1.0 INTRODUCTION

Benga Mining Limited (Benga), a wholly owned subsidiary of Riversdale Resources Limited (Riversdale), is submitting an application to construct and operate the Grassy Mountain Coal Project (the Project), which is located in south-west Alberta near the Crowsnest Pass. The Project will include a surface metallurgical coal mine, a coal handling preparation plant and associated infrastructure including a coal conveyor system, a rail load-out facility, an access corridor, a rail loop, and other necessary facilities. The rail load out facility will displace a portion of the Crowsnest Pass Golf and Country Clubs golf course. The replacement golf course development is included to ensure potential impacts are considered and mitigated.

Millennium EMS Solutions Ltd. (MEMS) was retained to assist in the preparation of an Environmental Impact Assessment (EIA) under the Alberta's *Environmental Protection and Enhancement Act* (EPEA) and Canada's *Canadian Environmental Assessment Act* (CEAA). One component of the application involves the assessment of potential effects of the Project on wildlife, including impacts on wildlife populations and wildlife habitat.

1.1 Project Terms of Reference and Assessment Approach

This wildlife assessment was prepared in accordance with the Project Final Terms of Reference (TOR) that were issued by Alberta Energy Regulatory (AER) and with the guidelines set out by the Canadian Environmental Assessment Agency's (CEAA) *Guidelines for the Preparation of an Environmental Impact Statement*. The AER Final TOR and CEAA guidelines related to wildlife are included below:

1.1.1 AER TOR

4.7 Wildlife

4.7.1 Baseline Information

[A] Describe and map existing wildlife resources (amphibians, reptiles, birds and terrestrial and aquatic mammals). Describe species composition, distribution, relative abundance, seasonal movements, movement corridors, habitat requirements, key habitat areas, general life history including habitat disturbances and their use and potential use of habitats. Also, identify any species that are:

a) listed as "at Risk, May be at Risk and Sensitive" in The Status of Alberta Species (ESRD);
b) listed in Schedule 1 of the federal Species at Risk Act;
c) listed as "at risk" by COSEWIC; and
d) species of traditional and current use, and cultural keystone species.

[B] Describe, quantify and map all existing habitat disturbance (including exploration activities) and identify those habitat disturbances that are related to existing and approved Project operations.

4.7.2 Impact Assessment

[A] Describe and assess the potential impacts of the Project to wildlife populations and wildlife habitats, considering:

a) how the Project will affect wildlife relative abundance, movement patterns, and distribution for all stages of the Project;

b) how improved or altered access may affect wildlife including potential obstruction of movements, increased vehicle-wildlife collisions, and increased hunting pressures;

c) how increased habitat fragmentation may affect wildlife considering edge effects, the availability of core habitat, and the influence of linear features and infrastructure on wildlife movements;

d) the spatial and temporal changes to habitat availability and habitat effectiveness (types, quality, quantity, diversity, and distribution);

e) potential impacts on wildlife resulting from changes to air and water quality, including both acute and chronic effects to animal health;

f) the resilience and recovery capabilities of wildlife populations and habitats to disturbance; and

g) the potential for the Project Area to be returned to its existing state with respect to wildlife populations and their habitats.

[B] Identify key indicator species and discuss the rationale for their selection.

[C] Comment on the availability of species for traditional use considering habitat loss, habitat avoidance, vehicle-wildlife collisions, increased non-aboriginal hunting pressure and other Project related impacts on wildlife populations.

1.1.2 CEAA Guidelines

6.1.6. Migratory Birds and their Habitat

- the various ecosystems found in the project area likely to be affected based on existing information;

- wetlands, including classification, location, size, and function (biochemical, hydrological, and ecological) based on existing information and surveys, if existing information is insufficient;

- migratory and non-migratory birds (including waterfowl, raptors, shorebirds, marsh birds, and other land birds) based on existing information and surveys, if existing information is insufficient;

- year-round migratory bird use of the area (e.g. winter, spring migration, breeding season, fall migration) using existing data and literature as well as surveys to provide current field data; and,

- exposure to relevant contaminants of concern (see section 6.1.2) based on data from existing sources.

