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## **Capital Region Partnership for Regional Invasive Species Management (CR-PRISM) Framework of Response**

**Purpose:** The Capital Region Partnership for Regional Invasive Species Management (CR-PRISM) prioritizes high threat invasive species with a low number of populations, as well as vectors that could potentially introduce these species. Invasive species are non-native and pose a serious threat to the economy, environment and/or human health. Efforts are focused on conservation targets that are highly significant or protect rare, threatened or endangered species.

The CR-PRISM prioritizes projects that have a high probability of success and the greatest impact with a limited capacity. This document provides an overview of considerations to be implemented when determining work efforts. These work efforts include: prevention, detection and monitoring surveys, response actions, and restoration.

The document provides a [Framework of Response](#) that permits the efficient use of resources while providing the greatest return on work efforts. The CR-PRISM focuses on Priority Conservation Areas (PCAs) and Priority Waterbodies (PWBs). Secondary sites are considered based on ecological connectivity, social, cultural, or partner priorities at the discretion of the CR-PRISM.

### **How the CR-PRISM Prioritizes Work**

#### **By Invasive Species Threat, Regulation or Tier:**

- Species are evaluated to determine their [invasiveness ranking](#) by assessing each species ecological impact, biological characteristics and dispersal ability, ecological amplitude and distribution, and difficulty to control. These assessments can be used for species that are established in New York State, new arrivals or even species that are not yet present. The rankings are based on a scale of 0 to 100, with 100 being the highest threat. The CR-PRISM focuses efforts on species with higher threat rankings due to their ability to invade areas at a faster rate and/or have a higher impact on the environment.
- Select invasive species are regulated by New York State to help reduce new infestations and spread of existing populations. Prohibited invasive species cannot be knowingly possessed with the intent to sell, import, purchase, transport or introduce. In addition, no person shall sell, import, purchase, transport, introduce or propagate prohibited invasive species. Regulated invasive species are species which cannot be knowingly introduced into a free-living state, or introduced by a means that one should have known would lead to such an introduction, although such species shall be legal to possess, sell, buy, propagate and transport. The CR-PRISM targets prohibited species first to ensure the existing populations of these species are contained or eliminated.
  - [New York State Prohibited and Regulated Invasive Plants](#)
  - [New York State Prohibited and Regulated Invasive Animals](#)
- Species are assigned to a tier based on state invasiveness ranks and abundance. A [statewide tier list](#) was developed by the New York Natural Heritage Program (NYNHP) to guide management priorities





across New York State. Additionally, each PRISM has developed a [tier list](#) to guide management priorities within each region.

- **Tier 1** species are not yet present in the region and surveying efforts are targeted for detection of these species. Targeting invasive species early is the most cost-effective approach to prevent further damages.
- **Tier 2** species are present in low abundance and are possible eradication candidates. They are another high priority target during detection surveys. If a tier 2 species is detected and the project is applicable, it can be run through the [Invasive Plant Management Decision Analysis Tool \(IPMDAT\)](#) to determine if eradication is feasible. If so, it will be added to the list of priority control projects for CR-PRISM staff and partners.

Actions regarding **Tier 3 and 4** species are dependent on location and are addressed below.

It is important to note that tier rankings are dynamic and need to be reevaluated as new information becomes available (such as new recorded infestations or updates to invasiveness rankings).

#### By Location:

- Highly probable areas are the most likely areas invasive species will be introduced and/or establish, especially pertaining to areas with a lot of human movement and disturbance. To protect larger areas that don't have invasive species or have a very low abundance of invasive species, the CR-PRISM prioritizes prevention, detection, monitoring and response efforts in these areas.
  - For example: parking lots, boat launches & high use areas, trailheads, picnic areas, campgrounds, gravel/brush piles, rights-of-way, roadways, etc.
- The [New York Natural Heritage Program \(NYNHP\) Prioritization Models](#) were created to highlight areas of the state that have high ecological significance, a high risk of spread of invasives into the area, and high value according to their protected status. Areas that overlap with high values for all three categories (high ecological significance, high risk of spread and high value due to protected status) are locations where the CR-PRISM focuses prevention, detection, monitoring, and response efforts.
- The [New York Protected Area Database \(NYPAD\)](#) is a spatial database of lands protected, designated, or functioning as open space, natural areas, conservation lands, or recreational areas. These lands cover over six million acres, approximately 20% of New York State. While the database has 'Protected' in its name, that term is used broadly. Lands in NYPAD may be public or private, open or closed to public use, permanently protected from development or subject to future changes in management. The CR-PRISM focuses its efforts on public and protected land, therefore this database is a great resource for assisting in identifying those areas.
- The [Environmental Resource Mapper](#) is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are protected by the state or federal government, or of conservation concern. These maps are intended as one source of information for landowners, land managers, citizens, local officials, and project sponsors engaged in land use decision making, conservation, or environmental assessment. Additionally, the maps can assist in determining if a permit may be needed for projects in that area. These maps also show





significant natural communities, rare plants or animals and wetlands. This is another great tool that helps the CR-PRISM prioritize which sites to manage.

