

**Environmentally Significant Areas  
of Alberta**

**Volume 2**

Prepared by:

**Sweetgrass Consultants Ltd.  
Calgary, AB**

for:

**Resource Data Division  
Alberta Environmental Protection  
Edmonton, Alberta**

**March 1997**

## EXECUTIVE SUMMARY

Large portions of native habitats have been converted to other uses. Surface mining, oil and gas exploration, forestry, agricultural, industrial and urban developments will continue to put pressure on the native species and habitats. Clearing and fragmentation of natural habitats has been cited as a major area of concern with respect to management of natural systems.

While there has been much attention to managing and protecting endangered species, a consensus is emerging that only a more broad-based ecosystem and landscape approach to preserving biological diversity will prevent species from becoming endangered in the first place.

Environmentally Significant Areas (ESAs) are important, useful and often sensitive features of the landscape. As an integral component of sustainable development strategies, they provide long-term benefits to our society by maintaining ecological processes and by providing useful products. The identification and management of ESAs is a valuable addition to the traditional socio-economic factors which have largely determined land use planning in the past.

The first ESA study done in Alberta was in 1983 for the Calgary Regional Planning Commission region. Numerous ESA studies were subsequently conducted through the late 1980s and early 1990s. ESA studies of the Parkland, Grassland, Canadian Shield, Foothills and Boreal Forest Natural Regions are now all completed while the Rocky Mountain Natural Region has been only partially completed.

Four factors regarding the physical state of the site were considered when assessing the overall level of significance of each ESA: representativeness, diversity, naturalness, and ecological integrity. Each ESA was assigned a significance level: provincial, national or international.

Areas of provincial significance in Alberta include relatively undisturbed and sizable remnants of undisturbed upland and valley habitats; important waterfowl production and shorebird staging areas; and some of the most critical wildlife ranges (e.g. deer, Pronghorn, Caribou, Moose, Grizzly Bear) in Alberta.

Areas of national significance include staging habitats with nationally high concentrations of waterfowl and shorebirds, national parks, habitats for endangered species and concentrations of nationally rare plant and animal species.

Areas of international significance include sites of globally endangered species (e.g. Whooping Crane), RAMSAR wetlands; geological type localities; and extremely diverse grassland-valley complexes on international waterways (e.g. Writing-on-Stone).

ESAs, viewed in the context of protected areas, are anticipated to be the most cost-efficient and, in many cases, the only means available for maintaining adequate levels of biological diversity at appropriate scales. It is important at this time to note that ESAs are not characterized by protectionist policies. A site designated as an ESA is not a legislatively mandated protected area. However, the designation of an ESA does indicate the value of both biotic and abiotic resources within a site. By identifying ESAs prior to the development of land-use plans, biodiversity conservation can be incorporated into both private and public land management. The overall goal of employing ESA inventories into land use plans is to maintain viable populations and natural distributions of native species and communities in the landscape.

Various national and international programs and agreements commit Canada to completing a network of protected areas and to conserving biodiversity in the overall landscape. Special Places 2000 is the strategic plan which has been established by the Alberta government to provide direction for the identification and establishment of protected areas in the province.

ESAs have become a useful tool in the implementation of Special Places 2000, a strategic plan for identifying and protecting diverse and representative landscapes in Alberta. ESA inventories serve as a valuable source of information for future protected area selection and designation. ESAs of provincial or

greater significance are considered the most likely sites for identifying landscapes suitable for a provincial protected areas program like Special Places 2000.

The primary purpose of this ESA study was to evaluate and provide an overview of all ESA inventories completed to date in Alberta and to determine which areas were of provincial, national or international significance. An analysis of Level 1 Natural History Theme occurrence in each of the ESAs was a significant component of this project. From an analysis of aerial photographs and dominant surficial themes identified from the literature, surficial landform units were mapped and the percentage occurrence of the 20 Level 1 Natural History Themes defined by Alberta Parks Services was determined for every surficial landform unit within each ESA.

Each ESA is described in checksheet format, identifying:

1. name of the ESA study from which the information is derived;
2. name of the area;
3. general location;
4. NTS map sheet;
5. municipality in which it occurs;
6. natural subregions in which it occurs;
7. level of significance (provincial, national or international) and background for determining level of significance;
8. a description of the major features which characterize the area;
9. management considerations; and
10. references which will provide more scientific or detailed information should the user require it.

All information is stored in digital database and ARCINFO spatial files so it can be used in a variety of ways.

A set of 1:250,000 scale maps showing the location of ESAs and Natural History Theme (Surficial) units within each ESA accompanies this report.

## TABLE OF CONTENTS

### VOLUME 1

Executive Summary .....	i
Table of Contents .....	iii
List of Tables .....	vi
1. INTRODUCTION .....	1
1.1 The Value of Environmentally Significant Areas (ESAs) .....	1
1.2 History of ESA Identification in Alberta .....	1
1.3 ESA Classification Criteria .....	2
1.4 Levels of Significance .....	4
1.5 ESAs and Biodiversity Conservation .....	5
1.6 Protection Targets, Special Places 2000 and ESAs .....	7
1.7 Outline of this Study .....	8
2. DATA COLLECTION METHODS .....	10
2.1 Review of ESA Reports and Data .....	10
2.2 Workshop on ESAs .....	12
2.3 Literature Review and Aerial Photograph Interpretation .....	12
2.4 Digital Map Production .....	14
3. OVERVIEW OF NATURAL REGIONS AND SUBREGIONS .....	15
3.1 Grassland Natural Region .....	15
3.1.1 Dry Mixedgrass Subregion .....	16
3.1.2 Mixedgrass Subregion .....	17
3.1.3 Northern Fescue Subregion .....	18
3.1.4 Foothills Fescue Subregion .....	19
3.2 Parkland Natural Region .....	19
3.2.1 Central Parkland Subregion .....	20
3.2.2 Foothills Parkland Subregion .....	21
3.2.3 Peace River Parkland Subregion .....	21
3.3 Foothills Natural Region .....	22
3.3.1 Lower Foothills Subregion .....	23
3.3.1 Upper Foothills Subregion .....	23
3.4 Rocky Mountain Natural Region .....	24
3.4.1 Montane Subregion .....	25
3.4.2 Subalpine Subregion .....	25
3.4.3 Alpine Subregion .....	26
3.5 Boreal Forest Natural Region .....	27
3.5.1 Dry Mixedwood Subregion .....	28
3.5.2 Central Mixedwood Subregion .....	29
3.5.3 Wetland Mixedwood Subregion .....	30
3.5.4 Boreal Highlands Subregion .....	30
3.5.5 Peace River Lowlands Subregion .....	31
3.5.6 Subarctic Subregion .....	31
3.6 Canadian Shield Natural Region .....	32
3.6.1 Athabasca Plain Subregion .....	33

3.6.2 Kazan Upland Subregion.....	33
4. NATURAL HISTORY THEME ANALYSIS.....	35
4.1 Protected Area Targets .....	37
4.1.1 Level 1 Natural History Theme Targets.....	37
4.2 Targets - Level 1 Natural History Themes - Dry Mixedgrass Subregion .....	39
4.3 Targets - Level 1 Natural History Themes - Mixedgrass Subregion.....	39
4.4 Targets - Level 1 Natural History Themes - Northern Fescue Subregion .....	39
4.5 Targets - Level 1 Natural History Themes - Foothills Fescue Subregion.....	40
4.6 Targets - Level 1 Natural History Themes - Central Parkland Subregion .....	40
4.7 Targets - Level 1 Natural History Themes - Foothills Parkland Subregion .....	40
4.8 Targets - Level 1 Natural History Themes - Peace River Parkland Subregion .....	41
4.9 Targets - Level 1 Natural History Themes - Lower Foothills Subregion .....	41
4.10 Targets - Level 1 Natural History Themes - Upper Foothills Subregion .....	41
4.11 Targets - Level 1 Natural History Themes - Montane Subregion .....	41
4.12 Targets - Level 1 Natural History Themes - Subalpine Subregion .....	41
4.13 Targets - Level 1 Natural History Themes - Alpine Subregion .....	42
4.14 Targets - Level 1 Natural History Themes - Dry Mixedwood Subregion .....	42
4.15 Targets - Level 1 Natural History Themes - Central Mixedwood Subregion .....	42
4.16 Targets - Level 1 Natural History Themes - Wetland Mixedwood Subregion.....	42
4.17 Targets - Level 1 Natural History Themes - Boreal Highlands Subregion.....	43
4.18 Targets - Level 1 Natural History Themes - Peace River Lowlands Subregion .....	43
4.19 Targets - Level 1 Natural History Themes - Subarctic Subregion .....	43
4.20 Targets - Level 1 Natural History Themes - Athabasca Plain Subregion .....	43
4.21 Targets - Level 1 Natural History Themes - Kazan Upland Subregion.....	43
5. OVERVIEW OF ENVIRONMENTALLY SIGNIFICANT AREAS.....	44
5.1 Grassland Natural Region Sites .....	44
5.1.1 Dry Mixedgrass Subregion .....	44
5.1.2 Mixedgrass Subregion.....	45
5.1.3 Northern Fescue Subregion .....	46
5.1.4 Foothills Fescue Subregion .....	47
5.2 Parkland Natural Region Sites .....	48
5.2.1 Central Parkland Subregion .....	48
5.2.2 Foothills Parkland Subregion.....	50
5.2.3 Peace River Parkland Subregion .....	50
5.3 Foothills Natural Region Sites .....	51
5.3.1 Lower Foothills Subregion .....	51
5.3.1 Upper Foothills Subregion .....	52
5.4 Rocky Mountain Natural Region Sites .....	52
5.4.1 Montane Subregion .....	52
5.4.2 Subalpine Subregion .....	53
5.4.3 Alpine Subregion .....	54
5.5 Boreal Forest Natural Region Sites .....	54
5.5.1 Dry Mixedwood Subregion.....	54
5.5.2 Central Mixedwood Subregion.....	56
5.5.3 Wetland Mixedwood Subregion.....	59
5.5.4 Boreal Highlands Subregion.....	60
5.5.5 Peace River Lowlands Subregion.....	60
5.5.6 Subarctic Subregion .....	61

5.6 Canadian Shield Natural Region Sites .....	61
5.6.1 Athabasca Plain Subregion .....	61
5.6.2 Kazan Upland Subregion.....	61
5.7 ESAs Sorted by Size.....	61
5.7.1 Sites Larger Than 10 Sq. Km. ....	61
5.7.2 Sites Less Than 10 Sq. Km. ....	70
6. DATA GAPS AND RESEARCH NEEDS .....	74
REFERENCES .....	75
GLOSSARY OF LEVEL 1 NATURAL HISTORY THEME TERMS.....	93

## VOLUME 2

Executive Summary.....	i
Table of Contents .....	iii
ENVIRONMENTALLY SIGNIFICANT AREA CHECKSHEETS.....	1
REFERENCES .....	564

## VOLUME 3

Executive Summary.....	i
Table of Contents .....	iii
NATURAL HISTORY THEME REPRESENTATION IN ESAs .....	1
GLOSSARY OF LEVEL 1 NATURAL HISTORY THEME TERMS.....	2

## ENVIRONMENTALLY SIGNIFICANT AREA CHECKSHEETS

The following sites represent all the provincially, nationally and internationally significant Environmentally Significant Areas identified in Alberta to date. References that are used throughout include Wildlife Management Division (1996) and COSEWIC (1996) for references to red, blue or yellow A-listed species and vulnerable, threatened and endangered species, as well as Packer and Bradley (1984) and Argus and Pryer (1990) for provincially and nationally rare plant species.

Each checklist identifies the ESA that it was identified within, its name, area (in hectares), a general location, NTS map sheet, natural subregions in which it occurs, the level of significance and rationale, descriptive notes, management considerations and a list of references. Note that the original ESA studies are not generally cited in the references section of each checklist unless there is no other source material identified. Geowest (1997, in prep.) Poston et al. (1990), Lamoureux et al. (1983), and Westworth and Associates (1990) are frequently cited in this manner.

The following is a listing of the source reports for each ESA study (as identified on the first line of each checklist. While POSTON is not strictly an ESA study, it forms the basis for evaluating the significance of a large number of ESA sites.

- ACADIA -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas in the Palliser Region: MD of Acadia. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- BARRHEAD -- Wallis, C. and L. Knapik. 1990. Environmentally significant areas of the County of Barrhead. Prepared by Cottonwood Consultants Ltd. for the Agriculture Services Board, County of Barrhead, Barrhead.
- BIRCH MOUNTAINS -- Westworth and Associates Ltd. 1994. An inventory of significant natural features in the Birch Mountains -- Firebag River Integrated Resource Planning Area. Prepared by Westworth and Associates Ltd. for Resource Information Branch, Alberta Environmental Protection, Edmonton.
- BOREAL -- Geowest Environmental Consultants. 1997 (in prep.). Environmentally significant areas inventory of the Boreal Forest Natural Region of Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton
- BOW CORRIDOR -- Sweetgrass Consultants Ltd. 1991. Environmentally significant areas in the Bow River Corridor. Prepared by Sweetgrass Consultants, Calgary, for the MD of Bighorn, Exshaw.
- BRAZEAU -- Patriquin, D. and R. Ellis. 1992. Environmentally significant areas study: Municipal District of Brazeau, White Zone. Prepared by Westworth and Associates, Edmonton for Yellowhead Regional Planning Commission.
- CALGARY -- Lamoureux, R. G. Chow and B. Reeves. 1983. Environmentally significant areas of the Calgary region. Prepared by Lamoureux and Associates, Calgary for Calgary Regional Planning Commission, Calgary.
- CANADIAN SHIELD -- Alberta Parks Services. 1995. Natural history overview and theme evaluation, Canadian Shield (Athabasca Plain and Kazan Upland). Parks Services, Alberta Environmental Protection, Edmonton.
- CANMORE -- Cottonwood Consultants Ltd. 1994. Environmentally significant areas in the Town of Canmore. Prepared by Cottonwood Consultants Ltd. for the Town of Canmore, Canmore.
- CARDSTON -- Cottonwood Consultants Ltd. 1987. Environmentally significant areas in the Oldman River Region: MD of Cardston. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- CLEARWATER -- Sweetgrass Consultants Ltd. 1991. Environmentally significant areas of the MD of Clearwater. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- CROWSNEST PASS -- Sweetgrass Consultants Ltd. 1988. Environmentally significant areas of the Municipality of Crowsnest Pass. Prepared by Sweetgrass Consultants, Calgary, for Alberta, Forestry, Lands and Wildlife, Edmonton.

- CYPRESS -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas of the MD of Cypress. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- DAVID THOMPSON -- Sweetgrass Consultants Ltd. 1989. Environmentally significant areas of the David Thompson Corridor. Prepared by Sweetgrass Consultants, Calgary, for Alberta, Forestry, Lands and Wildlife, Edmonton.
- DRY MIXEDWOOD -- Bentz, J., V. Chisholm, and A. Saxena. 1996. Environmentally significant areas inventory of the Boreal Dry Mixedwood Subregion of Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- EASTERN BOREAL -- Westworth and Associates Ltd.. 1990a. Significant natural features of the eastern Boreal Forest Region of Alberta. Prepared by Westworth and Associates for Alberta Forestry, Lands and Wildlife, Edmonton.
- FOOTHILLS -- Bentz, J., A. Saxena and T. Normand. 1995. Environmentally significant areas inventory, Foothills Natural Region, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Land Information Division, Alberta Environmental Protection, Edmonton.
- FORTY MILE -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas of the County of Forty Mile. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- GRASSLAND -- Saxena, A., V. Chisholm and J. Bentz. 1996. Environmentally significant areas inventory, Grassland and Parkland Natural Regions, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- KNEEHILL -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas in the Palliser Region: MD of Kneehill. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- LACOMBE -- Sweetgrass Consultants Ltd. 1988. Environmentally significant areas of the Counties of Lacombe and Stettler. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- LEDUC -- Brusnyk, L., D. Westworth, K. Egan, A. McCann, L. Knapik and C. Schreiner. 1991. Environmentally sensitive areas study: County of Leduc. Prepared by Westworth and Associates for the Edmonton Metropolitan Regional Planning Commission, Edmonton.
- LETHBRIDGE -- Cottonwood Consultants Ltd. 1987. Environmentally significant areas in the Oldman River Region: County of Lethbridge. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- LLOYDMINSTER -- Cottonwood Consultants Ltd. 1995. Environmentally significant areas of the Lloydminster Area, Alberta and Saskatchewan. Prepared by Cottonwood Consultants Ltd. for Nature Conservancy of Canada and Husky Oil Operations, Calgary.
- LOWER RED DEER -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas of the Lower Red Deer River. Prepared by Cottonwood Consultants Ltd. for Alberta Forestry, Lands and Wildlife, Edmonton.
- MODEL FOREST -- Sweetgrass Consultants Ltd. 1994. Environmentally significant areas in the Foothills Model Forest. Prepared by Sweetgrass Consultants, Calgary, for Foothills Model Forest, Hinton.
- MONTANE -- Alberta Environmental Protection. 1995. Alberta's Montane Subregion, Special Places 2000 and the significance of the Whaleback Montane. Natural Resources Service, Alberta Environmental Protection, Edmonton.
- NEWELL -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas of the County of Newell. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- PAINTEARTH -- Sweetgrass Consultants Ltd. 1989. Environmentally significant areas of the County of Paintearth. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.



- PARKLAND -- Saxena, A., V. Chisholm and J. Bentz. 1996. Environmentally significant areas inventory, Grassland and Parkland Natural Regions, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- PEACE RIVER -- Johnston, S., R. Ellis and D. Westworth. 1996. Inventory of environmentally significant areas in the Boreal Dry Mixedwood Natural Subregion, Peace River Section: 1995-1996. Prepared by Westworth, Brusnyk and Associates, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- PINCHER CREEK -- Cottonwood Consultants Ltd. 1987. Environmentally significant areas in the Oldman River Region: MD of Pincher Creek. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- POSTON -- Poston B., D.M. Ealey, P.S. Taylor and G.B. Keating. 1990. Priority migratory bird habitats of Canada's prairie provinces. Canadian Wildlife Service, Environment Canada. Edmonton, Alberta.
- RED DEER -- Sweetgrass Consultants Ltd. 1990. Environmentally significant areas of the County of Red Deer. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- STARLAND -- Cottonwood Consultants Ltd. 1991. Environmentally significant areas in the Palliser Region: MD of Starland. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- STETTLER -- Sweetgrass Consultants Ltd. 1988. Environmentally significant areas of the Counties of Lacombe and Stettler. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- STRATHCONA -- Westworth, D. and L. Knapik. 1987. Significant natural features and landscapes of Strathcona County. Prepared by Westworth and Associates for Recreation and Parks, Strathcona County. *and*  
Infotech. 1989. Environmentally sensitive areas: County of Strathcona and MD of Sturgeon. Prepared by Infotech Services Land Evaluation Consultants for the Edmonton Metropolitan Regional Planning Commission, Edmonton.
- STURGEON -- Infotech. 1989. Environmentally sensitive areas: County of Strathcona and MD of Sturgeon. Prepared by Infotech Services Land Evaluation Consultants for the Edmonton Metropolitan Regional Planning Commission, Edmonton.
- TABER -- Cottonwood Consultants Ltd. 1988. Environmentally significant areas in the Oldman River Region: MD of Taber. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- VULCAN -- Cottonwood Consultants Ltd. 1988. Environmentally significant areas in the Oldman River Region: County of Vulcan. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- WARNER -- Cottonwood Consultants Ltd. 1987. Environmentally significant areas in the Oldman River Region: County of Warner. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- WETLANDS -- Wallis, C. 1990. Reconnaissance survey of saline wetlands and springs in the grassland-parkland region of eastern Alberta. Prepared by Cottonwood Consultants Ltd., Calgary for World Wildlife Fund, Edmonton.
- WILLOW CREEK -- Cottonwood Consultants Ltd. 1989. Environmentally significant areas in the Oldman River Region: MD of Willow Creek. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.

ESA: LLOYDMINSTER; POSTON; WETLANDS

Name: Albert Lake

Area (ha): 167

Location:

- Twp. 48 - Rge. 3 to 4 - W4
- Albert Lake south of Vermilion, Alberta

NTS Map Sheet: 73E

Municipality: County of Vermilion River

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat
- one of few locales for salt-marsh sand-spurry (*Spergularia marina*) in Alberta

Description:

- permanent hypersaline lake with sandy to muddy alkali shore and shallow water
- rare or uncommon plants including small populations of salt-marsh sand spurry (*Spergularia marina*)
- important shorebird migration and nesting habitat
- key waterfowl production area for dabbling ducks and diving ducks
- Eared Grebe colony with up to 300 birds
- heavy grazing on west shore; lightly grazed east shore

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Fish and Wildlife key area maps
- 1995 field notes

ESA: BOREAL

Name: Albright Lake

Area (ha): 468

Location:

- Twp. 75 - Rge. 12 - W6
- Albright Lake

NTS Map Sheet: 83M

Municipality: MD of Saddle Hills

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive waterfowl lakes in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- good waterfowl production site
- supports a small Northern Pike sport fishery

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl

References:

- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes

ESA: ACADIA; GRASSLAND; LOWER RED DEER RIVER

Name: Alkali Creek Moraine

Area (ha): 41097

Location:

- Twp. 22 to 25 - Rge. 3 to 5 - W4
- 10 km southwest of Acadia Valley
- upland adjacent Alkali Creek and north of the Red Deer River

NTS Map Sheet:: 72L, 72M

Municipality: Special Area 3; MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- extensive native grassland is scarce in Alberta
- important upland habitats for Mule Deer, Pronghorn, Sharp-tailed Grouse, rare birds of prey and Loggerhead Shrikes are becoming increasingly localized

Description:

- extensive block of native mixed grassland, low shrubbery and ephemeral wetlands on strongly rolling hummocky moraine; unit extends northward through Special Area No. 3 and eastward into the MD of Acadia
- nesting habitat for Sharp-tailed Grouse
- key Mule Deer and Pronghorn habitat
- nesting and feeding area for rare birds of prey including the Prairie Falcon and Ferruginous Hawk, a COSEWIC vulnerable species
- nesting area for Loggerhead Shrike, a COSEWIC endangered species
- large ephemeral wetland, potentially productive for waterfowl and shorebirds in wetter years

Management Considerations:

- cultivation reduces the productivity of the grasslands for native plants and animals
- a diversity of grazing regimes will ensure the survival of a variety of grassland plants and animals

References:

- 1991 field notes

ESA: DRY MIXEDWOOD

Name: Amisk Lake

Area (ha): 1085

Location:

- Twp. 65 - Rge. 18 - W4
- Amisk Lake

NTS Map Sheet: 83I

Municipality: County of Athabasca

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the most important wetlands in central Alberta

Description:

- deep meltwater channel
- upland vegetated by aspen and spruce forest communities
- significant waterfowl production and staging lake
- significant ungulate habitat in upland
- Bald Eagle and Osprey nests
- flock of American White Pelicans observed during aerial survey
- high diversity of fish populations which include Walleye, Northern Pike, Walleye and Yellow Perch
- important sport and commercial fishery

Management Considerations:

- cottage development may decrease significance

References:

- Mitchell and Prepas (1990)
- Westworth (1990)
- Key Wildlife Area Maps
- Natural and Protected Area Files
- Landlis (pers. comm. 1995)

ESA: DRY MIXEDWOOD

Name: Amisk Valley

Area (ha): 4532

Location:

- Twp. 64 - Rge. 18 - W4
- Amisk Valley

NTS Map Sheet: 83I

Municipality: County of Athabasca

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the most diverse stream valleys in central Alberta

Description:

- significant glacial meltwater valley
- hummocky moraine
- land immediately adjacent to the valley is steep sloped rough terrain
- stream valley
- kettle belt consisting of numerous wetlands
- appears to be along an old stream channel
- wetland communities consist of scattered fens and marshes associated with Crikett, Loon and Amisk Lakes
- variety of shorelines ranging from irregular, long shores with wide bands of sedges and rushes, to straight shores, with easy access to open water
- diversity in shoreline is likely to provide good habitat for a number of water dependent wildlife species, such as dabbling and diving ducks, Mink and River Otter
- relatively undisturbed, extensive, mature aspen and mixedwood forests
- none of the vegetation species are considered provincially or regionally rare although some less common species do occur such as orchids
- significant ungulate habitat
- mineral lick
- significant furbearer habitat
- 134 terrestrial bird species noted to occur within Amisk including rare or uncommon species such as Chestnut-sided and Blackpoll Warblers
- historical Osprey nesting site
- old Osprey nest has since been used at least once by a Bald Eagle
- significant travel corridor for wildlife

Management Considerations:

- maintenance of natural vegetation will help provide habitats for the full range of upland and wetland species

References:

- Westworth (1990)
- Wildlife key area maps
- Mitchell and Prepas (1990)