6.1.7. Species at Risk

- a list of all potential or known federally listed species at risk that may be affected by the Project (fauna and flora), using existing data, literature, and surveys to provide current field data;

- a list of all federal species designated by the Committee on the Status of Endangered Wildlife of Canada (COSEWIC) for listing on Schedule 1 of the Species at Risk Act. This will include those species in the risk categories of extirpated, endangered, threatened, and special concern;

- any published studies that describe the regional importance, abundance, and distribution of species at risk;

- residences, seasonal movements, movement corridors, habitat requirements, key habitat areas, identified critical habitat and/or recovery habitat, and general life history of species at risk that will occur in the project area or be affected by the Project; and

- exposure to relevant contaminants of concern based on data from existing sources.

6.3.2 Predicted Effects to Migratory Birds

- direct migratory bird mortality from project activities, such as clearing of sites, or birds and nests being in contact with contaminated waters (e.g. surface water drainage ponds);

- collision risk of migratory birds with any project components or activities;

- changes to relative abundance, movements and use of habitats, including wetlands, by migratory birds due to increased disturbance (e.g. noise, light, presence of workers); and

- direct and indirect effects to migratory birds resulting from increased exposure to contaminants of concern.

6.3.3 Species at Risk

- direct and indirect effects of the Project on federally listed species at risk and those species listed by COSEWIC classified as extirpated, endangered, threatened, or of special concern (flora and fauna) and their critical habitat including:

- direct and indirect effects resulting from increased exposure to contaminants of concern; and

- the direct and indirect impacts to existing Recovery Strategy and Action Plans including a discussion of how population and distribution objectives set out in those documents would be affected.

1.1.3 Assessment Approach

The key regulatory issue with respect to wildlife is related to the potential occurrence of species at risk and species of management concern in the vicinity of the Project and the effects the Project will have on these species and their habitats. To determine which species at risk and of management concern occur in the vicinity of the Project, the assessment considers data from existing sources of information such as the Fish and Wildlife Management Information System (FWMIS), and from baseline inventory surveys conducted in the vicinity of the proposed Project from September 2013 to June 2016.

In addition to determining the presence and distribution of species at risk, the assessment addresses four other key wildlife issues, including:

- potential reductions in habitat availability through direct habitat alteration and reduced habitat effectiveness;
- habitat fragmentation and potential reductions in regional habitat connectivity and the significance this may have for vulnerable wildlife populations and their movements within and beyond Project boundaries;
- potential increases in regional wildlife mortality and impacts to wildlife health; and
- effects on regional wildlife diversity.

1.2 Project Location

1.2.1 Project Description

The Project footprint occupies an area of 1,520.7 ha located approximately 7 km north of the Town of Blairmore, Alberta (Figure 1.2-1). The Project footprint is primarily composed of the mine pit and the north and south waste rock disposal areas (1,222.3 ha, 80.4%), followed by the Coal Handling and Preparation Plant (CHPP) (94.1 ha, 6.2%) (Table 1.2-1). The remaining footprint area will be composed of surface water management drainage ditches and ponds, the replacement golf course area, a topsoil storage area, an access road, covered overland conveyor system and rail loop, and project components <2 ha in area (Figure 1.2-2). A temporary construction camp (required only for the approximate two year construction phase) will be located along an existing access road, and the coal conveyor will run from the CHPP facilities to a rail loop located along Highway 3.