- The CR-PRISM has established areas where efforts are focused within the PRISM boundary, called Priority Conservation Zones. These sites have high ecological significance, greater possibility of invasion, and/or are aesthetically appealing. The CR-PRISM surveys for and manages invasive species within 26 PCAs and 22 PWBs throughout the Capital Region that have been identified through these models.
  - Examples of these sites include: bird conservation areas, wildlife management areas, important bird areas, wild forests, state forests, preserves, parks, grasslands, and historic sites.
- The CR-PRISM has also designated an [Invasive Species Prevention Zone \(ISPZ\)](#), a formal designation for a natural area that is dominated by native species and is known to support exceptional biodiversity concentrations as stated by the New York Natural Heritage Program (NYNHP 2006). The goal of an ISPZ is to protect an area against the intrusion of invasive species. The ISPZ will allow land managers to maximize their limited resources by focusing on areas of high ecological value. In addition, an ISPZ will serve as a point to protect and preserve land holdings in their natural state for future generations.
- The [AIS Pond and Lake Vulnerability Prioritization for New York](#) is summarized on the NYNHP webpage as providing spatial information to help prioritize aquatic invasive species surveys and management efforts of lakes and ponds. With guidance from statewide partners, this online tool allows users to select risk thresholds for invasive species introduction, establishment, and impact to select a subset of lakes. Managers can use the resulting outputs to help guide their aquatic survey or management priorities.
- Using the tools above (the NYNHP Prioritization Models, the Environmental Resource Mapper and NYPAD), we can decide where to survey for and manage tier 3 and tier 4 species. Additionally, these tools are used to determine areas to focus efforts by creating a list of Priority Conservation Areas (PCAs) and Priority Waterbodies (PWBs).
  - **Tier 3** species are containment candidates, as they are too widespread to eradicate from the region but certain areas may be at risk if they are not managed. Actions to contain these species are evaluated by the CR-PRISM staff to identify the most ecologically significant areas.
  - **Tier 4** species are suppressed within and excluded from pristine areas that are dominated by native species and support exceptional biodiversity concentrations. Invasive Species Prevention Zones and other high priority areas are prime target locations for these efforts.

#### **By Presence of Rare, Threatened, Endangered Species and Species of Special Concern:**

- Site assessments should be completed prior to treatment and restoration efforts to ensure actions will not disrupt rare, threatened and endangered (RTE) species.
- RTE species are protected by New York State or by the United States Federal government. The CR-PRISM focuses efforts in areas with rare, threatened or endangered species to ensure these species are protected and native biodiversity is maintained.





- The New York Natural Heritage Program (NYNHP) maintains a [rare plants list](#) and [rare animals list](#) for species in New York State. The NYS DEC maintains a [State Protected Plant List](#) and a [list of Endangered, Threatened and Special Concern Fish and Wildlife Species of New York State](#). The definitions of endangered, threatened and rare plants and [animals](#) within New York State can be found on the [NYNHP Conservation Status Definitions webpage](#).
- The NYNHP also maintains [conservation guides](#) of native plants and animals as well as communities that provide more information about specific species and habitat types.

#### Ecological Connectivity:

- Landscapes are a mosaic of natural and developed parcels, which change overtime resulting in fragmentation of habitat, impacting biodiversity and ecological services provided. Connected corridors of land and forest are essential for many species to thrive, especially migratory species. Ecological connectivity is crucial to ensuring genetic diversity in populations and adapting to the impacts of climate change. The CR-PRISM considers areas that will provide ecological connectivity as a higher priority because of the services they provide.
- The fragmentation of ecosystems impacts the ecological services provided by ecosystems which benefit wildlife and humans. There are four types of ecosystem services that serve important roles in human cultures, livelihoods, and survival.
  - **Provisioning Services**- material benefits that are extracted from nature such as food, drinking water, timber, medicinal herbs, etc.
  - **Regulating Services**- processes that benefit humans and wildlife indirectly such as pollination, decomposition, water purification, climate regulation, etc.
  - **Cultural Services**- non-material benefits that contribute to development of people such as recreation, creativity inspired by nature, indigenous knowledge, etc.
  - **Supporting Services**- natural processes that support all other ecological services such as photosynthesis, nutrient cycling, water cycle, etc.

#### By Impact:

- Some species impact human health and the economy; therefore, they are the focus of removal and exclusion efforts to prevent harm to these groups. These are typically partner-led projects with the CR-PRISM available to assist based on funding or capacity.
- The CR-PRISM has also created [High Priority Invasive Species Lists](#) for aquatic, terrestrial, forest pests and agricultural species. These lists are reviewed and updated annually, as needed. Species on these lists are Tier 1 or 2 invasive species which poses a high or very high threat that are of particular concern with significant impacts to our ecosystems, economy, agricultural systems, and human health.





