

Suggested Guidelines for Conducting Rare Plant Surveys for Environmental Review, Washington State

Purpose of a rare plant survey

Rare plant surveys are undertaken to ascertain the presence or absence of rare plant species on a particular site. A rare plant survey can confirm the presence of rare plants on a site, but unless the site is severely degraded, most rare plant surveys cannot definitively rule out the presence of rare plants on a site.

What is a rare plant?

The Washington Natural Heritage Program (WNHP) considers any plant or lichen currently on our state rare lists for [vascular plants](#), [mosses](#), or [lichens](#) as a rare species. The vascular plant list includes federally listed species. The guidelines presented here are for vascular plant species; we are not able at this time to provide guidelines for surveys for lichens and bryophytes, which require additional specialized expertise.

Qualifications of surveyors

Surveyors should have:

- Academic background in plant taxonomy (a bachelor's degree or higher in botany) or equivalent experience.
- The taxonomic experience to identify, through personal knowledge or the use of technical floras, most or all of the plant species they encounter in the field, and an understanding of how to contact taxonomic experts for the species they can't identify.
- Knowledge of the potential rare plant species in the survey area.
- Ability to use maps, GPS and other tools to adequately map rare plant populations.

Preparation for fieldwork

1. Develop a list of potential rare plant species for the survey area, based on range and habitat requirements. The list should include scientific name, habitat, and appropriate time for successful identification

Resources include: [data requests to WNHP for the project area](#), the [WNHP GIS dataset](#), the [WNHP county lists](#), the Field Guide to the Rare Plants of Washington (available from the University of Washington Press, and the Flora of the Pacific Northwest and other floras.

2. Design fieldwork so that each habitat within the survey area is visited at the appropriate time for the potential species in that habitat. Most surveys will require more than one visit.
3. Choose the appropriate level of survey intensity for the project. Complete surveys attempt to cover the entire area at a high level of certainty. Other surveys can focus on most likely habitats or areas most likely to be affected by the project. The survey intensity should be identified in the survey report.

Fieldwork

Conduct surveys at the appropriate season for each potential rare species. Multiple site visits are usually necessary. Identify and list all species observed, not just the target rare species. A full floristic inventory is standard practice for rare plant surveys. Mapping of rare plants should be as precise as possible: the use of a GPS is recommended.

Rare plant survey reports

Reports should include a description of the project area, maps of the project area (USGS and project detail), maps of survey routes, survey dates and survey methodology, names and experience of surveyors, list of all vascular plant species occurring on the project site, potential rare plant species for the project area, and factors that might have influenced the presence or abundance of rare species (annual rainfall, etc.). Reports should note whether the habitat for the suspected rare species is present or absent. If rare plants are found, [WNHP sighting forms](#), maps of the population(s), and photos should be included.

Other resources

Nelson, J.R. 1985. Rare plant surveys: techniques for impact assessment. *Natural Areas Journal* 5(3): 18-30. You may also contact Joe Arnett, botanist for the WNHP, at joseph.arnett@dnr.wa.gov or 360-902-1710.

THE THREE MOST IMPORTANT FACTORS IN A RARE PLANT SURVEY

The taxonomic ability of the surveyors

Surveying at the appropriate time of year

Full documentation of methods and providing sighting forms to the WNHP