Table 1.2-1 Summary of Spatial Extent of the Primary Project Components

Project Component	Component Area (ha)	Percentage of Development (%)
Ultimate Pit Extent	632.4	41.6
Ultimate Rock Disposal Extent (north and south ex-pit areas)	589.9	38.8
Haul Road	0.3	0.0
Surface Water Management Ponds and Ditches	74.6	4.9
Coal Handling Processing Plant and Infrastructure	94.1	6.2
Conveyor, Access Road and Pipeline ROW	15.2	1.0
Coal Load-Out and Railway Loop	33.1	2.2
Topsoil Storage	37.9	2.5
Proposed Water Pipeline/Service Road ROW	1.5	0.1
Construction Camp	1.9	0.1
Proposed Helipad Access	1.6	0.1
Proposed Golf Course Development	38.1	2.5
TOTALS[1]	**1,520.7**	**100**

[1] Due to rounding of values, totals may not equal the sum of the individual values presented in the table.

1.2.2 Local Study Area

Baseline wildlife inventories were conducted in a Wildlife Local Study Area (WLSA) that occupies 5,646.4 ha of land in Townships 7, 8 and 9 and Ranges 3 and 4, West of the 5th Meridian (Figure 1.2-2). The WLSA is comprised of the proposed Mine Permit Boundary with a minimum 500 m zone established around major disturbance features (primarily the southern one-third of the WLSA). The WLSA was established to account for potential disturbance effects of Project development on wildlife that may extend beyond the proposed Mine Permit Boundary.

For the purposes of the wildlife baseline inventories, supporting sampling sites immediately to the west boundary of the WLSA are included. These sampling sites were part of the wildlife sampling program conducted prior to the Project's engineering Mine Permit Boundary being defined.

1.2.3 Regional Study Areas

Regional study areas (RSA) encompass an area within which Project-specific effects on wildlife can be assessed in a broad spatial context. For the Project wildlife assessment, two RSAs were defined (Figure 1.2-3). The Wildlife RSA (WRSA) was defined as the area within 10 km of the WLSA

boundary (73,547.0 ha), and the Grizzly Bear RSA (GBRSA) was defined as the area within 25 km of the WLSA boundary (284,024.7 ha). The WRSA was selected to reflect the approximate average size of two elk winter home ranges, while the GBRSA was selected to represent the average area of an adult female grizzly bear home range.

1.3 Environmental Setting Overview

Ecologically, the Project falls within the Montane and Subalpine Subregions of the Rocky Mountain Natural Region (Archibald *et al.*, 1996; Natural Regions Committee, 2006). The Rocky Mountain Natural Region covers 7.4% of the province (49,070 km^2) and includes the area within and adjacent to the front and main ranges of the Rocky Mountains. It has the widest elevational gradient of any subregion (825 – 3,600 m) and includes mountains, high foothills, and deep glacial valleys.

The Montane Natural Subregion is characterized by a mixture of grasslands (particularly on dry south- and west-facing aspects) and forests composed of mixed or pure stands of lodgepole pine, Douglas fir, trembling aspen, balsam poplar, and white spruce (for corresponding plant and wildlife scientific names, refer to (CR #8 – Vegetation and Wetlands). Young lodgepole pine forests dominate at high elevations, although mixedwood and Douglas fir forests occur as well. Limber pine may also occur on dry, exposed ridge tops. Understory vegetation communities are diverse, and common shrub species include thimbleberry, creeping mahonia, Canada buffaloberry, bearberry, and snowberry. Wetlands are uncommon, and comprise approximately 2% of the total subregion area.

The Subalpine Natural Subregion is characterized by closed forests of lodgepole pine, Engelmann spruce, and subalpine fir at lower elevations. Forests at higher elevations are typically more open and can include whitebark pine and subalpine larch. At the highest elevations in the subregion, trees may be widely spaced and stunted. Grasslands can occur on steep south- and west-facing slopes. Common understory shrubs include white-flowered rhododendron, false azalea, and grouse berry. Mountain heathers are common at higher elevations. Wetlands, which tend to occur in valley bottoms, are uncommon and comprising about 2% of the subregion area.

