Invasive Species Management Plan (ISMP):

A Framework for Response

**Purpose:**

The Invasive Species Management Plan (ISMP) template is a working document to help guide invasive species treatments after detection and delineation surveys have been conducted. The guide includes steps for post-treatment monitoring and restoration over a five-year period. The ISMP template is designed to treat a specific infestation at a given location. Multiple ISMP can be deployed over a larger geography. In such a case a more comprehensive plan should be considered when prioritizing multiple treatments in a park or preserve-like setting.

The framework built into this template helps to identify all the variables that are more likely to result in more successful treatments with lasting effects into the future. All management strategies should consider an [Integrated Pest Management (IPM) approach and a Framework of Response](https://www.capitalregionprism.org/framework-for-response.html). Invasive species management plans should be independently reviewed by a project manager or a Capital Region PRISM Coordinator.

**Section 1: Project Summary**

The project summary provides an overview of the site with a description including contact information, location, current land use, species present, and other related parcel characteristics. The project description identifies the treatment target. Survey maps and reports are included in this segment, potential land managers/owners are identified with approval. Map(s) outlining the project site and infestation area are clearly marked. Elements from pre-existing survey reports can be used to supplement this segment. All permits are secured and completed before commencement of treatment. [State Environmental Quality Review (SEQR)](https://www.dec.ny.gov/permits/357.html) checklist should be completed at this stage. SEQR requires the sponsoring or approving governmental body to identify and mitigate the significant environmental impacts of the activity it is proposing or permitting.

The project summary includes a step to determine if the proposed work is feasible and justifiable by completing an [Invasive Plant Management Decision Analysis Tool](https://ipmdat.org/home.html) [(IPMDAT)](https://ipmdat.org/home.html) simulation, when applicable. The Capital Region PRISM recommends using the tool to help determine if an invasive plant control project is likely to be successful and if it warrants an investment of their agency’s resources. To justify spending resources on an invasive plant control project: The invasive species must cause serious environmental, economic harm or harm to human health.

In addition, work in a specific geography can be assessed to see if it falls into an area relevant for protection on the [New York Invasive Species Prioritization Models](https://www.capitalregionprism.org/ny-invasive-species-prioritization-map.html). These models were created to highlight areas of the state that have high ecological significance, a high risk of spread of invasive(s) into the area and a high value according to their protected status. The models can be used to help guide and justify invasive species efforts.

Finally, it is strongly encouraged to determine if conservation priority species or habitat are located in or near the geographic area where the proposed work will occur. The Capital Region PRISM suggests the use of the New York State Department of Environmental Conservation (NYS DEC) “[Environmental Resource Mapper](https://www.dec.ny.gov/animals/38801.html)” to identify significant natural communities, and rare plants or animals. The NYSDEC has also developed a list of [threatened and endangered species](http://www.dec.ny.gov/animals/7494.html) of New York State and a list of species with the [greatest conservation need](https://www.dec.ny.gov/animals/7179.html) that should be referenced before starting treatment to ensure management will not cause any harm to these species.

**Section 2: Implementation Summary**

The implementation summary will provide guidance on response methods with best management practices, monitoring, and restoration strategies. After a 3-5-year period, a new assessment using the ISMP template may need to be conducted based on changing site conditions and parcel priorities.

**Section 3: Project Implementation**

The implementation segment contains treatment timelines and post-season summaries. Always consider the phenology of the invasive target when deploying a treatment to be effective. A post-season summary will be completed to document successes, failures, and needed adjustments to the management approach. Future treatment timelines will reflect such reassessment needs.

**Saving Plans**

Please save your invasive species management plan to your records for reference. The Capital Region PRISM staff can review invasive species management plans and provide recommendations if desired. Capital Region PRISM invasive species management plans will be saved in an online repository for historical purposes and future considerations. All detection, monitoring and response data associated with the project should be reported in the [iMapInvasives](https://www.nyimapinvasives.org/) online database. Please contact the Capital Region PRISM with any questions.

**Section 1: Project Summary**

|  |
| --- |
| **General Information** |
| **Date Response Action Conducted:**  | **Property Owner Name, Title, and Contact:**  |
| **Site Name:**  |
| **Site Address (if different):**  | ***Project* Leader Name, and Contact:** |
| **Latitude/Longitude:** | **County:** |
| **Total Parcel Size (acres):**  | **Team Member Name(s):** |
| **Worksite Size (acres):**  | **Permit(s)/Permission(s) Acquired?** |
| **Report Author:** | **Data Recorder & iMapInvasives ID:** |

**\*\*\*Remember to obtain proper permissions before completing any response project.** **Please attach any permits/permissions completed for this project as an appendix.**

**Conservation Goal:**

☐ To protect/assess a conservation value [ ]  Local Eradication [ ]  Containment

[ ]  Suppression [ ]  Exclusion

**Response Type:**

[ ]  Initial Response [ ]  Follow-up Monitoring [ ]  Crew Assistance Program Project

[ ]  Research Action [ ]  Restoration [ ]  Volunteer Engagement

**Site Description:** Provide existing conditions of the site, current land use, landscape elements, historical uses, etc. This section should include information such as habitat composition, dominance of native species, list any known native species on site, any protected properties or larger landscape features that include site, etc.

