

# SUPPLEMENTAL STUDIES

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## 9.0 SUPPLEMENTAL STUDIES

### 9.1 Introduction

Provident is committed to conducting supplemental studies in the spring and early summer of 2011. The planned studies will not change the significance conclusions identified in Sections 6.0 and 7.0 of this EA since mitigation and contingency plans have been developed to address potential findings from the 2011 studies. The information obtained during the studies will be used to refine and augment site-specific environmental protection planning.

The following subsections describe the respective scope, methodology, timing (field and reporting schedule) and study team qualifications for the following planned supplemental studies:

- soil survey along route and topsoil survey at new facilities;
- rare vascular plant and plant community surveys;
- weed survey;
- wildlife and wildlife habitat surveys for species of concern; and
- heritage resources impact assessment.

### 9.2 Soil Survey

Soil investigations by a soil survey expert will be conducted in the spring of 2011. Soil sampling will be undertaken using either a hand auger or a drill truck. Topsoil depths, soil classifications and land use will be determined along the proposed route. Soils requiring an alternate soil handling procedure to maintain soil capability, if any, will be identified. The results of the survey will be provided to Manitoba Conservation.

### 9.3 Rare Vascular Plant and Plant Community Surveys

Plant surveys by vegetation specialists are planned for the spring/early summer of 2011 along segments of the pipeline route that traverse non-cultivated/native vegetation. Rare plant and plant community surveys will also be conducted at proposed temporary facility sites should any of these sites be located on lands supporting native vegetation.

Existing literature on known and potential rare plants occurring in the general vicinity of the proposed pipeline route will be reviewed both prior to and following the field surveys. Primary sources include White and Johnson (1980), Argus and Pryer (1990), provincial CDC rare plant tracking lists, COSEWIC and SARA species lists, and previous rare plant surveys and post-construction monitoring reports along the pipeline corridor. The rare plant status designations will be based on the most current MB CDC tracking lists, and COSEWIC and SARA species lists for vascular plants prior to the initiation of field surveys.

The timing of the surveys will be dependent upon the phenology of the rare plant species to be surveyed and weather conditions. However, it is anticipated that a survey will be conducted in June 2011.

The field component of the surveys will generally consist of a foot traverse of segments of the proposed route that crosses native vegetation. Surveyed segments will include the full width of the construction right-of-way (proposed right-of-way and temporary workspace) and, if warranted, temporary facility sites. Any sites supporting rare plants will be staked or flagged and GPS locations will be documented. Notes will be taken on vigour, abundance, distribution and potential mitigation options for any rare plants found.

The results of each of the surveys will be provided to Manitoba Conservation upon completion.

In the event that rare vascular plants or plant communities are discovered on the construction right-of-way, appropriate mitigation will be selected from the Plant Species of Concern Discovery Contingency

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Plan identified in Appendix 6B of this EA. The mitigative measures noted in Section 6.0 of this EA will be amended, if warranted, to identify measures to be implemented during construction of the proposed pipeline.

#### **9.4 Weed Survey**

A weed survey by vegetation specialists is planned during the growing season prior to construction in order to identify weed infestations along the proposed pipeline route and temporary facility sites, and select the appropriate mitigative measures to avoid transporting weeds from infested areas to adjacent lands. The mitigative measures noted in Section 6.0 of this will be amended, if warranted, to identify measures to be implemented during construction of the proposed pipeline.

#### **9.5 Wildlife and Wildlife Habitat Surveys for Species of Concern**

Wildlife surveys will be conducted on proposed development areas located on non-cultivated/native vegetation during the spring/early summer of 2011 to determine habitat use and, if warranted, recommend site-specific mitigation to avoid or minimize potential impacts on wildlife and wildlife habitat.

Surveys for wildlife species of concern will be undertaken by a team of qualified wildlife biologists in the spring/early summer of 2011 along non-cultivated/native vegetation segments of the pipeline route. The surveys will generally consist of a foot traverse of the construction right-of-way. The timing of these surveys will be appropriate for the respective species groups (e.g., amphibians, invertebrates, upland game birds, migratory birds etc.) and the surveys will be conducted under suitable weather conditions and during the appropriate period of the day. Consequently, some route segments may be subject to more than one survey.

The results of previous surveys and existing scientific literature on wildlife species of special concern potentially occurring in the general area will be reviewed prior to the wildlife surveys. Primary sources include MB CDC tracking lists, and COSEWIC and SARA species lists as well as discussions with Manitoba Conservation. The wildlife status designations will be based on the list provided in Appendix 5E of this EA and will be updated with the most current tracking lists for mammals, birds, amphibians and reptiles prior to the initiation of field surveys.

The results of the wildlife surveys in 2011 will be provided to provincial wildlife authorities. In the event that sensitive wildlife species or critical habitats are encountered along the pipeline route, appropriate mitigation will be chosen from the Wildlife Species of Concern Discovery Contingency Plan identified in Appendix 6B of this EA in conjunction with the above agencies. The mitigative measures identified in Section 6.0 of this EA will be amended, if warranted, to identify the measures to be implemented during construction of the proposed pipeline.

Additional wildlife surveys for species of concern and nesting by migratory birds will be conducted in the spring or early summer of 2011 along pipeline route segments scheduled for construction from mid-April to late July. These surveys will focus on segments of the route that traverse non-cultivated/native vegetation. Surveys will also be conducted at locations where site-specific habitat use by species of concern were noted during previous surveys, if heavy equipment use will be necessary during final clean-up activities scheduled to occur from mid-April to late July.

#### **9.6 References**

- Argus, G.W. and K.M. Pryer. 1990. Rare Vascular Plants in Canada. Canadian Museum of Nature, Ottawa.
- White, D.J. and K. L. Johnson. 1980. The Rare Vascular Plants of Manitoba. National Museum of Natural Sciences, Ottawa, Ontario.