Using the above information and data, actions can be assigned to conservation areas based on the following guidelines:

Ecological Significance (model value)	Risk of Spread (model value)	# of iMap observations	Action
High	High	Low	Focus CR-PRISM surveys for Tier 1 and 2 species (but also create list of Tier 3 and 4 species for parcel). Focus control efforts if found.
High	Low	Low	Encourage volunteer surveys to report Tier 3 and 4 species (also include Tier 1 and 2 for more advanced surveyors)
High	Any	High	Provide information about Tier 1 and 2 species to conservation partner that has been collecting iMap data





## Priority Conservation Zones:

### Terrestrial Priority Conservation Areas\*:

1. Ann Lee Pond (Albany)
2. Ashford Glen Preserve (Albany)
3. Black Creek Marsh WMA (Albany)
4. Charleston State Forest (Montgomery)
5. Cherry Plain State Park & Capital District WMA (Rensselaer)
6. Eldridge Swamp State Forest (Washington)
7. Four Mile Point Preserve (Greene)
8. Ft. Edward Grasslands (Washington)
9. Goose Egg State Forest (Washington)
10. Grafton Lakes State Park (Rensselaer)
11. Indian Kill (Schenectady)
12. Moreau Lake State Park (ISPZ) (Saratoga, Warren)
13. Partridge Run WMA (Albany)
14. Peck Hill State Forest & Willie Wildlife Marsh (Fulton)
15. Plantation Island WMA (Herkimer)
16. Ralph Rd State Forest (Warren)
17. Rockwood State Forest (Fulton)
18. Rural Grove State Forest (Montgomery)
19. Sanders Preserve (Schenectady)
20. Saratoga Sand Plains WMA (Saratoga)
21. Spruce Creek & Lake Reservoir (Herkimer)
22. Stockport Flats & Nutten Hook Tidal Wetland (Columbia)
23. Thacher State Park (Albany)
24. Vosburgh Swamp (Greene)
25. Washington County Grasslands (Washington)
26. Wilton Wildlife Preserve (Saratoga)

\*The designation of these areas is subject to review.

### Aquatic Priority Waterbodies\*:

1. Partridge Run WMA (Albany)
  - Fawn Lake
  - White Birch Pond
  - Tubbs Pond
  - Newt lake
2. Basic Creek Reservoir (Albany)
3. Thompson Lake (Albany)
4. Queechy Lake (Columbia)
5. Rockwood Lake (Fulton)
6. North-South Lake (Greene)
7. Spruce Lake (Herkimer)
8. Grafton Lakes State Park (Rensselaer)
  - Long Pond
  - Shaver Pond
  - Second Pond
  - Mill Pond
9. Black River Pond (Rensselaer)
10. Dunham Reservoir (Rensselaer)
11. Moreau Lake State Park (Saratoga)
  - Moreau Lake
  - Lake Bonita
12. Delegan Pond (Saratoga)
13. Round Lake/Little Round Lake (Saratoga)
14. Colonie Reservoir (Saratoga)
15. Featherstonhaugh Lake (Schenectady)
16. Collins Lake (Schenectady)
17. Mariaville Lake (Schenectady)
18. Butler Pond (Warren)
19. Rush Pond (Warren)
20. Halfway Creek/Ann Pond (Warren)
21. Carters Pond WMA (Washington)
  - Carters Pond
22. Battenkill River (Washington)

\*The designation of these areas is subject to review.





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## **Supporting Documents and Tools:**

The CR-PRISM uses a [Framework for Response and Integrated Pest Management Approach](#) which can be used for a logical approach when responding to newly identified invasive species infestations. The framework is also designed to help the PRISM prioritize management activities while considering all aspects of management known and possibly unknown.

### **Invasive Species:**

- [Invasiveness ranking](#)
- [Statewide tier list](#)
- [CR-PRISM Tier List](#)
- [iMapInvasives Online](#)
- [New York State Prohibited and Regulated Invasive Plants](#)
- [New York State Prohibited and Regulated Invasive Animals](#)

### **Rare, Threatened and Endangered Species:**

- [NYNHP Conservation Status Definitions](#)
- [NYNHP Rare Plant Lists](#)
- [NYNHP Rare Animal Lists](#)
- [State Protected Plant List](#)
- [List of Endangered, Threatened and Special Concern Fish & Wildlife Species of New York State](#)
- [NYNHP Conservation Guides](#)

### **Locations:**

- [NYNHP Prioritization Models](#)
- [Environmental Resource Mapper](#)
- [New York Protected Area Database \(NYPAD\)](#)
- [Invasive Species Prevention Zone \(ISPZ\)](#)
- [NYNHP Natural Community Lists](#)
- [NYNHP Conservation Guides](#)

### **Reporting Templates:**

- [Survey Report](#)
- [Treatment Report](#)
- [Invasive Species Management Plan](#)

### **Reporting Tools:**

- [iMapInvasives Online](#)
- [iNaturalist Mobile App](#)
- [iMapInvasives Advanced Data Collection Tools](#)