**Project Description:** Provide a clear and concise description of work to be conducted, conservation targets and desired future conditions of the site.

**Project Significance:** Some recommended resources to identify high priority sites include:the [CR-PRISM Framework of Response](https://www.capitalregionprism.org/uploads/8/1/4/0/81407728/cr-prism_framework_of_response_2023.pdf), the [NYNHP Prioritization Model](https://www.capitalregionprism.org/ny-invasive-species-prioritization-map.html), the [NYS DEC Environmental Resource Mapper](https://gisservices.dec.ny.gov/gis/erm/)? Please provide screenshots of any maps and/or models used to determine the site is a priority and describe why they show the site is a priority. What other reason is present for conducting the survey (rare, threatened, endangered species, partner property, significant habitat present, etc.)?

**Appendices (if applicable)**:

1. If Invasive Plant Management Decision Analysis Tool ([IPMDAT](https://www.ipmdat.org/)) tool was utilized for this project, please attach result as an appendix.
2. Has pesticide use been proposed for this project? Attach any pesticide labels as an appendix.
* Aquatic Pesticide Permits: <https://www.dec.ny.gov/chemical/8530.html>
* Pesticide Laws and Regulations: <https://www.dec.ny.gov/chemical/112881.html>
1. If relevant to a larger project, please include associated master plan if relevant to a larger project (link file URL or attach as an appendix).

**Map:** Develop a map of the response area that shows the geography and has the searched area, any iMapInvasives points, polygons and/or lines for presence or non-detection. Multiple maps may be added for multiple species or locations. All response actions should be uploaded to the CR-PRISM SharePoint Tracker and [iMapInvasives](https://www.nyimapinvasives.org/).

**Section 2: Implementation Summary**

This section provides descriptions of any treatment methods, restoration, and monitoring efforts occurring over the course of the plan.

**Response:** Describe in detail integrated pest management methods selected for the site and why they were chosen along with any alternatives considered. Best management practice(s) should be outlined and sourced. State the target species (common and scientific name(s)), [Tier, and Threat Ranking](https://www.nynhp.org/invasives/species-tiers-table/), estimated percent cover, distribution/abundance and estimated size of infestation. If using a pesticide, provide the chemical name and application method.

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**Disposal and Disturbance:** State method of disposal. Describe the level of anticipated site disturbance and mitigation.

**Restoration:** Briefly explain the restoration efforts that will occur. If conducting active restoration, make sure to list common and scientific names of native species to be used, source of propagules, propagation type, number planted and/or pounds of seed dispersed, and acres restored. Describe when native seeds will be collected on site. If a separate restoration plan was developed, reference it here. If not actively restoring, explain why. (ex. Allelopathy, native seed source in place, minimal disturbance).

**Post-Monitoring:** Explain the monitoring procedure, when it will occur and why, and who will complete it. Consider the phenology of species when suggesting timelines. When conducting post-treatment monitoring, consider adaptive management techniques to improve results of response actions.

**Treatment, Post-Treatment (Monitoring), and Restoration Calendar**: Briefly outline when response, post-treatment monitoring, restoration efforts, and possibly research efforts are anticipated to occur with a date range. When completed check the box next to the targeted date range with an initial.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| EarlySpring |  |  |  |  |  |
| LateSpring |  |  |  |  |  |
| Summer |  |  |  |  |  |
| Early Autumn |  |  |  |  |  |
| LateAutumn |  |  |  |  |  |

Notes: Make notes as necessary and keep the documentation simple. Use plant phenology to determine ideal time for response actions and restoration efforts. Document anything that did not work with recommended adjustments in the post season report.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Section 3: Project Implementation - Year 1**

**Treatment Schedule:** Plan out when and how treatments will occur. Attach and reference separate spreadsheet if more space is needed for additional species. Include the [Tier level & Threat ranking](https://www.nynhp.org/invasives/species-tiers-table/) of each species.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment Window (MM/DD/YY) | Target SpeciesCommon and Scientific Name | Tier & Threat Rank | Response Method | Size of Infestation (Acres)\* | Percent Cover (%) | Species Abundance | Acreage Treated | Disposal Method |
|  |  |  |  |  |  |  |  |  |

\*If infestation is linear, use miles to measure “size of infestation”

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**End-of-Year Summary:**

Explain any successes, failures, or needed adjustments. Including restoration, missed treatments, not monitoring, etc.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Adjustments Needed:**

Explain any changes to be made for future years and update treatment restoration and calendars.

**\* Reminder:** if the project changes drastically (i.e., switch from manual control to chemical control) it may require a new SEQR review.