ESA: GRASSLAND; POSTON

Name: Antelope Lake

Area (ha): 1064

Location:

- Twp. 31 - Rge. 9 - W4
- Antelope Lake

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as a provincially significant goose staging site

Description:

- significant staging and production lake
- the water levels were quite low such that the lake is comprised of a deep marsh and shallow marsh wetlands within the basin
- Ducks Unlimited restoration project on lake
- numerous geese and ducks observed staging on lake during aerial survey
- Ring-billed Gull colony

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Ducks Unlimited
- field notes (1995)
- Wildlife key area maps

ESA: CANADIAN SHIELD

Name: Archibald Lake Dunes

Area (ha): 7425

Location:

- Twp. 113 to 114 - Rge. 1 - W4
- immediately south of Lake Athabasca along Saskatchewan-Alberta boundary

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain

Significance: National

- part of the second largest contiguous, uninterrupted dune area in Canada

Description:

- small portion (the western extremity) of a band of dune running along the south shore of Lake Athabasca from Saskatchewan
- parabolic, v-shaped and transverse dunes with border ridges and dune-track ridges
- jack pine forests

Management Considerations:

- dunes are a relatively fragile environment

References:

- David (1977)
- Vitt (1992)



ESA: POSTON

Name: Arthur Lake

Area (ha): 71

Location:

- Twp. 55 - Rge. 5 - W5
- Arthur Lake

NTS Map Sheet: 83G

Municipality: County of Lac St. Anne

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as a provincially significant Great Blue Heron breeding area

Description:

- Great Blue Heron nesting colony on small lake

Management Considerations:

- Great Blue Herons are sensitive to human activities during the nesting season

References:

- Poston et al. (1990)

ESA: MODEL FOREST; FOOTHILLS

Name: Athabasca River - Foothills

Area (ha): 32969

Location:

- Twp. 54 - Rge. 22 - W5
- valley of the Athabasca River in the Foothills

NTS Map Sheet: 83F, 83K

Municipality: MD of Greenview; MD of Yellowhead

Natural Subregions: Lower Foothills; Upper Foothills

Significance: National

- interprovincial waterway
- nationally significant, relatively undisturbed reaches

Description:

- major Lower Foothills valley with diverse habitat including: lodgepole pine, white spruce, poplar, aspen and mixed woodlands
- high diversity of wildlife species
- key terrestrial bird habitat
- high landform diversity
- important terrestrial furbearer habitat
- important waterfowl staging area
- productive for Arctic Grayling, Goldeye, Burbot, Northern Pike, Walleye and Mountain Whitefish
- productive fish habitat, including Bull Trout (being considered for COSEWIC listing)
- canyon-dwelling Mountain Goats at the mouths of Canyon, Hunt and (Sandstone) Creeks
- glacial flutings, kames, karst features, springs, islands, small lakes, bedrock pools, slumps and perched wetlands
- nesting habitat for Bald Eagle, Osprey, Great Gray Owl and Barred Owl
- Grizzly Bear (a COSEWIC vulnerable species), Fisher and Wolf denning habitat
- possible location for Taiga Vole (status currently unknown in Alberta)

Management Considerations:

- additional clearing and cultivation will reduce the habitat available for a variety of wildlife
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Fish and Wildlife key area maps
- 1989 and 1990 field notes
- Natural and Protected Areas Program files
- Alberta Forestry, Lands and Wildlife (1990) for key wildlife habitat
- Roed (1970) for surficial geology
- Bayrock and Reimchen (1980)
- Wayland and Arnold (1993) for Bald Eagle
- Smith (1993) for Taiga Vole
- Bentz and Saxena (1994)
- Mitchell and Prepas (1990)
- Fisheries inventory maps

ESA: BOREAL; BARRHEAD

Name: Athabasca River - Whitecourt-Vega

Area (ha): 47325

Location:

- Twp. 60 - Rge. 11 - W5
- Athabasca River in Whitecourt and Vega areas

NTS Map Sheet: 83J

Municipality: MD of Woodlands; County of Barrhead

Natural Subregions: Central Mixedwood

Significance: National, Provincial

- interprovincial waterway
- one of the largest and longest rivers in the Mixedwood Boreal Forest of Canada
- one of the most diverse and productive river valley systems in the Mixed Wood Boreal Forest of Canada
- nationally significant, relatively undisturbed reaches
- provincially significant where valley more extensively modified by human activity

Description:

- not as incised as other reaches of the Athabasca River
- areas of mature riparian forest along the floodplain with massive white spruce poplar with some old growth stands
- area classed as a critical wildlife zone
- key wildlife movement corridor and ungulate winter range especially for Moose, Elk, White-tailed and Mule Deer
- significant songbird habitat
- important sport fishery including: Walleye, Arctic Grayling, Burbot, Rainbow Trout, Mountain Whitefish, Northern Pike and Bull Trout
- includes the Vega Natural Area characterized by mature balsam poplar forest along the river, second growth aspen and scattered stands of jack pine

Management Considerations:

- land use activities adjacent to tributary rivers and creeks will impact downstream water quality
- on going monitoring is required to ensure water quality is maintained particularly from pulp mills located adjacent to the river and discharging effluent into the river

References:

- Alberta Natural Resources Service files
- Bentz and Saxena (1994)
- Borneuf (1983)
- Nystrom, Lee, Kobayashi and Associates (1988)
- Poston et al. (1990)
- Simons H.A. Ltd (1986)
- Smith H.C. (1993)
- Wallace and McCart (1984)
- Wayland and Arnold (1993)

ESA: EASTERN BOREAL; DRY MIXEDWOOD

Name: Athabasca River-Pembina Reach

Area (ha): 110834

Location:

- Twp. 67 - Rge. 2 - W5
- Athabasca River in vicinity of junction with Pembina River north to Rapids Reach

NTS Map Sheet: 83I, 83P

Municipality: County of Athabasca; MD of Woodlands; MD of Westlock; MD of Big Lakes; MD of Opportunity

Natural Subregions: Dry Mixedwood and Central Mixedwood

Significance: National

- interprovincial waterway
- one of the largest and longest rivers in the Mixedwood Boreal Forest of Canada
- one of the most diverse and productive river valley systems in the Mixed Wood Boreal Forest of Canada
- nationally significant, relatively undisturbed reaches

Description:

- steep valley walls in places; elsewhere a broad valley with an extensive floodplain
- dense white spruce, mixed and deciduous poplar and birch woodland as well as extensive riparian willow shrubland
- areas of mature riparian forest along the floodplain with massive white spruce and balsam poplar trees
- key habitat for Elk, Moose and deer
- diverse breeding bird habitat
- regionally uncommon birds, including birds of mature forests
- slumping sand banks and springs, with regionally uncommon plants including strawberry blite (*Chenopodium capitatum*) and Ross' sedge (*Carex rossii*)
- large Bank Swallow colonies on eroding banks
- mostly native habitat with some cleared and cultivated areas
- important sportfishery
- important fish species (Walleye, Arctic Grayling, Mountain Whitefish, Northern Pike, Rainbow Trout, Goldeye and Burbot)
- high landform diversity (including meanders)

Management Considerations:

- additional clearing and cultivation will reduce the habitat available for a variety of wildlife
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- the full variety of habitats should be protected

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: Athabasca River-Rapids Reach

Area (ha): 103521

Location:

- Twp. 85 - Rge. 17 - W4
- Athabasca River upstream of Fort McMurray to vicinity of Grand Rapids

NTS Map Sheet: 74D, 84A

Municipality: MD of Opportunity, MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- interprovincial waterway
- one of the largest and longest rivers in the Mixedwood Boreal Forest of Canada
- one of the most diverse and productive river valley systems in the Mixed Wood Boreal Forest of Canada

Description:

- scenic river with many rapids and bedrock outcrops
- deeply incised valley
- spawning Lake Whitefish
- other important fish species: Walleye, Arctic Grayling, Mountain Whitefish, Northern Pike and Goldeye
- important sportfishery
- important Moose habitat
- important furbearer (Lynx) habitat

Management Considerations:

- clearing and cultivation will reduce the habitat available for a variety of wildlife
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- the full variety of habitats should be protected

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL; BOREAL

Name: Athabasca River-Tar Sands Reach

Area (ha): 74005

Location:

- Twp. 90 to 109 - Rge. 9 to 11 - W4
- Athabasca River north of Fort McMurray

NTS Map Sheet: 74D, 74E, 74L

Municipality: MD of Big Lakes; Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Peace River Lowlands

Significance: National

- interprovincial waterway
- one of the largest and longest rivers in the Mixedwood Boreal Forest of Canada
- one of the most diverse and productive river valley systems in the Mixed Wood Boreal Forest of Canada

Description:

- not as incised as other sections of the Athabasca River
- extensive riparian forest, including old growth stands
- important sportfishery
- important fish species: Walleye, Lake Whitefish, Arctic Grayling, Northern Pike and Goldeye
- hydrologically important river
- important waterfowl staging area
- important landforms (bitumen outcrops and point bars)
- important Moose habitat

Management Considerations:

- clearing and cultivation will reduce the habitat available for a variety of wildlife
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Athabasca Sand Dune-Peatland Complex

Area (ha): 9153

Location:

- Twp. 64 - Rge. 3 - W5
- west of Athabasca River

NTS Map Sheet: 83J

Municipality: MD of Woodlands

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse sand dune wetland complexes in the Central Mixedwood of Alberta

Description:

- northern extension of Athabasca River sandhills which occur extensively to the south and southeast
- complex, highly diverse terrain consisting of horizontal and patterned fens, small lakes and transverse parabolic sand dunes
- the complex is likely the result of sandy deltaic deposits of glacial lakes that were subsequently formed into sand dunes
- high vegetation diversity including open jack pine/blueberry/lichen forest and jack pine-black spruce forest
- tamarack dominated fens
- willow/sedge wetlands and aquatic emergent vegetation associated with small lakes

Management Considerations:

- area is relatively undisturbed at present
- eolian and peatland landforms are very susceptible to surface disturbances such as road and trail construction

References:

- Bentz and Saxena (1993)
- Bentz and Saxena (1994)
- Boyacioglu (1975)
- David (1977)
- Hay et al. (1988)
- Mulira (1986)

ESA: DRY MIXEDWOOD

Name: Battle Lake

Area (ha): 1258

Location:

- Twp. 46 - Rge. 1 - W5
- Battle Lake

NTS Map Sheet: 83B

Municipality: County of Wetaskiwin

Natural Subregions: Dry Mixedwood

Significance: Provincial

- headwater of the provincially significant Battle River

Description:

- significant hydrological function within this portion of the study area
- emergent vegetation in southern portion of lake
- significant waterfowl staging lake
- Great Blue Heron colony, although not active during aerial survey
- Trumpeter Swans observed (non-breeding males believed to be the ones released from Elk Island National Park)
- key ungulate habitat in upland
- Moose observed in vicinity of lake shoreline during fall aerial survey
- semi-aquatic furbearer habitat
- fisheries resources consists of Lake Whitefish, Northern Pike, Yellow Perch, Burbot and Sauger
- includes the Battle Lake Natural Area

Management Considerations:

- clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife

References:

- Byersbergen (pers. comm. 1995)
- Wildlife key area maps
- Mitchell and Prepas (1990)
- field notes



ESA: PAINTEARTH; PARKLAND; STETTTLER

Name: Battle River - Bigknife

Area (ha): 19454

Location:

- Twp. 40 to 42 - Rge. 16 to 18 - W4
- valley of Battle River east of Donalda to east of Bigknife Provincial Park
- includes lower undisturbed section of Bigknife and Meeting Creeks as well as coulees draining into the Battle River

NTS Map Sheet: 83A

Municipality: County of Paintearth; County of Stettler; County of Flagstaff

Natural Subregions: Central Parkland; Northern Fescue

Significance: National

- interprovincial waterway
- one of the most intact and diverse valley complexes in the Parkland Region of Canada
- diverse valleys with uncultivated bottomlands along meandering streams are rare in the Parkland Region

Description:

- diverse habitats in glacial spillway channel
- classic meandering stream
- dense white spruce and aspen woodland, badlands, shrubbery and grasslands, oxbow lakes, riverine woodland (including Manitoba maple) and willows, wet meadows
- extensive badlands and adjacent lush grassland just south of County of Camrose boundary
- local and uncommon birds for the region including: Pileated Woodpecker, Baird's Sparrow and Sprague's Pipit
- old-growth forest
- diversity of breeding birds
- key White-tailed Deer habitat
- key Mule Deer habitat in vicinity of badlands
- Great Blue Heron colony
- sucker spawning and rearing, and Northern Pike spawning, overwintering and rearing
- some cultivation and haying on valley terraces
- extensive marsh development in oxbow lakes
- regionally rare breeding bird species such as Purple Finch
- Cooper's Hawk, a rare species in Canada

Management Considerations:

- clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife
- Great Blue Herons are sensitive to human presence during the nesting season

References:

- Allen (1987) for Great Blue Heron colony
- Ebel, Poll and Finkelman (1973)
- 1988 field notes
- Fish and Wildlife key area maps
- Christiansen (1977) for glacial spillway

ESA: PAINTEARTH; PARKLAND

Name: Battle River - Brownfield

Area (ha): 13284

Location:

- Twp. 38 to 40 - Rge. 10 to 13 - W4
- Battle River valley and adjacent upland and tributary streams from Highway 36 downstream to County of Paintearth boundary
- includes portions of Nelson and Castor Creeks

NTS Map Sheet: 73D

Municipality: County of Flagstaff; County of Paintearth; MD of Provost

Natural Subregions: Central Parkland; Northern Fescue

Significance: Provincial

- interprovincial waterway
- one of the most intact and diverse valley complexes in the Parkland Region of Alberta
- diverse habitats along classic glacial spillway and meandering stream
- lightly grazed fescue grassland is local in Alberta
- degree of disturbance reduces the significance of the area relative to other stretches of the valley which are less disturbed

Description:

- diverse habitats in glacial spillway channel
- dense white spruce and aspen woodland, badlands, shrubbery and grasslands, oxbow lakes, riparian woodland and willows, and wet meadows
- oxbow lakes, springs and major slump blocks with perched wetlands
- remnant area of aspen parkland and fescue grassland on adjacent upland in the western portion; includes some lightly grazed fescue grassland
- diverse bird population
- bird species of local occurrence in the region: Baird's Sparrow and Merlin
- key White-tailed Deer and Mule Deer habitat
- Great Blue Heron colony
- spawning, rearing and overwintering habitat for a diversity of fishes
- scattered cultivation in river bottom, and ongoing clearing and locally heavy grazing

Management Considerations:

- further clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Christiansen (1977) for glacial spillway

ESA: PARKLAND

Name: Battle River - Camp Wainwright

Area (ha): 2108

Location:

- Twp. - Rge. - W4
- Battle River valley along west side of Camp Wainwright

NTS Map Sheet: 73D

Municipality: County of Flagstaff; MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- interprovincial waterway
- one of the most intact and diverse valley complexes in the Parkland Region of Canada
- diverse valleys with uncultivated bottomlands along meandering streams are rare in the Parkland Region

Description:

- diverse aspen woodland, grassland and low and tall shrubbery
- extensive riparian poplar, willow and wetland habitats
- extensive springs
- key deer habitat
- diverse breeding bird communities
- important overwintering, spawning and rearing for Northern Pike, Goldeye and Walleye

Management Considerations:

- clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife

References:

- Alberta Fish and Wildlife key area maps
- aerial photo interpretation
- field notes (1995)

ESA: PARKLAND; POSTON

Name: Battle River - Driedmeat Lake

Area (ha): 4789

Location:

- Twp. 45 - Rge. 20 - W4
- Battle River valley
- includes Driedmeat Lake ESA

NTS Map Sheet: 83A

Municipality: County of Camrose

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck moulting and staging area

Description:

- long lake located within the Battle River valley
- significant nesting habitat for ducks and an important fall staging area for swans and geese
- flocks of American White Pelicans observed staging on lake during aerial survey
- discontinuous aspen groves immediately adjacent upland
- significant White-tailed Deer habitat
- fisheries resources include Northern Pike, Walleye and Sauger
- spawning, rearing and overwintering area for fish species

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)
- Fisheries inventory maps

ESA: LLOYDMINSTER; PARKLAND

Name: Battle River - Marsden

Area (ha): 3814

Location:

- Twp. 45 to 47 - Rge. 1 to 2 - W4
- Battle River valley and adjacent uplands extending from area south of McLaughlin, Alberta east into Saskatchewan
- includes Oxville Natural Area

NTS Map Sheet: 73D

Municipality: County of Vermilion River; MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- interprovincial waterway
- one of the most intact and diverse valley complexes in the Parkland Region of Canada
- diverse valleys with uncultivated bottomlands along meandering streams are rare in the Parkland Region

Description:

- diverse aspen woodland, grassland and low and tall shrubbery
- extensive riparian poplar, willow and wetland habitats
- localized areas of springs
- remnant Aspen Parkland and productive wetlands on uplands
- includes some areas of excellent condition ungrazed or lightly grazed fescue grasslands
- critical deer and Sharp-tailed Grouse habitat
- diverse breeding bird communities
- important overwintering, spawning and rearing for Northern Pike, Goldeye and Walleye
- includes patches of cultivation; additional clearing is ongoing in the area
- Great Blue Heron colony
- Eared Grebe colonies in upland sloughs

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife
- Great Blue Herons are sensitive to human disturbance during the nesting season

References:

- Alberta Fish and Wildlife key area maps
- Allen and McIsaac (1980a) for Oxville Natural Area
- Allen (1982a and b) for Battle River #8 site of interest
- Poston et al. (1990) for significance for Great Blue Herons
- 1995 field notes

ESA: LLOYDMINSTER; PARKLAND

Name: Battle River - Wainwright

Area (ha): 8281

Location:

- Twp. 45 to 47 - Rge. 4 to 7 - W4
- Battle River valley north of Wainwright, Alberta
- includes Battle River Natural Area

NTS Map Sheet: 73D

Municipality: County of Vermilion River; MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- interprovincial waterway
- one of the most intact and diverse valley complexes in the Parkland Region of Canada
- diverse valleys with uncultivated bottomlands along meandering streams are rare in the Parkland Region

Description:

- diverse aspen woodland, grassland and low and tall shrubbery
- extensive riparian poplar, willow and wetland habitats
- localized areas of springs
- remnant Aspen Parkland, including excellent condition fescue grassland on uplands
- includes some areas of excellent condition ungrazed or lightly grazed fescue grasslands in Saskatchewan and Alberta
- key deer habitat
- diverse breeding bird communities
- important overwintering, spawning and rearing for Northern Pike, Goldeye and Walleye
- extensive well site development in central portion
- includes patches of cultivation; additional clearing is ongoing in the area

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife

References:

- Alberta Fish and Wildlife key area maps
- Loewen and Gould (1979b) for Battle River Natural Area
- 1995 field notes

ESA: PARKLAND; LLOYDMINSTER; POSTON

Name: Baxter Lake

Area (ha): 1589

Location:

- Twp. 44 to 46 - Rge. 5 to 6 - W4
- Baxter Lakes and surrounding uplands northeast of Wainwright, Alberta

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant shorebird staging area
- nesting area for Piping Plover (a COSEWIC endangered species in Canada and a red-listed species in Alberta)

Description:

- eolian dune/wetland complex
- moderately saline to saline lakes
- narrow saline shore
- aspen woodland and grassland on sandy uplands
- boreal swamp birch fens on sand plain
- rare or uncommon plants including Nevada bulrush (*Scirpus nevadensis*)
- key waterfowl and nationally significant shorebird habitat
- the most productive areas for shorebirds have been at the south end of the largest (northern-most) lake and at the northwest end of the lake immediately southeast of the largest lake
- Sharp-tailed Grouse lek
- extensive lightly grazed portion west of road allowance; other areas have grazing intensity ranging from moderate to heavy

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Fish and Wildlife key area maps
- Grant Gunderson (pers. comm.) for Piping Plover
- Munro (1929) for historical perspective
- 1995 field notes
- Goossen (in prep)
- Pryor (pers. comm. 1995)
- Wildlife key area maps

ESA: PARKLAND; POSTON

Name: Bear Lake

Area (ha): 4200

Location:

- Twp. 72 - Rge. 7 - W6
- Bear Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- Trumpeter Swan nesting lake, a blue-listed species in Alberta
- significant waterfowl habitat

Management Considerations:

- maintenance of natural shorelines will attract a variety of water birds

References:

- Wildlife key area maps
- field notes (1995)



ESA: PARKLAND; POSTON

Name: Bearhills Lake

Area (ha): 1953

Location:

- Twp. 45 - Rge. 25 - W4
- Bearhills Lake

NTS Map Sheet: 83A

Municipality: County of Wetaskiwin

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as nationally significant duck staging and moulting habitat; productivity degraded by proximity to highway

Description:

- located north of the Ermineskin Indian Reserve
- shallow lake with grassland upland
- significant waterfowl staging lake
- numerous waterfowl sighted during aerial survey
- small buffer of aspen around perimeter
- one of the larger lake basins in the region however, water levels low during aerial survey

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: PEACE RIVER

Name: Bear River Sand Hills

Area (ha): 7742

Location:

- Twp. 70 - Rge. 5 - W6
- Bear River Sand Hills, south of Grande Prairie

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- enechelon dune formations are uncommon in Alberta

Description:

- dune-wetland complex with pine flats and enechelon dune formations
- sandhill crane breeding site
- important Elk habitat
- valued wildland in proximity to the city of Grande Prairie
- high landform diversity
- high vegetation community diversity
- key terrestrial bird habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- dunes can become destabilized through motorized vehicle use

References:

- D. Hervieux, pers. comm
- A. Raniseth, M. Raniseth, J. Kerr, and J. Smith, pers. comm
- David (1977)
- Mulira (1986)

ESA: PINCHER CREEK

Name: Beauvais Lake Provincial Park

Area (ha): 732

Location:

- Sections 29, 30 and NW21 - Twp. 5 - Rge. 1 - W5
- 16 km SW of Pincher Creek
- Beauvais Lake Provincial Park

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane

Significance: Provincial

- few areas of ungrazed upland and wetland habitats exist in the montane region of Alberta

Description:

- ungrazed diverse montane grassland, wetlands and woodland
- diverse breeding bird habitats
- uncommon birds including Hammond's Flycatcher
- numerous uncommon plants and plants restricted to southwestern Alberta
- key Elk and Mule Deer habitat
- one of few areas where Leopard Frogs and Spotted Frogs have overlapping ranges
- deep water marshes and open water

Management Considerations:

- recreation activity and developments can have significant local impacts on rare plants and animals

References:

- Crack and Danielson (1974a)
- 1986 field notes
- Fish and Wildlife key area maps

ESA: DRY MIXEDWOOD, BOREAL; POSTON

Name: Beaver Lake

Area (ha): 6114

Location:

- Twp. 66 - Rge. 13 - W4
- Beaver Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood; Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- non-breeding colonies of Great Blue Heron and American White Pelicans present
- Osprey and Bald Eagle have also been noted
- sportfish species include Northern Pike, Yellow Perch, Walleye, Burbot, suckers and Lake Whitefish
- supports commercial and domestic fisheries for Lake Whitefish
- topography at south end of Beaver Lake is rolling to gently undulating with mainly medium dense mixedwood forest of aspen, paper birch and white spruce
- old growth islands in Beaver Lake protected from fire which has historically scoured the main lake shore
- south end of lake is protected with a recreational natural area that provides a good representation of important mixedwood communities
- excellent habitat for waterfowl production, moulting and staging
- high fish species diversity
- numerous private cottages and resorts located on the lake
- includes natural area

Management Considerations:

- to maintain existing levels of fish production for sport, domestic and commercial utilization
- maintenance of surrounding natural habitats will attract a variety of wildlife

References:

- Alberta Natural Resources Service files
- Longmore et al. (1982)
- Mitchell and Prepas (1990)
- 1996 field notes
- Wildlife key area maps
- field notes (1995)

ESA: CALGARY; POSTON

Name: Beaverdam Creek

Area (ha): 1182

Location:

- Twp. 28 - Rge. 3 - W5
- Beaverdam Creek valley

NTS Map Sheet: 82O

Municipality: MD of Rocky View

Natural Subregions: Foothills Parkland; Central Parkland

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- shallow Foothills Parkland valley of Beaverdam Creek

Management Considerations:

- Great Blue Heron are sensitive to human intrusions during the nesting season

References:

- Poston et al. (1990)
- Lamoureux & Associates (1983)

ESA: PARKLAND; POSTON

Name: Beaverhill Lake

Area (ha): 19547

Location:

- Twp. 51 - Rge. 18 - W4
- Beaverhill Lake and adjacent uplands

NTS Map Sheet: 83H

Municipality: County of Beaver

Natural Subregions: Central Parkland

Significance: International

- RAMSAR site
- Beaverhill Lake is one of the most important bird habitats in western North America
- internationally significant waterbody for shorebirds and waterfowl, in particular, as a staging area for migratory birds flying to and from the Arctic

