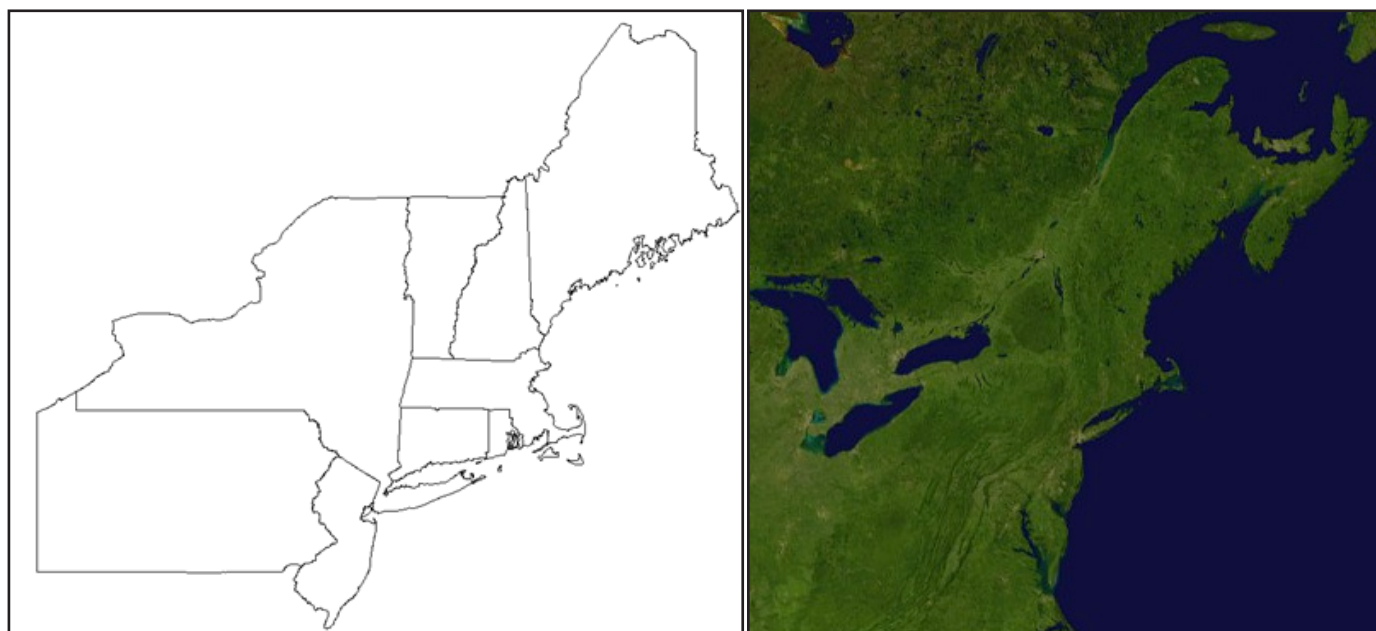


Invasive Species Initiatives in the Northeast States

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Cornell CALS
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**Department of
Environmental
Conservation**

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Process & Acknowledgements

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Introduction

Invasive species negatively impact the environment and economies around the world. Despite regulations and laws at the state and federal level, new invasive species continue to be introduced into North America at an alarming rate. In the United States, invasive species control legislation falls within the jurisdiction of individual states. While this means legislation and programs are well tailored to meet each states' needs, it also leaves room for inconsistency in legislation and control efforts on a regional scale, as well as missed opportunities for collaboration given many issues that states contend with are shared by their neighbors.

The purpose of this document is to outline the invasive species initiatives of each Northeastern state to document and compare the organizational structure and key players involved in these efforts. We see this as a first step towards building a framework for regional communication and collaboration on invasive species issues.

This report details the different invasive species initiatives taken on by private groups, government organizations and partnerships within each state. Information is organized by state, beginning with legislative bodies, management plans, and government organizations and concluding with private organizations.

The search for this information began with a compilation of online resources and was subsequently complemented with expert review and input from representatives in each state. For the purpose of conciseness, in this report we highlight state-wide or large-scale initiatives that target multiple species. Smaller-scale efforts directed at specific species have been excluded from this review. To the best of our knowledge, this information is accurate as of March 2019.

State-regulated leadership and documentation of invasive species priorities and management efforts differ vastly between some states, and are lacking entirely from others. State invasive species programs are highly dependent on adequate funding, a fact that has become increasingly clear through the compilation of this report. Some states have comprehensive plans for invasive species management, which include terrestrial and aquatic species, and others only have plans for aquatic species due to legislation from the federal government. Section 1204 of the Aquatic Nuisance Prevention and Control Act of 1990 (amended as the National Invasive Species Act of 1996) specifically calls for states to develop comprehensive nonindigenous aquatic nuisance species management plans in return for funding.

The table on the next page summarizes Northeastern state invasive species programming structures.

State-by-State Initiatives: A Quick Look

State	Invasive Species Council	Advisory Committee	Statewide Management Plan	Mapping Program	Invasive Species Legislation	List of Prohibited Species	Active Management Areas
Connecticut	Yes	Yes	Aquatic Only	EDDMapS	Yes	Yes	No
Maine	No	No	Aquatic Only	iMapInvasives	Yes	Yes	No
Massachusetts	No	Yes	Aquatic Only	EDDMapS	Yes	Yes	Yes
New Hampshire	No	Yes	No	EDDMapS	Yes	Yes	Yes
New Jersey	No	No	No	EDDMapS	In Congress	No	Yes
New York	Yes	Yes	Comprehensive	iMapInvasives	Yes	Yes	Yes
Pennsylvania	Yes	No	Comprehensive	iMapInvasives	Yes	Yes	Yes
Rhode Island	Yes	No	Aquatic Only	EDDMapS	Yes	Unknown	Yes
Vermont	No	Yes	No	NA	Yes	Yes	Yes

Connecticut

Groups with State Lawmaking Influence

In Connecticut, the **Connecticut Invasive Plants Council (CIPC)** is a state-mandated group that meets regularly to determine which species should be listed as invasive or potentially invasive and recommended for regulation. Meeting minutes, annual reports and other meeting information are listed on the website for the Connecticut Invasive Plant Working Group (CIPWG). See <https://cipwg.uconn.edu/ipc/> for more details.



The Invasive Plants Council meets at least twice annually and members are associated with the following organizations:

- University of Connecticut
- Connecticut Agricultural Experiment Station
- Connecticut Department of Environmental Protection
- Sprucedale Gardens
- Lake Waramung Task Force, Inc.
- Planter's Choice, LLC.
- The Nature Conservancy
- The Invasive Plant Atlas of New England (IPANE)
- Connecticut Department of Agriculture

The **Connecticut Invasive Plant Working Group (CIPWG)** serves in an advisory role to the Council. This group was created in 1997 as an ad hoc assembly started by Donna Ellis and the late Les Mehrhoff, who served as co-chairs. The group is governed by a Steering Committee, whose membership is currently in flux, and hosted by University of Connecticut. They hold meetings 1-2 times a year which are open to the public. Membership is fluid due to the nature of the group; members step up for various outreach activities, technical education activities and work on a biannual symposium. They work to gather and convey information on the presence, distribution, ecological impacts and management of invasive species; to promote uses of native or non-invasive ornamental alternatives throughout Connecticut, working with researchers, the public, government agencies and private industries to manage invasive species. For more information, visit <https://cipwg.uconn.edu/>.

Management Plan

Connecticut does not have a formal management plan for invasive species due to lack of resources. They do have a management plan specifically for aquatic nuisance species, prepared by the Connecticut Aquatic Nuisance Species Working Group. When threatening invasive species are detected, state, federal and other stakeholders meet to decide on a course of action on a case to case basis. To view the aquatic nuisance management plan visit: <http://www.ctiwr.uconn.edu/ProjANS/SubmittedMaterial2005/Material200601/ANS%20Plan%20Final%20Draft121905.pdf>

Involved Government Organizations

The **Connecticut Department of Energy and Environmental Protection (DEEP)** is the most involved state government agency when it comes to invasive species. If control steps are necessary, this organization facilitates them by taking measures to control and remove invasive species on state land while offering assistance to private landowners seeking to manage invasive species on their property. This organization works with invasive insects, aquatic and terrestrial plants. Specifically, the Environment Conservation Branch, within the DEEP, consists of two bureaus: The Bureau of Natural Resources (manages the state's natural resources- fish, wildlife and forests) and The Bureau of Outdoor Recreation (manages statewide recreational lands and resources). The department's website provides management resources to the public for both at home management and means for reporting IS. For more information, visit their website: https://www.ct.gov/deep/cwp/view.asp?a=2702&q=323494&depNav_GID=1641

Involved Government Organizations Cont.

The **Connecticut Agricultural Experiment Station** is a state agency dedicated to investigating problems that hinder agricultural productivity, environmental safety and human health through research. This entity has a program for surveying invasive aquatic plants to track the spread and record the arrival of invasive plants, as well as provide baseline information to determine if water chemistry plays a role in invasion. They also conduct research on management to test effectiveness of different control methods. See more at: <https://portal.ct.gov/CAES/Invasive-Aquatic-Plant-Program/IAPP/Aquatic-Plant-Survey-Program-for-Connecticut-Lakes>

The **USDA Natural Resources Conservation Service** for Connecticut works with partners from other agencies and organizations to share information, provide education and achieve goals relating to invasive plant management. They provide invasive plant sheets, workshops, identification and educational materials. See https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ct/technical/ecoscience/invasive/?cid=nrcs142p2_011122 for more details.

