



Alberta Native Plant Council

Recommendations for Botanical Surveys in Areas of Proposed Development

March 2009

The Alberta Native Plant Council (ANPC) provides the *Recommendations for Botanical Surveys in Areas of Proposed Development (Recommendations)* to assist with the proper inventory of sensitive botanical resources. The *Recommendations* are designed to assist land managers/planners, industry representatives, regulators and consultants in properly identifying the scope of work required to assess sensitive botanical resources in an area of proposed development. By properly assessing existing resources, appropriate protection measures can be established. This document does not preclude other types of vegetation-related assessments, such as vegetation community inventories and wetland assessments. These *Recommendations* provide a compilation of survey guidelines, protocols and other information resources that are particularly relevant to botanical surveys in Alberta. The intent is to update these *Recommendations* when new guidelines or protocols become available.

Currently in Alberta, a variety of laws and policies govern the protection and conservation of environmental resources. These laws and policies support and promote the protection, enhancement and wise use of the environment, including the province's biodiversity. Botanical surveys help with gaining an understanding of Alberta's biodiversity, to conserve it and to assess and monitor environmental effects of human activity. Considerable development pressure is associated with considerable cumulative environmental effects from land and water disturbance, habitat fragmentation, and invasive species infestations.

Rare vascular plants, rare ecological communities, rare bryophytes and rare lichens are elements of botanical diversity that are of particular conservation concern. Their status is being assessed and tracked by the Alberta Natural Heritage Information Centre (ANHIC). Generally accepted standards of practice involve surveying for rare vascular plants and rare ecological communities on all proposed developments that may affect natural environments. Rare bryophyte and rare lichen surveys are often conducted on proposed developments that occur in areas with greater environmental sensitivity, and especially where the development will deleteriously affect air quality and/or regional hydrological regimes. If surveys for these elements of botanical biodiversity are not conducted on proposed development areas, rationale(s) should be provided.

These *Recommendations* provide the following internet links to survey guidelines, protocols and other information resources for botanical surveys in Alberta. Some of these resources have been developed by ANPC and some by other organizations.

For **rare vascular plants**, *ANPC Guidelines for Rare Plant Surveys in Alberta* is available on ANPC's website at <http://www.anpc.ab.ca/assets/rareplant.pdf>. These guidelines identify the requirements for conducting general rare vascular plant surveys.

For surveys targeted towards **prairie plant species listed under the provincial *Wildlife Act* or the federal *Species at Risk Act***, *Draft Inventorying and Monitoring Guidelines: Prairie Plant Species at Risk* is available upon request to Darcy Henderson at Environment Canada, Prairie Region Office [darcy.henderson@EC.GC.CA].

For surveys of **rare ecological communities**, *Draft Ecology Community Sampling Guidelines* is available on the Alberta Natural Heritage Information Centre's (ANHIC) website at <http://tpr.alberta.ca/parks/heritageinfocentre/ecocommunities/samplingguidelines.aspx>. These guidelines identify plant community sampling protocols. Rare ecological community vegetation and site description forms are at <http://tpr.alberta.ca/parks/heritageinfocentre/ecocommunities/forms.aspx>.

For surveys of **rare bryophytes and lichens**, *Terrestrial Field Data Collection Protocols, Bryophytes and Lichens Section* is available on the Alberta Biodiversity Monitoring Institute's website at <http://www.abmi.ca/abmi/reports/reports.jsp?categoryId=0>. This protocol was designed to detect as many species of mosses, liverworts, and lichens as possible during a time constrained search within a one hectare area. The protocols must be modified to suit a specific proposed development and study area.

Additional resources that surveyors should consult are:

- *Tracking and Watch Lists, Vascular Plants, Mosses, Liverworts and Hornworts* on ANHIC's website at http://tpr.alberta.ca/parks/heritageinfocentre/docs/plants_2006.pdf, and
- *Preliminary Lichen Tracking List* on ANHIC's website at http://tpr.alberta.ca/parks/heritageinfocentre/docs/lichen_tl_cover.pdf
- *Preliminary Ecological Community Tracking List* on ANHIC's website at <http://tpr.alberta.ca/parks/heritageinfocentre/docs/ctl2008.pdf>.