

Protocols for Conducting Surveys for Plant Species of Special Concern

Part 1 of 4 – Preparation in Advance of a Botanical Survey

Introduction

The Department of Conservation and Natural Resources (DNCR) may request a botanical survey or habitat assessment be performed to investigate proposed project sites for PA Plant Species of Special Concern. This will be used to help DCNR determine whether or not a proposed project will remove or impact a Species of Special Concern (SOSC), evaluate the level of impact to the species of special concern habitat, and identify approaches to avoiding or minimizing project-related impacts to Species of Special Concern and their habitats.

The following protocols have been provided by DCNR as a means to enhance the quality of botanical surveys conducted, as well as to standardize the way in which project areas are surveyed and findings are documented and reported to DCNR for further review. DCNR has issued that the following protocols so they may be used to guide surveyors in the field and clearly indicate the expectations of DCNR in relation to survey result reporting. The following protocols are split into four sections: 1) recommended preparation in advance of a Survey, 2) field protocols for conducting a Survey, 3) guidelines for documenting field results and report writing, and 4) Voucher specimen collection protocols.

Please also note that as of January 2011, DCNR is recommending that a Wild Plant Management Permit be obtained before conducting botanical surveys for PA Plant Species of Special Concern. Permit information and application can be found on the Wild Plant Management Program Website at: <https://www.dcnr.pa.gov/Conservation/WildPlants/Pages/default.aspx> and on the PNDI Environmental Review Homepage at: <https://conservationexplorer.dcnr.pa.gov/>.

Preparation in Advance of the Survey

* All botanical surveyors should obtain a Pennsylvania Wild Plant Management Permit prior to surveying for any PA Plant Species of Special Concern (SOSC). The survey must address all state-listed plant species in the Pennsylvania Code Title 17, Chapter 45 listed as Extirpated, Endangered, Threatened, Rare or Tentatively Undetermined. These protocols often require collection of voucher specimens for documentation of occurrences of PA Plant Species of Special Concern. A Pennsylvania Wild Plant Management Permit is required for collection of species listed as Pennsylvania Threatened or Endangered, therefore, a Wild Plant Management Permit should be possessed by the surveyor prior to the survey date (or by the lead member of a team of surveyors). These Wild Plant Management Permits can be obtained by DCNR and are valid for one year, at which time an “update” may be sent in order for DCNR to update certification and botanists’ experience. At least one Wild Plant Management Permit holder should be present in the field during each botanical survey. This permit holder will be responsible for all voucher specimen collections on site and should be the contact for DCNR to discuss content and/or results of the botanical survey report.

Pre-Survey Research

I. Familiarize Yourself with the Target Species

Surveyors should begin by familiarizing themselves with the target species included on DCNR’s survey request letter. Botanical surveys should not be conducted before a PNDI review is completed; DCNR’s review may provide more detailed survey information or reveal an amended species list, different from what is provided on the PNDI receipt.

- A. **Review Resources:** Surveyors should use published and online resources in order to provide insight into target species’ habitat requirements and taxonomic details to aid in field identification.
- B. **Herbaria:** Surveyors should strongly consider visiting the appropriate PA herbaria to examine voucher specimens of target species. This will help to further familiarize the surveyor with the target species and provide practice in examining taxonomic characteristics necessary for field identification. At this time, surveyors should make prior arrangements with the Herbarium to deposit any voucher specimens of SOSC found on site during the field survey.
- C. **Time of the year for Survey:** By researching the target species’ phenology, the surveyors should determine the most appropriate time of the year to conduct the survey (usually, but not always, when the target species are in flower or fruit). This information is often included on the survey request letter from DCNR.
 - 1. DCNR recognizes that waiting for the ideal time of the year to survey for a species can sometimes cause costly delays. Many times this can be avoided by conducting an online PNDI review (or sending a Large Project submission) as early as possible in the planning process. At times, even when this is done, difficulties can arise. If surveying during the ideal time

of the year is not practical, additional research may be necessary to determine the feasibility of detecting and identifying the species in vegetative condition.

2. If not surveying during the ideal time of the year, contact DCNR to discuss the appropriateness of a survey during non-peak times. If DCNR approves non-peak surveys or habitat assessments, survey reports should sufficiently describe conditions and justifications for the survey under non-ideal conditions.
3. Occasionally, a survey for appropriate habitat may substitute for a survey for one or more target species. When this is done, the surveyor (and their client) should be aware that DCNR might determine that the presence of the species cannot be ruled out based on the survey report submitted. In this case, negative impacts on the species will be assumed until a survey is conducted at the appropriate time of the year.

II. Target Species within Project Area

If DCNR's records show that a species of special concern is known to be present **within** the proposed project area, please contact DCNR for exact species locations. These known locations within the project area are provided only to botanical surveyors (who should have obtained Wild Plant Management Permits) for informational purposes only to aid in their search; this information should not be shared. DCNR cannot give out location data for occurrences of species outside the project area due to data privacy and landowner issues.

III. Prepare to Survey for all PA Plant Species of Special Concern

Surveyors should prepare for all PA Plant Species of Special Concern that share habitat requirements that could also be located within the proposed project area, even if they are not target species included with the survey request letter. In addition to target species, any and all PA Plant Species of Special Concern found within the project area should be reported to DCNR. Lists of PA Species of Special Concern sortable by County and major watersheds can be created <https://www.naturalheritage.state.pa.us/SpeciesFeatures.aspx>

IV. “Special Concern Populations” or Watch-list Species

Surveyors should familiarize themselves with the plant species that DCNR has designated as “Special Concern Populations,” also referred to as “Watch-list Species.” While not currently afforded any legal protection, DCNR maintains and tracks locations of these species. These species are not always species with low population numbers, but are often plants with unique characteristics, habitats or geographic range. DCNR appreciates any additional information on these species—as it aids us and the Vascular Plant Technical Committee in better understanding plant species and habitats. DCNR will sometimes request voluntary steps to protect these populations. Brief reports are appropriate for the Watch-list Species (i.e. location and a few brief comments regarding the size of the population, immediate habitat, etc.).