Partnerships

- The **Cooperative Agriculture Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Connecticut before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. USDA APHIS has partnered with the Connecticut Agricultural Experiment Station. For more information, see <https://portal.ct.gov/CAES/CAPS/CAPS/CAPS-Cooperative-Agricultural-Pest-Survey>
- The **Sea Grant** program is funded by National Oceanic and Atmospheric Administration (NOAA), the State of Connecticut and the University of Connecticut. Like other Sea Grant programs, Connecticut Sea Grant encourages stewardship of marine resources through research, education, outreach and technology transfer. See <https://sea-grant.uconn.edu/focus-areas/invasive-species/> for more information.
- **Cooperative Invasive Species Management Areas (CISMAs)** have been attempted but none are currently active.
- The **Invasive Plant Atlas of New England (IPANE)**, soon to become Invasive Pest Atlas of New England, is a comprehensive web-accessible database of invasive and potentially invasive plants in New England that is updated by a network of professionals and trained volunteers. It was established by the University of Connecticut, which later partnered with the University of Georgia (UGA) for continued data collection. IPANE data is available via EDDMapS, housed the Center for Invasive Species and Ecosystem Health within UGA. The program promotes early detection and rapid response to new invasions. They have an app that allows users to report sightings of invasives in the field. A similar app called Outsmart (originally developed by the University of Massachusetts) has recently merged with IPANE to create a single New England regional app under the Outsmart brand; IPANE will remain the web brand, but the app brand will be Outsmart. For more information visit <https://www.eddmaps.org/ipane/>

Non-Government Organizations

- The **Connecticut Land Conservation Council** hosts an annual conference and works to conserve native land through efforts including IS management. Many other states have a very similar coalition of land trusts dedicated to conservation. See <http://www.ctconservation.org/> for more information.
- The **University of Connecticut** hosts a website with information, news, publications and educational materials relating to mile-a-minute vine in Connecticut; it includes distribution information, identification information, information regarding biological control, control options for homeowners, a similar species guide and contact information for various personnel. Visit <https://mam.uconn.edu/> for more information. They also have an integrated pest management program which has some information regarding invasive species. They provide factsheets for some invasive species that may impact homeowners. For more information, visit <http://ipm.uconn.edu/root/> for more information.

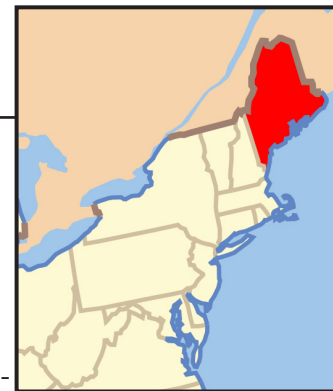
Maine

Groups with State Lawmaking Influence

In the state of Maine, there is no formal invasive species focused committee that advises lawmakers. Various committees and task forces advise state departments.

Management Plan

Maine has a State of Maine Action Plan for Managing Invasive Aquatic Species which, in addition to outlining Maine's approach to managing invasive aquatic species, makes the state eligible for modest federal funding to support invasive aquatic species programs. This plan has not been updated since its adoption in 2002, but is being revised in 2019 under the leadership of the Interagency Task Force on Invasive Aquatic Plants and Nuisance Species (see partnership section). To view the current plan visit: <https://www.maine.gov/dep/water/invasives/invplan02.pdf>



Involved Government Organizations

- The **Maine Department of Agriculture, Conservation and Forestry (MDACF)**, has multiple organizations that work with invasive species. The department is split into 4 different bureaus with various programs within these bureaus.
 - The **Bureau of Agriculture's Division of Animal and Plant Health** runs the Horticulture program. This program produced an Invasive Plant Report in 2008, describing how to develop processes and criteria to assess the danger posed to naturally occurring ecosystems by invasive terrestrial plant species and to determine which invasive plant species are of significant concern. Since then, they have generated a list of invasive plants in the horticulture trade which are now prohibited from sale in Maine. To view their list or learn more visit: <https://www.maine.gov/dacf/php/horticulture/invasiveplants.shtml>
 - The **Division of Forest Health and Monitoring** within the MDACF was established in 1921 to protect the forest, shade, and ornamental tree resources of the state from significant insect and disease damage and to provide pest management and damage prevention for homeowners, municipalities, and forest land owners and managers, thereby preserving the overall health of Maine's forest resources. To learn more see https://www.maine.gov/dacf/mfs/forest_health/index.htm
 - The **Maine Natural Areas Program (MNAP)** provides education and outreach to the public about terrestrial invasive plants, and provides management recommendations to landowners and land managers. They also house the state iMapInvasives, an information clearinghouse for citizen invasive species sightings, and manage the information submitted. MNAP convenes the Terrestrial Invasive Plant Scientific Advisory Committee which provides advice to MDACF on matters relating to invasive plants, including an advisory, non-regulatory list of invasive plants maintained by MNAP. Visit <https://www.maine.gov/dacf/mnap/> for more information.
- The **Maine Department of Environmental Protection (MDEP) Bureau of Water Quality** funds local programs to prevent, detect and control invasive aquatic plants in inland waters. This work is largely done in partnership with outside cooperators including NGOs and lake associations. Visit <https://www.maine.gov/dep/water/invasives/index.html> for more information. MDEP also convenes the Interagency Task Force on Invasive Aquatic Plants and Nuisance Species. For more information visit: <https://www.maine.gov/dep/water/invasives/task-force/index.html>
- The **Maine Department of Marine Resources** has programs to monitor and manage Maine's coastline resources for the public benefit, remediating coastal pollution, mapping the benthic habitat, engaging local coastal citizens in stewardship and promoting smarter municipal planning. Numbers of native and non-native species are recorded continually. This information is used to identify and track the movement of IS. See <https://www.maine.gov/dmr/> for more information.
- The **Maine Department of Inland Fisheries and Wildlife (DIFW)** implements work programs focused at IS prevention, detection, monitoring, remediation, and enforcement, with a focus on fish and wildlife invasive organisms. DIFW coordinates and partners with other state and federal natural resource agencies to tackle areas of mutual concern, including issues more global in scope. See <https://www.maine.gov/ifw/> for more information.

Partnerships

- The **Courtesy Boat Inspection (CBI)** program is available by a partnership between MDEP and the Lakes Environmental Association and others to educate citizens and prevent the spread of aquatic invasive plants. The program offers grants to communities interested in starting a program of their own. MDEP also funds a program with the Lake Stewards of Maine that provides classroom and hands-on training in identification of aquatic plants and plant monitoring. Additionally, MDEP's Invasive Aquatic Species Program provides information on permits, licenses, monitoring and reporting, prevention, early detection and control. View <https://www.maine.gov/dep/water/invasives/index.html> for more information.
- The **Cooperative Agricultural Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Maine before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. The USDA APHIS partners with the MDACF Division of Animal and Plant Health. The MDACF additionally partners with the University of Maine, Soil and Water Conservation Districts, State Parks and public and private campgrounds. For more information see <https://www.maine.gov/dacf/php/caps/index.shtml>
- **iMapInvasives** is housed by Maine's Natural Heritage Program, an information clearinghouse for citizen reporting on invasive species sightings. This helps the state to map invasive species presence and detect important invasive species early on. Previously, Maine used the Invasive Plant Atlas of New England (IPANE) and is currently transitioning to using iMapInvasives as their primary mapping tool for invasive plant species. Visit <https://www.imapinvasives.org/> for more information.
- **Cooperative Invasive Species Management Areas (CISMAs)** have been attempted in Maine but none are currently active.
- The **Gulf of Maine Area (GoMA) Census of Marine Life** focuses on developing an ecosystem-scale understanding of biodiversity. The goal of this organization is to advance the knowledge of biodiversity patterns and ecological processes over a range of habitats and species. This information will be used as a foundation for ecosystem approaches to management, improving our stewardship and use of oceans and their coastal margins. To learn more, visit: <http://www.gulfofmaine-census.org/education/tools-resources/overviews/invasives/>
- The **Got Pests? Program** helps homeowners quickly identify pest problems and obtain information on least-risk management options through pictures. This program was created through a collaboration with the Maine Board of Pesticides Control, University of Maine Cooperative Extension Pest Management, Maine Forest Service, and Maine Integrated Pest Management (IPM) Council. To learn more, visit <https://www.maine.gov/dacf/php/pesticides/index>
- The **Sea Grant** organization of Maine is hosted by the University of Maine. They focus specifically on threats that could impact the coastal communities of Maine. They produce outreach materials, conduct research and monitor invasive species along the coast. They also value education programs and scholarships to encourage higher education about marine topics. For more information, visit: <http://www.seagrant.umaine.edu/>

Non-Government Organizations

- The **Maine Invasive Species Network** was created by the University of Maine as a communication tool in 2009. This group meets annually and its role is to serve as a platform for information exchange so that collaborative projects can be identified and mapping, outreach and research can be supported. Learn more at: <https://extension.umaine.edu/invasivespecies/>
- The **Maine Land Trust Network** has been organized by Maine Coast Heritage, the network is made up of 94-member trusts and organizations. This network hosts an annual meeting and serves to conserve Maine's natural landscape. Members can apply for grants to fund conservation efforts. Land trusts carry out invasive species management and education to varying degrees. For more information see: <http://www.mltn.org/index.php>

Non-Government Organizations Cont.

- The **Insect Pests, Ticks and Plant Diseases Project** is maintained by the University of Maine Cooperative Extension, utilizing an Integrated Pest Management (IPM) approach to encourage better practices when managing agricultural crops and ornamental plants. They have programs related to this larger project for different agricultural crops. For more information visit: <https://extension.umaine.edu/ipm/>
- The **Lake Stewards of Maine** (formerly Maine Volunteer Lake Monitoring Program) works to protect Maine lakes through widespread citizen participation in the gathering and dissemination of credible scientific information pertaining to lake health. They train, certify and provide technical support to hundreds of volunteers that monitor lakes within Maine. To learn more, visit: <http://www.lakestewardsofmaine.org/ias-background/>

Massachusetts

Groups with State Lawmaking Influence

The state of Massachusetts does not have a state-mandated invasive species council or committee. The need for a group to provide recommendations to lawmakers on invasive species was recognized and the **Massachusetts Invasive Plant Advisory Group (MIPAG)** was formed as a voluntary collaboration of stakeholder organizations in 1995. Since its inception, MIPAG has worked to assess and make recommendations as to which invasive species should be banned from sale within the state, and is the only group in Massachusetts to regularly meet about these issues. Some of these recommendations have been adopted into legislation. Because this group is not a mandated entity, funding issues have hindered its ability to update its lists and recommendations. To learn more see: <https://www.massnrc.org/mipag/> The current members of this group include belong to these organizations and stakeholder groups:



- Massachusetts Department of Transportation (DOT) Highway Division
- New England Nursery Association
- Massachusetts Audubon
- U.S. Fish and Wildlife Service
- New England Wild Flower Society
- MA Department of Agricultural Resources
- MA Natural Heritage and Endangered Species Program
- MA Department of Conservation and Recreation
- MA Department of Agricultural Resources
- The Nature Conservancy
- Massachusetts Nursery and Landscape Association
- Small Planet Landscaping
- UMass Extension, Landscape, Nursery and Urban Forestry
- USDA Forest Service
- The Trustees of Reservations
- Massachusetts Association of Conservation Commissions
- Nursery and Landscape Association of North America (NLAE)

Management Plan

In 2002, the Massachusetts Aquatic Invasive Species Management Plan was published by the Massachusetts Aquatic Invasive Species Working Group. While this working group is no longer active, many of the strategies outlined in the management plan have been implemented and are still actively being carried out by partner agencies. To view the plan visit: <https://www.mass.gov/service-details/czm-marine-invasive-species-publications>

Involved Government Organizations

- The **Massachusetts Office of Coastal Zone Management's (CZM)** Marine Invasive Species program is involved in a variety of marine invasive species management issues including the Marine Invasive Monitoring Information Collaborative (MIMIC) citizen science monitoring program, which has been monitoring sites throughout New England for marine invasive species since 2006. The MIMIC program is coordinated by CZM and is a partnership of several state and non-profit organizations that recruit and train volunteers. This program supports early detection and monitoring for coastal invasive species as well as public education and outreach regarding invasive species. Additionally, CZM coordinates a more formal rapid assessment survey of New England coastal sites every few years with a team of taxonomic experts to document new introductions and monitor distribution trends of established invasive species. The latest survey was conducted in the summer of 2018; the report will be released soon. CZM also provides marine invasive species outreach materials including volunteer monitoring data story map, rapid assessment survey reports, and fact sheets. CZM provides technical assistance to communities regarding (cont.)

