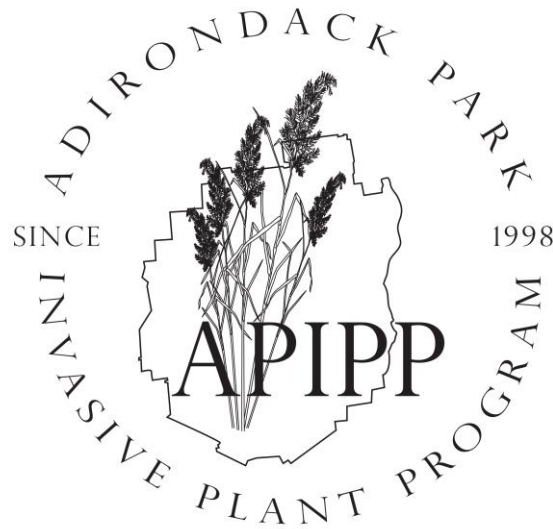


Adirondack Partnership for Regional Invasive Species Management

Invasive Species Strategic Plan

ABRIDGED



2013 – 2017

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ACKNOWLEDGEMENTS

This plan was prepared by the

Staff of the Adirondack Park Invasive Plant Program
representing the
Adirondack Partnership for Regional Invasive Species Management

Hilary Smith, Director
Brendan Quirion, Terrestrial Project Coordinator
Meghan Johnstone, Aquatic Project Coordinator

Contributions and review by

Meg Modley, Lake Champlain Basin Program
Emily Selleck, Essex County Cornell Cooperative Extension
Keith Rivers, NYS Department of Environmental Conservation
Caitlin Stewart, Hamilton County Soil and Water Conservation District
Dan Spada, Adirondack Park Agency
Partners and Cooperators of the Adirondack Park Invasive Plant Program

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EXECUTIVE SUMMARY

Invasive species are one of the top threats to lands and waters in the Adirondack region. Since the late 1990s, organizations, agencies, and volunteers collaborated to implement a landscape-level partnership, the Adirondack Park Invasive Plant Program (APIPP), to protect the region from the harmful impacts of invasive species. This partnership-based, integrated, and comprehensive approach to invasive species prevention and management served as the model for Partnerships for Regional Invasive Species Management (PRISM) in New York. PRISMs are one of the State's approaches to deliver on-the-ground invasive species programming. In 2008, APIPP secured funding through the Environmental Protection Fund to serve as the Adirondack PRISM and operates under a contract with the New York State Department of Environmental Conservation.

The Adirondack region is well positioned to successfully address invasive species. The landscape includes large, intact forests and comparatively little disturbance, fewer people, fewer invasive species, and smaller infestations than elsewhere in New York. Furthermore, APIPP has operated in the region for more than a decade. Its diverse partnership base provides the infrastructure, expertise, information, and credibility necessary to take initiatives forward to safeguard the region from invasive species.

Although the region remains relatively free of invasives, the urgency to act now is greater than ever. Invasive species in the region can spread exponentially if left unchecked, and changing temperatures, precipitation, and weather-related disturbances will likely exacerbate invasive species problems in the future. Immediate action is needed to preempt invasives from becoming widely established and degrading natural resources, recreational opportunities, local livelihoods, and cultural legacies.

Effective invasive species programming requires planning at the regional level, setting near-, mid-, and long-term priorities, identifying clear outcomes, tracking successes and challenges over time, adapting programming as needed, and using limited resources as efficiently as possible. The partnership, and the plan going forward, focuses on the following high priorities:

- Coordinating stakeholders and collaborating on invasive species solutions;
- Preventing new infestations by implementing innovative prevention programs, such as the boat launch steward program at water access sites, and policies, such as the Invasive Species Prevention Act and local Aquatic Transport Laws;
- Enhancing a region-wide early detection network that utilizes professionals and volunteers to detect and report new infestations;
- Formalizing Regional Response Teams, including an Aquatic Response Team and a Terrestrial Response Team, comprised of seasonal crews with the training and capacity to implement swift controls on new infestations;
- Implementing strategic management on existing infestations to limit their spread;
- Launching an invasive species education, marketing, and advertising campaign that informs all New Yorkers and visitors to New York about how to stop the spread of invasive species; and,
- Leveraging resources to the region to implement the full suite of actions required to stop the spread of invasive species.