Description:

- 272 species have been reported in the area with 145 species known to breed locally
- exposed mudflats, vegetated shorelines and islands are some of the numerous habitats that comprise Beaverhill Lake
- Piping Plover breeding lake, a COSEWIC endangered species in Canada and a red-listed species in Alberta and numerous other rare avian species
- includes Beaverhill Natural Area
- national importance for breeding and moulting waterfowl

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Morrison et. al (1995)
- Wildlife key area maps
- Goossen (in prep)
- field notes (1995)
- Natural and Protected Area Files

ESA: BOREAL

Name: Beavertail Creek-Lower Reach

Area (ha): 413

Location:

- Twp. 71 - Rge. 12 - W6
- Beavertail Creek valley

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive waterfowl lakes in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- excellent site for waterfowl production
- surrounding uplands provide habitat for upland and migratory birds, deer, Moose and Elk and furbearers

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Beavertail Creek-Upper Reach

Area (ha): 115

Location:

- Twp. 70 - Rge. 13 - W6
- Beavertail Creek valley

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive waterfowl lakes in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- adjacent uplands provide habitat for upland and migratory birds, deer, Moose and Elk and furbearers

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- 1996 field notes



ESA: PARKLAND; POSTON

Name: Bellshill Lake

Area (ha): 1116

Location:

- Twp. 42 - Rge. 11 - W4
- Bellshill Lake

NTS Map Sheet: 73D

Municipality: County of Flagstaff

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck production habitat

Description:

- significant waterfowl production lake with somewhat stable water levels
- Poston lists as provincially significant staging duck and geese habitat

Management Considerations:

- maintenance of natural shorelines will attract a variety of water birds

References:

- Wildlife key area maps
- Illnicki (pers. comm 1995)

ESA: MODEL FOREST; FOOTHILLS

Name: Berland River - Donald Flats

Area (ha): 3720

Location:

- Twp. 56 to 57 - Rge. 26 - W5 - Rge. 3 - W6
- valley of the Berland River, pasture and large tributary streams from east of Highway 40 to the mouth of "Donald Creek"

NTS Map Sheet: 83F

Municipality: MD of Yellowhead; MD of Greenview

Natural Subregions: Upper Foothills

Significance: Provincial

- part of a provincially significant ecosystem complex that supports Woodland Caribou

Description:

- critical Elk habitat year-round, including calving
- important fish habitat (including Bull Trout) and sport fishery
- habitat for Bull Trout (being considered for COSEWIC listing)
- diverse valley slope complex
- diverse Upper Foothills valley slope complex
- extensive meadows, shrubbery, and coniferous woods
- slump blocks and springs
- Moose habitat
- reports of Cougar and Grizzly Bear (a COSEWIC vulnerable species)

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- the full variety of habitats should be protected

References:

- Alberta Environmental Protection (n.d.) for zoning
- Alberta Environmental Protection (n.d.) for key ungulate habitat
- Barnes (1977) and Borneuf (1983) for springs
- Edson Fish and Wildlife (R. Hawryluk, personal communication) for Bull Trout
- Nagy et al. (1989) for Grizzly Bear

ESA: FOOTHILLS/MODEL FOREST

Name: Berland River-Hendrickson Creek

Area (ha): 9860

Location:

- Twp. 55 to 56 - Rge. 3 - W6
- valleys and uplands in the vicinity of the junction of Berland River and Hendrickson Creek; also includes Cabin Creek

NTS Map Sheet: 83E

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills, Subalpine

Significance: Provincial

- one of a handful of critical Woodland Caribou (mountain ecotype) habitats in Alberta

Description:

- critical Caribou habitat and migration corridor
- extensive Beaver pond complexes and diverse wet meadows
- habitat for Bull Trout; sport fishery
- dry pine-lichen woodland on outwash deposits
- extensive Beaver pond complexes and diverse wet meadows
- key Upper Foothills and Subalpine habitat for Woodland Caribou (mountain ecotype), a blue-listed species in Alberta
- habitat for Bull Trout (being considered for COSEWIC listing)

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- requires the highest level of protection from human disturbance

References:

- Edson Fish and Wildlife (R. Hawryluk, K. Smith, personal communication)
- Edmonds and Smith (1991)

ESA: PARKLAND; POSTON

Name: Big Hay Lake

Area (ha): 1975

Location:

- Twp. 48 - Rge. 20 - W4
- Big Hay Lake

NTS Map Sheet: 83H

Municipality: County of Beaver

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- Poston lists as provincially significant duck breeding habitat
- significant staging, production and moulting lake in the study area
- good emergent vegetation
- bird banding program initiated by Canadian Wildlife Service for several years
- significant shorebird staging lake

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Pryor (pers. comm. 1995)
- Goossen (pers. comm. 1995)

ESA: CALGARY

Name: Bighill Creek

Area (ha): 2250

Location:

- Twp. 26 - Rge. 3 - W5
- Bighill Creek valley

NTS Map Sheet: 82O

Municipality: MD of Rocky View

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of the largest springs in Alberta

Description:

- important locale for Pleistocene mammals and Paskapoo Sandstone mammals fossil sites
- Bighill coulee is the most deeply incised glacial meltwater channel in the region
- spring-fed creek flows year-round
- area heavily colonized by Beaver
- significant development of riparian vegetation

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Borneuf (1983)
- Lamoureux & Associates (1983)

ESA: STURGEON

Name: Big Lake

Area (ha): 2140

Location:

- Twp. 53 - Rge 26 - W4
- Big Lake

NTS Map Sheet:: 83H

Municipality: MD of Sturgeon

Natural Subregions: Central Parkland

Significance: Provincial

- recognized as one of the twenty most important waterfowl habitat units in the province
- proximity to a large urban centre adds to its importance since the area is easily accessed and has very significant tourist, interpretative and educational potential

Description:

- very important and diverse lake and riparian habitats; the lake is a Wetlands For Tomorrow site
- no significant limitations to the production of waterfowl
- very important moulting, staging and migration lake for waterfowl
- a large colony of Franklin's Gulls on the west bay of the lake
- colonies of Eared Grebe and Black Tern (a yellow A-listed species in Alberta)
- interesting birdsfoot delta of Sturgeon River
- the south shore supports large stands of mature aspen, birch and white spruce which have important value and provide habitat for non-game wildlife species
- acts as a natural reservoir and flood control entity for the city of St. Albert
- other species include Sandhill Crane, upland game birds including a self-sustaining pheasant population, furbearers such as Mink, weasel and Muskrat, and Mule Deer

Management Considerations:

- the lakeshore and wetland bordering the lake have a high environmental sensitivity
- industrial and resource development and expanded agricultural use of the immediate shoreline could have a large negative impact on the lake's habitat and production potential

References:

- Folinsbee (pers. comm. 1988)
- Stepney (pers. comm. 1988)

ESA: EASTERN BOREAL

Name: Birch Lake

Area (ha): 3558

Location:

- Twp. 85 - Rge 3 - W4
- Birch Lake in Gipsy-Gordon-Birch complex

NTS Map Sheet:: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- important White Pelican nesting area

Description:

- hydrologically important lake
- important Double-crested Cormorant nesting area
- diverse wetland habitat with large seepage area on north side of lake

Management Considerations:

- maintenance of natural habitats on the uplands will attract a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL; BIRCH MOUNTAINS

Name: Birch Mountains Diversity Area

Area (ha): 325325

Location:

- Twp 96 to 105 - Rge. 12 to 24 - W4
- plateau and adjacent slopes of the Birch Mountains
- includes Big Island Lake ESA (557); Namur-Gardiner Watershed ESA and Namur Lake ESA

NTS Map Sheet:: 74E, 84H

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood; Subarctic; Boreal Highlands

Significance: Provincial

- one of the most diverse intact major hill systems in the Boreal Forest of Alberta
- provincially significant California Gull colony
- high landform diversity (one of the best examples of glacial flutings in Alberta)

Description:

- large plateau supporting boreal, sub-arctic and foothills species
- high vegetation diversity
- high wildlife diversity
- important Osprey nesting area at Big Island Lake
- nesting Bald Eagles
- important White Pelican nesting area
- important sport, commercial/domestic and trophy fishing
- important fish species: Lake Trout, Lake Whitefish, Cisco, Arctic Grayling, Northern Pike, Walleye and Yellow Perch

Management Considerations:

- maintenance of natural habitats will attract a variety of boreal forest wildlife

References:

- Poston et al (1990)
- Westworth & Associates (1990)



ESA: CARDSTON

Name: Birdseye Butte Pond

Area (ha): 76

Location:

- Section 36 - Twp. 1 - Rge. 29 - W4
- just north of the Waterton Lakes National Park boundary west of the Belly River

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Montane

Significance: Provincial

- one of the more productive wetlands in the Montane/Foothills Parkland of Alberta
- one of a handful of Trumpeter Swan nesting areas in southern Alberta

Description:

- large pond within foothills parkland habitat
- used by Trumpeter Swans (Alberta blue-listed species) during the nesting season
- waterfowl staging and production

Management Considerations:

- Trumpeter Swans are sensitive to human presence during parts of the breeding season

References:

- 1986 field notes
- Birdseye Butte Ranch (personal communication)

ESA: PEACE RIVER

Name: Bisbing Lake

Area (ha): 55

Location:

- Twp. 72 - Rge. 11 - W6
- Bisbing Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (a blue-listed species in Alberta) breeding
- key waterfowl molting and staging
- high bird diversity

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- NAWMP, unpubl. data
- Nietfeld et. al. (1985)
- Semenchuk, ed. (1992)

ESA: BOREAL

Name: Bistcho Lake

Area (ha): 46927

Location:

- Twp. 124 - Rge. 5 - W6
- Bistcho Lake

NTS Map Sheet: 84M

Municipality: MD of Mackenzie

Natural Subregions: Subarctic

Significance: Provincial

- one of the five largest lakes in Alberta

Description:

- large, shallow, eutrophic lake in the Liard River basin
- black spruce/Labrador tea/bog cranberry/peatmoss-reindeer lichen is the most common and widespread vegetation community type in the Bistcho Lake area
- abundant emergent vegetation
- excellent waterfowl staging site (especially for geese)
- good waterfowl production site
- supports non-breeding colonies of Bonaparte's Gulls, Franklin's Gulls and Black Terns (a yellow A-listed species in Alberta) and Common Terns
- main raptor species identified are Osprey, Northern Goshawk and sharp-shinned hawk
- also supports a Bald Eagle nesting site on Kirkness Island
- fish species include Lake Whitefish, Northern Pike, Walleye, Cisco, Burbot, White Suckers, Longnose Suckers, Spottail Shiner, Ninespine Stickleback, Trout-perch and Slimy Sculpin
- adjacent uplands provide excellent Moose and Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) habitat
- lies within a Bison protected area
- common furbearers include Marten, Muskrat and Beaver
- supports an established fly-in sport fishing camp
- good potential for a trophy lake nomination
- shoreline has a low development potential

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Natural Resources Service files
- Poston et al. (1990)
- Reynolds (1996) pers. comm
- Walty (1996) pers. comm

ESA: BOREAL

Name: Bistcho Lake Peat Plateau Bog

Area (ha): 257532

Location:

- Twp. 124 - Rge. 8 - W6
- wetlands near Bistcho Lake

NTS Map Sheet: 84M

Municipality: MD of Mackenzie

Natural Subregions: Subarctic

Significance: Provincial

- one of the most diverse, extensive Subarctic wetlands in Alberta

Description:

- Subarctic Sphagnum peat plateau bog with collapse scars and channel fens

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

ESA: PARKLAND; POSTON

Name: Bittern Lake

Area (ha): 3821

Location:

- Twp. 47 - Rge. 22 - W4
- Bittern Lake

NTS Map Sheet: 83H

Municipality: County of Wetaskiwin

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck production habitat

Description:

- significant staging, production and moulting lake in the study area
- good emergent vegetation
- bird banding program initiated by Canadian Wildlife Service for several years
- significant shorebird staging lake
- one of the most productive shorebird migration areas in Alberta
- Poston lists as provincially significant duck staging and moulting lake

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Pryor (pers. comm. 1995)

ESA: FORTY MILE

Name: Black Butte

Area (ha): 106

Location:

- Twp. 1 - Rge. 8 - W4
- Black Butte east of Aden

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Mixedgrass

Significance: National

- the largest igneous dike on the Plains of Canada

Description:

- one of a series of dikes along the Milk River which radiate out from the Sweetgrass Hills
- rare animals and plants including Yellow-bellied Marmot, northern linanthus (*Linanthus septentrionalis*), and obscure evening-primrose (*Oenothera andina*); the last species is considered rare in Canada
- Prairie Rattlesnake hibernacula

Management Considerations:

- road construction has damaged part of the structure

References:

- Russell and Landes (1940)
- 1991 field notes

ESA: DRY MIXEDWOOD

Name: Blackfoot Grazing Reserve

Area (ha): 10001

Location:

- Twp. 52 - Rge. 20 - W4
- south of Elk Island National Park
- includes Islet Lake ESA

NTS Map Sheet: 83H

Municipality: County of Beaver

Natural Subregions: Dry Mixedwood

Significance: Provincial

- some of the most intact Dry Mixedwood habitat left in Alberta

Description:

- part of the provincially significant Cooking Lake Moraine
- representative of the Dry Mixedwood Boreal and Central Parkland themes
- this is a popular recreational area for the Edmonton area
- mixed aspen and spruce
- wetland complexes including marsh and fen complexes
- excellent ungulate habitat including White-tailed and Mule Deer and Moose
- significant habitat for terrestrial birds migrating or breeding in the area
- excellent waterfowl habitat at Islet Lake
- Great Blue Heron colony

Management Considerations:

- maintenance of natural habitat will attract a variety of wildlife

References:

- Goossen et al. (in prep)
- Pryor (pers. comm. 1995)
- R. Bjorge (pers. comm. 1995)
- Mitchell and Prepas (1990)
- Natural and Protected Areas Files
- Wildlife key area maps

ESA: FOOTHILLS

Name: Blackstone River

Area (ha): 5857

Location:

- Twp. 42 - Rge. 17 - W5
- Blackstone River valley

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Upper Foothills

Significance: Provincial

- one of few key Grizzly Bear habitats in the Foothills of Alberta

Description:

- key ungulate habitat (Moose and Mule Deer)
- critical Elk habitat and movement corridor
- key wolf habitat
- spawning, rearing and overwintering habitat for Bull Trout, Brook Trout and Mountain Whitefish

Management Considerations:

- maintenance of natural habitats will attract a variety of foothills wildlife
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Bentz et al. (1995)



ESA: DRY MIXEDWOOD

Name: Bleak Lake Wetlands

Area (ha): 6793

Location:

- Twp. 67 - Rge. 23 - W4
- wetlands near Bleak Lake

NTS Map Sheet: 83I

Municipality: County of Athabasca

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the most diverse wetland systems in the Dry Mixedwood of Alberta

Description:

- located adjacent to the Boreal Dry Mixedwood Boundary in the northwest portion of the study area
- diverse wetland complex including a large bog complex around Bleak Lake
- poor and rich fens south of lake
- Muskeg Creek feeds wetland complex
- one of the most northerly ombrotrophic bogs "nourished by rain" in Canada
- critical research site that represents in an ecosystem type not available in this part of the province
- area has natural gas and coal lease which may impact the significance of this site
- includes Bleak Lake Natural Area

Management Considerations:

- maintenance of natural habitats will attract a variety of boreal forest wildlife

References:

- Vitt (pers. comm. 1996)
- Natural and Protected Area Files
- field notes (1995)

ESA: WILLOW CREEK

Name: Bluestem

Area (ha): 7272

Location:

- Twp. 9 to 11 - Rge. 26 and 27 - W4
- 8 km west of Fort Macleod

NTS Map Sheet: 82H

Municipality: MD of Willow Creek

Natural Subregions: Mixedgrass; Foothills Fescue

Significance: Provincial

- this area contains the most extensive stands of rare little bluestem grassland in Alberta
- productive bird of prey habitats are very local in Alberta

Description:

- coarse glacial lake, outwash and till deposits
- meltwater delta complex along the Oldman River
- diversity of mixed grassland and foothills grassland types
- silverberry and thorny buffaloberry shrubbery, and fescue and wheat grass grassland interspersed with drainages and small alkali ponds
- widespread patches of rare little bluestem (*Schizachyrium scoparium*) grassland vegetation; some in excellent condition
- particularly good examples of little bluestem are found in Section 12 - Twp. 11 - Rge. 28 - W4 and Sections 3 and 33 - Twp. 9 - Rge. 27 - W4
- includes some small patches of cultivation
- abundant ground squirrel populations -- feeding area for rare birds of prey including Prairie Falcon, Golden Eagle and Ferruginous Hawk
- deer habitat in shrubby areas closer to the Oldman River
- glacial erratics of the Foothills Erratics Train
- esker

Management Considerations:

- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey
- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed and fescue grasslands, including the little bluestem type
- cultivation would reduce habitat diversity and eliminate many native plants and animals

References:

- 1988 field notes
- Jaques (1979) and Wallis (1980) for vegetation
- Shetsen (1987) and Stalker (1958) for surficial geology
- Beatty (1975) for glacial erratic

ESA: PARKLAND; GRASSLAND; POSTON

Name: Bodo

Area (ha): 34855

Location:

- Twp. 35 - Rge. 2 - W4
- uplands southeast of Bodo

NTS Map Sheet: 72M, 73D

Municipality: MD of Provost; Special Area 4

Natural Subregions: Northern Fescue; Central Parkland

Significance: International

- one of two large blocks of aspen parkland/northern fescue grassland in the world

Description:

- only a small portion of this site enters into the Central Parkland
- the majority of the site is located within the Grassland Natural Region
- site lies in a transition zone between the southern edge of the Central Parkland and Northern Fescue
- habitat includes lush fescue grassland, aspen woodland and a variety of shrub and wetland types including alkali springs
- the terrain is strongly hummock with typical knob and kettle landform features
- ice -thrust ridges
- appears fragmented because of the numerous cultivated fields bordering this site
- more than 200 kinds of native plants
- over 50 bird species and a variety of mammals
- regionally or provincially rare plants
- Sharp-tailed Grouse dancing grounds, a yellow A-listed species in Alberta
- Upland Sandpiper, a yellow A-listed species in Alberta, and Cooper's Hawk
- Poston lists as provincially significant breeding duck habitat
- high landform diversity (hummocky moraine, escarpment)
- high plant diversity (regionally or provincially rare plants)

Management Considerations:

- clearing and cultivation reduce the attractiveness for native plants and animals

References:

- Wallis (1990b)
- Natural and Protected Areas Files (1995)
- Hofman (pers. comm. 1995)
- Alberta Wilderness Association (1990)
- field notes (1995)
- Wildlife key area maps

ESA: EASTERN BOREAL

Name: Boivin Creek Peatland

Area (ha): 21469

Location:

- Twp. 79 to 82 - Rge. 16 to 17 - W4
- between House and Athabasca Rivers

NTS Map Sheet: 83P, 84A

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse wetland complexes in the Boreal Forest of Alberta

Description:

- includes proposed natural area
- discharge fen (channel fen)
- important Caribou habitat
- high vegetation diversity

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: NEWELL; VULCAN; TABER; POSTON

Name: Bow River - Bow City/Scandia

Area (ha): 6650

Location:

- Twp. 14 to 17 - Rge. 15 to 16 - W4
- Bow River valley south of Bow City to west of Scandia

NTS Map Sheet: 82I

Municipality: County of Newell; County of Vulcan; County of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- provincially significant waterfowl staging area
- Poston lists as provincially significant goose breeding habitat

Description:

- shallow river valley with exposed banks and rock outcrops
- nesting area for rare birds of prey including Prairie Falcons and Golden Eagles
- feeding area for American White Pelicans
- waterfowl staging area in summer and fall, especially for puddle ducks
- contains a productive spring with a healthy population of Leopard Frogs, a potentially threatened species in Alberta

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- native grasslands on the upland provide valuable feeding areas for birds of prey

References:

- 1987 and 1991 field notes
- Fish and Wildlife key area maps
- Irish (1967b) for bedrock geology

ESA: CALGARY; VULCAN

Name: Bow River - Calgary to Siksika Reserve

Area (ha): 15137

Location:

- Twp. 21 to 22 - Rge. 24 to 28 - W4
- includes Bow River - Carseland ESA

NTS Map Sheet: 82I

Municipality: MD of Foothills; County of Vulcan; MD of Rocky View; County of Wheatland

Natural Subregions: Mixedgrass; Foothills Fescue

Significance: International

- international class Rainbow Trout sport fishery

Description:

- narrow natural corridor along shallow river valley
- extensive riparian woodland and shrubbery
- high diversity of breeding birds
- ungrazed riparian woodland islands
- major waterfowl staging and production area, especially by mergansers, Double-crested Cormorants and diving ducks
- topographic and vegetational diversity
- two Great Blue Heron colonies in the eastern part
- unit well isolated from existing roads and is well protected by surrounding large land holdings
- excellent sport fisheries for Mountain Whitefish and Brown Trout
- Pileated Woodpecker habitat
- key Mule Deer and White-tailed Deer habitat
- white spruce stands on north-facing slopes

Management Considerations:

- heavy grazing reduces the suitability of these areas for a wide variety of wildlife and can affect the regeneration of trees
- major alterations in stream flow can affect the reproduction of cottonwood forests
- clearing and cultivation eliminate habitat diversity
- Great Blue Herons are sensitive to human presence during the nesting season

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Bradley and Smith (1986), Smith and Flake (1981) and Bradley (1988) for impacts of altered stream flow and grazing on cottonwood systems
- Vermeer (1969) for Great Blue Heron colony

ESA: NEWELL; TABER; POSTON

Name: Bow River - Hays

Area (ha): 9692

Location:

- Twp. 13 and 14 - Rge. 12 to 15 - W4
- Bow River in vicinity of Hays

NTS Map Sheet: 72L

Municipality: County of Newell; County of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- provincially important waterfowl area
- productive spring habitats are very localized in southern Alberta
- Poston lists as provincially significant goose breeding habitat

Description:

- shallow river valley with small coulees and extensive grassy terraces
- eroding cutbanks and rock outcrops provide nesting sites for rare birds of prey, including Golden Eagles, Prairie Falcons and Ferruginous Hawks (COSEWIC vulnerable species)
- waterfowl staging area in summer and fall, especially for puddle ducks
- American White Pelican feeding area
- numerous springs
- Mule Deer habitat in major coulee/spring areas
- rare or uncommon plants for the grassland region, including *Sphenopholis obtusata* (prairie wedge grass), *Erigeron lonchophyllus* (short-rayed fleabane), *Chenopodium fremontii* (oak-leaved goosefoot), *Aster borealis* (rush aster) and *Spiranthes romanzoffiana* (hooded ladies' tresses orchid) in spring in Section SW21 - Twp. 14 - Rge. 14 - W4

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are sensitive to human disturbance during the nesting season
- native grasslands on the uplands provide feeding habitat for birds of prey
- heavy grazing in springs reduces the suitability of these sites for rare plants

References:

- Fish and Wildlife key area maps
- Irish (1967c) for bedrock geology
- Moss (1983) for plant distribution
- important bird of prey nesting areas are restricted in the region
- 1987 and 1991 field notes

ESA: VULCAN; NEWELL; POSTON

Name: Bow River -Majorville

Area (ha): 15370

- Twp. 17 to 21 - Rge. 17 to 19 - W4
- Bow River valley from Bow City upstream to Blackfoot Indian Reserve

NTS Map Sheet: 82I

Municipality: County of Newell; County of Vulcan

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: Provincial

- waterfowl numbers along this portion of the Bow River are of provincial significance
- productive nesting habitat for rare and threatened birds of prey is very localized in Alberta
- Poston lists as provincially significant goose breeding habitat

Description:

- shallow valley with some coulees and exposed badlands and cliff faces
- includes Bassano Reservoir and associated riparian habitats and some associated upland mixed grassland
- extensive nesting area for rare birds of prey including Prairie Falcons, Golden Eagles and Ferruginous Hawks (COSEWIC vulnerable species)
- historic Peregrine Falcon nesting area
- major waterfowl staging area in summer and fall, especially for puddle ducks
- staging area for several shorebirds
- American White Pelican feeding area
- key deer habitat
- minor geological faults in 29-17-17 - W4 and 2-18-18 - W4

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey

References:

- 1987 and 1991 field notes
- Fish and Wildlife key area maps
- Irish (1967b) for bedrock geology
- Wayne Smith (personal communication) for birds of prey



ESA: CALGARY

Name: Bow Valley Provincial Park

Area (ha): 1716

Location:

