

**Guidelines for Preparation of an
Environmental
Protection Plan (EPP)
for Oil and Gas Projects**

**Procedures under *The Environmental
Assessment Act (Saskatchewan)***

**Environmental Assessment Branch
Saskatchewan Environment and Resource Management**

December, 2000

GUIDELINES FOR THE PREPARATION OF AN ENVIRONMENTAL PROTECTION PLAN (EPP) FOR OIL AND GAS PROJECTS

Table of Contents

Background	1
Information Required in an Environmental Protection Plan (EPP)	3
Introduction	3
Project Description	3
Environmental Setting	4
Potential Impacts	6
Impact-Management and Protection Measures (Mitigation)	6
Residual Impact	7
Environmental Monitoring	7
Public Consultation	8
Legal Issues	8
Procedures for Submitting the EPP	9
Reference Material	9
Appendix 1: <i>The Environmental Assessment Act</i>	10
Appendix 2: Areas Where EPPs Are Likely Required	11

GUIDELINES FOR PREPARATION OF AN ENVIRONMENTAL PROTECTION PLAN (EPP) FOR OIL AND GAS PROJECTS ¹

Background

The Environmental Assessment Act (Saskatchewan) (“the Act”) and related procedures provide for a coordinated review of environmental issues associated with development projects in the province. The environmental-assessment (EA) process is one of Saskatchewan Environment and Resource Management’s (SERM) principal environmental-management tools. EA review requires that potential impacts be identified, documented and evaluated, and that opportunities to avoid, minimize or eliminate the adverse effects and enhance the positive effects of a project be recognized during project planning. In so doing, unnecessary environmental impacts are avoided and proponents can avoid costly problems and delays and the difficulties associated with repairing environmental damage. Careful planning provides a sound basis for sustainable development, particularly in environmentally sensitive areas.

Several hundred proposals pertaining to all aspects of oil and gas exploration, development and transportation are reviewed annually through Saskatchewan’s EA process. Depending on project details and location, this review takes one of three forms:

- , All oil and gas projects with potential environmental implications are screened initially at a SERM regional office. Those with no or relatively minor concerns receive clearance to proceed without further environmental assessment requirements at that level.
- , Projects which raise broader or more significant concerns and which have some potential to trigger a full Environmental Impact Assessment (EIA) require a detailed **Environmental Protection Plan** ¹. The EPP receives an interagency review coordinated by SERMs Environmental Assessment Branch (EAB). (*Appendices 1 and 2* list the criteria for determining which projects require an EIA and identify areas likely to require EPPs.)
- , A full **Environmental Impact Assessment (EIA)** is required for projects which are likely to cause significant impacts or otherwise likely to meet any of the triggers established in *The Environmental Assessment Act* (*Appendix D*).

These Guidelines provide additional information to proponents of oil and gas projects undergoing the intermediate level of review described above - i.e., the **Environmental Protection Plan** ¹ (EPP). They are an industry-specific supplement to SERMs more general guidance document describing the Environmental Assessment and Review Process (see *Reference Material*).

The **EPP** is the document prepared by a proponent to describe how a project which raises significant environmental concerns or could otherwise trigger one or more of the criteria in the Act will be undertaken. It describes the project and project area, identifies conflicts and describes environmental-protection measures the proponent will take to avoid or minimize those conflicts.

¹For purposes of the Environmental Assessment process and SERMs publication, **The Saskatchewan Environmental Assessment and Review Process**, the term **Environmental Protection Plan (EPP)** is equivalent to the term **Project Proposal**.

The EPP has two main objectives:

- , documentation of project planning: environmental protection should be an important project goal. Environmental planning can make projects with significant environmental concerns more sustainable while also meeting a developer's other needs.
- , regulatory: the EPP is the mechanism used to determine if the project meets any of the criteria defining a "development" in the Act, thereby triggering an EIA.