Because of its complex topography, the Rocky Mountain Natural Region contains a wide variety of wildlife habitats resulting in correspondingly diverse wildlife populations. Substantial portions of the Alberta ranges of the long-toed salamander and Columbia spotted frog lie within the Rocky Mountain Natural Region. Other amphibians that occur there include the western tiger salamander, boreal chorus frog, wood frog, and western toad. Most amphibian species occur in wet habitats, including in or near wetlands, beaver ponds, steams, and lakes. Red-sided and wandering garter snakes are frequently associated with waterbodies and are the only reptiles known to occur naturally in this natural region.

Several bird species that range into Alberta also breed in the Rocky Mountain Natural region. American dippers and harlequin ducks can be found in or near fast flowing mountain streams. Steller's jay, varied thrush, mountain chickadee, blue grouse, Hammond's flycatcher, Clark's nutcracker, and Townsend's warbler are also largely restricted to the region, occurring primarily in montane or subalpine forests. Black swift, and Calliope and rufous hummingbirds, can also be found in montane areas in the region. Species that breed in high-elevation habitats in the region include the grey-crowned rosy-finch, American pipit, white-tailed ptarmigan, and horned lark.

The ranges of a number of mammalian species in Alberta are restricted to this region including such species as the mountain goat, mountain sheep, American pika, hoary marmot, Columbian ground squirrel, and golden-mantled ground squirrel. Other large mammals that occur in the region include the mule deer, white-tailed deer, moose, elk, beaver, black bear, grey wolf, coyote, red fox, Canada lynx, cougar, and wolverine. Mountain caribou occur in the northern section of the region but do not occur in the Crowsnest Pass area.

Several wildlife species of management concern occur in the Crowsnest Pass area, including grizzly bears, elk, moose, white-tailed and mule deer, mountain goats, mountain sheep, Canada lynx and American marten. The southern portion of the Mine Permit Boundary Area (associated with local name "Bluff Mountain") is situated within an AEP-designated Mountain Goat and Sheep Range (Figure 1.3-1). Mountain Goat and Sheep Range guidelines include a prohibition on developing new ground access routes within the range, restrictions on timing of exploration and industrial activity, and restrictions on the use of aircraft (including fixed-wing aircraft and helicopters) (AEP 2010a).

Core Grizzly Bear Zones are areas of low mortality with high grizzly bear habitat value. The north portion of the Mine Permit Boundary is situated within a Core Grizzly Bear Zone (Figure 1.3-1). Grizzly bear is a COSEWIC (Committee on the Status of Endangered Wildlife in Canada) species of "Special Concern" and is legally designated as a "Threatened" species in Alberta. Alberta's Grizzly Bear Recovery Plan provides a framework of actions that are needed for the successful recovery of this species. Key recommendations of the plan include controlling access development and use in high-quality grizzly bear habitat, ongoing collection, and monitoring of key data on grizzly bear biology, the creation of grizzly bear priority areas where development will be restricted, and the establishment of regional grizzly bear recovery implementation teams to address regional issues (Alberta Grizzly Bear Recovery Plan, 2008; AEP, 2016a).

Two Key Wildlife and Biodiversity Zones (KWBZs) also extend into the northern and southern portions of the lease (Figure 1.3-1). KWBZs are areas that contain a combination of key winter ungulate habitat and a high potential for biodiversity, typically occurring along major river valleys. KWBZ Development Guidelines include restrictions on the timing of industrial activities and recommended prohibitions on new access development (AEP, 2010b).

Because of its varied landscapes and wildlife diversity, the Rocky Mountain Natural Region is also highly valued for the recreational opportunities it provides. Hiking, birding, wildlife watching, horse riding, hunting, mountain biking, skiing, and snowboarding are popular activities in the area and tourism is important to the economy of the region. Other land uses include cattle grazing, forestry, oil and gas exploration, and mining.