- Twp. 24 - Rge. 9 - W5
- Bow Valley Provincial Park

NTS Map Sheet: 82O

Municipality: MD of Bighorn

Natural Subregions: Montane; Subalpine

Significance: Provincial

- Many Springs is one of the most diverse calcareous spring areas in Alberta
- only known location for rare white form of yellow lady's-slipper (*Cypripedium calceolus*) in Alberta

Description:

- contains Seebe Shale Pits (#1201), from which fossil ammonites of Cretaceous Age are found
- diverse Montane area with several wetlands, including calcareous springs with numerous rare plants
- diverse breeding bird populations
- important Elk habitat

Management Considerations:

- proposals have been made to use the springs' water supply for trout rearing

References:

- Lamoureux & Associates (1983)

ESA: GRASSLAND; POSTON

Name: Brent Lake

Area (ha): 134

Location:

- Twp. 28 - Rge. 10 - W4
- south of Plover Lake

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: Provincial

- Poston lists as provincially significant goose staging habitat

Description:

- shallow alkali lake

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Brine Creek Salt Plain

Area (ha): 18582

Location:

- Twp. 125 - Rge. 13 - W4
- salt plain along Brine Creek

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Peace River Lowlands

Significance: National

- Wood Buffalo National Park

Description:

- extremely saline soils that are dominated by halophytes and contain many vegetation types and plant species otherwise restricted to grasslands in southern Alberta
- 11 reported salt springs
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) breeding habitat
- numerous flocks of geese, swans and ducks
- never cultivated
- no human impact to date

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)
- Fairbarns (1990)
- 1996 field notes

ESA: MODEL FOREST

Name: Brûlé Lake

Area (ha): 3604

Location:

- Twp. 49-50 - Rge. 26-27 - W5
- south end and east shore of Brûlé Lake and extensions along the Athabasca River and Highway 16

NTS Map Sheet: 73F

Municipality: MD of Yellowhead

Natural Subregions: Montane

Significance: Provincial

- part of one of the most northerly areas of Montane vegetation in Alberta
- a rare occurrence of active dunes in the Rocky Mountains of Alberta

Description:

- Montane white spruce woodland as well as chokecherry-willow and stunted balsam poplar and aspen with willow-silverberry shrubbery on dunes
- extensive active and stabilized dunes in parabolic and elongate form
- calcareous springs
- spruce trees up to 400-500 years old
- reported Bald Eagle nest on the Athabasca River
- key Elk habitat
- Mule Deer habitat in dune vegetation

Management Considerations:

- requires the highest level of protection from human disturbances
- ungulates are sensitive to human activities on critical winter ranges
- portions of the unvegetated dunes, now open to motorized vehicles, should be placed off limits
- Bald Eagles are sensitive to disturbance during the nesting season

References:

- Alberta Forestry, Lands and Wildlife (1990)
- Edson Fish and Wildlife (K. Smith, personal communication) for key Elk habitat
- Dan Wilson (personal communication) for Bald Eagle
- Roed (1970) for significance of dunes
- Achuff and Wallis (1992) for distribution of Montane

ESA: FOOTHILLS; DRY MIXEDWOOD

Name: Buck Lake

Area (ha): 3961

Location:

- Twp. 46 - Rge. 6 - W5
- Buck Lake

NTS Map Sheet: 83B, 83G

Municipality: County of Wetaskiwin

Natural Subregions: Lower Foothills; Dry Mixedwood

Significance: Provincial

- excellent representation of Dry Mixed Wood lake

Description:

- waterfowl production, staging and moulting lake
- key fisheries (commercial and sport), mainly Lake Whitefish
- significant spawning area for Northern Pike and Lake Whitefish
- fish species include Northern Pike, Walleye and Yellow Perch
- Great Blue Heron colonies
- Osprey nesting
- part of a relatively intact, excellent representative of Dry Mixed Wood
- managed for recreation, domestic and commercial fishery
- includes Buck Lake Natural Area

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Natural and Protected Area Files
- Wildlife key area maps
- Fisheries inventory maps
- Mitchell and Prepas (1990)

ESA: PEACE RIVER

Name: Buffalo Bay/Horse Lakes

Area (ha): 13069

Location:

- Twp. 76 - Rge. 15 - W5
- Buffalo Bay/Horse Lakes

NTS Map Sheet: 83N

Municipality: MD of Opportunity

Natural Subregions: Dry Mixedwood; Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (a blue-listed species in Alberta) staging
- key waterfowl molting and staging
- American Bald Eagle and Osprey nesting
- Great Blue Heron colony
- Walleye spawning
- sand and gravel outwash delta
- high species diversity
- fen/bog complex and willow wetland

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Poston et al. (1990)
- D. Moyles, pers. comm
- D. Walty, pers. comm
- NAWMP unpubl. data
- Semenchuk (1992)

ESA: PARKLAND; STETTLER; LACOMBE; POSTON

Name: Buffalo Lake

Area (ha): 17440

Location:

- Twp. 39 to 41 - Rge. 20 to 22 - W4
- Buffalo Lake and some adjacent upland and wetlands

NTS Map Sheet: 83A

Municipality: County of Stettler; County of Lacombe; County of Camrose

Natural Subregions: Central Parkland

Significance: International

- significant Piping Plover (a COSEWIC endangered species in Canada and red-listed species in Alberta) nesting habitat

Description:

- large lake with islands and extensive marshes
- includes some adjacent parkland and alkali ponds
- Poston lists as nationally significant production, staging and moulting lake for waterfowl
- Rockland Bay has historically been a significant nesting habitat for the endangered Piping Plover, however in recent years vegetation encroachment has limited the availability of suitable rocky shore
- includes Ryder Lake
- one of the most productive shorebird staging habitats in Alberta
- Great Blue Heron colony observed on lake
- significant Mule Deer and White-tailed Deer habitat in immediate upland
- important fishery (rearing, spawning and overwintering lake for Northern Pike, Burbot and Sauger)
- Poston lists as provincially significant Ring-billed Gull breeding habitat
- nesting habitat for Piping Plover, an endangered species in Canada
- diversity of breeding marsh birds
- productive Mule Deer and White-tailed Deer habitat
- Great Blue Heron colony
- large gull colony on island
- local and uncommon Alberta birds including Forster's Tern, Virginia Rail and Yellow Rail
- low milkweed (*Asclepias ovalifolia*), a provincially uncommon plant, at Rochon Sands
- includes a portion of Rochon Sands Provincial Park

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for nesting and migrating waterfowl
- additional clearing, drainage and cultivation on the upland will further reduce the attractiveness of the area for a variety of wildlife
- Great Blue Herons are sensitive to human presence during the nesting season

References:

- Fish and Wildlife key area maps
- Andersen (1981) for waterfowl
- Wershler and Wallis (1987) for Piping Plovers
- Allen (1987) for Great Blue Heron colony
- 1988 field notes
- Harold Pinel, City of Calgary Parks and Recreation (personal communication) for *Asclepias ovalifolia*
- Sweetgrass Consultants (1988)
- field notes

ESA: PARKLAND; POSTON

Name: Buffalo Lake Complex

Area (ha): 975

Location:

- Twp. 74 - Rge. 7 - W6
- lake complex in Grande Prairie area

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- site includes Buffalo Lake, Gummer, and Jones Lake
- Trumpeter Swan (a blue-listed species in Alberta) staging
- significant production and staging lakes for waterfowl
- extensive emergent vegetation

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Wildlife key area maps
- field notes (1995)



ESA: DRY MIXEDWOOD; POSTON

Name: Bunder Lake

Area (ha): 1352

Location:

- Twp. 61 - Rge. 12 - W4
- Bunder Lake

NTS Map Sheet: 73L

Municipality: County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant for breeding Eared Grebes and staging ducks

Description:

- lake located south of Goodfish Lake east of the Whitefish Lake Indian Reserve
- significant waterfowl production lake
- Ducks Unlimited restoration project
- numerous waterfowl observed on lake during aerial survey

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Wildlife key area maps
- field notes (1995)

ESA: FOOTHILLS; CLEARWATER

Name: Burnstick Lake

Area (ha): 1357

Location:

- Twp. 34 to 35 - Rge. 6 to 7 - W5
- Burnstick Lake area

NTS Map Sheet: 82O

Municipality: MD of Clearwater

Natural Subregions: Lower Foothills

Significance: Provincial

- one of the more diverse Lower Foothills areas in Alberta

Description:

- key Moose habitat
- high wildlife diversity
- active Great Blue Heron colony
- overwintering and spawning for a variety of fish; sport fishery
- high landform and wetland diversity (wetland-upland complexes)
- boreal wetlands, marshes, patterned wetlands, and Beaver pond complexes
- upland aspen, pine and spruce woodland
- areas of diverse hummocky moraine
- uncommon birds such as Great Gray Owl and Pileated Woodpecker
- some waterfowl production
- regionally uncommon plants including round-leaved bog-orchid (*Habenaria orbiculata*)
- active clearing is taking place in this unit
- Northern Pike, Yellow Perch, Mountain Whitefish, and Eastern Brook Trout overwintering and spawning areas
- includes small campground area

Management Considerations:

- logging, clearing and drainage reduce the habitat diversity for breeding birds
- developments (e.g. roads, seismic trails) in the watershed can disrupt natural drainage patterns and adversely impact plant and animal habitats
- additional roads or uncontrolled vehicle access may have adverse impacts on wildlife populations

References:

- Fish and Wildlife key area maps
- 1991 field notes
- Nordegg-Red Deer River Sub-regional Integrated Resource Plan

ESA: PEACE RIVER

Name: Bush (Wilkin) Lake

Area (ha): 814

Location:

- Twp. 72 - Rge. 9 - W6
- Bush (Wilkin) Lake near Grande Prairie

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swans nesting (a blue-listed species in Alberta)
- high bird diversity

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Semenchuk (1992)
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm

ESA: PEACE RIVER

Name: Cache Creek - Wolverine Sand Hills

Area (ha): 71630

Location:

- Twp. 97 - Rge. 19 - W5
- sand dune area along the Peace River

NTS Map Sheet: 84F

Municipality: MD of East Peace

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the most important Moose ranges in northern Alberta

Description:

- key Moose range
- diverse vegetation
- rare plant *Eupatorium purpureum*
- sloping fen
- sand dune-wetland complex
- iron springs

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- File notes, Land and Forest Service
- D. Moyles, pers. comm
- R. Woods, pers. comm
- B. Mazurik, pers. comm
- Hermann (1993)
- Mulira (1986)
- David (1977)

ESA: DRY MIXEDWOOD; POSTON

Name: Cache Lake

Area (ha): 1576

Location:

- Twp. 59 - Rge. 12 - W4
- Cache Lake

NTS Map Sheet: 73L

Municipality: County of Smoky Lake

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Black Tern breeding habitat

Description:

- lake located immediately north of the Saddle Lake Indian Reserve
- significant production lake for waterfowl
- Black Tern colony
- fisheries resources include Northern Pike and Yellow Perch

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Fisheries Resources Maps
- Wildlife key area maps
- field notes (1995)

ESA: BOREAL; POSTON

Name: Cadotte Lake

Area (ha): 1810

Location:

- Twp. 86 - Rge. 16 - W5
- Cadotte Lake

NTS Map Sheet: 84C

Municipality: MD of East Peace

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- key waterfowl production, moulting and staging site
- supports Northern Pike and White Sucker
- domestic Northern Pike fishery

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Walty (1996) pers. comm

ESA: EASTERN BOREAL

Name: Calling Lake

Area (ha): 20100

Location:

- Twp. 72 - Rge. 22 - W4
- Calling Lake

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- an important commercial fishery in the Boreal Forest of Alberta

Description:

- important sportfishery
- commercial/domestic fishery
- important fish species: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot
- important waterfowl staging area

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Cameron Hills Glacial Flutings

Area (ha): 30818

Location:

- Twp. 126 - Rge. 21 - W5
- summit of Cameron Hills and adjacent slope

NTS Map Sheet: 84N

Municipality: MD of Mackenzie

Natural Subregions: Subarctic, Boreal Highlands

Significance: Provincial

- very large glacial flutings, one of the best examples in the province

Description:

- area contains lakes that provide good waterfowl production sites
- Moose and Black Bear noted in the area
- adjacent to key Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) habitat
- avifauna in the area include Bald Eagles and Osprey and Herring Gulls and Bonaparte's Gulls
- lies within a Bison protected area
- recommended by the Alberta Wilderness Association as a representative wildland

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Fairbarns (1983)
- Reynolds (1996) pers. comm
- Wynes 1996 pers. comm
- 1996 field notes



ESA: WILLOW CREEK

Name: Canon Coulee

Area (ha): 2364

Location:

- Twp. 12 and 13 - Rge. 28 and 29 - W4
- 16 km west of Claresholm

NTS Map Sheet: 82I

Municipality: MD of Willow Creek

Natural Subregions: Foothills Fescue

Significance: Provincial

- areas of nesting bird of prey concentrations are rare in Alberta

Description:

- deep, steep-sided coulee which occupies a former glacial meltwater channel
- picturesque massive sandstone outcrops with montane grassland and open limber pine and Douglas fir vegetation
- high density of nesting birds of prey, including Ferruginous Hawk, Golden Eagle, Prairie Falcon and Merlin
- key Mule Deer habitat
- Sharp-tailed Grouse dancing grounds
- moderate-sized glacial erratic
- key Mule Deer and White-tailed Deer habitat

Management Considerations:

- heavy grazing reduces many characteristic fescue grassland species
- cultivation reduces the productivity of the grasslands for native birds and mammals upon which rare birds of prey are dependent
- some birds of prey like Golden Eagles are sensitive to human activity during the nesting season

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Shetsen (1987), Stalker (1965) and Beaty (1975) for coulee description and erratic

ESA: PEACE RIVER; POSTON

Name: Cardinal Lake

Area (ha): 6820

Location:

- Twp. 83 - Rge. 24 - W5
- Cardinal Lake

NTS Map Sheet: 84C

Municipality: MD of Peace; MD of Northern Lights

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- key waterfowl moulting and staging, regionally important staging habitat for geese
- Western Grebe nesting
- wildlife viewing

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Nietfeld et. al. (1985)
- D. Moyles, pers. comm
- NAWMP, unpubl. data
- Semenchuk (1992)

## ESA: MODEL FOREST

Name: Cardinal River Headwaters

Area (ha): 16884

Location:

- Twp. 44 to 45 - Rge. 21 to 23 - W5
- valleys of Toma, Russell and Nomad Creeks; headwaters of Cardinal River; Ruby Lakes; steep slopes west of Mcleod River; Front Range Mountains: Russell, Mackenzie, Prospect, Cheviot and Tripoli

NTS Map Sheet: 83C

Municipality: MD of Yellowhead

Natural Subregions: Alpine and Subalpine

Significance: National

- together with Mcleod River headwaters, one of the most extensive, continuous vegetated Alpine habitat complexes in the Front Ranges of the Rocky Mountains

Description:

- diversity of geomorphological features including tarns, waterfalls and cascades
- abundance of periglacial features including patterned ground
- extensive, diverse Alpine and Subalpine habitats, including spruce-fir and lodgepole pine woodland interspersed with large, high-elevation wetlands comprising sedge and grassy meadows and willow-dwarf birch shrubbery
- diverse meadow wetlands-spring complex (including major springs) in vicinity of Ruby Lakes; includes calcareous springs and tufa deposits
- provincially rare vegetation type -- an everlasting-boreal wormwood herb community
- nationally and provincially uncommon, rare and disjunct plant (*Rhododendron lapponicum*, *Agrostis variabilis*, *Hierochloa alpina*, *Carex misandra*, *Eriophorum callitrix*, *Salix alaxensis*, *Lesquerella arctica*, *Saxifraga flagellaris*, *Telesonix* = *Boykinia heucheriformis*, *Polemonium viscosum*, *Pedicularis lanata*, *Erigeron radicans*), and invertebrate animal species
- habitat for Bull Trout (being considered for COSEWIC listing)
- key habitat for Elk, Grizzly Bear (a COSEWIC vulnerable species), Mountain Goat, Wolverine (a COSEWIC vulnerable species in Canada) and Fisher
- part of a buffer between Jasper National Park to the west and multiple use lands to the east

Management Considerations:

- Alpine tundra is vulnerable to disturbance
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and access roads reduce habitat effectiveness for Grizzly Bear
- wildlife and erosion problems associated with motorized recreational use should be monitored and, if warranted by declining wildlife or expanding erosion problems, there should be full closure of all lands to motorized use including designated access corridors

References:

- Alberta Forestry, Lands and Wildlife (1990) for Elk
- Alberta Ecological Survey (1977) and Komex International Ltd. (1992)
- Salt (1985 a & b) for birds and mammals
- Packer & Vitt (1974), Natural Areas Program (1983), and Mortimer (1978) for rare plants
- Belicek (1976), Daborn (1976), Clifford and Bergstrom (1976) and Pike (1978) for invertebrates
- Natural and Protected Areas file material
- Barnes (1978) and Borneuf (1983) for springs

ESA: BOREAL

Name: Caribou Mountains Escarpment

Area (ha): 224978

Location:

- Twp. 123 - Rge. 7 - W5
- slopes of the Caribou Mountains and adjacent upland

NTS Map Sheet: 84O

Municipality: MD of Mackenzie; Municipality of Wood Buffalo

Natural Subregions: Boreal Highlands; Subarctic; Wetland Mixedwood; Central Mixedwood

Significance: Provincial

- the most diverse and extensive Boreal Highlands/Subarctic landscape in Alberta

Description:

- significant escarpment feature
- unique landform
- supports a high flora and fauna diversity due to the extreme variation in elevation
- includes a significant Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- 1996 field notes

ESA: BOREAL

Name: Caribou Mountains Northern Ribbed Fens

Area (ha): 3848

Location:

- Twp. 121 - Rge. 10 - W5
- wetlands on summit of Caribou Mountains

NTS Map Sheet: 84O

Municipality: MD of Mackenzie

Natural Subregions: Subarctic

Significance: Provincial

- unique Subarctic peat development and patterning

Description:

- contains rare plants such as lousewort (*Pedicularis sudetica*) and bladderwort (*Pinguicula villosa*)

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

ESA: BOREAL

Name: Caribou Mountains Peat Plateau Bog

Area (ha): 3276

Location:

- Twp. 120 - Rge. 5 - W5
- wetlands on summit of Caribou Mountains

NTS Map Sheet: 84O

Municipality: MD of Mackenzie

Natural Subregions: Subarctic

Significance: Provincial

- one of the best representatives of this Subarctic wetland type in Alberta

Description:

- sphagnum dominated peat plateau bog with collapse scars and channel fens

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

ESA: CARDSTON

Name: Carway Iris

Area (ha): 101

Location:

- Section 24 - Twp. 1 - Rge. 26 - W4
- 6 km NNE of Carway

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: National

- the largest of three remaining areas of naturally occurring western blue flag populations in Canada

Description:

- several stands of COSEWIC threatened western blue flag (*Iris missouriensis*)
- moist meadows with a high diversity of native plants

Management Considerations:

- light grazing appears to be beneficial to these plants, while heavy grazing may eliminate the plants; fire may simulate grazing effects
- cultivation eliminates many native plants

References:

- 1986 field notes
- de Vries (1966) regarding western blue flag status in Canada

ESA: CANADIAN SHIELD

Name: Caspian Tern

Area (ha): 2324

Location:

- Twp. 118 - Rge. 5 - W4
- small unnamed lakes with Caspian Tern nesting colony

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- one of only a handful of known nesting areas for a provincially rare species

Description:

- small Caspian Tern nesting colony

Management Considerations:

- colonial birds are sensitive to human intrusions into their nesting areas

References:

- Bradley (1978)
- Bishoff and Fyfe (1975)



ESA: BOREAL

Name: Cattail Lake

Area (ha): 119

Location:

- Twp. 73 - Rge. 25 - W5
- Cattail Lake

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity noted in 1995 and 1996
- small boreal forest lake
- adjacent upland is extremely diverse

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Chain Lakes

Area (ha): 88

Location:

- Twp. 74 - Rge. 13 - W6
- Chain Lakes in Boreal Forest

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- three lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- potential waterfowl habitat
- supports Arctic Grayling and Northern Pike

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: STETTLER; STARLAND; GRASSLAND; POSTON

Name: Chain - Farrell Lakes

Area (ha): 7625

Location:

- Twp. 32 to 34 - Rge. 15 to 17 - W4
- Spiers, Farrell and Chain Lakes (including Clear and Pearl Lake) and adjacent parkland and grassland

NTS Map Sheet: 72M, 82P

Municipality: County of Stettler; MD of Starland; Special Area 2

Natural Subregions: Northern Fescue

Significance: International

- important nesting habitat for the Piping Plover, an endangered species

Description:

- productive wetlands are important elements of the Parkland Region
- complex of ephemeral shallow alkali lakes that is significant migratory shorebird habitat
- waterfowl production and staging at Farrell Lake and middle Chain Lakes
- Baird's Sparrow, a yellow A-listed species in Alberta, breeds in backshore areas
- Poston lists Chain Lake as nationally significant and Farrell Lake as provincially significant goose staging habitat
- shallow alkali lakes which may dry up for extended periods
- includes grassy meadows and alkali springs on adjacent lands

Management Considerations:

- drainage or blockage of flows into the wetland basins would reduce the attractiveness of the area for shorebirds and waterfowl
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production in wetter years
- groundwater withdrawals may affect spring activity and permanence of water in wetlands

References:

- Wershler and Wallis (1987) for Piping Plover
- Wershler (1989) for Baird's Sparrow
- Fish and Wildlife key area maps
- 1988 and 1990 field notes
- field notes (1995)
- Wallis (1989)
- Wildlife key area maps
- Poston et al. (1990)

ESA: PINCHER CREEK

Name: Chapel Butte

Area (ha): 3085

Location:

- Twp. 9 - Rge. 2 and 3 - W5
- 16 km NNW of Lundbreck

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane

Significance: Provincial

- this is the largest and most spectacular rock ridge in a grassland landscape in Alberta

Description:

- massive sandstone rock outcrop and ridge system
- grassland and extensive stunted limber pine ridges
- nesting area for Prairie Falcons
- key Mule Deer habitat
- Livingstone Ducks Unlimited wetland project
- Burmis anticline formation

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Beaty (1975) for Burmis anticline

ESA: CYPRESS

Name: Chappice-Sam Lakes

Area (ha): 14384

Location:

- Twp. 13 to 14 - Rge. 2 to 4 - W4
- Chappice and Sam Lakes and surrounding uplands

NTS Map Sheet: 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: International

- the only permanent nesting habitat for Piping Plovers in the Mixedgrass of Alberta; one of six primary nesting locations in the province

Description:

- permanent hypersaline lakes
- extensive saline spring/seepage in excellent condition
- one of few productive shorebird nesting and staging area in the Mixedgrass region of Alberta
- waterfowl production
- locally important area for staging ducks
- abundant ground squirrel population -- important bird of prey feeding area
- nesting Piping Plovers, an endangered species
- habitat for threatened Baird's Sparrows, Long-tailed Weasels, Ferruginous Hawks, and Golden Eagles
- rare or uncommon plants including Nevada bulrush (*Scirpus nevadensis*) and scratch grass (*Muhlenbergia asperifolia*)
- key Mule Deer habitat

Management Considerations:

- loss of groundwater flows to the springs and diversion and pumping of surface water during drought may result in the dessication of Chappice Lake or increasing salinity; maintenance of natural habitats on surrounding uplands will help reduce impacts on the wetland basins
- cultivation reduces the suitability of grassland habitats to support a variety of native species
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey

References:

- Poston et al (1990) and Wallis (1990a)
- Wershler and Wallis (1987), Wershler (1988) for Piping Plover
- Wershler (1989) for shorebirds
- Fish and Wildlife key area maps
- 1991 field notes

ESA: CANADIAN SHIELD

Name: Charles-Cornwall Lakes

Area (ha): 62412

Location:

- Twp. 121 to 126 - Rge. 3 to 5 - W4
- Charles and Cornwall Lakes and surrounding lakes and uplands

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- one of the more diverse areas on the Kazan Upland from geological and hydrological perspectives
- adjoins other provincially significant areas in the Alexander-Woodman and Colin Lake units

Description:

- diversity of large Canadian Shield lakes, sand deposits, wetlands and bedrock outcrops
- situated on the boundary of two major bedrock units resulting in a variety of Precambrian Shield rock types including, granitoids, gneisses and metasedimentary
- sand plains and dunes along the shore and backshore of Cornwall Lake
- jack pine woodlands and aspen forest
- diversity of wetlands
- Charles Lake is an outstanding example of a bedrock structurally controlled water body (i.e. the lake follows a major fault structure)
- good to excellent sport fishery potential
- uncommon, sensitive and colonially nesting birds (Bald Eagle, Osprey, Common Tern)
- zones of mylonitic (recrystallized) rocks