These represent some of the most important and immediate needs in the region; however, it is generally understood that numerous actions at multiple scales involving diverse stakeholders are necessary to successfully combat invasive species. This Strategic Plan outlines the range of goals and strategies that partners in the Adirondack PRISM intend to advance in the next five years.

INTRODUCTION¹

Invasive species are non-native species that cause significant harm to humans or the environment and are considered a form of biological pollution. While most non-native species are benign or beneficial, an estimated 10 - 15% threaten the environment, agriculture, forestry, fisheries, and human health. Invasive species invasions are rapidly increasing due to global trade and travel. Recent arrivals in NY include emerald ash borer, Chinese mitten crab, snakehead fish, didymo, and hydrilla. Other invasive species such as the Asian carp, currently in the Mississippi, are rapidly approaching. Invasive species arrive without their native predators and diseases to control their populations. They also include non-native pathogens such as West Nile virus, which has sickened and killed humans and birds, and hemorrhagic septicemia virus (VHS), which has killed tens of thousands of fish in NY and other Great Lakes states. Native species often lack resistance to non-native pathogens and can be rapidly decimated.

Much of the work to track, prevent, eradicate, and control invasions falls to the individual states. The State of NY is addressing invasive species on many fronts. Recognizing the growing problem, in 2003, NYS established an Invasive Species Task Force (ISTF), a multi-stakeholder team of NYS agencies and conservation and trade organizations co-led by New York State Departments of Environmental Conservation (DEC) and Agriculture and Markets (DAM)² to explore invasive species issues and provide recommendations to the Governor and Legislature by November, 2005. The ISTF report made 12 key recommendations intended to position the State to effectively address invasive species.

One of the ISTF recommendations was to establish a permanent leadership structure to coordinate with federal, state, and local programs to address the gaps in regulatory and administrative authorities; avoid duplication of efforts; develop integrated and consensus-based program priorities; and, identify funding and research needs. The New York Invasive Species Council (NYISC) and NY Invasive Species Advisory Committee were since established³ and DEC formed the Office of Invasive Species Coordination⁴ in December 2007 to support and coordinate with these bodies to implement the ISTF Recommendations.

The ISTF envisioned regional private-public partnerships to strategically deliver core invasive species management functions including coordinating partners, engaging and training volunteers, educating citizens, establishing early detection and rapid response networks, and conducting on-the-ground eradication and control efforts. Eight such Partnerships for Regional Invasive Species Management (PRISM) cover NY (Fig. 1). The Adirondack Park Invasive Plant Program serves as the Adirondack PRISM.

¹ Text provided by the Office of Invasive Species Coordination.

² Chapter 324 of the *Laws of New York, 2003*

³ Chapter 26 of the *Laws of New York, 2008*

⁴ The Office of Invasive Species Coordination was renamed the Invasive Species Coordination Unit in 2012.

ADIRONDACK PRISM DESCRIPTION

Geographic Region

The Adirondack PRISM encompasses approximately 10,244 square miles and includes 12 counties and 119 towns. Counties having portions within the PRISM are St. Lawrence, Lewis, Oneida, Herkimer, Fulton, Saratoga, Warren, and Washington. Counties located entirely within the PRISM include Hamilton, Essex, Franklin, and Clinton.