Involved Government Organizations Cont.

- invasive species management issues, such as seaweed accumulation on beaches and following up on invasive species reports. CZM actively participates in regional initiatives such as the NEANS panel meetings. To learn more, visit: <https://www.mass.gov/marine-invasive-species-program>.
- The **Massachusetts Lakes and Ponds Program** is managed by the Department of Conservation and Recreation. This program monitors and educates the public on the prevention of the spread of aquatic invasive species throughout the inland bodies of water in Massachusetts. The purpose of this group is to provide community groups with resources to monitor water quality for public safety. Invasive species management is an important component in maintaining water quality. For more information, visit: <https://www.mass.gov/orgs/department-of-conservation-recreation>.
- The **Forest Pest Education and Outreach Program** was developed by the Massachusetts Department of Agricultural Resources for the education and outreach for forest pests. This includes management and control programs as well as pathways for reporting potentially invasive species. To learn more, visit: <https://www.mass.gov/orgs/massachusetts-department-of-agricultural-resources>.
- The **Natural Heritage & Endangered Species Program** has a webpage discussing invasive plants with general information, additional resources and some information about what different organizations throughout the state are doing to control invasive species. For more information, see: <https://www.mass.gov/orgs/masswildlifes-natural-heritage-endangered-species-program>.

Partnerships

- The **Northeast Aquatic Nuisance Species** (NEANS) Panel is a regional panel established under the federal Aquatic Nuisance Species Task Force. Massachusetts is a member state and representatives from the Department of Conservation and Recreation, and Department of Environmental Protection Agency, and the MIT Sea Grant Program serve on the panel. See <https://www.northeastans.org/> for more information.
- **Cooperative Invasive Species Management Areas** (CISMAs) have been attempted in Massachusetts. These groups are partnerships that typically focus on invasive plant management. The SuAsCo Cisma has been successful and manages invasive species in the Sudbury, Assabet, and Concord watershed, covers 36 towns and has a total of 41 partner organizations. Visit <https://cisma-suasco.org/> for more information. The Westfield River Watershed Invasive Species Partnership (WISP) has also been successful, with the goals of promoting cooperative efforts to manage invasive species and protect native habitats in the watershed through education, early detection, eradication and management. Unfortunately, CISMAs are not always successful and management efforts can cease due to inadequate funding and resources.
- Massachusetts has two **Sea Grant** programs: **Massachusetts Institute of Technology Sea Grant** and **Woods Hole Sea Grant**. Both are funded by the National Oceanic and Atmospheric Association. These organizations fund research and outreach relevant to the maintenance of coastal resources. For more information about the MIT Sea Grant program visit <http://seagrants.mit.edu/>. For more information about the Woods Hole Sea Grant visit: <https://web.whoi.edu/seagrants/>.
- The **Invasive Plant Atlas of New England** (IPANE), soon to become Invasive Pest Atlas of New England, is a comprehensive web-accessible database of invasive and potentially invasive plants in New England that is updated by a network of professional and trained volunteers. IPANE data is available via EDDMapS, housed at the Center for Invasive Species and Ecosystem Health within University of Georgia (UGA). The program promotes early detection and rapid response to new invasions. They have an app that allows users to report sightings of invasives in the field. A similar app called Outsmart (originally developed at the University of Massachusetts) has recently merged with IPANE to create a single New England regional app under the Outsmart brand; IPANE will remain the web brand, but the app brand will be Outsmart. To learn more, visit: <https://www.eddmaps.org/ipane/>.

Partnerships Cont.

- The **Cooperative Agricultural Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Massachusetts before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. The USDA APHIS partners with MDAR for this program. See <https://www.mass.gov/service-details/division-of-crop-and-pest-services> for more information. The USDA APHIS also funds an educational effort called the Massachusetts Introduced Pests Outreach Project. MDAR and UMass Extension Agriculture and Landscape Program contribute to this project whose target audience is professional trade groups, government staff, environmental organizations, and other groups that would benefit from updates in invasive pests at high risk of introduction. For more information, see: <https://massnrc.org/pests/>.

Non-Government Organizations

- The **Massachusetts Land Trust Coalition** is a large organization that promotes conservation by providing education, tools, networking, and advocacy support for land trusts and their partners. Each year this group hosts a conference as well as small regional events. Members of this group contribute to invasive species control and management and sometimes receive state funding. The coalition has a total of 171-member land trusts and conservation groups. Visit <http://massland.org/> for more information.
- The **Massachusetts Association of Conservation Commissions (MACC)** is a non-profit organization that educates and advocates for the conservation of wetlands, open spaces and diversity. The information spread by this group includes management information but the amount of management that is carried out as a result of this group's outreach is difficult to quantify. To learn more, see: <https://www.maccweb.org/>.
- The **Electronic Guide to the Invasive Plants of Nantucket** is a product of a partnership between the Maria Mitchell Association and the Departments of Computer Science and Biology at the University of Massachusetts Boston. This guide documents the biodiversity of Nantucket Island, focusing specifically on terrestrial plants; it is geared towards teaching the public how to identify invasive species and teach them about the threat they are to natural habitats. To view the guide, visit: <https://www.nantucketconservation.org/stewardship-overview/invasive-plant-management/>
- The **Integrated Pest Management (IPM) Program of University of Massachusetts, Amherst Extension** aims to provide research-based information, education and cost-effective techniques for growers and managers to balance high quality yields and reducing adverse effects on humans and the environment. They incorporate mechanisms for accurate estimate of both pest and beneficial insect populations, including economic and environmental cost and benefit assessments. Find out more at: <https://ag.umass.edu/integrated-pest-management>
- The **Marine Bioinvaders Program** which is hosted by MIT Sea Grant Coastal Resources disseminates scientific and technical information. Their site highlights research, monitoring programs and management actions geared towards aquatic invasive species, water and sediment quality and habitats within the geographic areas of Boston Harbor and Massachusetts Bay, coastal Massachusetts and the Gulf of Maine. Their site was last updated in 2009 and it is assumed this group is no longer active. To view their resources, visit: <https://massbay.mit.edu/exoticspecies/>
- The **Coastal Habitat Invasives Monitoring Program** is hosted by Salem Sound Coastwatch and has the mission to protect and improve the environmental quality of Salem Sound and its surrounding watershed. They are a non-profit organization that works with citizens, businesses, and governmental agencies through partnership, scientific investigation, education and stewardship. Visit <http://www.salemsound.org/CHIMP-inner.html> for more information.

New Hampshire

Groups with State Lawmaking Influence

The **New Hampshire Invasive Species Committee** (ISC) is an advisory group for the Commissioner of the **New Hampshire Department of Agriculture, Markets and Food** (DAMF) that works on matters concerning invasive species in the state. They meet regularly to review information, evaluate and discuss potentially invasive plant, insect and fungi species of concern, host guest presentations on related topics, develop outreach and educational materials, formulate management practices as guidance for the control of invasive species, and prepare lists of proposed prohibited and restricted plant species for terrestrial and riparian habitats. They are not charged with the evaluation or listing of aquatic plant species, which is conducted by the Department of Environmental Services under RSA- 487: 16-a. Members of the New Hampshire ISC are listed below:



- New Hampshire Department of Agriculture
- New Hampshire Department of Environmental Services
- New Hampshire Department of Resources & Economic Development
- New Hampshire Department of Transportation
- New Hampshire Department of Fish & Game
- The College of Life Science & Agriculture of the University of NH
- University of New Hampshire (UNH) Cooperative Extension
- A representative for environmental interests
- A representative for Horticultural interests
- A representative for General public interests
- A representative for Livestock owners & feed growers interests

To learn more about the New Hampshire Invasive Species Committee visit: https://extension.unh.edu/resources/files/Resource000988_Rep1134.pdf

The **Exotic Aquatic Weeds and Species Committee** (EAWS) is a standing legislative committee, tasked with enhancing aspects of the state's response to aquatic invasive species. They discuss the exotic species growth in the state and other related topics during their monthly meetings. For more information, visit: <http://www.gencourt.state.nh.us/rsa/html/L/487/487-30.htm>

Since January 1, 1998, the sale, distribution, importation, propagation, transportation and introduction of key exotic aquatic plants has been prohibited and punished by the **Department of Environmental Services** (RSA 487: 16-a-b). This law was designed as a tool for lake managers to help prevent the spread of nuisance aquatic plants, with the hopes that preventing transport over land will stop the spread between waterbodies. To view a summary of **New Hampshire Aquatic Nuisance Species Laws**, visit: <https://www.northeastans.org/docs/nh-laws.pdf>

Learn more at: <https://www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-40.pdf>

Management Plan

In January 2006, the **Department of Environmental Services** and the **Fish and Game Department** entered into a Memorandum of Agreement about how exotic aquatic plant control projects, or any projects dealing with aquatic plant management, will be handled. The plans, outlined below, are to ensure there is a strategic, well-organized process that is tailored to best manage growth of aquatic vegetation on a waterbody-by-waterbody basis. The Department of Environmental Services takes the lead in drafting the management plans, but includes input from the lake residents, municipalities, the Fish and Game Department, and other stakeholders in the health and integrity of the waterbody and its surroundings. In 2007, a total of 19 draft plans for 19 different waterbodies were prepared by the Department of Environmental Services. These plans guide management for five-year increments and can be accessed online using the Lake Mapper application (listed below). If a waterbody has a plan in place, it will be listed in the pop-up box as a link, for a selected waterbody.