Management Considerations:

- some birds of prey are sensitive to human intrusion near their nest sites (e.g. Bald Eagle)

References:

- Bradley (1978)
- Rhude (1977)
- Alberta Recreation and Parks (1980)
- Renewable Resources Consulting Services (n.d.)
- Vitt (1992), Godfrey (1966)
- Godfrey and Langenberg (1986)

ESA: DRY MIXEDWOOD; POSTON

Name: Charlotte Lake

Area (ha): 1730

Location:

- Twp. 61 - Rge. 5 - W4
- Charlotte Lake

NTS Map Sheet: 83I

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Eared Grebe, Common Tern and Black Tern breeding habitat

Description:

- waterfowl production and staging lake

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Wildlife key area maps
- field notes (1995)

ESA: PEACE RIVER

Name: Child Lake (Child Lake Salt Meadows Natural Area)

Area (ha): 657

Location:

- Twp. 108 - Rge. 16 - W5
- Child Lake Salt Meadows Natural Area

NTS Map Sheet: 84K

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- the most extensive dry salt meadow in northwestern Alberta

Description:

- never cultivated
- representation of 11 major vegetation types

Management Considerations:

- clearing and cultivation drastically reduce biodiversity

References:

- Fairbarns (1990)
- file notes, Lands & Forest Service



ESA: FOOTHILLS

Name: Chinchaga Diversity Area

Area (ha): 838663

Location:

- Twp. 95 - Rge 12 - W5
- Chinchaga River and surrounding uplands

NTS Map Sheet: 84D, 84E

Municipality: MD of Clear Hills

Natural Subregions: Lower and Upper Foothills; Wetland Mixedwood

Significance: Provincial

- one of only two large intact blocks of Foothills landscape left in Alberta

Description:

- high landform diversity
- old-growth forest and high plant community diversity
- critical Caribou habitat (considered secondary lands for Caribou preservation)
- Trumpeter Swan nesting
- critical terrestrial furbearer habitat
- key Moose range and important Grizzly Bear habitat along the Chinchaga River
- large diversity of wetlands including patterned and non-patterned fens, bogs, marshes and lakes

Management Considerations:

- maintenance of unfragmented natural cover is critical for Caribou
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Fish and Wildlife (1993, 1994)
- 1994 field notes

ESA: BOREAL

Name: Chinchaga River

Area (ha): 23470

Location:

- Twp. 103 - Rge. 3 - W5
- Chinchaga River valley

NTS Map Sheet: 84E

Municipality: MD of Mackenzie; MD of Northern Lights

Natural Subregions: Wetland Mixedwood; Lower Foothills

Significance: Provincial

- one of the most diverse and extensive river valleys in the Wetland Mixedwood Boreal Forest of Alberta

Description:

- excellent example of a tight meandering river
- good Trumpeter Swan (blue-listed species in Alberta) nesting potential on oxbow lakes
- river supports Arctic Grayling, Northern Pike, Walleye, Longnose Suckers and White Suckers
- sport fishing occurs at access sites
- vulnerable at times due to low water levels
- lies within a Bison protected area
- key Moose range and important Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) habitat along the river
- uplands also support a large Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) range
- aspen dominated riparian upland
- surrounding uplands support a high diversity of landforms and vegetation communities including mature old growth forest
- uplands consist of a large diversity of wetland types including patterned and non-patterned fens, bogs, marshes and lakes

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Natural Resources Service files
- Reynolds (1996) pers. comm
- Walty (1996) pers. comm
- 1996 field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Chip Lake

Area (ha): 8956

Location:

- Twp. 53 - Rge. 9 - W5
- Chip Lake

NTS Map Sheet: 83G

Municipality: MD of Yellowhead

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant for staging ducks and Great Blue Heron breeding habitat

Description:

- largest lake within this portion of the study area
- important hydrological function
- emergent vegetation around perimeter of lake
- important staging lake for waterfowl
- flocks of ducks and geese observed on lake during fall aerial survey
- Trumpeter Swans (Alberta blue-listed) observed (believed to be non-breeding swans released from Elk Island National Park)
- small islands may be utilized by colonial nesting birds although heavy boating activity may deter nest selection
- important sport fishery
- Northern Pike spawning area

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Byersbergen (pers. comm. 1995)
- Mitchell and Prepas (1990)
- Alberta Wilderness Association Map
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: PARKLAND

Name: Cipher Lake

Area (ha): 151

Location:

- Twp. 43 - Rge. 1 - W4
- Cipher Lake

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- nesting site for Piping Plover (a COSEWIC endangered species in Canada and a red-listed species in Alberta)

Description:

- small alkali lake located west of Reflex Lake
- key migratory shorebird habitat

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Goossen et. al. (in prep)
- Morrison et. al. (1995)
- Byersbergen (pers. comm. 1995)

ESA: PARKLAND; POSTON

Name: Clairmount Lake

Area (ha): 1202

Location:

- Twp. 72 - Rge. 5 - W6
- Clairmount Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: Provincial

- one of relatively few productive Trumpeter Swan (blue-listed species in Alberta) breeding lakes in Alberta
- Poston lists as provincially significant duck staging habitat

Description:

- Ducks Unlimited wetland
- significant waterfowl production and staging wetland

Management Considerations:

- maintenance of natural shorelines will attract a variety of waterbirds

References:

- Wildlife key area maps
- field notes (1995)

ESA: LLOYDMINSTER

Name: Clarke Lake

Area (ha): 418

Location:

- Twp. 48 - Rge. 3 - W4
- Clarke Lake north of Paradise Valley, Alberta

NTS Map Sheet: 73E

Municipality: County of Vermilion River

Natural Subregions: Central Parkland

Significance: Provincial

- one of the more productive duck staging areas in the Aspen Parkland of Alberta

Description:

- moderately saline, deep lake
- key waterfowl breeding and staging area
- Bucks for Wildlife project
- extensive but narrow great bulrush (*Scirpus acutus*) marsh

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Fish and Wildlife key area maps
- Poston et al. (1990) for significance for waterfowl
- 1995 field notes

ESA: PEACE RIVER

Name: Clear River Moose Range

Area (ha): 35275

Location:

- Twp. 83 - Rge. 11 - W6
- valley of Clear River and adjacent uplands

NTS Map Sheet: 84D

Municipality: MD of Clear Hills

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the best ungulate ranges in northern Alberta

Description:

- contains Clear and Eureka rivers
- ungulate winter range
- key Moose range
- key Elk range
- Clear River provides spawning, feeding and rearing habitat for fish
- high landform diversity

Management Considerations:

- maintenance of natural habitats will attract a variety of boreal wildlife

References:

- D. Moyles, pers. comm
- Boag (1993)

ESA: FOOTHILLS; CLEARWATER

Name: Clearwater River

Area (ha): 38036

Location:

- Twp. 35 to 39 - Rge. 6 to 12 - W5M
- Clearwater River valley from Dovercourt area to west of Ricinus

NTS Map Sheet: 83B

Municipality: MD of Clearwater

Natural Subregions: Upper and Lower Foothills; Dry Mixedwood

Significance: Provincial

- one of the most diverse and productive Foothills streams in Alberta

Description:

- key Elk, Mule Deer and White-tailed Deer habitat
- Osprey nesting sites
- key movement corridor
- high fish diversity (including Bull Trout) and sport fishery
- Eastern Brook Trout, Brown Trout, and Mountain Whitefish
- includes Edmond's and Rauch Springs, two of Alberta's larger springs
- includes Clearwater-Ricinus and Chedderville Natural Areas
- braided stream floodplain and valley habitats
- diverse riparian woodland, shrubbery and back channel wetlands along the Clearwater River
- variety of breeding birds
- includes Clearwater-Ricinus and Chedderville Natural Areas

Management Considerations:

- heavy grazing, clearing and cultivation will reduce the attractiveness of the area for wildlife and fish

References:

- 1991 field notes
- Fish and Wildlife key area maps
- Natural and Protected Areas Program files
- Nordegg-Red Deer River Sub-regional Integrated Resource Plan
- Borneuf (1983) for springs



ESA: EASTERN BOREAL

Name: Clearwater River

Area (ha): 62055

Location:

- Twp. 89 - Rge. 4 - W4
- Clearwater River valley
- includes Clearwater Springs and High Hill River Springs ESAs

NTS Map Sheet: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- interprovincial waterway
- connects to Canadian Heritage River in Saskatchewan

Description:

- important sportfishery (over 20 fish species recorded)
- Northern Pike and Burbot spawning
- important Moose habitat
- high landform diversity (including outstanding Whitemud Falls)
- rare vegetation species in Clearwater Springs
- saline spring on Devonian limestone
- significant spring features
- significant plant species
- wildlife mineral lick

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: PINCHER CREEK

Name: Cloudy Ridge

Area (ha): 437

Location:

- Twp. 3 - Rge. 30 - W4
- just north of northern tip of Waterton Lakes National Park

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Parkland; Montane

Significance: Provincial

- one of few lightly grazed montane/foothills parkland areas in Alberta
- several provincially rare plants

Description:

- lightly grazed grassland, aspen woodland, and Douglas fir ridge
- key Elk habitat
- rare plants including Alaska onion grass (*Melica subulata*), tall trisetum (*Trisetum canescens*) and bearded fescue (*Festuca subulata*)

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Cottonwood Consultants (1983)

ESA: PARKLAND

Name: Cluster of Unnamed Lakes (Hughenden)

Area (ha): 491

Location:

- Twp. 41 - Rge. 5 - W4
- east of Hughenden

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: National

- breeding site for Piping Plover (a COSEWIC endangered species in Canada and a red-listed species in Alberta)

Description:

- small alkali lakes
- key ungulate habitat
- high species diversity
- Sharp-tailed Grouse dancing ground

Management Considerations:

- maintenance of natural shorelines will attract a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Byersbergen (pers. comm. 1995)

ESA: PARKLAND; POSTON

Name: Coal Lake

Area (ha): 2147

Location:

- Twp. 47 - Rge. 23 - W4
- Coal Lake

NTS Map Sheet: 83H

Municipality: County of Beaver

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- deep meltwater channel and kame terraces
- Great Blue Heron colony
- waterfowl staging and production lake
- important local Northern Pike sport fishery
- critical deer habitat

Management Considerations:

- maintenance of natural habitats will attract a variety of wildlife

References:

- Mitchell and Prepas (1990)
- field notes (1995)
- Wildlife key area maps

ESA: FOOTHILLS/MODEL FOREST

Name: Coal Valley Highland

Area (ha): 15478

Location:

- Twp. 47 to 49 - Rge. 18 to 21 - W5
- Lovett Ridge, east of Robb; headwaters of Erith River, including Bacon, Halpenny and Lendrum Creeks

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills

Significance: Provincial

- the most extensive, diverse willow-alder habitats with rare species known in the Upper Foothills of Alberta

Description:

- diverse Upper Foothills habitats including old spruce-fir, lodgepole pine and mixed pine-aspen and pine-black spruce woodlands
- extensive willow-alder on seepage springs
- wet meadows and Beaver pond complexes
- high landform diversity
- high wildlife diversity
- key terrestrial bird habitat
- key Moose, Elk and deer habitat
- productive habitat for a diversity of breeding bird species (especially willow-alder-spring habitat)
- regionally uncommon birds - Yellow-bellied Flycatcher, Magnolia Warbler, and Bohemian Waxwing
- Barred Owls
- habitat for Bull Trout (being considered for COSEWIC listing)
- rare and uncommon plants including *Viola selkirkii*, *Thalictrum sparsiflorum*, *Sorbus scopulina* and *Oplopanax horridum*

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could negatively impact several wildlife species
- the full variety of habitats should be protected

References:

- Rick Bonar (personal communication) for Bohemian Waxwing
- Cottonwood Consultants (1978) for breeding bird diversity
- aerial photograph interpretation and aerial overflights for extent of willow-alder habitats
- Achuff and Wallis (1992) for Coal Valley as special theme

ESA: BOREAL; POSTON

Name: Cold Lake

Area (ha): 34349

Location:

- Twp. 64 - Rge. 1 - W4
- Cold Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville; MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant for breeding Western Grebes

Description:

- Western Grebe colonies of 400-500 birds and Great Blue Heron colonies are present
- Bald Eagles and non-breeding American White Pelican colonies have been noted
- breeding colonies of Red-necked Grebes and Forster's Terns also noted
- hydrologically important drainage basin
- source of water for the town of Cold Lake
- important commercial and sport fishery
- key fish species include Lake Whitefish, Cisco, Lake Trout, Brook Trout, Rainbow Trout, Northern Pike, Walleye, Burbot, suckers and Yellow Perch
- presence of Lake Trout make Cold Lake a unique angling opportunity
- the Martineau River mouth provides the most productive wildlife habitat on the lake due to a wind sheltering shoreline
- Cold Lake supported three historical trading posts in the late 1700s of which all are considered to be of major historical and archaeological significance
- currently the lake supports a native reserve

Management Considerations:

- to maintain all existing fish populations and total fishery production levels, and to enhance them whenever possible

References:

- Alberta Natural Resources Service files
- Alberta Forestry, Lands & Wildlife 1988b
- Longmore et al. (1982)
- Mitchell and Prepas (1990)

ESA: GRASSLAND; POSTON

Name: Coleman Lake

Area (ha): 1753

Location:

- Twp. 28 - Rge. 14 - W4
- Coleman Lake

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as a provincially significant goose staging site

Description:

- the lake has been noted as being a significant waterfowl production and staging lake
- significant Great Blue Heron and Black-crowned Night Heron colonies
- numerous waterfowl observed during aerial survey

Management Considerations:

- maintenance of natural shorelines will attract a variety of wildlife

References:

- Schmutz (pers. comm. 1995)
- Hofman (pers. comm. 1995)
- Wildlife key area maps
- field notes (1995)

ESA: CANADIAN SHIELD

Name: Colin Lake

Area (ha): 20694

Location:

- Twp. 121 to 122 - Rge. 1 to 2 - W4
- Colin Lake and surrounding uplands

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- nesting area for provincially rare bird species: Mew Gull, Semipalmated Plover
- best examples of sand plain Kazan Upland features in Alberta
- provincially rare plants including lens-fruited sedge (*Carex lenticularis*), rush (*Juncus filiformis*), pearlwort (*Sagina nodosa*), goosefoot (*Chenopodium leptophyllum*), cardamine (*Cardamine pratensis*), and supine sedge (*Carex supina*), the last representing the only known locality in Alberta

Description:

- large scenic lake with rocky islands
- Colin River flows eastward from the lake
- extensive sand plain, stream and wetland vegetation
- unique kettle wetlands north of Colin Lake
- unique south-facing slope grasslands on sand and gravel deposits
- dunes in vicinity of north shore
- good potential for sport fishing
- rock outcrops not as evident as in areas further west and south

Management Considerations:

- maintenance of natural cover will support a variety of Shield species

References:

- Wallis and Wershler (1984)
- Rhude (1977)
- Alberta Recreation and Parks (1980)
- Renewable Resources Consulting Services (n.d.)
- Vitt (1992), Godfrey (1986)
- Godfrey and Peikert (1964)



ESA: PINCHER CREEK

Name: Connelly Creek Ridges

Area (ha): 5358

Location:

- Twp. 7 and 8 - Rge. 2 and 3 - W5
- 10 km N of Burmis

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane

Significance: Provincial

- the most extensive limber pine stands in Alberta

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and animals

Description:

- dry montane ridges with grassland and extensive stunted limber pine habitats
- some small ponds are productive for waterfowl
- key Mule Deer habitat
- Golden Eagle feeding area, possibly nesting

Management Considerations:

- maintenance of natural habitats will support a variety of Montane wildlife

References:

- 1986 field notes
- Fish and Wildlife key area maps

ESA: STRATHCONA

Name: Cooking Lake

Area (ha): 3961

Location:

- Twp. 51 - Rge. 21 - W4
- Cooking Lake

NTS Map Sheet: 83H

Municipality: County of Strathcona

Natural Subregions: Dry Mixedwood

Significance: Provincial

- key component of an interrelated wetland system of larger significance, important for production, moulting, staging and migration of waterfowl

Description:

- large, shallow eutrophic lake
- approximately 70% of shoreline is still forested
- shoreline emergent vegetation communities are best along the north shore
- sheltered bays along the north side of the lake support breeding habitat for waterfowl and Muskrat
- four islands provide relatively secure habitat for waterfowl and other water-associated birds -- the two large islands in the eastern end of the lake support rare white spruce stands
- large Eared Grebe colonies have been noted near the seaplane base
- long identified as key waterfowl habitat on Fish and Wildlife Division maps
- the proximity to a large urban centre and major highways gives the lake a high potential for an interpretative centre

Management Considerations:

- the riparian habitat has a high sensitivity to disturbance
- maintenance of the very high wetland values should be a high priority and the assessment of development proposals near the lakeshore should stress habitat protection
- lake level fluctuation has been a natural part of the lake's history. Consideration may be given to controlling the lake level to maximize wetland habitat
- the waterbird populations are moderately sensitive to disturbance by power boats and seaplanes, particularly during the brood-rearing and moulting periods

References:

- Griffiths (1987)
- Westworth and Knapik (1987)
- Kemper (1976)
- Folinsbee (pers. comm. 1988)
- Fish and Wildlife Key Areas Map

ESA: WILLOW CREEK

Name: Coulee Ridges

Area (ha): 8364

Location:

- Twp. 14 to 16 - Rge. 28 to 29 - W4
- 12 km west of Nanton

NTS Map Sheet: 82I

Municipality: MD of Willow Creek

Natural Subregions: Foothills Fescue

Significance: Provincial

- productive habitat for rare and threatened birds of prey is very localized in Alberta

Description:

- steep-walled, scenic coulees along former glacial meltwater channels
- extensive sandstone rock outcrops, grassland and a variety of shrubbery and woodlands, including spruce and aspen
- high density of nesting and migrating birds of prey, including Prairie Falcon, Ferruginous Hawk, Golden Eagle and Merlin
- several Sharp-tailed Grouse dancing grounds
- key Mule Deer habitat
- glacial erratic
- springs

Management Considerations:

- a diversity of grazing regimes will maintain a variety of native plants and animals typical of the grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals upon which rare birds of prey are dependent
- some birds of prey like Golden Eagles are sensitive to human activity during the nesting season

References:

- 1988 field notes
- W. Smith (personal communication) regarding migrating birds of prey
- Fish and Wildlife key area maps
- Shetsen (1987), Stalker (1965) and Beaty (1975) for coulee description

ESA: FOOTHILLS; CLEARWATER; POSTON

Name: Cow Lake

Area (ha): 1750

Location:

- Twp. 38 - Rge. 7 to 8 - W5M
- Cow Lake south of Rocky Mountain House

NTS Map Sheet: 83B

Municipality: MD of Clearwater

Natural Subregions: Lower Foothills

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- large boreal lake with wetland margins
- variety of wetland types including fens, marshes, sedge meadows, Beaver dam complexes, and black spruce and tamarack swamps
- mature mixed wood forest on uplands
- productive for a diversity of breeding birds
- Great Blue Heron and Bonaparte's Gull colonies
- includes small campground area

Management Considerations:

- clearing and drainage reduce the habitat diversity for breeding birds
- developments (e.g. roads, seismic) in the watershed can disrupt natural drainage patterns and adversely impact plant and animal habitats
- Great Blue Herons can be sensitive to human activities during portions of the nesting season
- wave disturbance associated with power boats can affect the nesting success of loons and grebes

References:

- 1991 field notes
- Natural and Protected Areas Program files
- Rocky-North Saskatchewan Sub-regional Integrated Resource Plan

ESA: LEDUC; BRAZEAU

Name: Coyote Lake Natural Area

Area (ha): 1035

Location:

- Twp. 49 - Rge. 4 to 5 - W5
- Coyote Lake and surrounding uplands

NTS Map Sheet: 83G

Municipality: County of Leduc; MD of Brazeau

Natural Subregions: Dry Mixedwood

Significance: Provincial

- significance status is a result of the occurrence of *Wolffia columbiana* (Family Lemnaceae), a new plant species recorded in the province

Description:

- maximum depth of Coyote Lake is 5.5 m
- 44 ha waterbody
- lake is moderately eutrophic with a well-developed aquatic macrophyte community
- upland is aspen with balsam poplar and white spruce; some larch-black spruce-sphagnum bogs, birch willow shrublands and sedge meadows
- diverse wildlife and rare plant species: 22 mammals, 154 birds, 3 amphibians, 2 fish, 1 reptile and 266 vascular plants recorded
- Moose, Elk, deer and Black Bear habitat
- used by breeding and migrating waterbirds
- nine birds species considered at risk by COSEWIC

Management Considerations:

- rare orchids and other plants are susceptible to loss from plant collectors and damage from trampling by recreational users
- many birds such as Common Loon and Western Grebe are sensitive to human disturbance during nesting
- creeks and steep banks susceptible to erosion
- trophic status may be significantly altered by runoff from agricultural lands if further clearing occurs
- groundwater recharge areas (bogs and fens) are highly sensitive to disturbances and contaminants
- comprehensive management plan needed for wider area around the natural area to delineate fragile or sensitive areas, identify education and interpretive opportunities, recommend conservation measures, and provide an assessment of the long-term protection requirements for the entire area
- if warranted, trails and wildlife viewing facilities could be constructed and interpretive signs erected
- sensitive habitats and wildlife should be protected by restricting or eliminating access during critical periods
- a wildlife corridor linking the site to the North Saskatchewan River should be considered as part of the overall management strategy for the region

References:

- Alberta Natural and Protected Areas (1986)
- Griffiths and Griffiths (1987, 1988)
- Mr. and Mrs. E. Hopkins, personal communication

ESA: CANADIAN SHIELD; BIRCH MOUNTAINS

Name: Crag and Tail

Area (ha): 70716

Location:

- Twp. 100 to 102 - Rge. 3 to 5 - W4
- Johnson Lake-Marguerite River area northeast of Fort McKay

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- the only significant area of crag and tail topography in Alberta
- Precambrian granitic bedrock exposures are found nowhere else in Alberta south of Lake Athabasca
- combination of granitic knobs and the till is unusual anywhere in Alberta

Description:

- primarily an outcrop of the Precambrian Shield
- rugged granite crags rise abruptly and grade gently into till on their lee side
- individual crag-and-tail features are separated by black spruce bogs
- open jack pine woods with sparse understories occur only on exposed granite outcrops
- craggy knolls of Precambrian Shield bedrock and "tails" of glacial till deposited on the lee sides of the knolls during glacial advance
- depressions between the crag and tail containing glacial sand and gravel
- area described is the core; isolated areas of crag and tail and Precambrian outcrops extend north to Twp. 103 and west to Rge. 6
- disjunct Precambrian Shield plant species

Management Considerations:

- presently undisturbed, but would be sensitive to recreation activities and development

References:

- Godfrey (1970)
- Alberta Recreation and Parks (1980)
- 1992 field observations
- Bayrock (1971)
- Fairbairns (1979a, b)

ESA: FOOTHILLS; CLEARWATER; DAVID THOMPSON CORRIDOR

Name: Crimson-Louis Lake Wetlands

Area (ha): 7600

Location:

- Twp. 39 to 40 - Rge. 7 to 9 - W5M
- disjunct wetlands in vicinity of Crimson Lake Provincial Park, Prentice Creek and Louis Lake

NTS Map Sheet: 83B

Municipality: MD of Clearwater

Natural Subregions: Lower Foothills

Significance: Provincial

- part of a provincially significant sand dune-wetland complex
- one of few Foothills areas where large patterned wetlands are associated with extensive sand deposits
- diverse patterned wetlands in association with sandhills are localized in Alberta
- Sandhill Crane nesting areas are very local in southern Alberta

Description:

- classic, extensive patterned wetlands
- wide variety of northern fen and bog species of plants and animals
- Great Blue Heron and Bonaparte's Gull nesting colonies
- concentration of nesting Sandhill Cranes and Common Loons
- rare and uncommon bird species: Ring-necked Duck, Great Gray Owl, Swamp Sparrow and Hooded Merganser
- diverse breeding bird habitats
- rare and uncommon plants, including slender-leaved sundew (*Drosera linearis*), scheuchzeria (*Scheuchzeria palustris*), round-leaved bog-orchid (*Habenaria orbiculata*), northern water-horehound (*Lycopus uniflorus*)
- diversity of wetlands, from sedge and swamp birch fens to tamarack swamps, black spruce bogs, and open water
- includes upland mixed woods and pine woods adjacent to the wetlands
- diverse Beaver dam complexes, especially along Prentice Creek and Buster Creek
- part of aeolian sand deposit complex

Management Considerations:

