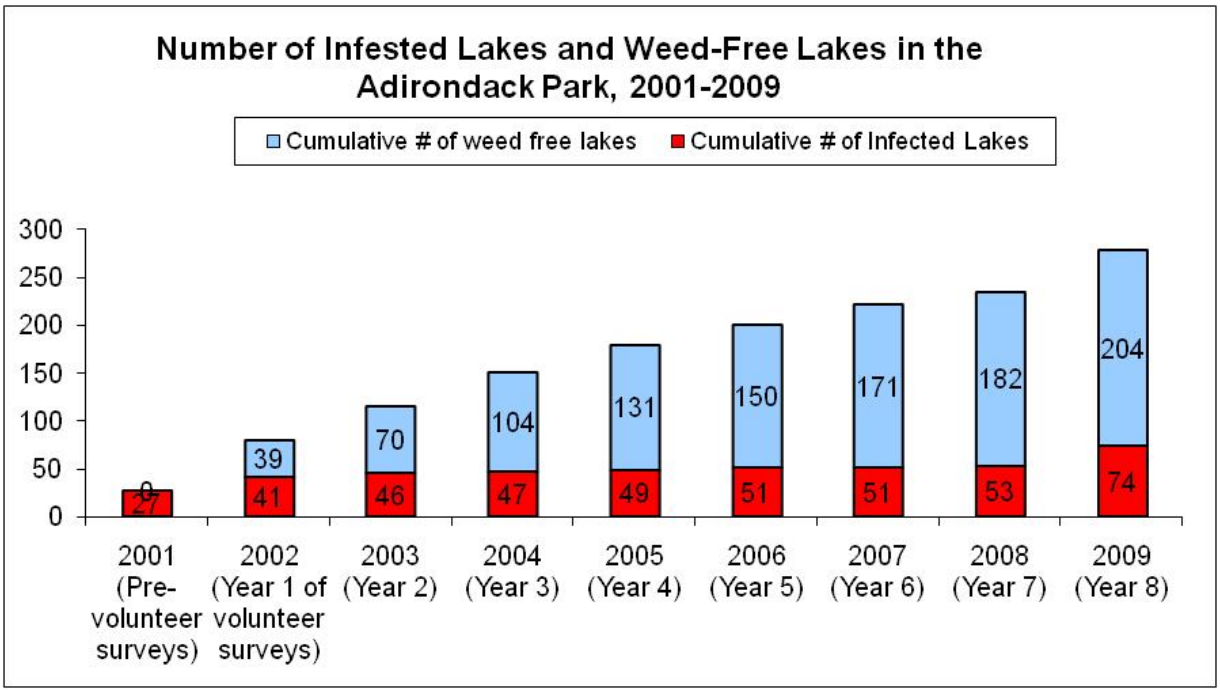


Figure 5. Cumulative number of infested lakes and lakes monitored by APIPP volunteers where no invasive plants were detected. The spike between 2001 and 2002 is accounted for by the inception of a standardized regional volunteer monitoring program. The spike between 2008 and 2009 is accounted for by the inclusion of variable-leaf watermilfoil as an invasive species, rather than as a watched species.



Map 1. The list of lake names corresponding to the numbers below is attached as Table 3.

Please note that APIPP is transitioning our GIS project files so map making capabilities are limited at this time. The map below does not show brittle naiad in Lake George. Also, while lakes with variable-leaf watermilfoil are illustrated below, the lakes do not have numbers associated with them.

