



## **Protocols for Protection of Rare Plant Species during Habitat Management and Forestry Activities**

The following information provides applicants with an overview of the process used by MassWildlife's Natural Heritage and Endangered Species Program (NHESP) to review projects in rare plant habitat. This outline is intended to streamline the process. For purposes of such reviews, where rare plants are found on the landscape, land management projects are generally classified as 3 categories:

- Invasive Plant Management
- Timber Harvesting
- Other Management Activities (e.g., prescribed burning, habitat type conversion, wetland creation)

Not all projects will occur within rare plant habitats, and not all projects within rare plant habitat will require these specific protocols. NHESP strongly encourages project proponents to file a [State-listed Species Information Request](#) to determine any likely species of concern at a property prior to the development of land management plans.

### **Timber Harvesting in Rare Plant Habitat:**

1. The Department of Conservation and Recreation (DCR) submits a Forest Cutting Plan to NHESP for review; if timber harvesting will be done without a Forest Cutting Plan, the proponent submits a management plan directly to NHESP for review. If this describes your project please refer to the "Other Management Activities in Rare Plant Habitat" section below.
2. NHESP reviews the project based on known rare species populations and habitat requirements.
3. Depending on the location of the harvest, rare plants may need to be delineated and avoided before the harvest can proceed.
4. If rare plant surveys are required, the Review Biologist will contact the DCR Service Forester to discuss options for how to move the project forward.
5. Next steps may include:
  - a. NHESP and DCR staff schedule a time to conduct surveys in order to delineate and avoid individual plants.
  - b. DCR suspends the review until the time of year when the plants are identifiable and surveys may take place.
  - c. NHESP issues a Determination letter that requires rare plant surveys be done.
  - d. The Plan Preparer works with the DCR and/or NHESP to redesign the Cutting Plan so that it avoids any mapped rare plant habitats and, therefore, eliminates the need for plant surveys.

**Note: Most plants have a certain window in which they can be clearly identified, often based on morphology of the seeds or other distinguishing characteristics. This timeline drives when the surveys can be done and subsequently when the review is complete.**

6. If a plant survey is required, and prior to the suitable survey period, the Plan Preparer and DCR Service Forester identify qualified person(s) to survey for plants prior to the suitable survey period. Typically, this is done in consultation with the Review Biologist.
  7. If rare plants are found during the survey, the Review Biologist will provide comments to the DCR outlining necessary measures to protect the plants. Typically, NHESP will identify “No Cut Buffer Zones” around rare plants, with the size of the buffer based on particular conditions of the site and the species of interest.
    - a. Buffers are field-delineated with either tape or paint, and no work or placement of slash can occur within said buffers.
    - b. The Review Biologist will establish who will mark the buffers at the site in coordination with the DCR Service Forester and Plan Preparer.
  8. In some cases, harm to rare plants can be avoided merely by harvesting only during a designated period of time (i.e., “No Cut Buffer Zones” are not needed). NHESP will specify this window of time in the final Determination Letter.
  9. If no rare plants are found, and the survey results appear to be conclusive, NHESP will, in most cases, issue a comment letter confirming that the harvest may proceed as originally planned.
- \*Conditions for rare plants (or lack thereof) do not preclude protections for other rare species occurring on-site.

*Example 1: A forester submits a Forest Cutting Plan to DCR in April and plans to begin harvest in June. A portion of the harvest area is habitat for the state-listed rare plant Sand Violet (*Viola adunca*), which can be identified at this time of year. The Review Biologist reaches out to the DCR Service Forester to set up a time to survey for the plant and works with them to identify a botanist with expertise to identify the species. The surveys are conducted and several plants are identified. The plan is modified according to the needs of the plants which require disturbed habitats with sandy soil and open exposure to the sky. However, the Sand Violet should not be disturbed during its flowering phase. Therefore, the harvest proceeds in July, a time of year restriction for after the flowering period.*

*Example 2: A forester submits a Forest Cutting Plan to DCR in October and is planning to start work within the month. A portion of the harvest area is habitat for the state-listed rare plant Downy Woodmint (*Blephilia ciliata*) which can be accurately identified only from mid-June to mid-July. The Review Biologist issues a letter stating that the review is suspended pending a botanical survey, which will have to take place the following year in June or July. After the botanical survey is complete the next year the Review Biologist is then able to issue a Determination letter identifying the no-harvest protection zones around the plants and the harvest proceeds one year later than anticipated.*