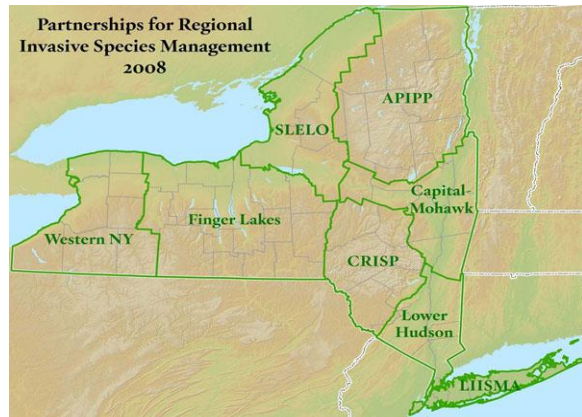


Figure 1. Eight Partnerships for Regional Invasive Species Management are in NY.

JUSTIFICATION

The proliferation of invasive species may be the greatest regional threat to water quality and forest health, and the rising cost of management is unsustainable. Invasive species of the past such as Dutch elm disease and American chestnut blight are reminders of the far-reaching impacts that invasives can have on ecosystems, economies, and society. With increasing numbers of invasives on the move, the need for invasive species prevention and management is clear. Invasive species are already a significant drain on local economies. Millions of dollars are spent each year in the Adirondacks to manage invasive species such as Eurasian watermilfoil, Asian clam, and Japanese knotweed, among others. The economic backbone of the Adirondack region is supported by tourism. Adirondack woods and waters are main ingredients of the tourism package that attract visitors, and thus healthy forests and clean water are key for maintaining jobs. Water affects the quality of life of Adirondack residents in several important ways, including property values, drinking water quality, and ecosystem health. Diverse, healthy forests are a prerequisite for a thriving wood products and maple sugar industry and fall foliage touring – all staples of Northern Forest communities.

Since 1998, agencies and organizations in the Adirondack region worked collaboratively through APIPP's partnerships to address invasive species at the landscape level. APIPP was honored to serve as the model for seven other regional partnerships now established in NY. In 2008, APIPP secured funding through the Environmental Protection Fund and serves as the Adirondack PRISM via a contract with the DEC.

The opportunity to prevent widespread degradation in the Adirondack region from invasive species is real. Adirondack ecosystems are still largely intact compared to nearby regions (Fig. 2). Unique opportunities exist to capitalize on factors including remoteness, lack of development, and fewer vectors that may offer some protection against invasions. The expertise and infrastructure exist in the region to deliver effective invasive species programs.

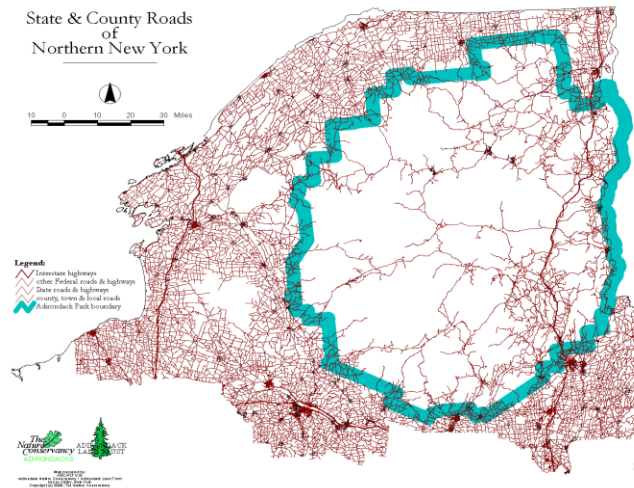


Figure 2. The limited roadway network in the Adirondack region reduces the number of invasive species pathways. Fewer numbers of invasive species and smaller infestations present a unique opportunity to prevent widespread degradation by invasive species.

Impacts of invasive species in the Adirondack region will continue to increase if current populations are left unchecked and new invasive species enter the region. A changing climate, including increases in weather-related disturbance, will likely further exacerbate problems. While range expansions of native species are not addressed within the scope of this Plan, non-native invasive species that are currently limited by temperature may be able to survive and thrive in the region. If coordinated, strategic action is enhanced and sustained, systems will be in place to limit the spread of invasive species and protect the ecologic and socioeconomic vitality of the Adirondacks. This Plan provides guidance on actions to prevent, control, and limit the impacts of invasive species that have invaded or may invade the Adirondack region.