- logging, clearing and drainage for pasture, including that on adjacent land, reduces the habitat diversity for breeding birds
- developments (e.g. roads, seismic) in the watershed can disrupt natural drainage patterns and adversely impact plant and animal habitats
- additional roads or uncontrolled motor vehicle access created through petroleum development, clearing or logging may have adverse impacts on wildlife populations
- wave disturbance associated with power boats can affect the nesting success of Common Loons

References:

- 1988 and 91 field notes
- Biggs et al (1973) and Dumais (1976) for Crimson Lake Provincial Park
- Fish and Wildlife key area maps
- Rocky-North Saskatchewan Sub-regional Integrated Resource Plan

ESA: FOOTHILLS

Name: Crooked Lake

Area (ha): 1720

Location:

- Twp. 63 - Rge. 22 - W5
- Crooked Lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Lower Foothills

Significance: Provincial

- one of the most diverse and productive lakes in the Foothills of Alberta

Description:

- nesting Bald Eagles
- important waterfowl staging lake
- sport fishery (one of few good perch lakes in Alberta)

Management Considerations:

- maintenance of natural shorelines will support a variety of wildlife

References:

- Bentz et al. (1995)



ESA: EASTERN BOREAL

Name: Crow Lake Diversity Area

Area (ha): 11201

Location:

- Twp. 78 - Rge. 14 - W4
- Crow Lake and surrounding upland

NTS Map Sheet: 83P

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- excellent representation of Central Mixedwood

Description:

- includes Ecological Reserve
- rare vegetation species
- high vegetation diversity
- high landform diversity

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: PINCHER CREEK

Name: Crowsnest River

Area (ha): 2428

Location:

- Twp. 7 - Rge. 2 and 3 - W5
- Crowsnest River valley from Bellevue downstream to Cow Creek
- includes Crowsnest River-Burmis ESA

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek; Municipality of Crowsnest Pass

Natural Subregions: Foothills Fescue; Montane

Significance: International

- international class trout fishery

Description:

- shallow valley of the Crowsnest River with a variety of rock outcrops, grassland, shrubbery and coniferous woodland
- premium quality trout fishery
- large mature riparian (riverside) poplar and white spruce woodland
- diversity of breeding birds in woodland and adjacent shrubbery
- key Mule Deer and White-tailed Deer habitat
- Moose habitat
- stands of yellow monkey flower (*Mimulus guttatus*), a rare plant, along Byron Creek
- population of Western Painted Turtle, an endangered species in Alberta, in pond southeast of Hillcrest Mines
- extensive wetland seepage in Sections 35 and 36 - Twp. 7 - Rge. 2 - W5
- excellent geological sections
- well-preserved river terraces in the Burmis area
- small waterfall at Lundbreck Falls, 3 km W of Lundbreck

Management Considerations:

- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries
- heavy grazing reduces the suitability of these habitats for a variety of native plants and animals
- clearing and cultivation eliminate many native plants and animals

References:

- Fish and Wildlife key area maps
- 1986 and 1987 field notes
- C. Bradley, Trout Unlimited (personal communication) for fish
- Hage (1945), Stalker (1963a), Rutter and Christiansen (1972) and Shawa (1975) for terraces and geological sections
- Cottonwood Consultants (1986a) for Western Painted Turtle status
- Longmore and Stenton (1981) and C. Bradley and J. Eisenhauer (personal communication) for fish

ESA: CROWSNEST PASS

Name: Crowsnest Spring

Area (ha): 64

Location:

- NE8 - Twp. 8 - Rge. 5 - W5M
- immediately north of Crowsnest Lake

NTS Map Sheet: 83G

Municipality: Municipality of Crowsnest Pass

Natural Subregions: Montane

Significance: Provincial

- one of the largest, most spectacular karst springs in Alberta

Description:

- large karst spring, flowing out of cave along north side of railway tracks

Management Considerations:

- because circulation is fairly rapid in this spring system, protection has been recommended for the catchment area, including sinkholes 4 km to the northwest, immediately outside of the study area

Management Considerations:

- disturbances in the catchment basin could affect springs

References:

- Borneuf (1983)

ESA: CROWSNEST PASS

Name: Crowsnest Volcanics

Area (ha): 301

Location:

- E19 and NW20; Section 18; and W7 - Twp. 8 - Rge. 4 - W5M
- west and north of Coleman

NTS Map Sheet: 83G

Municipality: Municipality of Crowsnest Pass

Natural Subregions: Montane

Significance: Provincial

- this formation occurs in Alberta only in the Crowsnest Pass
- exposures of volcanic rock are very local in the province

Description:

- outcrops of volcanic rocks of the Crowsnest Formation; these are the largest exposures of this formation in Alberta

Management Considerations:

- rare vegetation may be present on rock outcrops

References:

- Price (1962)

ESA: MODEL FOREST; FOOTHILLS; BOREAL

Name: Cutbank River

Area (ha): 29510

Location:

- Twp. 64 - Rge. 5 - W6
- Cutbank River valley

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood, Upper and Lower Foothills

Significance: Provincial

- one of few critical Grizzly Bear habitats in the Foothills of Alberta

Description:

- tributary of the Smoky River
- key Bull Trout, Arctic Grayling and Mountain Whitefish fisheries habitat
- key Moose and Elk range
- important Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) habitat
- important wildlife movement corridor
- key Bull Trout, Arctic Grayling and Mountain Whitefish habitat
- key Moose and Elk range
- diversity of fluvial landforms and riparian communities

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- permanent facilities and transportation corridors could negatively impact several wildlife species and reduce habitat effectiveness for Grizzly Bear

References:

- Alberta Energy and Natural Resources (1984)
- Alberta Natural Resources Service files
- Hardy (1990)
- Wildlife key area maps
- Fisheries inventory maps

ESA: CYPRESS

Name: Cypress Hills

Area (ha): 61817

Location:

- Twp. 7 to 9 - Rge. 1 to 4 - W4
- Cypress Hills upland

NTS Map Sheet: 72E

Municipality: MD of Cypress

Natural Subregions: Montane; Mixedgrass

Significance: National

- a unique unglaciated landscape and associated relict flora and fauna in Canada
- some species and varieties of wildlife occur nowhere else in Canada; endemic varieties of fauna

Description:

- unglaciated plateau of the Cypress Hills and surrounding woodlands and relict Foothills Fescue
- massive outcrops of conglomerate rock; includes type locality for Cypress Hills geological formation
- extensive relict montane forests of aspen, lodgepole pine, and white spruce
- numerous fresh water springs and perched wetlands
- extensive area of marshes and permanent wetlands along the lower north slopes
- diversity of breeding birds
- hundreds of disjunct vascular and non-vascular plants and birds
- a large number of rare plants including yellow lavauxia (*Oenothera flava*), speedwell (*Veronica catenata*), yellow monkey-flower (*Mimulus guttatus*), Watson's knotweed (*Polygonum watsonii*), Alaska onion-grass (*Melica subulata*), naiad (*Najas flexilis*), plains halimolobos (*Halimolobos virgata*), dwarf fleabane (*Erigeron radicans*), Cous biscuitroot (*Lomatium cous*), beardless trisetum (*Trisetum wolfii*), striped form of the round-leaved orchid (*Orchis rotundifolia* var. *lineata*), and flowering quill-wort (*Lilaea scilloides*); the last six are considered rare in Canada
- key Moose, Elk and deer habitat
- hibernacula for Red-sided Garter Snakes and other snakes
- regionally and provincially rare, uncommon and threatened species including Leopard Frog, Broad-winged Hawk, Ring-necked Duck, Lazuli Bunting, Turkey Vulture, Poorwill, Baird's Sparrow, and Trumpeter Swan
- Sharp-tailed Grouse dancing grounds
- marsh bird and waterfowl production, including grebes and diving and dabbling ducks
- for purposes of theme analysis, surficial units 1-13 and 15 and 20 have been included as Mixedgrass although some of these units have been mapped in whole or in part as Montane

Management Considerations:

- clearing and cultivation reduce the suitability for a variety of grassland and woodland species
- heavy grazing is not compatible with maintenance of many of the distinctive fescue grassland and montane woodland species
- disturbance of key wetlands has led to Trumpeter Swan abandonment of traditional nesting areas

References:

- Breitung (1954)
- Shetsen (1987) and Barendregt (n.d.-a) for geology
- Cottonwood Consultants (1987b) for snake hibernacula
- Fish and Wildlife key area maps
- 1991 field notes

ESA: WARNER

Name: Deer Creek

Area (ha): 21032

Location:

- Twp. 1 and 2 - Rge. 11 and 12 - W4
- uplands and valleys downstream from Writing-on-Stone Provincial Park

NTS Map Sheet: 72E

Municipality: County of Warner

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: Provincial

- one of few well-managed, extensive mixed grassland areas left in the region; part of the most diverse and largest continuous Mixedgrass habitat in Alberta
- concentration of significant features which are provincially significant: snake hibernacula, extensive greasewood stands, rare plants and fish
- drumlins are quite localized on the plains in Alberta

Description:

- well-managed extensive mixed grassland with rugged, diverse coulees
- key Mule Deer habitat
- key White-tailed Deer habitat in southern portion
- rare plants along Black Coulee, including Moquin's sea-blite (*Suaeda moquini*), a plant which is rare in Canada
- rare fish including Stonecat
- extensive (greasewood) *Sarcobatus vermiculatus* stands along Black Coulee
- high potential for nesting birds of prey which have been observed feeding in the area
- glacial flutings, drumlins and outwash sand plain
- snake hibernacula (overwintering sites) in badlands and rock outcrops
- alkaline springs
- several Ducks Unlimited wetland projects
- excellent bedrock exposures along coulees

Management Considerations:

- a diversity of grazing regimes is needed to maintain a variety of native plants and animals
- cultivation eliminates many native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Paetz and Nelson (1970) and Clayton and Ash (1980) for fish
- Russell and Landes (1940) and Irish (1967a) for bedrock geology
- Westgate (1968) for surficial geology

ESA: RED DEER; POSTON

Name: Delburne Wetlands

Area (ha): 922

Location:

- Twp. 37 - Rge. 22 to 24 - W4
- four wetlands in vicinity of Delburne, including Delburne Lakes

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: Provincial

- productive wetlands are important elements of the Parkland Region
- Poston lists Delburne Lake as provincially significant duck breeding habitat

Description:

- alkali lakes and ponds with some cattail marsh
- some aspen and extensive willow in backshore vegetation
- productive for a variety of waterfowl including diving ducks and Canada Geese; also used by migrating shorebirds

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- 1989 field notes



ESA: DRY MIXEDWOOD; POSTON

Name: Dick Lake

Area (ha): 166

Location:

- Twp. 44 - Rge. 1 - W5
- Dick Lake

NTS Map Sheet: 83B

Municipality: County of Ponoka

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Black Tern breeding habitat

Description:

- lake located south of Pigeon Lake
- significant waterfowl production lake
- emergent vegetation provides cover and food source for dabbling ducks
- relatively undisturbed lake within this portion of the study area

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Mitchell and Prepas (1990)
- field notes (1995)

ESA: BOREAL

Name: Dickson Lake Complex

Area (ha): 513

Location:

- Twp. 75 - Rge. 13 - W6
- three small lakes including Dickson Lake

NTS Map Sheet: 83M

Municipality: MD of Saddle Hills

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed on two of the lakes in 1996 field survey
- good waterfowl production, staging and moulting site
- Dickson Lake supports Arctic Grayling and Northern Pike

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: NEWELL; LOWER RED DEER RIVER

Name: Dinosaur

Area (ha): 22886

Location:

- Twp. 20 to 21 - Rge. 11 to 13 - W4
- Dinosaur Provincial Park and adjacent uplands north of Brooks

NTS Map Sheet: 72L

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: International

- much of the area is a World Heritage Site, noted for its paleontological, riparian and badland features

Description:

- concentration of features; one of the most diverse river valley/badland complexes in the grasslands of Canada
- extensive badlands and intriguing rock formations
- extensive cottonwood, tall shrub, and low shrub riparian habitats, some of which are ungrazed
- diverse breeding bird habitat
- key Mule and White-tailed Deer habitat
- active Great Blue Heron colony
- uncommon birds including Saw-whet Owl
- nesting area for COSEWIC endangered Loggerhead Shrikes and several rare birds of prey including COSEWIC vulnerable Ferruginous Hawk as well as Golden Eagle and Prairie Falcon
- rare plants including annual lupine (*Lupinus pusillus*), nodding umbrella plant (*Eriogonum cernuum*), Powell's salt sage (*Atriplex powellii*), and runcinate-leaved rush-pink (*Stephanomeria runcinata*); the last three species are rare in Canada
- locally important for breeding geese
- hibernacula for Bull Snake and Prairie Rattlesnake
- habitat for Leopard Frog, a potentially threatened species in Alberta

Management Considerations:

- a diversity of grazing regimes on the uplands will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey
- some birds of prey (e.g. Golden Eagles) and Great Blue Herons are sensitive to human presence during the nesting season
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- Wallis (1977); Wells and Bentz (1990); Coupland (1973); Kondla and Crawford (1971); Envirocon (n.d.)
- Poston et al (1990) for waterfowl
- Mowat and Maerz (1988) and Laframboise (1986) for birds of prey
- Fish and Wildlife key area maps
- 1991 field notes

## ESA: MODEL FOREST; FOOTHILLS

Name: Donald Creek Drainage

Area (ha): 32999

Location:

- Twp. 55 to 58 - Rge. 25 - W5 to Rge. 1 - W6
- area between the Berland River and Hightower and Pinto Creeks
- includes Smith Creek and several unnamed creeks, the largest of which is referred to as "Donald Creek" (Twp. 56 and 57 - Rge. 26 and 27)

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills

Significance: Provincial

- part of one of the most extensive and relatively undisturbed Upper Foothills habitat complexes in Alberta
- the most diverse and extensive Upper Foothills wetland habitat complex in Alberta
- one of a handful of critical Woodland Caribou habitats in Alberta

Description:

- Upper Foothills coniferous forest, including older stands, extensive marshes, wet meadows and patterned wetlands
- diverse creek habitat complexes, including slumps, Beaver ponds, tall shrubbery and wet meadows
- migration corridor and key winter range for Woodland Caribou, a blue-listed species in Alberta
- habitat for Bull Trout and Grizzly Bear, a COSEWIC vulnerable species
- high plant community diversity and old growth forest
- key ungulate habitat
- critical terrestrial furbearer habitat

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could negatively impact several wildlife species and reduce habitat effectiveness for Grizzly Bear
- the full variety of habitats should be protected

References:

- Vitt (1992) for wetlands
- Edson Fish and Wildlife (R. Hawryluk, personal communication)
- Nagy et al. (1989) for Grizzly Bear
- aerial photograph interpretation for extent, quality and diversity of habitats

ESA: GRASSLAND

Name: Dowling Lake

Area (ha): 4584

Location:

- Twp. 32 - Rge. 15 - W4
- Dowling Lake

NTS Map Sheet: 82P

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: International

- important Piping Plover nesting area

Description:

- large alkali lake surrounded by wetland complexes consisting of ephemeral marshes, wet meadows and alkali marshes
- this lake also is fed by alkali springs which rare quite are in the region
- the alkali rich wetland provides a significant habitat (exposed mudflats) for shorebirds
- evidence of nesting Piping Plovers, a COSEWIC endangered species in Canada and a red-listed species in Alberta
- historical Great Blue Heron colony noted
- the lake is also utilized by waterfowl when water levels are higher
- Ducks Unlimited have a large restoration project on lake
- the lake was dry during aerial survey

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- field notes (1995)
- Hofman (1991)
- Wildlife key area maps

ESA: CROWSNEST PASS

Name: Dry Canyon

Area (ha): 76

Location:

- Section 17 - Twp. 8 - Rge. 5 - W5M
- immediately northeast of Phillips Pass

NTS Map Sheet: 83G

Municipality: Municipality of Crowsnest Pass

Natural Subregions: Subalpine

Significance: Provincial

- one of a handful of collection localities for maidenhair fern in Alberta; elsewhere in Alberta found only at Waterton National Park where it is considered uncommon

Description:

- ephemeral stream in steep, rocky canyon
- rare and uncommon Alberta plants including the maidenhair fern (*Adiantum pedatum*) and holly fern (*Polystichum lonchitis*)
- scarce and uncommon bird species (Cassin's Finch and Rock Wren)
- diversity of flowering plants
- key Bighorn Sheep habitat

Management Considerations:

- quarrying is incompatible with maintenance of the rare plant populations

References:

- 1987 field notes
- Fish and Wildlife key area maps and list of scarce avian species
- Kuijt (1982) for rare plants

ESA: DRY MIXEDWOOD; POSTON

Name: Duck Lake

Area (ha): 658

Location:

- Twp. 57 - Rge. 10 - W4
- Duck Lake

NTS Map Sheet: 73E

Municipality: County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Franklin's Gull breeding habitat

Description:

- located just east of the Saddle Lake Indian Reserve
- good emergent vegetation
- waterfowl staging and production lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: ACADIA; LOWER RED DEER RIVER

Name: Dune Point Springs

Area (ha): 1182

Location:

- Twp. 23 - Rge. 3 - W4
- 8 km northwest of Bindloss

NTS Map Sheet: 72L

Municipality: MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- some of the most diverse alkali springs in Alberta with provincially significant populations of rare plants

Description:

- eroding slopes and coulees of the Red Deer River
- nesting area for rare birds, including Golden Eagle and the COSEWIC endangered Loggerhead Shrike
- extensive, diverse springs with numerous rare plants including few-flowered aster (*Aster pauciflorus*), beggarticks (*Bidens frondosa*), Virginia wild rye (*Elymus virginicus*), and box elder (*Acer negundo*)
- diverse coulee woodlands, shrubbery and grasslands
- key Mule Deer and Pronghorn habitat

Management Considerations:

- intensive cattle grazing can significantly reduce populations of rare plants
- birds of prey such as the Golden Eagle are sensitive to human intrusion during certain portions of the nesting season
- maintenance of adjacent native grasslands and associated prey populations will ensure the continued survival of rare birds of prey
- groundwater withdrawals could negatively affect spring flows

References:

- 1990 field notes
- Wallis (1977)
- Fish and Wildlife key area maps



ESA: PINCHER CREEK

Name: Dungarvan Wetlands

Area (ha): 383

Location:

- Section 7 and 8 - Twp. 3 - Rge. 29 - W4
- between Dungarvan Creek and Cottonwood Creek west of Highway 6

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of the most diverse and significant Beaver wetland complexes in the southern part of Alberta

Description:

- extensive marshes, Beaver ponds and lush aspen and poplar woodlands
- diverse breeding bird habitat
- uncommon birds, including Black-headed Grosbeaks
- several uncommon plants in lush aspen woods
- key Moose and Elk habitat
- large alluvial fan
- some fish production

Management Considerations:

- limited grazing and maintenance of the Beaver activity will maintain the wetland diversity
- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Horberg (1954) and Harrison (1976) for alluvial fan
- Cottonwood Consultants (1983)
- Longmore and Stenton (1981) for fish

ESA: CYPRESS; FORTY MILE

Name: Eagle Butte

Area (ha): 45686

Location:

- Twp. 6 to 9 - Rge. 3 to 6 - W4
- Eagle Butte west of the Cypress Hills

NTS Map Sheet: 72E

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Mixedgrass; Montane; Dry Mixedgrass

Significance: Provincial

- one of only two diverse isolated foothills grassland and montane landscapes in Alberta

Description:

- lush foothills fescue grassland
- relict montane forests of aspen, lodgepole pine, and white spruce; least diversity at southern extremity where this unit grades from fescue grassland into mixed grassland
- numerous ephemeral and permanent wetlands
- riparian shrubbery
- hundreds of disjunct vascular and non-vascular plants and birds
- diversity of breeding birds
- Sharp-tailed Grouse dancing grounds
- key Moose, Elk and Mule and White-tailed Deer habitat
- former Trumpeter Swan habitat
- nesting area for threatened Baird's Sparrows
- rare plants including flowering quill-wort (*Lilaea scilloides*), considered rare in Canada
- marsh bird and waterfowl production, including grebes and diving and dabbling ducks
- for purposes of theme analysis, all units have been included in the Mixedgrass even though some units are partially mapped as Montane

Management Considerations:

- clearing and cultivation reduce the suitability of these habitats for a variety of grassland and woodland species
- heavy grazing is not compatible with maintenance of many of the distinctive fescue grassland and montane woodland species

References:

- Fish and Wildlife key area maps
- 1991 field notes
- D. Dickinson (1991 letter)

ESA: LLOYDMINSTER; POSTON

Name: Earlie Lake

Area (ha): 167

Location:

- Twp. 48 - Rge. 3 - W4
- Earlie Lake, south of Vermilion, Alberta

NTS Map Sheet: 73E

Municipality: County of Vermilion River

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat
- productive wetlands are important elements of the Parkland Region

Description:

- moderate size saline wetland
- key production area for puddle ducks
- important for migrating and nesting shorebirds

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Fish and Wildlife key area maps
- 1995 field notes

ESA: PARKLAND; POSTON

Name: Edberg Slough

Area (ha): 594

Location:

- Twp. 44 - Rge. 20 - W4
- large slough west of Edberg

NTS Map Sheet: 83A

Municipality: County of Camrose

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- shallow alkali wetland

Management Considerations:

- maintenance of natural cover on the shorelines will keep the area attractive for a variety of waterfowl

References:

- Poston et al. (1990)

ESA: PARKLAND

Name: Edgerton Dunes

Area (ha): 10930

Location:

- Twp. 44 - Rge. 3 - W4
- situated east of Wainwright

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: Provincial

- one of the most diverse sand hill complexes in the Parkland of Alberta

Description:

- aspen groves are interspersed with grassland, eolian landforms and associated vegetation
- inter-dune fen complex
- variety of wetland types
- Ribstone Creek flows through this area
- dunes and eolian/wetland complexes
- unique dune ridges with associated vegetation
- high diversity of breeding birds
- key Mule and White-tailed Deer habitat
- Sharp-tailed Grouse dancing grounds in upland (a yellow listed species in Alberta)
- includes Edgerton Natural Area

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Morrison et al. (1995)
- Alberta Wilderness Association (1990)
- Natural and Protected Area Files
- Mulira (1986)
- Wildlife key area map

ESA: DRY MIXEDWOOD; POSTON

Name: Edward Lake

Area (ha): 112

Location:

- Twp. 63 - Rge. 4 - W4
- Edward Lake

NTS Map Sheet: 83I

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Eared Grebe breeding habitat

Description:

- Poston lists as provincially significant Black Tern breeding habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Poston et al. (1990)

ESA: CANADIAN SHIELD

Name: Egg Island Ecological Reserve

Area (ha): 171

Location:

- Twp. 115 - Rge. 3 - W4
- Egg Island, a small island in Lake Athabasca

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain

Significance: Provincial

- the largest nesting colony of Caspian Terns in Alberta; Caspian Terns are known to nest in only a handful of sites in Alberta

Description:

- small rocky island with nesting Caspian Terns, a provincially rare species
- nesting Common Terns

Management Considerations:

- colonial birds are sensitive to human intrusions into nesting colonies

References:

- Bradley (1978)
- Wallis and Wershler (1984)
- Weseloh and Cocks (1979)

ESA: EASTERN BOREAL

Name: Egg Lake-Algar Lake Diversity Area

Area (ha): 495231

Location:

- Twp. 80 - Rge. 14 - W4
- east of Grand Rapids, Athabasca River

NTS Map Sheet: 73M, 74D, 83P

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood and Boreal Highlands

Significance: Provincial

- one of the most diverse and relatively intact Boreal Forest landscapes in Alberta

Description:

- significant patterned fen
- important Caribou habitat
- high vegetation diversity

Management Considerations:

- maintenance of unfragmented natural habitats is critical for Caribou

References:

- Westworth & Associates (1990)



ESA: DRY MIXEDWOOD; POSTON

Name: Elk Island National Park

Area (ha): 19391

Location:

- Twp. 53 - Rge. 20 - W4
- Elk Island National Park

NTS Map Sheet: 83H

Municipality: Elk Island ID

Natural Subregions: Dry Mixedwood

Significance: National

- National Park

Description:

- a highly diverse vegetation, landform and wildlife areas
- relatively undisturbed area
- hummocky moraine
- numerous wetland complexes represented includes lakes, fens and marshes
- forest communities include mixed aspen stands, paper birch, white spruce, tamarack and black spruce
- jack pine on sandy plain
- grassland and shrub communities well represented
- large resident ungulate population including Bison, Elk, Moose, Mule and White-tailed Deer
- some areas are extensively over-browsed
- numerous terrestrial bird species residing in or migrating through Park
- Poston lists Astotin Lake as provincially significant for breeding Red-necked Grebe

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Goossen et al. (in prep)
- Pryor (pers. comm. 1995)
- R. Bjorge (pers. comm. 1995)
- Mitchell and Prepas (1990)
- Natural and Protected Areas Files
- Wildlife key area maps