The EPP should be complete and accurate so that SERM can form the correct opinion as to whether or not the project is a "development." Without adequate information, SERM must conclude that a project is a "development" and hence subject to a full EIA if it appears "likely" that the project will trigger one or more of the criteria in the Act. Proponents are encouraged to discuss EPP scope with SERM before starting to prepare it.

If the concerns with a project are addressed in the EPP and the proponent demonstrates to SERMs satisfaction that the project does not meet any of the criteria defining a "development," then SERM will not require the project to undergo a full EIA. **The EPP becomes the developer's opportunity to show that he has planned the best project, all things considered, and to demonstrate both an awareness of the concerns and how the project has been designed to avoid, minimize or otherwise mitigate them.** Planning of the sort that goes into an EPP can most effectively resolve concerns associated with relatively small or local projects, rather than impacts of large-scale projects and those with regional or significant cumulative impacts.

EABs opinion on whether or not a project requires a full EIA may be challenged in Court by a third party. The proponent of a project that is determined by a Court to be a "development" despite EABs opinion to the contrary could experience substantial delays while completing the EIA and obtaining a ministerial decision on the project. Further, any proponent who proceeds with a "development" without ministerial approval or exemption under the emergency provisions in the Act is also liable for third party loss, damage or injury (see *Legal Issues*). Completeness of information in an EPP may reduce the likelihood of a successful Court challenge.

An EPP should provide a reasonable understanding of the project, the environment into which it is to be placed, and its potential impacts, and should describe measures the proponent will take to address these impacts. Types of information and level of detail required in an EPP depend on several factors, including: project nature, size and location; availability of existing information; significance of potential impacts and the degree of uncertainty associated with these effects; and the level of public concern. Proponents should consider each of these factors carefully when planning and preparing the EPP. Complete project information and comprehensive environmental protection-commitments will help ensure a timely conclusion to the EPP review.

The EPP should be prepared by professionals with expertise in the areas of concern. In many cases, proponents should hire consultants to provide the necessary expertise.

EPPs are subject to comprehensive review by provincial and federal agencies. They are public documents and may be provided to municipal governments, the public and public-advocacy groups when public interest or concern is anticipated. Proponents can identify information such as business plans or proprietary technology that they wish to remain confidential.

Information Required in an Environmental Protection Plan (EPP)

The sections which follow outline the types of information which should be included in an EPP. These guidelines do not prescribe a format, but can be viewed as a checklist organized into a logical progression for presentation. **Information presented in one section should not be repeated if a subsequent section refers to the same topic.**

INTRODUCTION

This section should identify the proponent and summarize the project. It should describe the project schedule and location and identify relationships (if any) to other projects and land uses in the same area. It should identify key project personnel and state the number and type of people to be employed. The proponent should identify the project's benefits and describe project need.

PROJECT DESCRIPTION

This section should provide a clear and comprehensive description of the complete project. All phases of the project for which you are seeking clearance should be included. The project description should answer the questions: *what?*, *when?*, *where?* and *how?* by focusing on:

- ' project description. Include all proposed works and activities directly related to the project - i.e., works or activities that are likely to proceed if the main project proceeds. For exploratory drilling, only access and drilling need be addressed. For production projects, describe drilling, temporary and permanent access, power and fuel supply, other ancillary facilities, production plans, product removal, and waste management. Where production plans are not available, options should be discussed;
- ' project location. Describe the immediate project location and show that you have identified and tried to avoid environmentally sensitive locations in siting project facilities. (Additional information on project location and associated protection measures should be presented in the *Environmental Setting* and *Impact-Management and Protection Measures* sections of the EPP);
- ' descriptions of project location should be supported by maps, legal surveys, contour plans, sketches, photographs, air photos or similar means showing (as appropriate):
 - , existing and planned linear features (e.g., access roads, power and pipe lines)
 - , other infrastructure - borrow pits, temporary work camps (if on Crown land)
 - , extra working space (where required)
 - , environmental constraints (e.g., steep or sensitive terrain, surface water, trees / shrubs, nesting sites, native vegetation and other pertinent details)
 - , other nearby projects or existing infrastructure;