Management Plan Cont.

Aquatic plant management plans are required to include the following:

- The current status of the aquatic vegetation in the pond (Is it native, exotic, wide spread, localized, etc.).
- The chemical, physical, biological, and ecological characteristics of the pond.
- The designated uses of the waterbody.
- The goals of aquatic plant management for that waterbody.
- The desired outcomes of any management actions.
- The possible control mechanisms based on all of these above referenced criteria.
- The use of integrated pest management (IPM) strategies.
- The selected control strategies.
- The monitoring plan following implementation of control strategies.
- A schedule for control actions and monitoring.

To learn more about these management plans and their requirements, visit: https://www.des.nh.gov/organization/divisions/water/wmb/exoticspecies/intro_management.htm There is not a comprehensive statewide management plan for invasive species at this time.

The Lake Mapper Application is available at: <http://nhdes.maps.arcgis.com/apps/webappviewer/index.html?id=1f45d-c20877b4b959239b8a4a60ef540>

Involved State Government Organizations

- The **Division of Plant Industry of the Department of Agriculture, Markets, and Food** participates in an inter-state and international network of plant protection agencies whose goal is to reduce the transport of economically injurious plant pests by certifying the condition and quality of nursery stock. This division licenses New Hampshire's Plant Dealers and inspects nursery stock sold within New Hampshire, as well as stock shipped both nationally and internationally. Additionally, the Division's Invasive Species Coordinator has created a Cooperative Statewide Invasive Species Management Program. This project was initiated in 2012 as a cooperative effort with the NH Department of Transportation (DOT). Since 2018, integrated vegetation management has been conducted, targeting some of NH's worst upland invasive species focusing on state and federal highway systems as well as state owned lands. Since its inception, over 120 acres of Japanese knotweed have been managed and over 20,000 woody invasive species eradicated. The DOT has seen the success of this program and has authorized two personnel from each district to become licensed as herbicide applicators as of 2016. To date, there are 10 – 14 DOT employees licensed to apply herbicides. This program is also made available for demonstration purposes for towns/municipalities. In 2018, the DAMF's Division of Plant Industry also began a pilot project targeting Tree of Heaven, in the preparation for an introduction/detection of spotted lanternfly. The Division of Plant Industry also hosts a website with a section devoted to invasive species and their management, along with annual reports of their Statewide Invasive Species Management Program: <https://www.agriculture.nh.gov/divisions/plant-industry/invasive-plants.htm>. To view the best management practice guide they developed for Japanese Knotweed, visit: <https://www.agriculture.nh.gov/publications-forms/documents/japanese-knotweed-bmps.pdf>.
- The **Forest Health Section**, situated within the **New Hampshire Division of Forests and Lands**, was originally established as the "white pine blister rust control program" in 1917. The Section has expanded overtime, and now implements and enforces forest health regulations to prevent the introduction or spread of exotic insects and diseases. Their mission is to: Provide and maintain forest and tree pest control programs in coordination with other state and federal agencies; provide detection, identification, evaluation and assessment of forest pest problems on a statewide basis; provide leadership in all forest pest problems, keeping current through systematic detection programs and close liaison with other sources of information; maintain close contact with all segments of the forestry profession in forest insect and disease matters; provide service for identification of forest pests cooperating in this regard with the UNH Cooperative Extension, NH Department of Agriculture, U.S. Department of Animal and Plant Health Inspection Service, and the U.S. Forest Service and assist and coordinate in the control of forest insects and diseases, cooperating with the U.S Forest service, Department of Agriculture, and the New Hampshire landowners and landowner associations.

Involved State Government Organizations Cont.

- As of July 2011, New Hampshire issued a **state-wide ban the importation of untreated firewood** without a commercial or home heating compliance agreement. Firewood is a major source of damaging insects and diseases. This ban will help protect the health on New Hampshire's forests. For more information on this division or the statewide ban, visit: <https://www.nhdf.org/forest-health/>.
- The **Department of Transportation** (DOT) has a **Bureau of Environment** that specifically focuses on invasive species. This Bureau has developed Best Management Practices (BMPs) with input from Maintenance Districts, the Roadside Development Section, the Bureau of Construction, and the NH Department of Agriculture. These BMPs provide recommendations to help prevent the spread of invasive plants caused by maintenance and construction activities. In 1997, the DOT became involved in a partnership with the NH Department of Agriculture, Markets & Food (DAMF), and the Division of Plant Industry to cooperatively manage purple loosestrife with the use of a bio-control. The program is no longer actively monitored by the DOT but insects are available for purchase. They were also previously involved in the NH Coastal Watershed Invasive Plant Partnership (see below). For more information, visit: <https://www.nh.gov/dot/org/projectdevelopment/environment/>.
- The **Natural Heritage Bureau** was mandated by the Native Plant Protection Act of 1987 to determine protective measures and requirements necessary for the survival of native plant species in the state, to investigate the condition and degree of rarity of plant species, and to distribute information regarding the condition and protection of these species and their habitats. To learn more, visit: <https://www.nhdf.org/About-Us/Natural-Heritage-Bureau>.
- The **New Hampshire Fish and Game Department** holds responsibility for prohibiting, restricting and managing invasive aquatic animals in New Hampshire. They conduct reviews of special aquatic permits for herbicide application to determine potential impacts on aquatic animal habitat. They provide assistance in the designation and enforcement of restricted use areas on waterbodies. Coordinates and performs education/outreach activities that include information on exotic species. A section of their website is dedicated to aquatic nuisance species in New Hampshire and another section is dedicated to planning successful invasive species projects. To learn more, visit: <https://www.wildlife.state.nh.us/>.
- The **Great Bay National Estuarine Research Reserve** (Great Bay NERR) has mapped twenty of the most ecologically damaging invasive plant species on their properties since 2005, allowing for strategic prioritization for management. They also have cooperated in the New Hampshire Coastal Watershed Invasive Plant Partnership (see below). For more information, visit: <https://www.greatbay.org/>.
- The **New Hampshire Department of Environmental Services** (NHDES) has two programs associated with invasive species:
 - The **Exotic Species Program** coordinates activities associated with the control and management of exotic aquatic plants. It was initiated in 1981 and has 5 focus areas: Prevention of new infestations, monitoring for early detection of new infestations to facilitate rapid control activities, control of new and established infestations, research towards new control methods with the goal of reducing or eliminating infested areas, and regional cooperation. To learn more, visit: <https://www.des.nh.gov/organization/divisions/water/wmb/exotic-species/index.htm>
 - The **Wetlands Bureau** works with the Exotic Species Program to review projects where wetlands work is proposed that may impact or cause exotic plant infestations. These groups also work together to amend/establish regulations and rules to allow for specific control activities in jurisdictional areas. For more information, visit: <https://www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/r-wd-18-19.pdf>
- The **Integrated Pest Management** (IPM) program at the **University of New Hampshire Cooperative Extension** provides resources regarding invasive plants. The University makes specimens of invasive species available for verification, provide outreach and education materials through the NH Lakes Lay Monitoring Program (NHLLMP) and Cooperative Extension. To learn more, visit: <https://extension.unh.edu/programs/integrated-pest-management-ipm>.

Partnerships

- The **New Hampshire Coastal Watershed Invasive Plant Partnership** (NH CWIPP) is no longer active but their website remains active as a reference of the partnership's former activities. It was formerly a cooperative weed management area (CWMA) in the state. They would inventory, monitor and prevent the spread of invasive plants

Partnerships Cont.

- across jurisdictional boundaries. They also worked with municipalities, private landowners and state and federal land managers to control native species and restore native habitats. To learn more, visit: <https://www.des.nh.gov/organization/divisions/water/wmb/coastal/cwipp/index.htm>.
- The **Invasive Plant Atlas of New England** (IPANE), soon to become Invasive Pest Atlas of New England, is a comprehensive web-accessible database of invasive and potentially invasive plants in New England that is updated by a network of professional and trained volunteers. It was established at the University of Connecticut, which later partnered with the University of Georgia (UGA) for continued data stewardship. IPANE data is available via EDDMapS, housed the Center for Invasive Species and Ecosystem Health within UGA. The program promotes early detection and rapid response to new invasions. They have an app that allows users to report sightings of invasives in the field. A similar app called Outsmart (originally developed at the University of Massachusetts) has recently merged with IPANE to create a single New England regional app under the Outsmart brand; IPANE will remain the web brand, but the app brand will be Outsmart. For more information, visit: <https://www.eddmaps.org/ipane/>.
- The **Cooperative Agricultural Pest Survey** (CAPS) is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in New Hampshire before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. This program is coordinated by the USDA APHIS and the DAMF. The Forest Pest Outreach and Survey Project is another project in conjunction with the USDA APHIS to provide outreach on injurious forest insect pests, specifically Emerald Ash Borer and Asian longhorned beetle. Additional information can be found at: <https://www.agriculture.nh.gov/divisions/plant-industry/federal-agreements.htm>.
- The **NHBugs** program is a collaboration of forest health agencies based in New Hampshire working to keep the public informed about invasive forest pests. It is a website maintained by the University of New Hampshire Cooperative Extension, in collaboration with the New Hampshire Department of Agriculture, Markets & Food. To learn more, visit: <https://nhbugs.org/>.
- The document: "**Picking Our Battles: A Guide to Planning Successful Invasive Plant Management Projects**" is a guide for communities and landowners to strategically prioritize the control of upland, wetland and intertidal invasive plant species. This was a collaboration between the New Hampshire Fish and Game Department, NH Natural Heritage Bureau, and Great Bay National Estuarine Research Reserve along with over 120 community members, natural resource managers and academics. This document can be found at: <https://wildlife.state.nh.us/invasives/documents/picking-battles.pdf>.
- The **New Hampshire Sea Grant** organization is hosted by the University of New Hampshire and focuses on addressing needs specific to their state promoting stewardship through research, extension and communication efforts. A big project they are currently working on is exploring options for using the green crab as a food market product. Learn more about their program at: <https://seagrant.unh.edu/>.