ESA: EASTERN BOREAL

Name: Ells River

Area (ha): 18359

Location:

- Twp. 94 - Rge. 19 - W4
- valley of the Ells River

NTS Map Sheet: 74E, 84H

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood and Boreal Highlands

Significance: Provincial

- one of the best examples of incised oxbows and meanders in Alberta

Description:

- outstanding sportfishery
- important fish species: Walleye, Lake Whitefish, Arctic Grayling, Mountain Whitefish, Northern Pike, Yellow Perch, Goldeye and Burbot
- high vegetation diversity
- major wildlife corridor

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: ACADIA

Name: Empress Creek

Area (ha): 874

Location:

- Twp. 23 to 25 - Rge. 1 - W4
- Empress Creek valley and some adjacent grasslands

NTS Map Sheet: 72L; 72M

Municipality: MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- the lower portion of this unit may be one of the more productive Leopard Frog breeding areas in Alberta

Description:

- shallow valley with gently sloping to steep sides
- scattered cottonwood trees, dense tall and low shrubbery, eroding slopes, grasslands and permanent water
- diverse breeding bird habitat
- nesting area for rare birds of prey including Prairie Falcons
- important breeding area for Leopard Frogs, a potentially threatened species in Alberta

Management Considerations:

- birds of prey such as the Prairie Falcon can be sensitive to human intrusion during certain portions of the nesting season
- maintenance of adjacent native grasslands and associated prey populations will ensure the continued survival of rare birds of prey
- withdrawals of water in upper portions of the Empress Creek drainage may reduce the amount of permanent water in Leopard Frog breeding areas

References:

- 1990 field notes
- C. Wallis and W. Smith field notes
- Cottonwood Consultants (1986a) for Leopard Frog status

ESA: POSTON

Name: Ensleigh Lakes

Area (ha): 267

Location:

- Twp. 33 - Rge. 7 - W4
- small alkali wetlands near Ensleigh

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: Provincial

- Poston lists as provincially significant staging geese habitat

Description:

- shallow, ephemeral alkali lakes in native grassland

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Erickson Lake

Area (ha): 158

Location:

- Twp. 63 - Rge. 6 - W5
- Erickson Lake

NTS Map Sheet: 83J

Municipality: MD of Woodlands

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more diverse lakes in the Central Mixedwood Boreal Forest of Alberta

Description:

- moderate-sized shallow lake situated north of Fort Assiniboine
- adjacent upland vegetation primarily young aspen-dominated deciduous forest to the north and east
- tamarack-black spruce peatland vegetation located to the west and south of the lake
- small island in lake supports an active breeding colony of Great Blue Herons
- lake is relatively shallow with a marshy shoreline composed primarily of sedges
- dense growth of yellow water lily over much of the lake in mid-summer

Management Considerations:

- low level of land use activity immediately adjacent to the lake but agricultural lands occur to the south and timber harvesting is occurring in surrounding areas
- limited access to lake should be maintained to protect the Great Blue Heron colony

References:

- Alberta Natural Resources Service files
- Bentz and Saxena (1993)
- Bentz and Saxena (1994)

ESA: STETTTLER; POSTON

Name: Erskine Lake

Area (ha): 336

Location:

- Twp. 38 - Rge. 20 - W4
- Erskine Lake, at Erskine
- part of Erskine-Stettler Marshes ESA

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Central Parkland

Significance: National

- Poston lists Erskine-Stettler marshes as nationally significant duck staging habitat
- productive wetlands are important elements of the Parkland Region

Description:

- discontinuous wetlands within a cultivated upland
- variety of marshes including extensive bulrush marshes
- Poston lists Erskine-Stettler marshes as provincially significant duck breeding habitat
- waterfowl production and staging habitat
- productive habitat for a variety of marsh birds

Management Considerations:

- additional clearing, drainage and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production

References:

- Fish and Wildlife key area maps
- 1988 field notes

ESA: GRASSLAND

Name: Esther/Douglas Lake Native Prairie

Area (ha): 18673

Location:

- Twp. 32 - Rge. 1 - W4
- vicinity of Douglas Lake

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Northern Fescue; Dry Mixedgrass

Significance: Provincial

- one of few relatively intact areas of Northern Fescue in Alberta

Description:

- the landform type is hummocky moraine with two lake basins within site
- this area has the highest concentration of Sharp-tailed Grouse dancing grounds in the region
- this area is also critical deer habitat
- transition area between Northern Fescue and Dry Mixedgrass
- key terrestrial bird habitat

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Bjorge (pers. comm. 1995)
- field notes (1995)
- Agriculture Canada (1988)
- Wildlife key area maps

ESA: FORTY MILE; WARNER

Name: Etzikom Coulee

Area (ha): 22131

Location:

- Twp. 5 and 6 - Rge. 9 to 17 - W4
- valley of Etzikom Coulee, including the western portion of Crow Indian Lake, and immediately adjacent uplands

NTS Map Sheet: 72E

Municipality: County of Forty Mile; County of Warner

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- well-defined glacial spillways are localized in Alberta
- one of few nesting areas for Clark's Grebes and White-faced Glossy Ibis in Alberta

Description:

- major glacial spillway
- diverse mixed grassland habitats
- key Mule Deer habitat
- extensive bulrush marsh in Crow Indian Lake
- waterfowl staging and production area
- regionally important area for moulting and staging ducks and geese
- rare birds, including the White-faced Glossy Ibis, have been seen in the vicinity
- nesting area for COSEWIC endangered Burrowing Owls and vulnerable Ferruginous Hawks
- first recorded nesting of Clark's Grebes in Alberta
- variety of marsh birds

Management Considerations:

- relative stability in the water levels and maintenance of natural habitat in surrounding lands will keep productivity of waterfowl and marsh birds high
- maintenance of native grasslands along the coulee will help to attract several birds of prey
- some birds of prey, e.g. Ferruginous Hawk, are sensitive to human intrusion during portions of the nesting season

References:

- 1986 and 1991 field notes
- Poston et al. (1990)
- Fish and Wildlife key area maps
- Beaty (1975), Westgate (1968) and Christiansen (1977) for spillway description
- 1986 field notes



ESA: STETTLER; POSTON

Name: Ewing Lake

Area (ha): 1373

Location:

- Twp. 37 - Rge. 20 to 21 - W4
- 7 km WNW of Fenn
- part of Ewing Lake Wetlands ESA

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck staging habitat
- productive wetlands are important elements of the Parkland Region

Description:

- variety of wetlands and adjacent parkland and grassland within a cultivated matrix
- waterfowl staging and production area during wetter years
- habitat for migrating shorebirds

Management Considerations:

- additional clearing, drainage and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production

References:

- Fish and Wildlife key area maps
- 1988 field notes

ESA: BOW CORRIDOR

Name: Exshaw/Grotto Mountain

Area (ha): 1406

Location:

- Twp. 24 - Rge. 9 - W5
- lower slopes of Exshaw and Grotto Mountains, including Grotto Creek

NTS Map Sheet: 82O

Municipality: MD of Bighorn

Natural Subregions: Montane; Subalpine; Alpine

Significance: Provincial

- provincially significant cave (Rat's Nest Cave)

Description:

- one of the most important Bighorn Sheep wintering areas in the region
- some of the most extensive populations of rare and uncommon cliffbrakes in the region and, possibly, in Alberta
- Elk, Mule Deer and Bighorn Sheep habitat (primarily winter)
- rare and uncommon plants including cliff-brake (*Pellaea glabella*), slender lip-fern (*Cheilanthes feei*), green spleenwort (*Asplenium viride*)
- the most significant fern and ungulate sites occur at Gap Lake, north Lac des Arcs and northeast of Exshaw
- cave with important paleontological and geological features
- scenic canyon with extensive rock outcrops
- pictographs

Management Considerations:

- ungulate habitat in the Canmore Corridor has been fragmented into smaller areas through human developments; development in critical habitats would lead to further population declines
- gravel and mineral extraction could result in the unacceptable destruction of critical habitat; however, with properly designed operation guidelines, some gravel and mineral extraction could take place in portions of these areas
- rock quarrying is incompatible with maintenance of natural fern habitat
- there is some mortality of ungulates along Highway 1

References:

- 1990 field notes
- Alberta Fish and Wildlife files
- Cottonwood Consultants (1990)
- Tony Nette, Alberta Fish and Wildlife (pers. comm.)
- J.R. Salt and Associates (1990)
- Alberta Forestry Lands and Wildlife (1990)
- Alberta Fish and Wildlife (1989)
- Brunton (1979)
- Barry Newton (Alberta Culture), pers. comm

ESA: EASTERN BOREAL

Name: Eymundson Sinkholes

Area (ha): 841

Location:

- Twp. 98 - Rge. 11 - W4
- north of Bitumount, west of the Athabasca River

NTS Map Sheet: 74E, 84H

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- significant sinkhole lakes, a rare feature in Alberta

Description:

- karst topography

Management Considerations:

- disturbance in surrounding areas could affect the aquifers that supply the sinkholes

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Fawcett Lake

Area (ha): 4994

Location:

- Twp. 73 - Rge. 26 - W4
- Fawcett Lake

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive lakes in the Central Mixedwood Boreal Forest of Alberta

Description:

- inlets to lake drain from the Pelican Mountains to the south
- key waterfowl production, staging and moulting habitat (primarily for ducks)
- important furbearer habitat
- fish species present include Walleye, Northern Pike, perch, Lake Whitefish and Cisco
- active sport fisheries for Walleye and Northern Pike exist while commercial fisheries primarily harvest Lake Whitefish and Cisco
- American White Pelicans have been sighted on the lake
- contains a Great Blue Heron colony
- high recreational use

Management Considerations:

- appropriate measures should be taken to ensure that the increasing recreational use on Fawcett Lake does not infringe upon important fisheries habitat

References:

- Alberta Natural Resources Service files
- Poston et al. (1990)
- 1996 field notes

ESA: PARKLAND; POSTON

Name: Ferguson Lake

Area (ha): 443

Location:

- Twp. 72 - Rge. 6 - W6
- Ferguson Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging and Ring-billed Gull and Franklin's Gull breeding habitat

Description:

- significant production and staging wetland for waterfowl
- one of relatively few productive Trumpeter Swan breeding lakes in Alberta (blue-listed species in Alberta)
- listed as a Ducks Unlimited wetland
- *Scirpus* spp. growing within most of lake bed

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: TABER; POSTON

Name: Fincastle Lake

Area (ha): 750

Location:

- Sections 15 to 18 and 20 to 22 - Twp. 10 - Rge. 15 - W4
- Fincastle Lake, 10 km east of Taber

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose breeding habitat

Description:

- reservoir, ponds and adjacent mixed grassland
- waterfowl production area, mostly for puddle ducks

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of waterfowl

References:

- 1987 field notes
- Fish and Wildlife key area maps

ESA: EASTERN BOREAL, BOREAL; BIRCH MOUNTAINS

Name: Firebag River

Area (ha): 26059

Location:

- Twp. 99 - Rge. 7 - W4
- Firebag River
- includes Firebag River Old Growth Forest ESA

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Firebag and tributaries are provincially significant Arctic Grayling habitat

Description:

- hydrologically important
- high landform diversity (meanders and delta)
- old growth alluvial white spruce forest (623 hectares, 170-190 years old)
- significant meander reach
- key Moose range
- key fisheries habitat (spawning, feeding & over wintering)
- high fish species diversity
- important fish species: Walleye, Lake Whitefish, Northern Pike, Yellow Perch and Burbot
- sport fishery present with Northern Pike, Arctic Grayling & Walleye being the main species
- other fish species include Lake Whitefish, White Suckers and Longnose Suckers

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files

ESA: DRY MIXEDWOOD; POSTON

Name: Flat Lake

Area (ha): 4105

Location:

- Twp. 65 - Rge. 20 - W4
- Flat Lake

NTS Map Sheet: 83I

Municipality: County of Athabasca

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- lake located south of Amber Valley
- significant emergent vegetation creates excellent habitat for waterfowl
- listed as a waterfowl production, staging and moulting lake
- fluctuating water levels have reduced significance during drought years
- Ducks Unlimited restoration project
- large lake within this portion of the study area
- Flat Lake Natural Area east of site

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Natural and Protected Area Files
- Wildlife key Area Maps
- field notes (1995)
- Ducks Unlimited



ESA: PEACE RIVER

Name: Flood Lake

Area (ha): 465

Location:

- Twp. 86 - Rge. 25 - W5
- Flood Lake

NTS Map Sheet: 84C

Municipality: MD of Northern Lights

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- important Trumpeter Swan staging (a blue-listed species in Alberta)
- key waterfowl moulting and staging
- regionally significant Moose range

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Poston et al. (1990)
- NAWMP, unpubl. data
- D. Moyles, pers. comm

ESA: PARKLAND; POSTON

Name: Flyingshot Lake

Area (ha): 269

Location:

- Twp. 71 - Rge. 6 - W6
- Flyingshot Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: National

- Poston lists as nationally significant Black Tern nesting area

Description:

- significant production and staging wetland for waterfowl
- one of relatively few productive Trumpeter Swan nesting lakes in Alberta (a blue-listed species in Alberta)

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: PEACE RIVER

Name: Flyingshot Lake (SW)

Area (ha): 113

Location:

- Twp. 71 - Rge. 6 - W6
- lake southwest of Flyingshot Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- important Trumpeter Swan nesting (a blue-listed species in Alberta)
- key waterfowl moulting and staging

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data

ESA: POSTON

Name: Forsyth Lake

Area (ha): 448

Location:

- Twp. 62 - Rge. 6 - W4
- Forsyth Lake

NTS Map Sheet: 73E

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat
- Poston lists as nationally significant Franklin's Gull breeding habitat

Description:

- Poston lists as provincially significant Eared Grebe and Common Tern breeding habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Fort Assiniboine Horizontal Fen

Area (ha): 3142

Location:

- Twp. 62 - Rge. 5 - W5
- dune-wetland complex near the Athabasca River valley

NTS Map Sheet: 83J

Municipality: MD of Woodlands

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse wetland complexes in Alberta's Central Mixedwood

Description:

- a large horizontal fen and sand dune complex that consists of forested and non-forested fens

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- drainage alterations can have profound influences on fen wetlands

References:

- Nicholson (1991)

ESA: PEACE RIVER

Name: Fort Vermilion Sand Hills

Area (ha): 71549

Location:

- Twp. 106 - Rge. 17 - W5
- sand hills near Fort Vermilion along the Peace River

NTS Map Sheet: 84K

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood

Significance: National

- dune morphology is unique in Canada

Description:

- dune-wetland complex
- good examples of rare lacadena dune formations
- diverse vegetation, pine ridges
- rare plant *Potamogeton natans*
- contains Gull and Surette lakes which provide key waterfowl moulting and staging habitat
- locally important recreation area
- high landform diversity

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Mulira (1986)
- David (1977)
- Herrmann (1993)
- A. Doepel, pers. comm
- file notes, Land & Forest Service
- D. Moyles, pers. comm

ESA: FORTY MILE; POSTON

Name: Forty Mile Coulee Reservoir

Area (ha): 1014

Location:

- Twp. - Rge. - W4
- Forty Mile Coulee Reservoir south of Bow Island

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Dry Mixedgrass

Significance: National

- Poston lists as nationally significant goose staging habitat

Description:

- Forty Mile Coulee reservoir and associated upland
- staging and production area for grebes and waterfowl, including geese and puddle and diving ducks
- regionally important area for moulting ducks and staging ducks
- key deer habitat

Management Considerations:

- relative stability in the water levels and maintenance of natural habitat in surrounding lands will keep productivity high

References:

- Fish and Wildlife key area maps
- 1991 field notes

ESA: BOREAL

Name: Fowell Lake Complex

Area (ha): 2564

Location:

- Twp. 71 - Rge. 11 - W6
- Fowell, Burgess, Lowen, Funnel and Hackmatack Lakes

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetland complexes in the Boreal Forest of Alberta

Description:

- all lakes support Trumpeter Swan (blue-listed species in Alberta) nesting sites
- Trumpeter Swans observed on Hackmatack Lake in 1996 field survey
- key waterfowl production, staging and moulting sites
- adjacent areas provide good habitat for migratory birds, ungulates and furbearers

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta, Forestry, Lands and Wildlife (1991a)
- Alberta Natural Resources Service files
- 1996 field notes



ESA: CALGARY

Name: Frank Lake

Area (ha): 1591

Location:

- Twp. 18- Rge. 28 - W4
- Frank Lake near High River

NTS Map Sheet: 82I

Municipality: MD of Foothills

Natural Subregions: Foothills Fescue

Significance: Provincial

- one of the most productive wetlands in the Grasslands of Alberta
- provincially significant duck staging
- provincially significant Franklin's Gull colony

Description:

- rated as high priority duck staging habitat and medium priority for production and staging of colonial nesting migratory birds and for goose staging
- major Ducks Unlimited project
- well-developed emergent vegetation provides excellent habitat for a wide variety of bird species

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Canadian Wildlife Service (1979)

ESA: PEACE RIVER

Name: Frank Lake

Area (ha): 180

Location:

- Twp. 80 - Rge. 19 - W5
- Frank Lake near Falher

NTS Map Sheet: 83N

Municipality: MD of East Peace

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan nesting (a blue-listed species in Alberta)
- small lake and deep marsh

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- D. Moyles, pers. comm
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm

ESA: CROWSNEST PASS

Name: Frank Slide

Area (ha): 567

Location:

- Sections 29, 30, 31 and 32 - Twp. 7 - Rge. 3 - W5M
- east and southeast of Frank

NTS Map Sheet: 82G

Municipality: Municipality of Crowsnest Pass

Natural Subregions: Montane; Subalpine

Significance: International

- recent rock slides of this magnitude are rare in the world; the site has been studied by geologists from around the world

Description:

- large classic rock slide, a unique geological feature
- permanent wetland with some waterfowl production at Frank Lake

Management Considerations:

- some possibility of additional slides in the area

References:

- 1987 field notes
- Beaty (1975) for geology

ESA: FOOTHILLS; BOREAL

Name: Freeman River

Area (ha): 13476

Location:

- Twp. 65 - Rge. 12 - W5
- Freeman River Valley

NTS Map Sheet: 83J

Municipality: MD of Woodlands; MD of Opportunity

Natural Subregions: Upper and Lower Foothills; Central Mixedwood

Significance: Provincial

- one of a handful of critical Grizzly Bear habitats in the Foothills of Alberta

Description:

- significant hydrological feature
- one of the primary fluvial features in the Swan Hills area
- headwaters originate in the western Swan Hills and the river confluences with the Athabasca River just west of Fort Assiniboine
- high diversity of fluvial landforms including classic channel meanders in lower reaches, meander scars, oxbows, and point bars
- the alluvial fan plain incised in these deposits is also composed of coarse gravel covered by a layer of sand and silt deposited during floods
- shallow wetlands are common on the floodplain
- significant fisheries habitat, particularly for Arctic Grayling and Mountain Whitefish; also Rainbow Trout, Northern Pike, Lake Chub, Brook Stickleback and Spoonhead Sculpin
- important wildlife movement corridor and Moose winter range; high diversity of vegetation communities including mature coniferous and mixedwood forest, old-growth white spruce forest and a variety of wetland types
- key habitat and movement corridor for Swan Hills Grizzly Bear
- high diversity of vegetation communities including mature coniferous and mixedwood forest, old growth white spruce forest and a variety of wetland types

Management Considerations:

- permanent facilities and transportation corridors could negatively impact several wildlife species and reduce habitat effectiveness for Grizzly Bear
- point-source erosion sources associated with oil, gas and forestry developments should be closely monitored to reduce sedimentation and deterioration of water quality

References:

- St. Onge (1974)
- Fisheries inventory maps
- 1993 field reconnaissance
- Alberta Wilderness Association (1976)
- Wildlife key area maps
- Alberta Natural Resources Service files

ESA: BOREAL

Name: Frenchman Lake

Area (ha): 1439

Location:

- Twp. 64 - Rge. 10 - W4
- Frenchman Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive lakes in the Central Mixedwood of Alberta

Description:

- fish include Lake Whitefish, Northern Pike, Walleye and Yellow Perch
- Laurretta Island is designated as a Natural Area to protect the Great Blue Heron nesting colony
- island consists of medium dense mixedwood of aspen, paper birch and white spruce
- excellent shorebird habitat

Management Considerations:

- recognized as a special management feature in Lakeland Integrated Resource Plan
- to be managed to protect Great Blue Heron colony

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Frog Lake

Area (ha): 7623

Location:

- Twp. 57 - Rge. 3 - W4
- Frog Lake

NTS Map Sheet: 73E

Municipality: MD of Big Lakes; County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron and Ring-billed Gull breeding habitat

Description:

- large lake basin located in the eastern portion of the study area
- waterfowl staging and production lake
- numerous waterfowl observed during aerial survey
- significant colonial bird habitat including Western Grebes, Common Terns, Herring Gulls, Great Blue Heron and Double-crested Cormorants
- fishery resources include Lake Whitefish, Northern Pike, Walleye, Yellow Perch and suckers
- important commercial and sport fishery
- includes Frog Lake Heron Colony Natural Area

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Natural and Protected Areas Files
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: BOREAL

Name: Garden River Bison Range

Area (ha): 388748

Location:

- Twp. 110 - Rge. 18 - W4
- western portion of Wood Buffalo National Park

NTS Map Sheet: 84I

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Peace River Lowlands; Wetland Mixedwood

Significance: National

- National Park

Description:

- one of the last large free ranging Bison herds in North America
- core Bison range to the north and south of Peace River
- Bison range overlaps with extensive eolian areas
- (comprised of polygons 18051 and 18052)

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Geowest (1997, in prep)

ESA: LEDUC

Name: Genessee Natural Area

Area (ha): 296

Location:

- Twp. 50 - Rge. 3 - W5
- south bank of North Saskatchewan River, west of Genessee

NTS Map Sheet: 83G

Municipality: County of Leduc

Natural Subregions: Dry Mixedwood

Significance: International

- site contains part of an important 60-65 million year old fossil bed dating back to the late Cretaceous and early Palaeocene periods, located along the northwest facing bank of the North Saskatchewan River
- one of the finest examples of a coal seam compression fossil bed in the world

Description:

- moderately undulating topography
- two creeks
- adjacent to North Saskatchewan River, provincially significant watercourse
- relatively undisturbed upland aspen forest with aspen-dominated overstory and white spruce, balsam poplar and paper birch
- dense understory of lowbush cranberry, rose and red-osier dogwood
- important seasonal habitats for a variety of wildlife

Management Considerations:

- steep banks of creeks and river subject to erosion and slumping
- some disturbance of fossil beds by amateur collectors in the past
- high paleontological sensitivity zone
- current permit requirements for access and fossil removal should be maintained
- extent and exact location of fossil bed needs to be determined so adequate protection can be achieved; this may include expanding the size of the natural area through purchase or conservation easement

References:

- J. Burns, Alberta Provincial Museum, pers. comm
- J. McNeil, Alberta Forestry, Lands and Wildlife, Public Lands
- Alberta Culture (1984)
- Alberta Natural and Protected Areas (1986)



ESA: POSTON; BARRHEAD

Name: George Lake

Area (ha): 203

Location:

- Twp. 57 to 58 - Rge. 1 to 2 - W5
- George Lake and marshes, boreal wetlands, and uplands to the north and west

NTS Map Sheet:: 83G

Municipality: County of Barrhead

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant staging duck habitat

Description:

- moderate size lake
- several ponds, marshes, boreal black spruce wetlands and mixed aspen-poplar, birch and scattered white spruce woodland with some cleared and cultivated patches
- Double-crested Cormorant and Great Blue Heron colony on north peninsula of George Lake
- open water, and cattail, bulrush and sedge marshes on ponds to the west
- George Lake is productive for marshbirds, dabbling and diving ducks, Red-necked Grebes and Common Loons; other ponds are important for ducks, grebes, marshbirds; pond in southwest corner has large Eared Grebe colony
- extensive breeding bird habitat on the uplands
- habitat for uncommon birds including Pileated Woodpeckers
- includes a portion of the George Lake Natural Area and a University of Alberta entomological research station

Management Considerations:

- maintenance of natural shorelines and woodlands will keep the area attractive for a variety of woodland and wetland birds
- Great Blue Herons and Double-crested Cormorants can be sensitive to human intrusion during portions of the nesting season

References:

- Fish and Wildlife key area maps
- 1989 and 1990 field notes
- Natural and Protected Areas Program files

ESA: PEACE RIVER

Name: Gerry Lake

Area (ha): 640

Location:

- Twp. 84 - Rge. 2 - W6
- Gerry Lake

NTS Map Sheet: 84D

Municipality: MD of Clear Hills

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan nesting (a blue listed species in Alberta)
- locally important for staging ducks

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Poston et al. (1990)
- D. Moyles, pers. comm

ESA: PARKLAND; POSTON

Name: Gillespie Lake

Area (ha): 1381

Location:

- Twp. 40 - Rge. 2 - W4
- Gillespie Lake

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding and shorebird staging lake

Description:

- includes sloughs to east
- Waterfowl production lake
- usually water levels are stable in lake
- slightly alkali lake
- significant shorebird habitat
- Piping Plover (a COSEWIC endangered species in Canada and a red-listed species in Alberta) observed staging on lake but there has been no evidence of breeding

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Pryor (pers. comm. 1995)
- Wildlife key area maps

ESA: EASTERN BOREAL; POSTON

Name: Gipsy Lake

Area (ha): 6040

Location:

- Twp. 86 - Rge. 2 - W4
- Gipsy Lake

NTS Map Sheet: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant American White Pelican non-breeding habitat

Description:

- boreal forest lake
- American White Pelican colony

Management Considerations:

- American White Pelicans are very sensitive to human intrusion at their nesting colonies

References:

- Westworth & Associates (1990)

ESA: CANADIAN SHIELD

Name: Glacial Lake Berg

Area (ha): 4485

Location:

- Twp. 113 to -114 - Rge. 5 to 6 - W4
- upland north of Shelter Point

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland; Athabasca Plain

Significance: Provincial

- the most well-developed example of abandoned glacial lake beach ridges on the Kazan Upland in Alberta

Description:

- abandoned beach ridges from Glacial Lake Berg Complex
- extensive outwash sand plain
- has been used by tour groups in the past

Management Considerations:

- sandy habitats are relatively fragile

References:

- Bayrock (1972b)
- Godfrey (1958)

ESA: CARDSTON

Name: Glenwoodville Erratic

Area (ha): 54

Location:

- Section NW28 - Twp. 5 - Rge. 26 - W4
- 6 km NE of Glenwood

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: Provincial

- glacial erratics of this size are rare in Alberta

Description:

- large glacial erratic rock, 7 X 9 metres in size
- quartzite

Management Considerations:

- the larger "original" Glenwoodville erratic was situated about 1 km SW of this site but was dynamited and removed
- several other major erratics in southern Alberta have also been removed

References:

- Barendregt (n.d.-b)
- Stalker (n.d.)