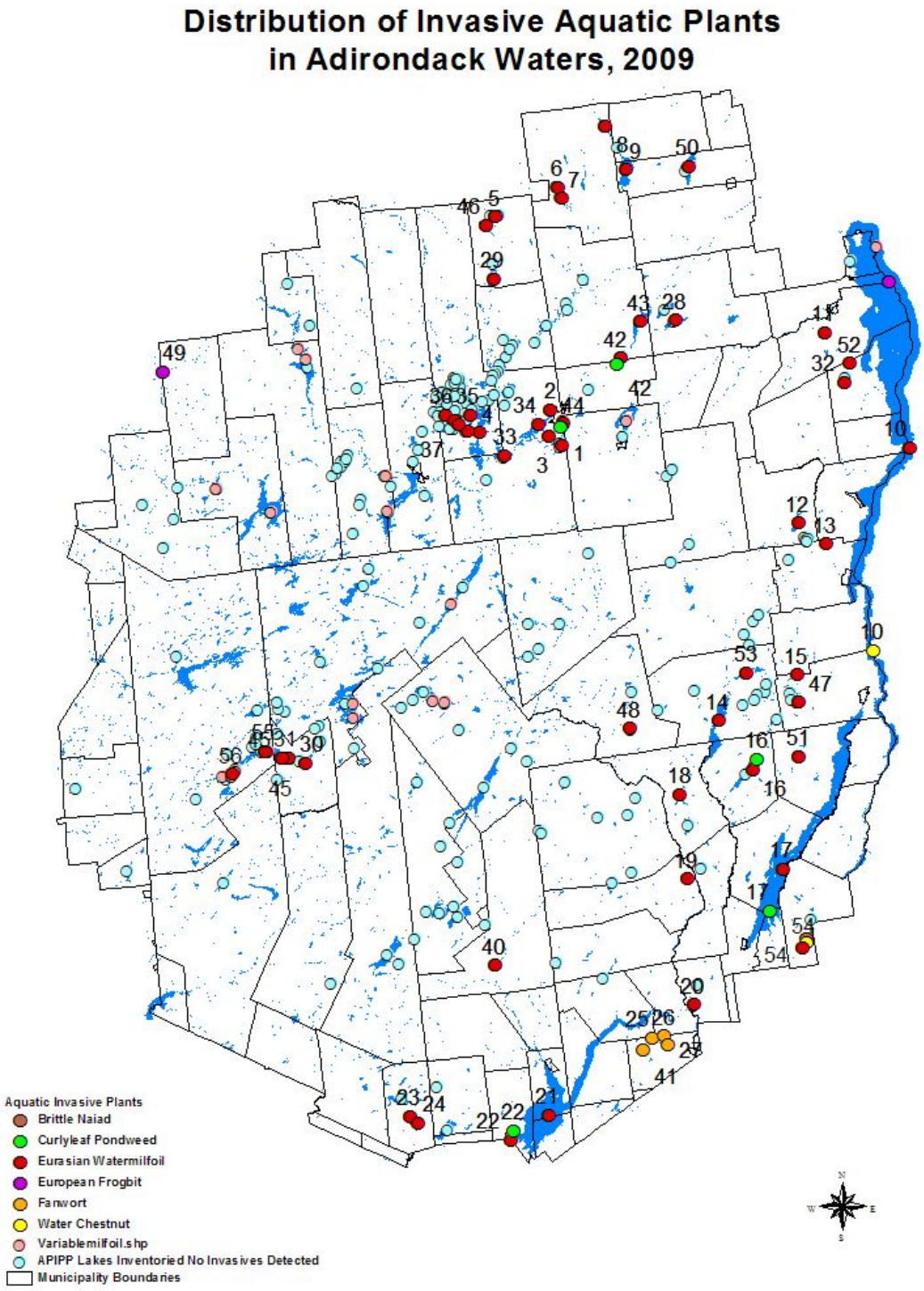


Table 3, to accompany Map 1
Adirondack Park Waterbodies Reported with Aquatic Invasive Plants

		Lakes also with variable-leaf watermilfoil
1	Oseetah Lake	x
2	Lake Colby	
3	Kiwassa Lake	
4	Upper Saranac Lake	
5	Horseshoe Pond	
6	Indian Lake	
7	Mountain View Lake	
8	Lower Chateaugay Lake	
9	Upper Chateaugay Lake	
10	Lake Champlain	x
11	Augur Lake	
12	Lincoln Pond	
13	Bartlett Pond	
14	Schroon Lake	
15	Eagle Lake	
16	Brant Lake	
17	Lake George	
18	Loon Lake	
19	Daggett Lake	
20	Lake Luzerne	
21	Great Sacandaga Lake	
22	Mayfield Lake	
23	West Caroga Lake	
24	East Caroga Lake	
25	Effner Lake	
26	Jenny Lake	
27	Hunt Lake	
28	Taylor Pond	
29	Meacham Lake	
30	Seventh Lake	
31	Sixth Lake	
32	Long Pond	
33	Middle Saranac Lake	
34	Lower Saranac Lake	
35	Follensby Clear Pond	
36	Floodwood Pond	
37	Little Square Pond	
38	Fish Creek Pond	x
39	Copperas Pond	
40	Lake Algonquin	
41	Mill Pond	
42	Franklin Falls	x
43	Union Falls Flow	x
44	Lake Flower	x
45	Fifth Lake	x
46	Deer River Flow	
47	Putnam Pond	
48	Minerva Lake	

Map prepared by APIPP. Aquatic plant reports provided by a variety of plant monitoring programs and cited in the Darrin Fresh Water Institute Annual Reports.

Table 3, to accompany Map 1
Adirondack Park Waterbodies Reported with Aquatic Invasive Plants

		Lakes also with variable-leaf watermilfoil
49	Grasse River at Lampson Falls	
50	Chazy Lake	
51	North Pond	
52	Highlands Ledge Lake	
53	Paradox Lake	
54	Hadlock Pond	
55	2nd Lake Fulton Chain	x
56	4th Lake Fulton Chain	x
57	First Pond, Saranac Chain	
58	Second Pond, Saranac Chain	x
59	First Pond Fulton Chain	x
60	Third Pond Fulton Chain	x
61	Oswegatchie River (Chaumont Pond)	x
62	Cranberry Lake	x
63	Tupper Lake	x
64	Simond Pond	x
65	Raquette Lake	x
66	Eldon Lake	x
67	Long Lake (Town of Long Lake)	x
68	Piercefield Flow	x
69	Carry Falls Reservoir	x
70	Stark Reservoir	x
71	Lake Durant	x
72	Lake Placid	x
73	Rock Pond (adjacent to Lake Durant)	x
74	Forked Lake	x

Map prepared by APIPP. Aquatic plant reports provided by a variety of plant monitoring programs and cited in the Darrin Fresh Water Institute Annual Reports.