Non-Government Organizations

- The **Lake Host Program** under the New Hampshire Lakes Association is a courtesy boat inspection program for community groups, marinas and owners of ramps not open to the public to prevent the introduction and spread of aquatic invasive species, plants and animals, from waterbody to waterbody. For more information, visit: <https://nhlakes.org/education/lake-host/>.
- The New Hampshire Rivers Council (NHRC) has a **River Runners Program** to do volunteer monitoring for invasives. They work with individual river groups throughout the state and share information about AIS with those groups. To learn more about this organization, visit: <https://www.nhrivers.org/>.
- The New Hampshire Department of Environmental Services runs the **Weed Watcher Program**, which is a group of volunteers who spend time monitoring for invasive aquatic plants. For more information on how to get involved,

New Jersey



Groups with State Lawmaking Influence

New Jersey maintains a website for an **Invasive Species Council** on the **New Jersey Department of Environmental Protection (NJDEP)** page, however this council is no longer active and the content has not been updated since 2009. To view this website, visit: <https://www.nj.gov/dep/njisc/index.htm>.

There are currently two bills related to invasive species in the New Jersey House and Senate:

- A4585/S3091 which would establish an “Invasive Species Task Force”
- A4460/S3086, which will prohibit the sale, distribution, or propagation of certain invasive plant species without permit from the Department of Agriculture

Additionally, a third bill (listed below), also under consideration, does not mention invasive species but could be used as a management technique for invasive species fitting the “certain circumstances” required.

- A3764 would permit the stocking of triploid grass carp in waterbodies under certain circumstances

Management Plan

A draft **New Jersey Strategic Management Plan for Invasive Species**, published in 2009, is available on the NJDEP website. The plan was approved by the then active NJ Invasive Species Council but never adopted by the governor. There are currently efforts by various working groups to stimulate interest in the development and acceptance of a statewide Invasive Species Management Plan, with a new administration that may determine the environment a key initiative. To view the draft management plan, visit: <https://www.nj.gov/dep/njisc/docs/Final%20NJ%20Strategic%20Management%20Plan%20for%20Invasive%20Species%2011.09.pdf>.

Involved State Government Organizations

- The **New Jersey Department of Environmental Protection (NJDEP)** does not have active programs for the control and management of invasive species. In the past, the NJDEP was active and proposed bills to prohibit the sale of a list of invasive plants but these were never incorporated into state law. The only invasive species that are prohibited in New Jersey are those prohibited federally. Some municipalities have adopted ordinances prohibiting the new planting of invasive species and specifically name past nuisance invasive species. For more information about this organization, visit: <https://www.nj.gov/dep/>.
- The **New Jersey Water Supply Authority** manages for invasive species across the reservoirs and water supply canal in their jurisdiction, as well as their preserved landholdings. To learn more, visit: <http://www.njwsa.org/>.
- The **Division of Plant Industry** within the **New Jersey Department of Agriculture** protects New Jersey’s food crops, forests and other plant resources against injurious plant insects and diseases through detection, control and eradication programs. For more details, visit: <https://www.nj.gov/agriculture/divisions/pi/>. The NJDA Division of Plant Industry includes the **Phillip Alampi Beneficial Insect Rearing Laboratory** which develops insect rearing techniques and mass produces beneficial insects. Much of the research, insect production, and insect releases are aimed at invasive species control. Visit their site for more details about this program: <https://www.nj.gov/agriculture/divisions/pi/prog/beneficialinsect.html>.

Partnerships

- The **Cooperative Agricultural Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in New Jersey before (cont.)

Partnerships Cont.

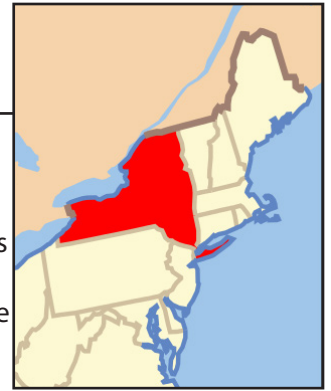
they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. The USDA APHIS partners with the state plant regulatory official and the state plant health director to administer this program. For more information, visit: <https://www.nj.gov/agriculture/divisions/pi/prog/plantpest.html>.

- The **Invasive Plant Atlas of New England** (IPANE), soon to become Invasive Pest Atlas of New England, is a comprehensive web-accessible database of invasive and potentially invasive plants in New England that is updated by a network of professional and trained volunteers. IPANE data is available via EDDMapS, housed the Center for Invasive Species and Ecosystem Health within University of Georgia (UGA). The program promotes early detection and rapid response to new invasions. They have an app that allows users to report sightings of invasives in the field. A similar app called Outsmart (originally developed at the University of Massachusetts) has recently merged with IPANE to create a single New England regional app under the Outsmart brand; IPANE will remain the web brand, but the app brand will be Outsmart. For more details, visit: <https://www.eddmaps.org/ipane/>.
- The **New Jersey Sea Grant** strives to advance knowledge and education through their research, education and extension programs that work with the local community to achieve their goals. They are affiliated with the College of New Jersey, Rutgers University, William Paterson University and many more. They contribute leading research in the field of marine and environmental science, focusing on specific priority areas. For more details, visit: <http://njseagrant.org/>.

Non-Government Organizations

- The **New Jersey Invasive Species Strike Team** (NJISST) within the larger organization of Friends of Hopewell Valley Open Space (FohVOS) is the most active group working to combat invasive species in New Jersey. This organization does not receive state funding and takes on a coordination role between partners throughout the state, hosting a state meeting annually. Partner organizations include townships, conservation organizations, and land trusts. The NJISST uses EDDMapS (see above under partnerships) as a central repository for all of its records. The strike team has developed its own cell phone application entitled New Jersey Invasives. This app has photos and information to aid in the identification of invasive species. Users can report the presence and upload photos of invasive species they may find. See <https://www.fohvos.info/invasive-species-strike-team/> for more information.
- The **Rutgers Cooperative Extension New Jersey Agricultural Experiment Station** (NJAES) Center for Vector Biology conducts basic and applied research to better understand and address societal issues related to mosquitoes and other insects that impact public health. More information can be found at: <http://vectorbio.rutgers.edu/outreach/>. The NJAES also maintains a New Jersey Weed Gallery, a collection of photos and descriptions of agricultural weeds found in New Jersey. For more information, visit: <https://njaes.rutgers.edu/weeds/>.
- The **Native Plant Society of New Jersey** has plant lists that detail information on native plants of every kind, the habitats in which they are found, their habits, propagation, and guides to their maintenance and care. This is a co-operative effort of professional horticulturalists, landscape designers, botanists and industry professionals. To view these lists, visit: http://www.npsnj.org/pages/nativeplants_Plant_Lists.html#p7HGMpc_1_4.

New York



Groups with State Lawmaking Influence

New York State has both an **Invasive Species Council** and an **Invasive Species Advisory Committee**. The council meets at least quarterly and generates and revises invasive species policy. It is co-led by the NY Department of Environmental Conservation (DEC) and the NY Department of Agriculture and Markets (DAM). The nine members of the council include the following:

- Commissioner of the Department of Environmental Conservation
- Commissioner of the Department of Agriculture and Markets
- Commissioner of Transportation
- Commissioner of Education
- Commissioner of the Office of Parks
- Commissioner of Recreation and Historic Preservation
- Secretary of State
- Chairperson of the NYS Thruway Authority
- Director of the NYS Canal Corporation
- Chairperson of the Adirondack Park Agency

The purpose of the **NYS Invasive Species Advisory Committee** is to provide the council with current information and guidance. The advisory committee often assists the council in drafting legislation. This committee can have up to 25 members either specified by the law or stakeholder organizations. Membership is subject to change. To learn more about both the Invasive Species Council and the Advisory Committee, visit: <https://www.dec.ny.gov/animals/6989.html>.

Management Plan

New York State has a **Comprehensive Invasive Species Management Plan**, which was published in 2018. It details state efforts to:

- Maintain and expand partnerships
- Streamline and centralize information flow
- Set invasive species management priorities and improve preparedness
- Engage and inform the public
- Improve prevention and early detection
- Improve response to invasive species
- Recover ecosystem resilience
- Evaluation of success

To view the management plan, visit: http://www.dec.ny.gov/docs/lands_forests_pdf/iscmpfinal.pdf

Involved Government Organizations

- The **New York State Department of Environmental Conservation** (NY DEC) is the most involved government entity in New York State when it comes to invasive species management. Many of these efforts are funded by NYS's Environmental Protection Fund. Additionally, the NY DEC often partners with other organizations (detailed further in the Partnerships section). To learn more, visit: <https://www.dec.ny.gov/>.
- The **New York Invasive Species Clearinghouse** (NYIS.info) is an invasive species clearinghouse created in 2008 with funds from the Environmental Protection Fund provided to the NY DEC. This site provides the public with information on the invasive species that are problematic in NYS. In 2015 this funding ran out and the site is now managed by New York Sea Grant. To view this website, visit: <http://nyis.info/>.

Involved Government Organizations Cont.