- ' schedule (start and completion dates of construction) and anticipated project life;
- ' options considered. Where options exist, identify the alternatives and describe briefly why the preferred option was chosen and others were not. For instance, describe why a particular site or access route was selected or why specific procedures such as vertical vs directional drilling were chosen. Such evaluations are particularly important if the preferred option will cause some environmental damage;
- ' required inputs. Identify resource inputs such as water or natural gas, along with the amount used, source(s) and means of transport;
- ' project outputs. Describe products, reusable materials, and wastes. How will they be managed and what special risks (if any) do they pose?

ENVIRONMENTAL SETTING

This section should describe the area into which you propose to place the project. The amount of information on any particular topic will depend on the project, the characteristics of the area and potential for conflicts. While existing data may be useful, up-to-date information based on new field work may be required. The environmental setting should describe:

- ' principal geologic and geographic features of the project area, including rare or unique features. Identify sensitive areas such as steep slopes, riparian areas and wetlands;
- ' soils in areas directly affected by the project. Identify highly erodible or “problem” soils;
- ' typical land use(s) and other development projects in the area around the project;
- ' vegetation at the project site. Document the principal plant communities and species. Potential conflicts with rare, endangered or other species of concern should be addressed when site survey, habitat evaluation or previous records indicate potential occurrence. Depending on the situation, a “risk assessment” should be done or a rare plant survey completed using standard survey methods²,³. The appropriate approach should be discussed with EA Branch when the EPP is being planned;

²For rare and endangered species which may occur in the project area, refer to SERMs *Wild Species at Risk Regulations (The Wildlife Act)*, federal legislation, COSEWIC lists, and Saskatchewan Conservation Data Center lists of “species of concern.” Clarify species of concern in an area with the SERM regional office and Environmental Assessment Branch. A “risk assessment” evaluates the potential for conflict between the project and the species of concern, based on previous records, habitat preferences, behaviour, season and similar factors.

³Rare plant surveys should follow accepted field methodologies. One recommended methodology is the Native Plant Society of Saskatchewan’s **Guidelines for Rare Plant Surveys**, available on their web site at: <http://npss.sk.ca/inforesource/rareplant.html>.

- ' wildlife in the project area. Existing information on key species should be summarized, supplemented if necessary by a wildlife survey. Potential conflicts with rare, endangered or other wildlife species of concern should be addressed when site survey, habitat evaluation or previous records indicate potential occurrence. Depending on the situation, a “risk assessment” or survey for rare species should be performed ²;
- ' wildlife habitat and habitat potential. Habitat value of land which the project will affect should be evaluated. Project effects may extend up to 1 km from the project site. Lands with ***Wildlife Habitat Protection Act*** or other special-area designation should be identified and project implications for the habitat or other ecological features considered. Discuss specific wildlife concerns with the SERM regional office during EPP scoping;
- ' measures that will be taken to ensure that the project will not “seriously jeopardize the wildlife habitat land” for projects where more than four wells per quarter section are proposed on lands listed in ***The Wildlife Habitat Protection Act*** ⁴;
- ' water bodies, wetlands and riparian areas in and near the project;
- ' fish habitat potential of affected streams or waterbodies ⁵;
- ' odors, other air quality issues and noise (where appropriate);
- ' archeological or heritage resources at the project site ⁶;
- ' any past, current and known future projects and activities in the project area whose effects may interact with those of the project under review;
- ' any other environmental considerations as may be identified for each project location.

KEY TOPICS AND THE APPROPRIATE LEVEL OF DETAIL FOR EACH TOPIC WILL DEPEND ON THE PROJECT AND ITS LOCATION. PROPONENTS SHOULD DISCUSS EPP SCOPING WITH ENVIRONMENTAL ASSESSMENT BRANCH, THE SERM REGIONAL OFFICE AND OTHER AFFECTED AGENCIES BEFORE INITIATING WORK ON THE EPP.