MISSION

The mission of the Adirondack PRISM is to protect the Adirondack region from the negative impacts of invasive species.

VISION⁵

The vision of the Adirondack PRISM is to foster regional collaboration and coordination wherein the threat of invasive species will be minimized and the vitality of the Adirondack region's varied ecosystems and socioeconomic prosperity will be preserved. Specifically, the vision of the strategic plan is that, within five years, the Adirondack PRISM will have secure funding to sustain its infrastructure for cooperative invasive species prevention and management, including coordination, prevention, early detection, rapid response, and education, as well as the capacity to address all priority invasive species issues within the PRISM. Partners will have the tools to prevent new invasions from affecting the PRISM's rich natural and cultural heritage, including waterways, public lands, private lands, forests, fisheries, and farmland. Invaded areas will be managed for maximum benefit of native ecosystems, biodiversity, forestry, fisheries, and agriculture. Public awareness and participation will be increased to a level where most interested residents and visitors understand the issues.

⁵ Vision statement adapted from the Long Island Invasive Species Management Area Strategic Plan

PRIORITY ISSUES

Coordination

Coordination among agencies, organizations, and communities within the PRISM is essential to avoid duplication and ensure that needs within the region are identified and met and that programs are effectively and efficiently delivered. Coordination is also necessary with state, regional, and national efforts to inform and learn from similar programs throughout NY, the Northeast, and the U.S.

Prevention and Preparedness

The first line of defense for minimizing impacts of invasive species is to prevent future introductions and further spread. Encouraging both regulatory and non-regulatory programs and policies can help bolster this first line of defense. As in other regions of the U.S., attention to invasive species in NY has historically been a reactionary response. Resource managers have generally focused on addressing problems associated with specific invasive species already introduced and only after populations reach nuisance proportions. Similarly, it is only after reaching nuisance proportions that invasive species problems attract significant attention from the public. Developing the infrastructure and consciousness to prepare for invasive species rather than to react to them after they arrive will help ease the burden on communities, save money, and better protect resources in the long-term.

Early Detection and Rapid Response

Developing a comprehensive understanding of the presence and distribution of all invasive species in the PRISM through early detection surveys and monitoring programs is a prerequisite for formulating effective strategies to prevent new introductions, to limit the spread of existing invaders, and to abate the negative impacts of established ones. Because of the geographic magnitude of the Adirondack PRISM and the tremendous terrestrial and water resources including 12 major watersheds, over 11,000 lakes and ponds, 30,000 miles of rivers and streams, and millions of acres of forest as well as significant agricultural areas, an effective early detection and monitoring program will depend on utilizing citizen scientist volunteers. A successful program includes training, mentorship, coordination, data management, and quality control. Once invasive species become established, eradication is nearly impossible and ongoing management is costly and complicated. New infestations must be detected early and acted upon swiftly to minimize economic, social, and ecological impacts, as well as to allow for the possibility of elimination. This requires coordination among multiple agencies and organizations, planning to balance rapid response deadlines with regulatory timetables, and available resources and personnel, through regional response teams. Formulating a rapid response protocol and designating a rapid response network will help to minimize future impacts of invasive species in the PRISM.

Strategic Management

Several species presently in the PRISM are actively managed to limit their distribution and to minimize their ecological, social, and economic impacts. Management activities, however, are costly to implement and, in most cases, will not result in complete elimination of an invasive species population. Eurasian watermilfoil, for example, has been actively managed in Lake George since 1987. Because of the costs associated with managing invasive species, and

because of the potential impacts on non-target species, existing management alternatives, as well as new techniques and approaches, should be evaluated carefully for their effectiveness at producing the desired results as well as for their secondary impacts. To the greatest extent possible, selected management actions should: 1) optimize the use of limited resources; 2) have negligible negative impacts on non-target species, natural ecological communities, ecological processes, and human activities; and 3) not threaten public health or safety. Efforts should also be taken in advance of starting a management project to determine if the project is likely to be successful. A successful management project should not only control an invasive species, it should also achieve intended goals which could be conservation goals, such as maintaining or restoring the viability, health, and resilience of desired species, natural communities, and/or ecosystem processes; economic goals; human health protection; recreational use; or, meeting legal obligations.