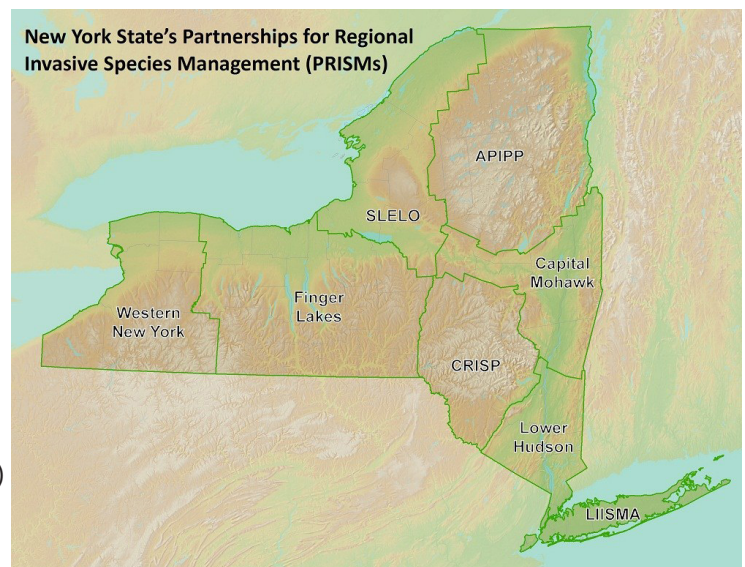
- The **New York Department of Agriculture and Markets (NYSDAM)**, **Division of Plant Industry** plays an important role in the prevention, detection and response to invasive species. In efforts to prevent the introduction of agricultural pests, NYSDAM partners with the **USDA Animal and Plant Health Inspection Service (APHIS)**, the federal **Department of Homeland Security (DHS)** the **National Plant Board**, and other state agencies and municipalities. NYSDAM monitors and surveys for invasive pests and diseases so that they can be prevented, detected, managed or eradicated. Pathways of introduction are evaluated to develop prevention strategies. NYSDAM also develops and implements quarantine policies and regulatory requirements for agricultural commodities as well as policies regarding the safe import and export of agricultural commodities. To learn more, visit: <https://www.agriculture.ny.gov/PI/PIHome.html>.
- The **New York Invasive Species Research Institute (NYISRI)** is funded by the Environmental Protection Fund, and is housed by Cornell University. This organization facilitates communication between invasive species research and manager communities and promotes programs and projects to improve the scientific basis of invasive species management. This organization also ensures research is conducted in needed areas so that management practices are optimized. For more information, visit: <http://www.nyisri.org/>.
- The **New York State Department of Transportation (NYSDOT)** takes invasive species into account when scoping, planning, designing, constructing, and with maintenance of highway facilities. The department is required by law to prevent the introduction of invasive species, provide for their control and minimize the economic, ecological and human health impacts that invasive species can cause through its weed management programs and during the movement of their equipment. For more information about this group, visit: <https://www.dot.ny.gov/index>. To view their procedures and control methods, visit: <https://www.dot.ny.gov/divisions/engineering/environmental-analysis/manuals-and-guidance/epm/repository/4-8invas.pdf> and <https://www.dot.ny.gov/divisions/engineering/environmental-analysis/manuals-and-guidance/epm/repository/4-8atta4.pdf>.

Partnerships

- The **Partnerships for Regional Invasive Species Management (PRISMs)** were formed by the New York State Department of Environmental Conservation (NYSDEC) to unite resource managers, non-governmental organizations, industry, resource users, citizens and other state agencies and stakeholders managing invasive species. These 8 regions cover the entire state. The roles of PRISMs include: Planning regional invasive species management, developing early detection and rapid response capacity, implementing eradication projects, educating - in cooperation with DEC contracted Education and Outreach providers, coordinating PRISM partners, recruiting and training volunteers and support for research through citizen science. To learn more about PRISMs, visit: <https://www.dec.ny.gov/animals/47433.html>

The eight PRISM regions include:

- Adirondack Park Invasive Plant Program (APIPP)
- Capital Mohawk PRISM
- Catskill Regional Invasive Species Partnership (CRISP)
- Finger Lakes PRISM
- Long Island Invasive Species Management Area (LIISMA)
- Lower Hudson PRISM
- St. Lawrence Eastern Lake Ontario PRISM (SLELO)
- Western NY PRISM



Above, a map of New York State's PRISM Coverage. Credit: Adirondack Invasive Plant Program

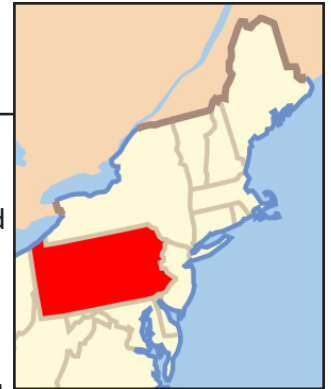
Partnerships Cont.

- The **New York Sea Grant** (NYSG) is one of the National Oceanic and Atmospheric Administration's (NOAA) university-based programs. With these programs, NOAA works with university extension to conduct research relevant to coastal areas. NYSG funds research within State Universities of New York (SUNYs) as well as Cornell University focused on aquatic invasive species. This information is important to the coastal region in the southern part of the state and areas bordering the Great Lakes. NYSG currently maintains the New York Invasive Species Clearinghouse (NYIS.info) website. To learn more, visit: <https://seagrant.sunysb.edu/>.
- The **Cooperative Agricultural Pest Survey** (CAPS) is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in New York before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. CAPS is directed by the USDA's State Plant Health Director and NYS's State Plant Regulatory Officer and conducted by the Division of Plant Industry of the NYS Department of Agriculture and Markets. For more information, visit: <https://www.agriculture.ny.gov/CAPS/index.html>.
- The **Lake Champlain Basin Program** (LCBP) works in partnership with government agencies from New York, Vermont and Québec, private organizations, local communities and individuals to coordinate and fund efforts that benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation and cultural resources. For more details visit: <http://www.lcbp.org/>.
- The **New York iMapInvasives** program is an information clearinghouse for citizen science reporting. A mobile app and website was developed so that citizen can report invasive species sightings. Other states have adopted iMapInvasives as well where it is typically hosted by the state's Natural Heritage Program. To learn more, visit: <https://www.nyimainvasives.org/>.

Non-Government Organizations

- The **Ecology and Management of Invasive Plants Program** at Cornell is directed by Dr. Bernd Blossey and conducts research to assess the ecological impacts of introduced plant species. This group focuses on potential mechanisms of how non-indigenous plants may affect native ecosystems and the species living in them. This group also assists in developing and implementing biological control programs and studying the mechanisms allowing introduced plant species to become invasive. For more details, see: <http://invasiveplants.net/>.
- The **New York Flora Association** (NYFA) began in 1990 with the purpose of allowing professional botanists to promote the study of native plants through field botany and developing a greater understanding of the plants that grow in the wild of New York State. This group is an independent non-profit. They host the New York Flora Atlas which is a source of information for the distribution of plants within the state, as well as information on plant habitats, associated ecological communities and taxonomy. To learn more, visit: <https://www.nyflora.org/>.
- The **Lake Champlain Land Trust** strives to save the scenic beauty, natural communities and recreational amenities of Lake Champlain by permanently preserving significant islands, shoreline areas, and natural communities in the Champlain Region. For information, visit: <https://www.lclt.org/>.
- The **Lake George Association** (Invasive Species in the Lake George Watershed) focuses on performing critical, in-the-ground projects that make a difference in Lake George water quality and providing a comprehensive education program that teaches people that their everyday actions help keep the lake clean. For more information, visit: <https://www.lakegeorgeassociation.org/>.

Pennsylvania



Groups with State Lawmaking Influence

The Governor's **Invasive Species Council of Pennsylvania** is an active advisory panel called in the state of Pennsylvania. This council meets quarterly to discuss and identify invasive species and related issues that pose a threat to public health or the state's natural and agricultural resources. The group also discusses public outreach, current updates and recommendations for policy development. Within the council, working groups have been formed with the goal of implementing various components of the council's management plan titled "Invaders in the Commonwealth". However, because the council is currently an unfunded mandate, implementation of the statewide management plan is difficult to achieve. Members of the council are listed on the Pennsylvania Department of Agriculture's website. Represented organizations are as follows:

- PA Department of Agriculture
- PA Department of Conservation and Natural Resources
- PA Department of Environmental Protection
- PA Department of Transportation
- PA Department of Health
- PA Fish and Boat Commission
- PA Game Commission
- Western PA Conservancy
- The Nature Conservancy
- PennAg Industries Association
- PA Landscape & Nursery Association
- Penn State University
- PA Sea Grant
- University of Pennsylvania
- PA Farm Bureau
- PA Lake Management Society
- PA Parks & Forests Foundation
- PA Transportation Sector
- Pennsylvania Association of Conservation Districts
- County Commissioners Association of Pennsylvania
- PA State Association of Township Supervisors

As of January 2019, the **PA Department of Agriculture** is attempting to hire a coordinator for the council to ensure action is taken to implement recommendations and goals set forth by the council. A new website for the council is forthcoming and is planned to be hosted as a section within the PA Department of Agriculture's current website.

Management Plan

Pennsylvania has a **Comprehensive Invasive Species Management Plan** that is updated at least every five years. The plan was most recently updated in 2017, although without a coordinator, the plan efforts remain stagnant. The plan, which outlines Pennsylvania's goals for the next five years, is broken into the following sections:

- Examples of Invaders in Pennsylvania
- The Need for an Invasive Species Management Plan
- The Framework for Response
- Recommendations
- Moving Forward

To view the management plan, visit: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_002854.pdf.

Involved State Government Organizations

- The **Pennsylvania Department of Agriculture** (PDA) chairs the Governor's Invasive Species Council of Pennsylvania and its **Bureau of Plant Industry** works to detect, manage and control destructive disease, insect and plant pests. They also head the **Bureau of Animal Health and Diagnostic Services** (BAHDS) which protects livestock and poultry from foreign diseases, thereby protecting food supplies and citizen health. This organization focuses heavily on invasive species that are of significance to the state's agriculture. They administer the Noxious Weed Control Law and Noxious Weed Control List, which classifies noxious weeds based on the ability to manage and eradicate by grouping weeds into one of three classes. For more information, visit: <https://www.agriculture.pa.gov>.
- The **Pennsylvania Department of Conservation and Natural Resources** (DCNR) manages 2.2 million acres of state forest and 120 state parks. This organization serves on Governor's Invasive Species Council of Pennsylvania and developed its own invasive species management plan in 2011 to establish protocols for prevention, survey and detection, control and restoration on DCNR land. This management plan was created in response to the Pennsylvania invasive species management plan that was established in 2009 developed by the Governor's Invasive Species Council of PA. The DCNR conducts trainings on invasive plant identification and control in both field and classroom settings for foresters and park personnel as well as the public. The Bureau of Forestry monitors insects and diseases that could impact the entire structure of Pennsylvania's forests. To learn more about the department, visit: <https://www.dcnr.pa.gov>. To view the management plan, visit: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_002854.pdf
- The **Pennsylvania Department of Transportation** (DOT) has developed protocols for developing best management practices as well as best management practice protocols of invasive species. This document outlines ways to incorporate invasive species management into construction, maintenance, movement of equipment, mowing, disposal of plants, soil disturbance and excavation. For more information about this organization, visit: <https://www.penndot.gov>. To view their protocols, visit: <http://www.dot.state.pa.us/public/pubsforms/Publications/PUB%20756.pdf>.
- The **Pennsylvania Fish and Boat Commission** (PFBC) has taken on the role of monitoring, and managing select aquatic invasive species. The PFBC has a list of banned aquatic species and has also developed species-specific action plans. To learn more, visit their website: <https://www.fishandboat.com>.
- The **Pennsylvania Game Commission** (PGC) primarily focuses on game species and a secondary focus on non-game species including species at risk. The PGC published a State Wildlife Action Plan in 2005 and updated it in 2015. The plan is a non-regulatory, proactive conservation blueprint to reduce future costs of wildlife management. Invasive species are covered in this plan; however, the main focus of the plan is preventing native species from becoming endangered. In 2006, the PGC managed the feral swine task force; however, this committee may be inactive at present. To learn more, visit: <https://www.pgc.pa.gov>.
- The **Pennsylvania Department of Health** has developed a program to survey the prevalence of West Nile Virus by collecting mosquitoes, dead birds and monitoring horses and people. This is to prevent the spread of disease throughout the environment. For more information about this program, visit: <http://www.westnile.state.pa.us/>.
- **Conservation Districts** have been established in every Pennsylvania county except Philadelphia under the Conservation District Law to address the need to support grass-roots conservation efforts. They implement a variety of programs and provide assistance for a range of issues relative to their county. Each Conservation District is led by a Board of Directors made up of local residents. They study county natural resource issues and make decisions which enhance and protect the community. For more details, see <https://pacd.org/>.