At the local level, the Project is located in the Crowsnest Pass region of southwestern Alberta. The Crowsnest Pass is a low-elevation mountain pass comprised of an east-west valley that passes through the Crowsnest Ridge. It contains the southernmost rail and highway route through the Canadian Rockies and the Project is approximately 7 km north of this important transportation corridor. The Crowsnest Valley also represents a major wildlife movement corridor and is an important overwintering ground for elk, and mule and white-tailed deer.

1.4 Regulatory and Policy Framework

1.4.1 Wildlife Legislation, Standards and Guidelines

Relevant legislation, regulations, policies, standards, and guidelines pertaining to the protection of wildlife and wildlife habitat are enforced under both federal and provincial legislation (Table 1.4-1). Standards and best management practices are guiding statements that allow development to occur in a way that will avoid, limit, or mitigate effects on aquatic and riparian habitats, water quality and quantity, fish and wildlife species, and public safety and property. Standards are defined as a regulatory requirement that must be adhered to or achieved in the design and completion of developments. Best management practices are recommended methods or techniques that should be adhered to, to ensure the standards are met and potential effects are mitigated.

Table 1.4-1 Wildlife Legislation, Regulation, Policy, Standards and Guidelines

Name	Type	Jurisdiction	Description
Species at Risk Act (SARA)	Act	Canada	Legal protection for at-risk wildlife species including species of special concern, and endangered, threatened, or extirpated species. Prohibits these species from being harmed or harassed and prohibits the destruction of their nests or dens.
Federal Recovery Strategies	Policy	Canada	Developed for species designated as threatened, endangered, or extirpated under Schedule 1 of SARA. Identifies critical habitat of Schedule 1 species. Currently, there are only three recovery strategies

Table 1.4-1 Wildlife Legislation, Regulation, Policy, Standards and Guidelines

Name	Type	Jurisdiction	Description
			applicable to the Project: • Recovery Strategy for the Common Nighthawk (*Chordeiles minor*) in Canada (Environment Canada 2016b) • Recovery Strategy for the Olive-sided Flycatcher (*Contopus cooperi*) in Canada (Environment Canada 2016a) • Proposed Recovery Strategy for Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Canada.(Environment Canada 2015)
Federal Management Plan	Policy	Canada	Proposed Management Plan for the Short-eared Owl (*Asio flammeus*) in Canada (Environment Canada 2016c)
Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	-	Canada	Legally assesses and classifies wildlife species according to the framework of SARA. Determines national status of species, subspecies, and populations thought to be at risk.
Migratory Birds Convention Act	Act	Canada	Prohibits killing, harming, or disturbing migratory birds or deposition of harmful substances in areas frequented by migratory birds; also protects their eggs and nests.
Wildlife Act	Act	Alberta	Multiple sections protect wildlife by outlining rules in regards to hunting, taking, trapping, wounding, and/or killing wildlife.
Water Act	Act	Alberta	Ensures that water quality, fish and wildlife habitat, and the rights of license users are not compromised.
Integrated Standards and Guidelines: Enhanced Approval Process	Guideline	Alberta	Outlines best management practices that industry can follow to avoid, limit, or mitigate negative effects on wildlife and the environment.
Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones	Guideline	Alberta	Assists industry in minimizing impacts on wildlife in KWBZ that generally provide high-quality wintering habitats for ungulates.

Table 1.4-1 Wildlife Legislation, Regulation, Policy, Standards and Guidelines

Name	Type	Jurisdiction	Description
Recommended Land Use Guidelines: Mountain Goat/ Bighorn Sheep Ranges	Guideline	Alberta	Assists industry in minimizing impacts on mountain goats and mountain sheep.
Wildlife Sensitivity Maps	Guideline	Alberta	Identifies specific wildlife key areas that function in ensuring the continued survival of local and regional populations of wildlife or wildlife group.
Sensitive Species Inventory Guidelines	Guideline	Alberta	Pre-disturbance inventory protocols focused on wildlife that are or may be at risk of extirpation, require protection to prevent them from becoming at risk, or other species of management concern.