## Management of Invasive Plant Species in Rare Plant Habitat:

1. Plans and a project narrative are submitted to the Division for review using the [Habitat Management Plan Project Submission Checklist](#).
2. Division reviews project based on known rare plant species populations and habitat requirements.
3. Division may request additional information at this time (e.g., habitat assessment, botanical surveys) to be submitted before the Division can issue a Determination. Please note that pre-filing consultations help avoid this scenario because the Division will provide this input early in the Applicants planning process.
4. If surveys are required, the Applicant works with a Division-approved, qualified botanist(s) to survey for plants.
  - a. Prior to conducting surveys, the qualified botanist(s) develops a survey protocol and submits this protocol for Division review and approval.
5. Division issues Determination Letter. In some cases, and informed by botanical surveys if required, the Division will issue a letter that identifies special conditions necessary to avoid harm to rare plants. Depending on when the project will occur and activities proposed, certain precautions may be necessary. These conditions may include but are not limited to:
  - a. Delineate / avoid rare plants with an adequate protective buffer
  - b. Modify the herbicides selected
  - c. Modify the techniques proposed in some or all of the project area (e.g., hand wipe instead of mist blowing, cover rare plants with a 5-gallon bucket during applications, hand pulling instead of herbicide use)
6. If no rare plants are found, and the survey results appear to be conclusive, the Division will, in most cases, issue a comment letter confirming that the harvest may proceed as originally planned.

\*Conditions for rare plants (or lack thereof) do not preclude protections for other rare species occurring on-site.

**Note: Most plants have a certain window where they can be definitively identified, often based on morphology of the seeds or other distinguishing characteristics. This timeline determines when surveys can be done and subsequently when the review is complete.**

*Example 1: In October a land trust submits a plan to control invasive species in the forest on one of their properties. They are proposing to use a backpack sprayer as the method of herbicide delivery. The forest is suitable habitat for rare orchids and a few plants have been found in the area in the past. The Division requires a botanical survey the following spring when orchids are visible. The survey identifies a number of areas where orchids are growing and due to the fact that they appear in different areas within the suitable habitat each year, the areas as well as a suitable buffer are conditioned limiting herbicide work to cut and daub, bark injection, or hand wiping. This is because orchids are sensitive to herbicides transmitted through the soil as well as by direct impact.*

## Other Management Activities in Rare Plant Habitat:

This guidance is applicable to habitat management activities such as prescribed fire, mowing, turtle nest site creation, selective tree harvesting that does not require a Forest Cutting Plan, some types of trail work, etc.

1. Plans and a project narrative are submitted to the Division for review using the [Habitat Management Plan Project Submission Checklist](#).
2. Depending on the nature of the project and when it will start and end, a plant survey may be necessary.
3. If measures must be taken to avoid harm to rare plant species, the Review Biologist will reach out to the Proponent to discuss considerations and/or issue a Determination Letter requiring botanical surveys before any further discussion takes place.
4. If surveys are required, the Proponent identifies qualified person(s) to survey for the pertinent plant species. Typically, this is done in consultation with the Review Biologist.
5. The Review Biologist works with identified person(s) to develop a protocol for the survey, approves the protocol, and may also participate in the botanical survey.

**Note: Most plants have a certain window in which they can be clearly identified, often based on morphology of the seeds or other distinguishing characteristics. This timeline drives when the surveys can be done and subsequently when the review is complete.**

6. If rare plants are found during the survey, protective measures such as a time of year restriction, avoidance of rare plants during work, or other modifications of the plans may be incorporated into the project prior to a final approval.
7. If no rare plants are found, and the survey results appear to be conclusive, the Division will, in most cases, issue a comment letter confirming that the harvest may proceed as originally planned.

\*Conditions for rare plants (or lack thereof) do not preclude protections for other rare species occurring on-site.

*Example 1: A land trust submits a mowing plan for fire breaks on one of their properties. The disturbed areas created by the mowing and continued public use have generated good habitat for a number of state-listed rare plants, but care must be given to when the mowing occurs because mowing the flowering and/or seeding plants will push back an entire year of reproductive effort. Therefore, the Land Trust receives a Conditional Exempt letter requiring mowing to occur after the seeds of the plants have dispersed.*