Partnerships

The five active **Cooperative Weed Management Areas** (CWMAs) cover part of the state to manage invasive species. These are partnerships between different county, state and federal agencies, NGOs, businesses and landowners. The Western Pennsylvania Conservancy is a partner and has taken on a coordinating role in three of these CWMAs. PA Sea Grant coordinates the remaining CWMA. Two CWMAs are currently inactive: the Delaware River Invasive Plant Partnership and the Juniata River CWMA.

Partnerships Cont.

Active CWMAs include:

- Lake Erie Watershed CWMA
- French Creek Watershed CWMA
- Allegheny Plateau Invasive Plant Management Area
- Sinnemahoning Invasive Plant Management Area
- Southern Laurel Highlands Invasive Plant and Pest Management Area

Right, Map of CWMAS with Lake Erie Watershed CWMA in upper left corner; touching LEW CWMA is the French Creek Watershed CWMA; to the right of the FCW CWMA is the Allegheny Plateau IPMA; touching the APIPMA on the right is the Sinnemahoning IPMA; and down near the bottom, appearing as many small dots is the Southern Laurel Highlands Plant & Pest Management Partnership. The other two large CWMAs (Juniata and Delaware) are inactive.



- The **Pennsylvania Sea Grant** organization is administered by NOAA, Penn State University and the Commonwealth of Pennsylvania. PA Sea Grant offers adult and K-12 educational programs, funds cutting-edge scientific research, provides valuable Great Lakes and coastal resources and expertise to communities, decision-makers, and individuals throughout the state. They developed the "Rapid Response Plan and Procedures for Responding to Aquatic Invasive Species in PA", a document needed by the Governor's Invasive Species Council of Pennsylvania to apply for certain grant funds. To learn more about this organization, go to their website: <https://seagrant.psu.edu/>. They have created two field guides specific to aquatic invasive species in their region:
 - https://docs.wixstatic.com/ugd/ed0c71_55482e5446b441e6ae839065b5fd25a3.pdf
 - https://seagrant.psu.edu/sites/default/files/MidAtlantic%20AIS%20Field%20Guide_Web.pdf
- The **iMapInvasives** program is administered by the state's Natural Heritage Program. In addition to mapping invasive species across the state, the program works closely with state and local organizations/agencies to raise awareness of early detection/rapid response efforts and high priority species findings. To learn more, visit: <https://www.paimapinvasives.org>.
- The **Cooperative Agricultural Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Pennsylvania before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. USDA APHIS has partnered with the Pennsylvania Department of Agriculture, Bureau of Plant Industry to monitor agricultural pest species. For more details on this program, visit: https://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/plant-health/CAPS/Pages/default.aspx
- The **Pittsburgh Parks Conservancy** was founded in December of 1996 by a group of citizens concerned with the deteriorating conditions of Pittsburgh's city parks. Since 1998 an official private interest partnership agreement to restore the parks. This program is currently active in 22 parks. For more information, visit: <https://www.pittsburgh-parks.org/>. The Pittsburgh Parks Conservancy has also created a field guide specific to invasive species for their region: https://docs.wixstatic.com/ugd/ed0c71_3de35abdfa23433bb36cd5a69260a9e9.pdf.
- The **PA Master Naturalist Program** is a statewide partnership initiative that aims to connect people with their local ecosystems through intensive natural science training and local conservation service work. They work with a coalition of community and conservation organizations to ensure they have the necessary volunteer leader-(cont)

Partnerships Cont.

- ship to address the most pressing conservation needs and challenges. They host an annual Bioblitz, a competition to find the most species. This is essentially a citizen science program; the observations are shared with scientific repositories. This program could help scientists identify where invasive species may be present. For more details, visit: <https://www.inaturalist.org/projects/pa-master-naturalist-2017-annual-meeting-bioblitz>.

Non-Government Organizations

- The **Pennsylvania Land Trust Association** (PALTA) is a land trust organization, which holds an annual conference. This association has 92 members involved in conservation efforts including invasive species management. See <https://conserveland.org/conservation-101/> for more information.
- The **Garden with Natives** program is hosted by **Bowman's Hill Wildflower Preserve**, located in New Hope, Pennsylvania; they have general information regarding invasive plants and their threats to natural resources. The program stresses the importance and benefits of using native plants in the garden. Visit <http://bhwp.org/grow/garden-with-natives/invasive-species/> for more details.
- The **Integrated Pest Management Program** (IPM) developed by Pennsylvania State University Cooperative Extension focuses on agricultural pests and ways to control them to promote food security. PSU's Cooperative Extension produces and provides educational materials on pests, diseases, and many other topics to a variety of audiences. For more information and materials, visit: <https://extension.psu.edu/ipm-in-agriculture>.
- The **Pennsylvania Flora Project** is a database started by the Morris Arboretum that provides information on habitat, growth habit, and the status of various plant species within Pennsylvania. To visit the database, go to: <http://paflora.org/original/>.
- The **Nine Mile Run Watershed Association** (NMRWA) works on various initiatives, including the largest urban stream restoration in the US completed by the U.S. Army Corps of Engineers. They work to restore and protect its watershed ecosystem, while working regionally to support and implement resilient solutions for a healthy urban environment. They have a blog that describes their projects, some of which are related to invasive species while restoring different areas within the watershed. For more details, visit: <https://ninemilerun.org/>.
- The **Friends of High School Park** (FHSP) is a non-profit volunteer organization whose mission is to create, manage, and preserve an 11+ acre native ecosystem for their community. This project is completed with cooperation of Cheltenham Township. In 2007, the Cheltenham Township received a grant from the Pennsylvania Department of Conservation and Natural Resources. They have been able to develop a master plan with detailed management protocols and timelines to guide their projects. To learn more, visit: <http://www.friendsofhighschoolpark.org/fhspw/goals/>.

Rhode Island



Groups with State Lawmaking Influence

The **Coastal Resources Management Council** (CRMC) is a management agency with regulatory functions. They are primarily responsible for preservation, protection, development and restoration of the coastal areas of the state by implementing their comprehensive coastal management plans and the issuing of permits for work with the coastal zone of the state. They authored the federally approved management plan (see below) and receives an annual federal grant to implement this plan. They have partnered with the **Rhode Island Department of Environmental Management** (RIDEM) to provide some of these federal funds for their freshwater invasive species work. The two agencies have agreed to split the state's responsibilities regarding invasive species so that CRMC addresses marine species and RIDEM addresses freshwater species. For more details, visit: <http://www.crmc.ri.gov/invasives.html>.

Management Plan

In 2007, the **Rhode Island Aquatic Invasive Species Management Plan** was created. It has not been updated since its publication. The Coastal Resources Management Council is working to implement plans outlined in the state management plan. To view the plan, visit: https://www.anstaskforce.gov/State%20Plans/RI_SMP_Approved.pdf.

Involved State Government Organizations

- The **Department of Environmental Management** (DEM) serves as the chief steward of the state's natural resources. Their mission is "to protect, restore and promote the environment to ensure Rhode Island remains a wonderful place to live, visit, and raise a family." They have developed a plan to guide their work over the next several years. Find more information on aquatic invasive species and the prevalence of mosquito-borne diseases at: <http://www.dem.ri.gov/programs/water/quality/surface-water/aquatic-invasive-species.php> and <http://www.dem.ri.gov/programs/agriculture/mosquito-diseases.php>.
- The **University of Rhode Island Biological Control Lab** conducts research and implementation programs in classical biological control of invasive species. Programs have involved the use of insects to control introduced insects such as the hemlock woolly adelgid, the lily leaf beetle and winter moth, as well as using insects to control invasive weeds such as Phragmites, swallow-worts, cypress spurge, mile-a-minute, and knapweed. The lab also conducts surveys for invasive species in partnership with Rhode Island Department of Environmental Management (RI DEM) Division of Agriculture and RI DEM Division of Forestry. For more information, visit: <https://web.uri.edu/biocontrol/>.

Partnerships

- The **Invasive Plant Atlas of New England** (IPANE), soon to become Invasive Pest Atlas of New England, is a comprehensive web-accessible database of invasive and potentially invasive plants in New England that is updated by a network of professional and trained volunteers. It was established at the University of Connecticut, which later partnered with the University of Georgia (UGA) for continued data stewardship. IPANE data is available via EDDMapS, housed the Center for Invasive Species and Ecosystem Health within UGA. The program promotes early detection and rapid response to new invasions. They have an app that allows users to report sightings of invasives in the field. A similar app called Outsmart (originally developed at the University of Massachusetts) has recently merged with IPANE to create a single New England regional app under the Outsmart brand; IPANE will remain the web brand, but the app brand will be Outsmart. To learn more information, visit: <https://www.eddmaps.org/ipane/>.
- The **Cooperative Agricultural Pest Survey** (CAPS) is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is (cont.)

Partnerships Cont.