⁴ This is a requirement of Section 7(6)(b) of ***The Wildlife Habitat Protection Act / The Wildlife Habitat Lands Disposition and Alteration Regulations***.

⁵ **Activities which may alter or destroy fish habitat** or affect a navigable waterway may be subject to review and permitting requirement(s) from Fisheries and Oceans Canada.

⁶ A **Heritage Resource Impact Assessment** may be required. Contact Heritage Branch, Saskatchewan Municipal Affairs, Culture, and Housing about heritage-resource concerns and assessment requirements.

POTENTIAL IMPACTS

Describe how the project may affect each of the project area's environmental features discussed in *Environmental Setting*. Level of detail and the geographic scope will depend on the nature and scale of the project and the feature of interest. Consider potential impacts of each project phase addressed in the EPP (exploration, construction, operation, decommissioning), as appropriate, and how these may be affected by existing or known future projects and activities in the project area.

The EPP should indicate if potential impacts are not adequately understood. Any additional information required to properly understand project impacts should be identified and any planned studies, monitoring or other measures to collect essential information should be described.

IMPACT-MANAGEMENT AND PROTECTION MEASURES (MITIGATION)

Describe specific measures that you will take to avoid or manage (mitigate) identified *Potential Impacts*. Measures to *avoid* impacts should be emphasized, followed by a description of how those that cannot be avoided will be *minimized*. Consideration of alternatives is an important means of avoiding and managing impacts, particularly in situations where some impacts will remain following mitigation (see *Residual Impacts*). Mitigative measures should be in a format which can be used by field construction personnel.

The EPP should detail how the following types of mitigative measures will be incorporated (as appropriate) by describing in detail:

- ' how the project has been scheduled to avoid seasonal conflicts (e.g., nesting and spawning, important wildlife winter habitat areas; and spring break-up);
- ' how impacts of project access will be reduced (e.g., by using existing roads, trails or natural features). Explain what alternatives were considered, why they were or were not used, and why any new or upgraded access is necessary;
- ' how project locations were chosen to avoid or reduce impacts. Explain what alternatives were considered and why they were or were not used;
- ' how the equipment and construction methods chosen will reduce or avoid impacts. How will you protect the ground surface (e.g., no stripping, padding, winter construction)? Identify alternatives considered and explain why they were or were not used;
- ' how disturbed areas will be reclaimed. Provide specific details, as appropriate, for:
 - , scheduling
 - , erosion-control methods
 - , reseedling (seed mixes, seed source and quality control, seeding methods and rates)
 - , tree or shrub plantings (source, numbers, species, spacing)
 - , fencing
 - , weed control
 - , monitoring and follow up measures;

- ' how wastes and byproducts will be managed, stored, transported, reused and disposed of. Detailed plans are required only if the project will not follow the standardized practices described in the following guidelines:
 - , *Waste Management Guidelines for the Saskatchewan Upstream Oil and Gas Industry* (SPIGEC 1996)
 - , *Saskatchewan Drilling Waste Management Guidelines* (Saskatchewan Energy and Mines GL 99-01, December 1999).
 Any wastes which may be “waste dangerous goods” must be identified and a management plan proposed;
- ' how you plan to deal with any unique aspects or impacts of your project;
- ' how you will identify and to mitigate impacts that were identified in the *Project Impacts* section as incompletely understood;
- ' how you will deal with unexpected events such as:
 - , spills
 - , fire
 - , unpredictable weather (e.g., heavy rain, breakup, severe cold, drought, wind).

RESIDUAL IMPACTS

The EPP should identify and describe project impacts that will remain after all the proposed mitigation has been implemented. Environmental significance of these residual impacts to feature(s) of interest should be evaluated (scale, magnitude, and duration).

The EPP should include a table which summarizes potential impacts, describes mitigative measures that will be used, and identifies impacts that will remain after mitigation.