**Year 1 Notes:**

**Section 3: Project Implementation - Year 2**

**Treatment Schedule:** Plan out when and how treatments will occur. Attach and reference separate spreadsheet if more space is needed for additional species. Include the [Tier level & Threat ranking](https://www.nynhp.org/invasives/species-tiers-table/) of each species.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment Window (MM/DD/YY) | Target SpeciesCommon and Scientific Name | Tier & Threat Rank | Response Method | Size of Infestation (Acres)\* | Percent Cover (%) | Species Abundance | Acreage Treated | Disposal Method |
|  |  |  |  |  |  |  |  |  |

\*If infestation is linear, use miles to measure “size of infestation”

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**End-of-Year Summary:**

Explain any successes, failures, or needed adjustments. Including restoration, missed treatments, not monitoring, etc.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Adjustments Needed:**

Explain any changes to be made for future years and update treatment restoration and calendars.

**\* Reminder:** if the project changes drastically (i.e., switch from manual control to chemical control) it may require a new SEQR review.

**Year 2 Notes:**

**Section 3: Project Implementation - Year 3**

**Treatment Schedule:** Plan out when and how treatments will occur. Attach and reference separate spreadsheet if more space is needed for additional species. Include the [Tier level & Threat ranking](https://www.nynhp.org/invasives/species-tiers-table/) of each species.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment Window (MM/DD/YY) | Target SpeciesCommon and Scientific Name | Tier & Threat Rank | Response Method | Size of Infestation (Acres)\* | Percent Cover (%) | Species Abundance | Acreage Treated | Disposal Method |
|  |  |  |  |  |  |  |  |  |

\*If infestation is linear, use miles to measure “size of infestation”

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**End-of-Year Summary:**

Explain any successes, failures, or needed adjustments. Including restoration, missed treatments, not monitoring, etc.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Adjustments Needed:**

Explain any changes to be made for future years and update treatment restoration and calendars.

**\* Reminder:** if the project changes drastically (i.e., switch from manual control to chemical control) it may require a new SEQR review.

**Year 3 Notes:**

**Section 3: Project Implementation - Year 4**

**Treatment Schedule:** Plan out when and how treatments will occur. Attach and reference separate spreadsheet if more space is needed for additional species. Include the [Tier level & Threat ranking](https://www.nynhp.org/invasives/species-tiers-table/) of each species.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment Window (MM/DD/YY) | Target SpeciesCommon and Scientific Name | Tier & Threat Rank | Response Method | Size of Infestation (Acres)\* | Percent Cover (%) | Species Abundance | Acreage Treated | Disposal Method |
|  |  |  |  |  |  |  |  |  |

\*If infestation is linear, use miles to measure “size of infestation”

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**End-of-Year Summary:**

Explain any successes, failures, or needed adjustments. Including restoration, missed treatments, not monitoring, etc.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Adjustments Needed:**

Explain any changes to be made for future years and update treatment restoration and calendars.

**\* Reminder:** if the project changes drastically (i.e., switch from manual control to chemical control) it may require a new SEQR review.

**Year 4 Notes:**

**Section 3: Project Implementation - Year 5**

**Treatment Schedule:** Plan out when and how treatments will occur. Attach and reference separate spreadsheet if more space is needed for additional species. Include the [Tier level & Threat ranking](https://www.nynhp.org/invasives/species-tiers-table/) of each species.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment Window (MM/DD/YY) | Target SpeciesCommon and Scientific Name | Tier & Threat Rank | Response Method | Size of Infestation (Acres)\* | Percent Cover (%) | Species Abundance | Acreage Treated | Disposal Method |
|  |  |  |  |  |  |  |  |  |

\*If infestation is linear, use miles to measure “size of infestation”

**Integrated Pest Management Methods Deployed:**

* **Manual**- the use of physical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Mechanical**- the use of mechanical means to eliminate or reduce pest populations

Cut, Girdle/Frill, Mow, Dig, Plow, Pull, Other (Describe)

* **Chemical**- the use of pesticides to eradicate or limit the prevalence of unwanted pests.

Foliar spray, Stem injection, Cut-stump treatment, Wiper application, Basal bark application, Frill, Tree injection method, Other (Describe)

* **Cultural**- the practice of modifying the growing environment to reduce the prevalence of unwanted pests.

Please describe any methods used.

* **Biological control**- the use of a natural enemy or predator to control a pest.

Please include the scientific name of the biological control released, number released, and the life stage released.

**Percent Cover:**

iMapInvasives Percent Cover Ranges: <5%, 5%-25%, 26%-50%, 51%-75%, 76%-100% or use a specific percentage

**Distribution/Abundance:**

Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Monoculture, Linearly scattered

**End-of-Year Summary:**

Explain any successes, failures, or needed adjustments. Including restoration, missed treatments, not monitoring, etc.

**Goal Progress**: [ ]  Goal Unlikely [ ]  Regressing [ ]  No Change [ ]  Progressing [ ]  Goal Met

 **Follow-up Plan**: [ ]  Further Treatment Planned [ ]  Further Monitoring Planned [ ]  Monitoring Phase Complete

 [ ]  Further Management Not Planned [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_

**Native Species Recovery**: [ ]  Absent [ ]  Sub-Dominant [ ]  Dominant

**Adjustments Needed:**

Explain any changes to be made for future years and update treatment restoration and calendars.

**\* Reminder:** if the project changes drastically (i.e., switch from manual control to chemical control) it may require a new SEQR review.

**Year 5 Notes:**