- to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Rhode Island before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. For more details and information, visit: <http://www.dem.ri.gov/programs/agriculture/caps.php>.
- The **Rhode Island Invasive Species Council** (RIISC) aims to protect native biodiversity in Rhode Island. To this end, they gather and convey information on the presence, distribution, ecological and economic impacts and management of invasive species, promote the use of native species and non-invasive alternative, and work cooperatively among all involved parties. RIISC is an outreach program of the Rhode Island Natural History Survey, The Rhode Island Agricultural Experiment Station and The University of Rhode Island Cooperative Extension. RIISC is currently developing measures that can be used to assess the impact of invasive species on natural habitats in the Narragansett Bay Region (which includes essentially all of Rhode Island) and collective capacity (agencies, non-profits, local groups and private citizens) to deal with the threats. Each year they produce an annual report with their findings. To view their reports and read more information, visit: <http://www.watershedcounts.org/> and <https://rinhs.org/invasive-species-portal/riisc/>.
- The **RI Woods**, a website hosted and maintained by the University of Rhode Island (URI), Department of Natural Resources Science, provides information for property owners, businesses, and manufacturers regarding forest policy and management, inheritance, usage rights, and RI Woods-related products. They aim to be a hub of information for all different users and an avenue to resources promoting good stewardship and forest health. This website is a partnership of URI, USDA Natural Resources Conservation Service, Rhode Island Department of Environmental Management, Rhode Island Conservation and Development Area Council, Rhode Island Forest Conservators Organization and Rhode Island Woodland Partnership. To learn more: <https://rhodeislandwoods.uri.edu/>.
- The **Rhode Island Sea Grant** is one of the 33 National Sea Grant College Programs working to enhance long-term economic development and responsible use of the coastal resources and environmental stewardship. They are administered by the National Oceanic and Atmospheric Administration (NOAA) have partnered with the University of Rhode Island (URI) and support research, outreach and education programs. Additionally, they partner with the URI Coastal Resources Center for their extension and with the Roger Williams University School of Law for their legal program. For more information, visit: <https://seagrant.gso.uri.edu/>.

Non-Government Organizations

- The **Rhode Island Natural History Survey** (RINHS) consists of member organizations and individuals seeking further knowledge and understanding of Rhode Island biota, geology, and ecosystems. They are an umbrella organization for ecological information in Rhode Island and work to provide sound scientific data that could be used to make informed management decisions. Additionally, they provide the invasive species portal which provides resources regarding invasive species and provide some general information on invasive species. To learn more, visit: <http://rinhs.org/invasive-species-portal/>.
- The **Rhode Island Wild Plant Society** stresses the importance of native plants describing all that they do for us and educate gardeners on why they should use them in their gardens. They do this through offering educational workshops and programs, cultivating native plants, leading nature walks, partnering with other organizations to preserve and protect native plants and organize native plant symposium on best stewardship practices. For more details, visit: <http://riwps.org/taking-action/>.

Vermont



Groups with State Lawmaking Influence

The **Vermont Invasive Exotic Plant Committee** (VIEPC) is composed of representatives from state and federal government, nonprofit organizations and private industry, as well as concerned individuals. The committee's goal is to provide coordination and guidance on invasive exotic plant issues for the public, special interest groups and policymakers, to protect natural communities, native species, agricultural and forestry interests and human use and enjoyment of Vermont's natural resources. To learn more, visit: <https://vtinvasives.org/land/regulations/vermont-invasive-exotic-plant-committee>.

Together, members:

- Promote cooperative efforts to address invasive exotic plant issues.
- Educate the public, special interest groups, and policymakers about invasive plants.
- Compile information on invasive plants and facilitate access to the information.
- Make recommendations to the Vermont Agency of Agriculture, Food & Markets about which invasive species should be considered for the Quarantine Rule.
- Develop and maintain a state watch list of invasive plants.

The **Secretary of the Agency of Natural Resources** has emergency permitting authority to initiate a rapid response to new invasive species invasion. These permits are available to the Commissioners of the Vermont Department of Environmental Conservation (DEC) and the Vermont Department of Fish & Wildlife. More regulations and laws can be found here: <https://dec.vermont.gov/watershed/lakes-ponds/aquatic-invasives/laws-and-regs>.

The Watershed Management Division of the Department of Environmental Conservation manages the **Vermont Aquatic Nuisance Control Program**. The goal of this program is "to prevent or reduce the environmental and socio-economic impacts of nuisance (primarily non-native) aquatic plant and animal species". For more information, visit: <https://dec.vermont.gov/watershed/lakes-ponds/permit/control/aquatic-nuisance-control>.

Management Plan

There is no statewide management plan for invasive species currently.

Involved Government Organizations

- The **Agency of Agriculture Food and Markets'** regulatory branch of **Plant Health and Pest Management** works to detect, intercept and control plant and insect pests that threaten native plant and agriculture resources. These range from plant pathogens, agricultural pests, exports and imports, nursery inspection and seed certification. They maintain the Vermont Noxious Weeds Quarantine list. For more information, visit: <https://agriculture.vermont.gov/>.
- Within the **Department of Forests, Parks and Recreation**:
 - The **Forests and Forestry Division** created the 2017 Forest Action Plan outlining goals and planned actions designed to meet the desired future forest conditions. Additionally, they have funded a Forest Stewardship Program, Urban and Community Forestry Program, Forest Legacy Administration, Fire Assistance program and Forest Health Monitoring. They host information on Firewood and Invasive Pests on their Buy It Where You Burn It page. Each summer they publish Monthly Forest Insect and Disease Observations. To learn more: <https://fpr.vermont.gov/>.
 - The **Invasive Plant Coordinator** position has been hosted by the department since 2015, funded through various grants from the Forest Service, and an initial collaboration with The Nature Conservancy Vermont. The coordinator works with communities, organizations, and other state agencies to provide information (cont.)

Involved Government Organizations Cont.

- about the impact of invasive terrestrial plants, and connect those people to resources to take action.
- The **Habitat Restoration Crew** is a seasonal crew based out of the Rutland regional office, hosted from the department since 2013. They focus on NNIP management on state lands and NNIP outreach through running programs with volunteers in state parks. This effort was initially funded through a CARP grant, and in 2017 became part of the project that funds the IPC position through a Forest Service grant.
- Within the **Department of Environmental Conservation** (DEC):
 - The **Watercraft Decontamination Program** is managed by the Vermont DEC, who owns and supervises the use of watercraft decontamination stations placed strategically at boat launches around the state. This program offers free watercraft decontamination to vessels at risk of carrying invasive species.
 - The **Public Access Greeter Program** has been in place since 2002, and has resulted in over 100,000 watercraft inspections, hundreds of intercepts of invasive species and has educated boaters on the threats of AIS.
 - The **Vermont Invasive Patrollers** (VIPs) is a dedicated group of volunteers that scour Vermont's lakes, rivers and ponds for new infestations of invasive plants.
 - The **Watershed Management Division** focuses specifically on watercraft inspection and aquatic invasive species and shares information of some aquatic species and how to control these species.

To learn more about the Department, visit: <https://dec.vermont.gov/>.
- Within the **Department of Fish & Wildlife**:
 - The **LIEP Invasive Species Program** focuses on Location, Identification, Evaluation and treatment, and Prevention to help landowners manage invasive species. They provide information material on different invasive species. Many projects occurring on state land are overseen by a Stewardship team that consists of FPR, F&W and DEC staff. More than 50% of the work done using federal EQIP funding is to control invasive plants on private land. They have an Aquatic Invasive Species Team made up of fisheries biologists working on aquatic invasive fish species and fish pathogen issues primarily through regulation and public education and outreach on spread prevention measures. They have implemented fish importation and in-state fish transport/movement regulations and have overhauled regulations pertaining to the use of baitfish in Vermont, to reduce the risk and prevent the spread of fish pathogens. They conduct annual wild fish health testing on Lake Champlain as well as other inland Vermont lakes to monitor for fish pathogens.
 - The Department owns more than 98 **Wildlife Management Areas** (WMAs) that are divided into 5 districts throughout Vermont. In these areas, they manage invasive species infestations and improve wildlife habitat. These state-managed lands are open to hunting, fishing and other recreational activities.

For more information, visit: <https://vtfishandwildlife.com/>.

Partnerships

- The **Vermont Invasives Partnership** was created as a joint effort between the University of Vermont Extension, the Vermont Department of Forests, Parks and Recreation, the Vermont Department of Environment Conservation and the Vermont Chapter of the Nature Conservancy. It was funded by the USDA Forest Service Urban and Community Forestry Assistance Program at the recommendation of the National Urban & Community Forestry Advisory Council. This website provides information for those interested in learning more about invasive insects, plants and pathogens. It also guides visitors to the appropriate places to learn more and become involved in various efforts. For more information, visit: <https://www.vtinvasives.org/>.
- The **iMapInvasives** program in Vermont is no longer active due to associated costs with the license and administration of the program. It is a citizen science program that helps scientists and natural resource professionals track and take action against invasive species. It was administered by the Nature Conservancy and they worked with other organizations and agencies when actions needed to be taken. For more details and information: <https://www.imapinvasives.org/login>

Partnerships Cont.

- The **Cooperative Agricultural Pest Survey (CAPS)** is a collaborative effort by federal and state agricultural organizations to raise public awareness about introduced pests by means of surveillance, detection and monitoring of invasive, exotic pests. These pests range from weeds to invertebrate organisms and insects. Their goal is to increase awareness to prevent the introduction and spread of potentially invasive, exotic pests in Vermont before they become established. The staff conducts surveys at various sites that could serve as potential pathways in introducing pests into the environment and set insect traps to monitor for insects. The USDA APHIS partners with the Agency of Agriculture, Food and Markets to administer this program.
- The **Lake Champlain Basin Program (LCBP)** works in partnership with government agencies from New York, Vermont and Québec, private organizations, local communities and individuals to coordinate and fund efforts that benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation and cultural resources. To learn more about this program, visit: <http://www.lcbp.org/>.
- The **Lake Champlain Basin Aquatic Invasive Species Rapid Response Task Force** is a multi-agency group of state and federal partners, implements the Lake Champlain Basin Rapid Response Plan. They facilitate and promote cooperation among jurisdictions during response to new AIS introductions in the Lake Champlain Basin. Although there have been numerous recent AIS introductions, member agencies do not actively manage these invasions.
- The **Lake Champlain Sea Grant** is based at the University of Vermont and partners with SUNY Plattsburgh and the National Oceanic and Atmospheric Administration's (NOAA). They develop and support research, outreach and education programs. They table at various fishing tournaments for outreach to anglers teaching them about invasive species prevention. They work to empower businesses, communities and individuals to make informed decisions regarding management, conservation and utilization of their aquatic resources. For more information, visit: <https://www.uvm.edu/seagrant/node/1>.

Non-Government Organizations

- The **Lake Champlain Land Trust** strives to save the scenic beauty, natural communities and recreational amenities of Lake Champlain by permanently preserving significant islands, shoreline areas, and natural communities in the Champlain Region. They also host a website to help the public learn how to identify aquatic invasive species. To learn more, visit: <https://www.lclt.org/>.

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