1.4.2 Species of Conservation Concern

Baseline wildlife surveys conducted for the Project focused on species of conservation concern that are protected in either Alberta and/or Canada. Species of conservation concern are important to consider in wildlife assessments because of their status and sensitivity to disturbance or changes in habitat. By managing the landscape for species of concern, habitat for a broad range of other wildlife species may also be conserved. The following sections review the provincial and federal ranking systems used to identify wildlife species of concern for the Project.

1.4.2.1 General Provincial Status

In Alberta, more than 5,200 species have an assigned non-legislated general provincial status based on information about their population sizes, distribution trends, and potential threats to their persistence (AEP, 2010c; Table 1.4-2). These status ranks are updated every five years and are intended to help government and non-governmental organizations set conservation priorities and to alert industry to species that may require special consideration when making land use decisions (AEP, 2010c).

Table 1.4-2 Definitions of Provincial General Status Categories

Rank	Definitions1
At Risk	Any species known to be "At Risk" of extinction or extirpation after a formal detailed status assessment.
May Be At Risk	Any species that "May Be At Risk" of extinction or extirpation, and is therefore a candidate for detailed risk assessment.

Table 1.4-2 Definitions of Provincial General Status Categories

Rank	Definitions1
Sensitive	Any species that is not at risk of extinction or extermination, but might require attention or protection to prevent it from becoming at risk.
Secure	A species that is not "At Risk", "May Be At Risk", or "Sensitive".
Undetermined	Any species where there is insufficient information, knowledge, or data available to reliably evaluate its general status.
Not Assessed	Any species has not examined in the General Status of Alberta Wild Species 2010 report.
Exotic/Alien	Any species that has been introduced due to human activities.
Extirpated/ Extinct	Any species no longer thought to be present in Alberta ("Extirpated") or no longer believed to be present anywhere in the world ("Extinct").
Accidental/ Vagrant	Any species occurring infrequently and unpredictably in Alberta, *i.e.* outside its normal range due to accidents during migration, unusual breeding behaviour by a small number of individuals, or unusual weather circumstances.

Source: AEP (Alberta Environment and Parks). 2010c. Alberta Wild Species General Status Listing – 2010a. Government of Alberta. Available online at: http://aep.alberta.ca/fish-wildlife/species-at-risk/albertas-species-at-risk-strategy/general-status-of-alberta-wild-species-2010/documents/SAR-2010WildSpeciesGeneralStatusList-Jan2012.pdf

The general provincial status of all wildlife species occurring in Alberta is determined following consultation with wildlife professionals and the analysis of available data (AEP, 2010c). The provincial ranking system serves as a first step for determining which species should be designated as "At Risk" or "May Be at Risk". These species often require further detailed study, and are given priority when being considered for federal listing by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The general status of wildlife in Alberta is divided into nine categories based on a number of criteria including abundance and distribution, population trends, documented and presumed threats to the species and their habitat, and whether the species is native to Alberta (Table 1.4-2).

1.4.2.2 Legislated Provincial Status

Alberta's *Wildlife Act* provides legal protection for species considered to be threatened or endangered in the province. The *Act* charges the Endangered Species Conservation Committee with evaluating the status of potentially threatened or endangered wildlife (Table 1.4-3). Species that are classified as "Threatened" or "Endangered" under the *Act* are protected from harm, either directly or indirectly in Alberta. This includes protecting nests and dens of threatened and endangered species throughout the year and providing penalties for killing or trafficking endangered species (AEP, 2014).