ENVIRONMENTAL MONITORING

This section should describe plans for monitoring during and following construction. Monitoring plans should consider the project’s *Impact-Management and Protection Measures* and the *Residual Impacts* described in earlier sections of the EPP. Monitoring plans should describe:

- ' what will be monitored and at what frequency, both during and following construction. Post-construction monitoring should evaluate the success of mitigation and identify what further reclamation measures may be required;
- ' who will do the monitoring and his/her qualifications, or if unknown, the qualifications which the monitor will require;
- ' the monitor’s authority to halt construction or to make changes to avoid or reduce impacts. This authority should be provided in writing.

PUBLIC CONSULTATION

Proponents should discuss their plans with the public in the project area. The level and format of consultation will depend on the project and its location, but at a minimum it should involve affected landowners / occupants, nearby residents and local municipal government(s). First Nations should be consulted when the project may infringe on Aboriginal rights or traditional-use areas. Projects with potential for more significant public interest or concern require more extensive consultation. A public meeting or open house can inform local residents about the project and identify and discuss their concerns. Results of these consultations, including responses to issues identified during the discussions, should be documented in the EPP.

Proponents should discuss their public consultation plans with Environmental Assessment Branch before initiating EPP preparation.

Legal Issues

Proponents are advised of the following points which may apply to fulfilling requirements under *The Environmental Assessment Act*:

- ' while SERM may advise that a project is not a “development” following EPP review, others with an interest in the project may disagree with this opinion. Saskatchewan courts have ruled that in the event of a dispute as to whether or not a project is a “development” under the Act, the *Courts* will make the final decision. Accordingly, if a third party initiates legal proceedings and a Court determines that a project is in fact a “development” notwithstanding the previous opinion from SERM, a proponent would then be required to seek ministerial approval by completing a full EIA prior to proceeding with the project;
- ' proponents must comply with legislative and regulatory requirements in addition to those under *The Environmental Assessment Act* before starting construction or operation. Clearance under *The Environmental Assessment Act* is NOT an Approval to Construct, but rather is a clearance to seek other necessary approvals. Proponents must ensure that all applicable approvals are identified and obtained before starting construction.

Further, *The Environmental Assessment Act* provides that:

- ' anyone who proceeds with a “development” without ministerial approval (or commits other offenses specified in the Act) is guilty of an offense and liable on summary conviction to a fine of up to \$5000, and a further fine of \$1000 per day for a continuing offense (S. 20);
- ' anyone who proceeds with a “development” without ministerial approval is liable to anyone else who suffers loss, damage or injury as a result of the project, and the other person is not required to prove negligence or intention to inflict loss, damage or injury. In such a case, the burden of proving that any loss, damage or injury was not caused by the project is on the person who proceeded with the “development” (S. 23).

Procedures for Submitting the EPP

Sixteen copies of EPPs are normally required, although this may vary according to the project and the review distribution it will receive. EPPs are circulated to provincial agencies and the Canadian Environmental Assessment Agency⁷, and may be distributed to municipal governments, advocacy groups and members of the public. EPPs may be submitted directly to the Project Manager responsible for coordinating the review or to:

Director
Environmental Assessment Branch
Saskatchewan Environment and Resource Management
3211 Albert Street
Regina, Saskatchewan
S4S 5W6

EPP review typically requires four to six weeks, or longer if documentation is incomplete.

Reference Material

Additional information on Saskatchewan's Environmental Assessment and Review Process is available in:

- ' *The Environmental Assessment Act*;
- ' Environmental Assessment Branch's guidance document, *The Saskatchewan Environmental Assessment and Review Process, January 1996*;
- ' Environmental Assessment Branch's Web site:
<http://www.serm.gov.sk.ca/environment/assessment/>
- ' Information on rare and endangered species may be obtained by contacting:
 - , SERMs regional Oil and Gas Coordinators; or
 - , Conservation Data Centre at (306) 787-7196 or at their Web site:
<http://www.biodiversity.sk.ca>

September 1, 2000

⁷ EPPs are provided to the Canadian Environmental Assessment Agency (CEAA) for review by Federal agencies to identify any requirements under *The Canadian Environmental Assessment Act*. Referral procedures to CEAA are described in the **Canada - Saskatchewan Agreement on Environmental Assessment Cooperation, November 1999**.