Education

Education is a key to effectively prevent the spread of invasive species in the long-term. Spread prevention is achieved through persistent, comprehensive, and consistent educational outreach programs and trainings that target multiple audiences. Coordination among the various organizations delivering outreach programs is also necessary to maintain consistency and to increase the likelihood of voluntary compliance with spread prevention measures. Evaluating, improving, and expanding educational outreach programs will lead to increased public support, cooperation, and compliance necessary for reducing invasive species in the Adirondack PRISM. Ideally, messaging and programming will be coordinated across multiple spatial scales, including other PRISMs, throughout NY, and neighboring states and provinces.

Funding

Dedicated and sustained funding in support of the Plan and partner projects is a vital part of success and effectiveness. The challenge of invasive species cannot be managed by piecemeal and sporadic funding. Numerous groups and organizations in the Adirondack region spend millions of dollars every year to prevent or mitigate the impacts of invasive species. Cooperators view this Plan as a tool to leverage additional resources through state and federal grants and local and private assistance to support coordinated regional planning and implementation of priority actions. In 2005, the NY Invasive Species Task Force recommended an initial \$10 million per year in dedicated, sustained funding via the Environmental Protection Fund in support of invasive species programs in NY as an important first step in fighting invasive species statewide.

STRATEGIC PLAN DEVELOPMENT

The purpose of strategic planning is to set overall goals and develop objectives, strategies, and actions to achieve them. It involves stepping back from everyday activities and asking where a program is headed and what its priorities should be. The development of the Adirondack PRISM Strategic Plan was informed by *Adirondack Park Aquatic Nuisance Species Management Plan* (2005), guidance from the Office of Invasive Species Coordination (now known as the Invasive Species Coordination Unit), and other PRISM strategic plans including those from Long Island, the Catskills, and the St. Lawrence Eastern Lake Ontario region. The Plan incorporates many of the same concepts to ensure coordination and consistency.

A subset of APIPP staff and partners comprised the writing team, which formed in 2010. Since then, the Plan was reviewed by the writing team and distributed on the APIPP PRISM Listserve for partner input multiple times. It was also discussed at various bi-annual APIPP meetings. On April 30th, 2013, the APIPP partners in attendance at the APIPP spring meeting voted unanimously to approve the plan.

The following Goals provide a framework for the Objectives and Strategies/Actions to accomplish the mission of protecting the Adirondack region from the negative impacts of invasive species.

GOALS

- A. Coordination
- B. Pathway Analysis
- C. Spread Prevention and Vector Management
- D. Enforcement and Legislation
- E. Education and Outreach
- F. Early Detection, Rapid Response, and Monitoring
- G. Control and Management
- H. Information Management
- I. Restoration
- J. Research
- K. Climate Change Adaptation
- L. Resource Development and Funding

Although these Goals are not listed in order of priority, it is generally accepted that the first line of defense for minimizing invasive species impacts is to prevent invasive species introductions and spread. Each Goal is inextricably linked to spread prevention. In addition, central to all of the Goals of this Plan are the PRISM staff and the PRISM Committee Structure whose roles are to coordinate implementation of the Strategies/Actions and to coordinate development of future iterations of this Strategic Plan. Of note is that many of the actions described in the Plan are underway.

APIPP PRISM STRATEGIC PLAN

To review the Adirondack PRISM Strategic Plan in its entirety, including the full suite of strategies/actions, outputs, and outcomes and supporting information, please contact the Adirondack Park Invasive Plant Program at 518-576-2082 or download a copy at http://www.adkinvasives.com/documents/APIPPPRISMStrategicPlanMay2013_FINAL.pdf.