Table 1.4-3 Definitions of the Legal Status Categories Under the Alberta *Wildlife Act*

Status	Definition[1]
Extinct	A species that no longer exists in the world.
Extirpated	A species that no longer exists in the wild in Alberta, but occurs elsewhere in the wild.
Endangered	A species facing imminent extirpation or extinction.
Threatened	A species likely to become endangered if limiting factors are not reversed.
Species of Special Concern	A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
Data Deficient	A species for which there is insufficient scientific information to support status designation.

[1]Source: AEP (Alberta Environment and Parks). 2014a. A Guide to Endangered and Threatened Species and Species of Special Concern in Alberta. Version 1. Available online at: http://aep.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/documents/SpeciesAtRiskGuide-Jan-2015.pdf.

1.4.2.3 Federal Status

Species ranked as "At Risk" or "May Be At Risk" at the provincial level may be considered candidates for a more detailed assessment by COSEWIC. COSEWIC was established within the *Species at Risk Act* (SARA) as an independent body of experts responsible for identifying and assessing species that are at risk of extinction (SARA, 2002). Assessment by COSEWIC is the first step toward protecting species at risk of extirpation or extinction throughout Canada. Species designated by COSEWIC to be at risk of extinction are then eligible for federal protection by the government. Species that are ranked as either "Special Concern", "Threatened", or "Endangered" are offered certain protections under SARA (Table 1.4-4). These measures include general prohibitions against harming the species or their nests, commitments to recovery, and protection of critical habitat. General prohibitions provide immediate protection to species on federal lands, aquatic species, and migratory birds. The prohibitions can also apply to listed species on all lands through a safety net process, and on federal lands for species listed by provincial and territorial governments.

Table 1.4-4 Definitions of Federal Status Categories for Wildlife

Status	Definitions[1]
Extinct	A wildlife species that no longer exists.
Extirpated	A wildlife species that no longer exists in the wild in Canada, but occurs elsewhere.
Endangered	A wildlife species that is facing imminent extinction or extirpation.
Threatened	A wildlife species that is likely to become endangered if limiting factors are not reversed.

Table 1.4-4 Definitions of Federal Status Categories for Wildlife	
Status	**Definitions[1]**
Special Concern	A wildlife species that might become "Threatened" or "Endangered" because of a combination of biological characteristics and identified threats.
Data Deficient	A wildlife species for which there is inadequate information to make a direct or indirect, assessment of its risk of extinction.
Not At Risk	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

[1]Source: *Species at Risk Act* (SARA 2002)

1.4.3 Land Management Plans

The Project falls within the area covered by the South Saskatchewan Regional plan and the South Saskatchewan River Basin Plan. It also includes lands that are subject to two different Integrated Resource Plan (IRP) areas, both of which aim to allow for multiple land uses while protecting the environment. These are the Livingstone-Porcupine Hills Sub-Regional IRP and the Crowsnest Corridor Local Sub-Regional IRP. Each IRP divides land into eight different Land Use Zones, each of which is subject to different management objectives.

A detailed description of land use in the Project area is provided in Consultant Report #12-Land and Resource Use.

2.0 BASELINE WILDLIFE SURVEYS

The primary objective of the baseline wildlife surveys was to describe and map existing wildlife resources in the Project WLSA, including amphibians, reptiles, birds, and mammals, and to evaluate their use and potential use of habitats. Special attention was paid to those species listed as "At Risk", "May Be At Risk" and "Sensitive" in Alberta (AEP, 2010c), all species listed in Schedule 1 of the Canada's SARA (Government of Canada, 2014), and those listed as "At Risk" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC; COSEWIC, 2014). Species of management concern (*i.e.* those that may be hunted or trapped), and species used and/or valued by First Nations were also considered.

2.1 Wildlife Habitat Delineation

Vegetation classification for the WLSA was based on Archibald *et al.* (1996), who used information on vegetation, soil, site characteristics, and productivity to develop a field guide for ecosite phases in southwestern Alberta. Ecosite-level mapping was considered appropriate for survey planning and data analysis for the Project because it was available for the entire WLSA, it contains a relatively high