

**Wildlife Resources**  
**Baseline Environmental Program Summary**  
**BP Canada Energy Company Mist Mountain Coalbed Gas Project**

Matrix Solutions Inc. (Matrix) has developed a baseline wildlife assessment program for BP Canada Energy Company's (BP Canada's) Mist Mountain Coalbed Gas Project located in southeast British Columbia. The objectives of the baseline wildlife program are:

1. To collect wildlife related data for use in estimating the baseline, or current, conditions for wildlife resources in the project study area. This will include the collection and use of existing data for wildlife in the study area and the collection of field data using recognized sampling techniques.
2. To estimate the baseline, or current conditions, for wildlife resources in the project area using a select group of wildlife indicators (e.g., indicator species or species groups).

This assessment is intended to build upon existing research, knowledge and data for wildlife resources in a collaborative manner; to provide a tool to help plan future resource development and mitigation strategies in the study area with respect to wildlife resources; and to provide a foundation for BP Canada's internally mandated Environmental and Social Impact Assessment for the project.

Key accomplishments of the assessment during 2007 and 2008 include:

- The project design was finalized based on coordination with numerous wildlife experts and regulatory representatives familiar with the area and based on a review of relevant existing information and data.
- Nine wildlife indicator species or species groups were defined to focus the baseline assessment (Table 1).
- Partnerships with the British Columbia Ministry of Environment have been developed, such that BP Canada is supporting existing wildlife monitoring initiatives for grizzly bears and moose in and surrounding the project study area.
- Expert consultants have been hired to conduct detailed habitat evaluations, information reviews and field studies for wildlife indicators.
- Historical information reviews have been conducted on wildlife resources in and surrounding the study area. Historical wildlife data and information sources have been collected and compiled.
- The following wildlife field surveys have been conducted and or supported by BP Canada to build upon existing information available for the study area:
  - a winter snow tracking survey;
  - a mountain goat and bighorn sheep winter habitat aerial survey;
  - a songbird point count survey;

- a moose aerial census survey (conducted by British Columbia Ministry of Environment);
  - two years of grizzly bear trend monitoring from DNA hair snagging (conducted by British Columbia Ministry of Environment); and
  - goshawk habitat evaluation and nest surveys;
- Consultants have derived resource selection models (empirical wildlife habitat models) from wildlife data collected in and surrounding the study area for grizzly bears, elk, moose and bighorn sheep. Additionally habitat suitability models for goshawks, mountain goats, badgers, songbirds and furbearers have been developed and tested from expert opinion, peer-reviewed literature and data collected in the study area.
  - During 2009, a report summarizing the baseline conditions for wildlife resources in the area will be prepared. However, full documentation will not be complete until contributing baseline monitoring studies are complete (up to 2012). The need for additional assessments or further years of study on the proposed program will be evaluated as the program proceeds.



Table 1. Wildlife Indicators and Selection Rationale

Wildlife Indicator	Selection Criteria
Grizzly Bears ( <i>Ursus arctos</i> )	<ul style="list-style-type: none"> <li>• A focal species that has been studied in the Flathead drainage for over 30 years</li> <li>• An umbrella species occupying large home ranges representative of other flora and fauna in the area</li> <li>• A charismatic species known to represent wilderness on a global context</li> <li>• An environmental wilderness indicator</li> <li>• Environmental indicator for riparian habitats</li> </ul>
Moose ( <i>Alces alces</i> )	<ul style="list-style-type: none"> <li>• Focal species and the focus of study by the forest industry in the area</li> <li>• Socio-Economic species that is managed as a game species in British Columbia with traditional use values</li> <li>• Umbrella species as a key prey species for large carnivores</li> </ul>
Elk ( <i>Cervus elaphus</i> )	<ul style="list-style-type: none"> <li>• Socio-Economic species that is managed as a game species in British Columbia with traditional use values</li> <li>• Umbrella species as a key prey species for large carnivores</li> </ul>
Goshawks ( <i>Accipiter gentilis</i> )	<ul style="list-style-type: none"> <li>• Focal species being the focus of study by the forest industry and academia in the area</li> <li>• An umbrella species representative of old growth forest-dependent species</li> <li>• Environmental indicator for old growth forests</li> <li>• Wilderness indicator sensitive to forest clearing and removal</li> </ul>
Bighorn Sheep ( <i>Ovis canadensis</i> )	<ul style="list-style-type: none"> <li>• Environmental indicator for alpine and sub alpine ecosystems</li> <li>• A charismatic species in North America</li> <li>• Socio-Economic species managed as a game species in British Columbia</li> <li>• Focal species of coal mine habitat reclamation studies in the area</li> </ul>
Mountain Goats ( <i>Oreamnos americanus</i> )	<ul style="list-style-type: none"> <li>• Wilderness indicator sensitive to anthropogenic development</li> <li>• Environmental indicator of alpine and sub alpine ecosystems</li> <li>• Charismatic species</li> <li>• Socio-Economic species that is managed as a commercial game species in British Columbia</li> <li>• Focal species with provincial concern</li> </ul>
Songbirds	<ul style="list-style-type: none"> <li>• Environmental indicator of ecosystem health</li> <li>• At-Risk-Species including numerous federally listed Schedule 1 Species by COSEWIC</li> <li>• Wilderness indicator with nest site selection that can be sensitive to anthropogenic disturbance</li> </ul>
Badgers ( <i>Taxidea taxus</i> )	<ul style="list-style-type: none"> <li>• At-Risk-Species listed as a Schedule 1 Species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)</li> <li>• Focal species of concern in British Columbia's east-Kootenay region</li> </ul>
Tailed Frog ( <i>Ascaphus montanus</i> )	<ul style="list-style-type: none"> <li>• At-Risk-Species listed as a Schedule 1 Species by COSEWIC</li> <li>• Focal species of concern in British Columbia and has been the focus of studies in the Flathead drainage.</li> </ul>