Appendix 1: *The Environmental Assessment Act*

The following key definitions are excerpted from the Act:

Section 2(d) of *The Environmental Assessment Act* defines “*development*” as:

any project, operation or activity or any alteration or expansion of any project, operation or activity which is likely to:

- i) have an affect [sic] on a unique, rare or endangered feature of the environment;*
- ii) substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose;*
- iii) cause the emission of any pollutants or create by-products, residual or waste products which require handling or disposal in a manner that is not regulated by any other Act or regulation;*
- iv) cause widespread public concern because of potential environmental changes;*
- v) involve a new technology that is concerned with resource utilization and that may induce significant environmental change; or*
- vi) have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment.*

Any project which is a “development” requires Ministerial Approval following completion of an Environmental Impact Assessment (EIA) before it may proceed. Following review of an EIA, the minister may approve the project, approve the project with conditions, or deny approval.

Section 2(e) states that “*environment*” means:

- (i) air, land or water;*
- (ii) plant and animal life, including man; and*
- (iii) the social, economic and cultural conditions that influence the life of man or a community insofar as they are related to the matters described in subclauses (i) and (ii).*

Appendix 2: Areas Where EPPs Are Likely Required

An Environmental Protection Plan (EPP) is prepared by a project's proponent to describe how he will implement a project which raises significant environmental concerns or may trigger one or more of the criteria defining a "development" in *The Environmental Assessment Act*.

OIL AND GAS EXPLORATION AND DEVELOPMENT PROJECTS IN THE FOLLOWING GEOGRAPHICAL AREAS USUALLY WILL REQUIRE AN EPP. Some projects in these areas may require a full Environmental Impact Assessment (EIA) and ministerial approval under *The Environmental Assessment Act*. Saskatchewan Environment and Resource Management (SERM) has based this list on known environmental sensitivities and public concern regarding development activity in the following areas:

- " Great Sand Hills
- " Webb, Burstall, Cabri and Elbow sand hills
- " Manitou Sand Hills
- " other sand hills complexes
- " Cypress Hills Uplands
- " Frenchman River valley and contiguous native grassland and ravine complexes
- " South Saskatchewan River valley and contiguous native grassland and ravine complexes
- " locations directly affecting the valley walls and / or floodplain of any river
- " Big Muddy valley and contiguous native grassland and ravine complexes
- " Western Hemisphere Shorebird Reserve Network (WSHRN) sites (Chaplin, Reed, Old Wives and Quill lakes)
- " Old Man On His Back Prairie and Heritage Conservation Area (Butala Ranch Nature Conservancy area)
- " Grand Cheviot Co-op Pasture
- " Cold Lake Air Weapons Range
- " Whitehood Integrated Resource Management Area
- " Significant projects within the Provincial Forest
- " lands listed in *The Wildlife Habitat Protection Act* when more than 4 wells per quarter section are proposed
- " projects which involve significant use of a provincial resource (e.g., water).

The preceding list is provided for guidance only, and is subject to the following points:

- 1. SERM will request an EPP (and potentially an EIA) for projects proposed OUTSIDE the areas described above where significant environmental concerns are raised and where one or more of the criteria in *The Environmental Assessment Act* may be triggered.**
- 2. SERM may determine that some projects in these areas do not raise significant environmental issues and limit the environmental-review requirement to the short-form Project Proposal process administered through the SERM regional office.**

Contact the SERM regional office Oil & Gas Coordinator for direction on review procedures for projects where SERMs requirements may be unclear.

December 11, 2000