ESA: POSTON

Name: Glory Hills

Area (ha): 2648

Location:

- Twp. 53 - Rge. 1 - W4
- Glory Hills west of Edmonton

NTS Map Sheet: 83G

Municipality: County of Parkland

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat

Description:

- hummocky moraine with pothole wetlands
- extensively fragmented uplands

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: EASTERN BOREAL; POSTON

Name: Godin Lake

Area (ha): 2301

Location:

- Twp. 82 - Rge. 1 - W5
- Godin Lake

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- listed by Poston as provincially significant staging duck habitat

Description:

- productive boreal forest lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- Westworth & Associates (1990)



ESA: EASTERN BOREAL

Name: Gods Lake

Area (ha): 1820

Location:

- Twp. 90 - Rge. 2 - W5
- Gods Lake

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood; Boreal Highlands

Significance: Provincial

- one of a handful of trophy fishing lakes in Alberta

Description:

- important sportfishery and trophy fishing lake
- important fish species: Walleye, Lake Whitefish and Northern Pike
- hydrologically important lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- Westworth & Associates (1990)

ESA: PEACE RIVER

Name: Goodfare Lake

Area (ha): 189

Location:

- Twp. 72 - Rge. 11 - W6
- Goodfare Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- important Trumpeter Swan nesting habitat (a blue listed species in Alberta)
- key waterfowl moulting and staging habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- NAWMP, unpubl. data

ESA: FOOTHILLS

Name: Goose-Wallace Mountain

Area (ha): 24527

Location:

- Twp. 66 - Rge. 13 - W5
- summit of Swan Hills
- includes Goose Mountain Ecological Reserve and Wallace Mountain

NTS Map Sheet: 83J

Municipality: MD of Woodlands; MD of Opportunity

Natural Subregions: Upper Foothills; Lower Foothills

Significance: Provincial

- a unique landscape in the province
- a disjunct occurrence of a modified subalpine ecosystem

Description:

- highest point in the Swan Hills (Goose Mountain)
- flat-topped erosional remnant capped by Tertiary cobbles and thin till
- significant plant species and old-growth forest
- portions of the area may have escaped glaciation or were covered by only a thin layer of glacial ice
- mature (100 to 150 years) coniferous forest dominated by tree layers composed of balsam and subalpine fir hybrids, white and engelmann spruce hybrids and lodgepole pine
- Bradley and Fairbarns (1984) identified 33 plant species in the Goose Mountain area to the west that are typically confined to the foothills and mountains in Alberta, and 16 species that are rare or uncommon in Alberta

Management Considerations:

- old growth forests are essential to the survival of many of the rare plant species found here

References:

- Bradley and Fairbarns (1984)
- Bentz et al. (1993)
- Bentz and Saxena (1994)

ESA: GRASSLAND

Name: Gooseberry Lake

Area (ha): 686

Location:

- Twp. 36 - Rge. 6 - W4
- Gooseberry Lake

NTS Map Sheet: 73D

Municipality: Special Area 4

Natural Subregions: Northern Fescue

Significance: Provincial

- one of the most productive and permanent saline lakes in Alberta

Description:

- ice thrust ridges
- rough fescue-porcupine grass interspersed with aspen groves
- Sharp-tailed Grouse dancing ground in immediate vicinity of lake (a yellow A-listed species in Alberta)
- the high diversity of upland vegetation communities supports a number of terrestrial birds
- includes Gooseberry Lake Provincial Park

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of birds

References:

- Goossen (in prep)
- Hofman (pers. comm. 1995)
- Morrison et al. (1995)
- Natural and Area Files
- Wildlife key area maps

ESA: EASTERN BOREAL

Name: Gordon Lake

Area (ha): 19199

Location:

- Twp. 86 - Rge. 3 - W4
- Gordon Lake

NTS Map Sheet: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most important waterfowl breeding, moulting and staging areas in the mixedwood of Alberta

Description:

- hydrologically important lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- Westworth & Associates (1990)

ESA: STETTLER; POSTON

Name: Gough Lake

Area (ha): 10517

Location:

- Twp. 35 to 36 - Rge. 17 to 18 - W4
- 12 km WNW of Byemoor

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Northern Fescue

Significance: Provincial

- Poston lists as provincially significant duck breeding and goose staging habitat

Description:

- ephemeral, large, alkali lake and adjacent parkland and grassland
- productive waterfowl habitat in wet years
- numerous Baird's Sparrow and Sprague's Pipits (uncommon bird species in the region) in vegetated lake bottom and shore during dry years
- variety of saline wetland plant communities
- Pronghorn, an uncommon mammal in the region
- heliotrope (*Heliotropium curassavicum*), an uncommon plant in the region
- upland fescue grassland is heavily grazed

Management Considerations:

- productivity declines in drought years when the lake dries up
- additional clearing, drainage and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production
- heavy grazing eliminates uncommon plants and animals from the fescue grassland

References:

- Fish and Wildlife key area maps
- 1988 field notes

ESA: BOREAL

Name: Graham Creek

Area (ha): 190

Location:

- Twp. 72 - Rge. 13 - W6
- Graham Creek and associated wetlands

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive stream influenced wetlands in the Boreal Forest of Alberta

Description:

- adjacent uplands provide very good habitat for Moose and Elk, deer and furbearers
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- aspen-dominated forest stands

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files

ESA: CALGARY; CANMORE

Name: Grassi Lakes

Area (ha): 36

Location:

- Twp. 24- Rge. 10 - W5
- Grassi Lakes near Canmore

NTS Map Sheet: 82O

Municipality: Town of Canmore

Natural Subregions: Montane

Significance: Provincial

- provincially rare limestone formations riddled with solutions caverns
- greater than 150m waterfall (rare in Alberta)

Description:

- singular beauty and diversity
- deteriorating Indian pictographs
- many original trail system structures still remain

Management Considerations:

- controls may be needed to protect archeological resources

References:

- Lamoureux & Associates (1983)



ESA: GRASSLAND; POSTON

Name: Grassy Island Lake

Area (ha): 5871

Location:

- Twp. 33 - Rge. 3 - W4
- Grassy Island Lake

NTS Map Sheet: 72M

Municipality: Special Area 4

Natural Subregions: Northern Fescue

Significance: National

- Poston lists as nationally significant for staging ducks

Description:

- large lake basin within the Northern Fescue Subregion
- listed as significant waterfowl production and staging lake
- lake dry during aerial survey however, during the spring did contain high water levels
- may return to being useable waterfowl habitat when water levels in the region increase
- some grazing occurring within the basin during survey

Management Considerations:

- productivity declines in drought years when the lake dries up
- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Ilnicki (pers. comm. 1995)
- field notes (1995)
- Wildlife key area maps

ESA: GRASSLAND

Name: Grassy Island Native Prairie

Area (ha): 37677

Location:

- Twp. 33 - Rge. 3 - W4
- vicinity of Grassy Island Lake

NTS Map Sheet: 72M

Municipality: Special Area 4

Natural Subregions: Northern Fescue; Dry Mixedgrass

Significance: National

- one of a handful of undisturbed fescue grasslands in Canada

Description:

- extensive grassland community within the Northern Fescue Natural Subregion
- reasonably undisturbed by agricultural activity
- the site is adjacent to Grassy Island Lake, Current Lake and Misty Lake
- significant Mule and White-tailed Deer habitat

Management Considerations:

- maintenance of natural habitats will support a variety of grassland wildlife

References:

- field notes (1995)
- Agriculture Canada (1988)
- Wildlife key area maps

ESA: BOREAL

Name: Grassy Lake

Area (ha): 424

Location:

- Twp. 67 - Rge. 24 - W5
- Grassy Lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity observed in 1996
- good waterfowl staging site with abundant emergent vegetation
- adjacent upland provides excellent ungulate habitat, particularly for Moose and Elk, White-tailed Deer and Mule Deer

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- 1996 field notes

ESA: TABER; POSTON

Name: Grassy Lake Wetlands

Area (ha): 1283

Location:

- Twp. 10 - Rge. 13 and 14 - W4
- wetlands 3 km south of Grassy Lake near Bow Island

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose breeding habitat

Description:

- small to large marshes and wetlands, including part of Yellow Lake
- associated with irrigation developments
- waterfowl staging and production area, for puddle ducks, diving ducks and geese
- discontinuous wetlands within mainly cultivated habitat
- Great Blue Heron feeding area
- some shorebird migration
- includes adjacent native mixed grassland

Management Considerations:

- maintenance of uncultivated land adjacent these wetlands will keep the area attractive for a variety of waterfowl
- relative stability in the water levels, allowing for some fluctuation, will increase the production potential of this marsh system

References:

- 1987 field notes
- Fish and Wildlife key area maps

ESA: PARKLAND

Name: Greenlee Lake

Area (ha): 110

Location:

- Twp. 37 - Rge. 4 - W4
- Greenlee Lake north of Sounding Lake

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: National

- Piping Plover breeding lake (a COSEWIC endangered species in Canada and a red-listed species in Alberta)
- nationally significant concentrations of migrating shorebirds in some years

Description:

- alkali marsh with exposed mudflats
- significant staging and possibly breeding wetland for other shorebirds

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Wildlife key area maps

ESA: EASTERN BOREAL

Name: Grist Lake

Area (ha): 3218

Location:

- Twp. 74 - Rge. 4 - W4
- Grist Lake

NTS Map Sheet: 73M

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive fisheries in the boreal forest of Alberta

Description:

- important sportfishery
- important fish species: Lake Trout, Lake Whitefish, Cisco, Arctic Grayling, Northern Pike and Burbot
- hydrologically important lake

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: DRY MIXEDWOOD; LACOMBE

Name: Gull Lake

Area (ha): 10282

Location:

- Twp. 40 to 42 - Rge. 28 - W4 to Rge. 1 - W5
- Gull Lake

NTS Map Sheet: 83B

Municipality: County of Lacombe; County of Ponoka

Natural Subregions: Dry Mixedwood; Central Parkland

Significance: Provincial

- significant waterfowl staging
- one of the largest most productive water bird lakes in the Dry Mixedwood of Alberta

Description:

- large, relatively deep lake
- includes adjacent wetlands and natural shoreline, backshore willow, poplar and meadow habitat (particularly well-developed along the west-central and east sides of the lake)
- spawning, rearing and overwintering area for several fish species
- fisheries resources consists of Lake Whitefish, Northern Pike, Walleye, Burbot and Sauger
- locally significant sport fishing lake
- includes large marshy pond in Sections 11 to 13 - Twp. 41 - Rge. 1 - W5 and productive ponds in Sections 24 to 25 - Twp. 41 - Rge. 28 - W4
- significant staging and production wetland for waterfowl
- large flocks of geese and ducks observed on lake during aerial survey
- Great Blue Heron and large gull colonies located just outside study area boundary
- large esker adjacent to eastern shoreline
- shorebird staging lake
- former nesting area for Piping Plover (a COSEWIC endangered species in Canada and a red listed species in Alberta)
- diversity of breeding marsh birds
- American White Pelican (a blue listed species in Alberta) foraging and loafing habitat; apparently increasing in numbers, expanding range into this part of Alberta

Management Considerations:

- maintenance of native vegetation cover on shorelines and backshore will keep the area attractive for a variety of wildlife

References:

- Fish and Wildlife key area maps
- Wershler and Wallis (1987) for Piping Plover
- 1988 field notes
- Goossen (in prep)
- Mitchell and Prepas (1990)
- Fisheries inventory maps
- field notes (1995)

ESA: BOREAL

Name: Haig Lake

Area (ha): 2844

Location:

- Twp. 91 - Rge. 14 - W5
- Haig Lake

NTS Map Sheet: 84C

Municipality: MD of East Peace

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive lakes in the Central Mixedwood of Alberta

Description:

- excellent waterfowl production and staging site
- supports an American White Pelican colony, observed in 1996 field survey
- fish species include Lake Whitefish, Northern Pike, White Sucker, Walleye and Burbot
- stocked Walleye population
- important sport fishery
- surrounded by forest management protection zone
- east side of the lake is a proposed native land claim area

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Downing et al. (1987)
- Walty (1996) pers. comm
- 1996 field notes



ESA: BOREAL

Name: Haig River

Area (ha): 6244

Location:

- Twp. 104 - Rge. 5 - W6
- Haig River and associated wetlands

NTS Map Sheet: 84L

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the most productive and minimally disturbed stream-influenced wetlands in the Boreal Forest of Alberta

Description:

- several breeding pairs of Trumpeter Swan (blue-listed species in Alberta) observed during the 1996 field survey
- excellent waterfowl production habitat throughout the river corridor
- lies within a Bison protected area

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- Reynolds (1996) pers. comm
- 1996 field notes

ESA: STARLAND; GRASSLAND

Name: Hand Hills

Area (ha): 7984

Location:

- Twp. 29 to 30 - Rge. 17 to 18 - W4
- north and west slopes of the Hand Hills and portions of the summit

NTS Map Sheet: 82P

Municipality: MD of Starland

Natural Subregions: Northern Fescue

Significance: Provincial

- only a handful of hill systems in the plains are capped by significant Tertiary deposits
- the Hand Hills is one of the more prominent hill systems in the Plains of Alberta
- the most significant portions of this unit are the mid to higher slopes and adjacent plateau areas

Description:

- high plant community diversity
- aspen woodlands, tall and low shrubbery, and grasslands on west and north slopes of the Hand Hills; includes some remnants of natural vegetation on the plateau
- Tertiary conglomerate and gravel cap, a rare geological feature; an ancient plateau that rises 225 m above the surrounding prairie
- disjunct populations of Cordilleran plant species including heart-leaved arnica (*Arnica cordifolia*) and yampa (*Perideridia gairdneri*)
- north-facing slopes along top edge of the escarpment have small stands of paper birch, a rare species in the region
- springs and marl deposits
- a high diversity of terrestrial birds of both grassland and parkland origin
- key White-tailed Deer and Mule Deer habitat
- remnant fescue grasslands
- ground moraine is the dominant landform feature
- gravely sand deposits of tertiary and quaternary origin are found within the hills

Management Considerations:

- gravel operations may impact significant vegetation if they are not set back from the escarpment edge
- many fescue grassland species are not well-adapted to grazing pressure
- light grazing or infrequent mowing help maintain the most significant plants and animals of this ecosystem

References:

- Wallis (1977)
- Fish and Wildlife key area maps
- Macdonald (1982) for marl

ESA: STARLAND; GRASSLAND

Name: Hand Hills Fescue

Area (ha): 77091

Location:

- Twp. 27 to 29 - Rge. 16 to 17 - W4
- uplands northwest of Little Fish Lake on southwestern slopes of the Hand Hills
- includes Hand Hills Ecological Reserve

NTS Map Sheet: 82P

Municipality: MD of Starland; Special Area 2

Natural Subregions: Northern Fescue

Significance: International

- part of largest remaining area of northern fescue grassland in the world

Description:

- extensive area of lush fescue grassland
- significant populations of uncommon or threatened birds including Upland Sandpiper and Baird's Sparrow
- rare or uncommon plants including crowfoot violet (*Viola pedatifida*), yellow paintbrush (*Castilleja lutescens*), western wood lily (*Lilium philadelphicum*), and a rush (*Juncus confusus*)
- diverse flower blooms in wetter years
- Sharp-tailed Grouse dancing grounds
- aspen clones provide nesting habitat for Merlins, an uncommon species in the region
- includes a portion of the Hand Hills Ecological Reserve
- unit extends south into Special Area 2

Management Considerations:

- many fescue grassland species are not well-adapted to grazing pressure
- light grazing or infrequent mowing help maintain the most significant plants and animals of this ecosystem
- prescribed burning may enhance the growth of some rare plant species

References:

- Wallis (1977) and Wallis and Wershler (1985)
- Wershler and Wallis (1989)
- Owens and Myres (1972) for effects of agriculture on birds of fescue grassland
- Wershler (1989) for Baird's Sparrow and fescue grassland status
- 1990 field notes
- Allan (pers. comm., 1995)
- field notes (1995)
- Wildlife key area maps

ESA: GRASSLAND

Name: Hand Hills Lake

Area (ha): 2981

Location:

- Twp. 29 - Rge. 16 - W4
- Hand Hills Lake

NTS Map Sheet: 82P

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: International

- the most productive Piping Plover (COSEWIC endangered species) lake in Alberta

Description:

- large, extensive mudflats provide significant habitat for shorebirds
- Piping Plover prefer the pebble shore
- significant staging lake for waterfowl, particularly when lake levels are higher
- numerous waterfowl observed during field survey
- Poston lists as provincially significant goose staging habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- field notes (1995)
- Hofman (pers. comm. 1995)
- Wildlife key area maps
- Poston et al. (1990)

ESA: POSTON

Name: Harold Lake

Area (ha): 607

Location:

- Twp. 63 - Rge. 4 - W4
- Harold Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Eared Grebe breeding habitat

Description:

- small boreal forest lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Harper Springs Natural Area

Area (ha): 5823

Location:

- Twp. 106 - Rge. 3 - W5
- lake, wetland and upland complex southeast of Fort Vermilion

NTS Map Sheet: 84J

Municipality: MD of Mackenzie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse wetland/upland complexes in the Central Mixedwood Boreal Forest of Alberta

Description:

- includes Harper Creek Natural Area which protects sulphur springs and pools, limestone caves, oxbow lakes, meander scars and wetlands
- the natural area also has historical native value
- uplands consist of aspen-balsam poplar forests
- site includes Moose Lake which provides a continuous shoreline of highly suitable nesting habitat for waterfowl
- contains important Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) range
- no available fisheries information

Management Considerations:

- currently no surface access is permitted to prevent any direct impacts
- petroleum and natural gas exploration and development activities could impact cave stability

References:

- Alberta Wilderness Association (1990)
- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes

ESA: STRATHCONA; POSTON

Name: Hastings Lake

Area (ha): 928

Location:

- Twp. 51 - Rge. 20 - W4
- Hastings Lake

NTS Map Sheet: 83H

Municipality: County of Strathcona

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck breeding and staging habitat
- part of an interrelated wetland system of larger significance, important for production, moulting, staging and migration of waterfowl

Description:

- a large lake over 900 ha
- secure nesting habitat for geese
- important for staging and migration of Bonaparte's Gull and yellowlegs
- most of the shoreline remains forested and in natural condition, and well developed submerged and emergent aquatic vegetation communities are found in the west end, SE bays and NE bays
- the lake has a history of water level stability
- good Muskrat population and as many as five Beaver colonies
- Great Blue Herons feed at the lake and Griffiths (1987) suggested the possibility that a colony is establishing, which would be a first for the county
- very good waterfowl habitat, including an abundance of islands, with large species diversity

Management Considerations:

- shoreline is highly sensitive to disturbance
- the current shoreline condition makes an important contribution to wetland habitat maintenance
- toxic spill potential has been noted from the CNR mainline

References:

- Griffiths (1987)
- Kemper (1976)
- Brown (1988)

ESA: BOREAL

Name: Hay River

Area (ha): 91764

Location:

- Twp. 112 - Rge. 10 - W6
- Hay River valley

NTS Map Sheet: 84L

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- provincially important fishery

Description:

- supports Arctic Grayling, Northern Pike and Walleye
- upland areas provide key Moose habitat
- contains parts of Hay Lake and Zama Lake Indian Reserves
- includes Burning Fire/'Hot Pot' Natural Area which protects an almost permanent burning flame fed by natural methane gas
- lies within a Bison protected area

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- Reynolds (1996) pers. comm



ESA: TABER

Name: Hays Reservoir

Area (ha): 989

Location:

- Sections 2, 3, 4, 9, 10 and 11 - Twp. 13 - Rge. 14 - W4
- 4 km south of Hays

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Double-crested Cormorant colonies are uncommon in Alberta and this is one of the largest colonies in the province
- major American White Pelican feeding areas are limited in the province

Description:

- reservoir with islands but little marsh development
- major waterfowl staging and production area, for puddle ducks, diving ducks and Canada Geese
- Double-crested Cormorant colony
- some use by migrating shorebirds
- major American White Pelican feeding area
- breeding habitat for Great Plains Toads (an Alberta red-listed species)
- surrounded by native mixed grassland

Management Considerations:

- maintenance of natural habitats around the reservoir will keep the area attractive to a variety of bird life
- Double-crested Cormorants are sensitive to human intrusion on and around nesting islands
- relative stability in the water levels, allowing for some fluctuation, will increase the production potential of this marsh system
- clear, shallow water is required by Great Plains Toads for breeding
- heavy spring grazing may be detrimental to breeding Great Plains Toads

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Brechtel (1981) for Double-crested Cormorant colony
- Cottonwood Consultants (1986a) for Great Plains Toads

ESA: BOREAL

Name: Hay-Zama Lakes Complex

Area (ha): 55436

Location:

- Twp. 113 - Rge. 06 - W6
- Hay and Zama Lakes and surrounding wetlands

NTS Map Sheet: 84L

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: International

- internationally recognized RAMSAR wetland

Description:

- key waterfowl production, staging and moulting site (especially for duck and goose staging)
- colonial nesting birds observed include Franklin's Gulls, Herring Gulls and Bonaparte's, Ring-billed Gulls and Common Terns
- 10 raptor species identified including Bald Eagles, Northern Goshawks and Peregrine Falcons (red-listed species in Alberta, COSEWIC endangered species)
- provides good Moose and Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) habitat
- acts as an ungulate movement corridor
- aquatic and semi-aquatic furbearers common
- supports Northern Pike spawning for the Hay River fish populations, otherwise low fisheries production potential
- surrounding area dominated by black and white spruce, trembling aspen and balsam poplar
- includes parts of Hay and Zama Lakes Indian Reserves
- lies within a Bison protected area

Management Considerations:

- excessive water level fluctuations may adversely affect the nesting success of some shoreline and beach-nesting waterfowl species
- oil and gas exploitation may threaten wildlife

References:

- Alberta Wilderness Association (1990)
- Alberta Natural Resources Service files
- Bentz et al. (1994)
- Poston et al. (1990)
- Reynolds (1996) pers. comm
- Walty (1996) pers. comm

ESA: EASTERN BOREAL

Name: Heart Lake

Area (ha): 6379

Location:

- Twp. 70 - Rge. 10 - W4
- Heart Lake

NTS Map Sheet: 73M

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of a handful of commercial fisheries in the boreal forest of Alberta

Description:

- important sportfishery (contains 6 species of sportfish)
- spawning for Northern Pike, Cisco and whitefish
- commercial/domestic fishery
- hydrologically important lake

Management Considerations:

- maintenance of natural cover on surrounding uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: High Hill River

Area (ha): 12588

Location:

- Twp. 91 - Rge. 3 - W4
- High Hill River valley

NTS Map Sheet: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse valleys in the mixedwood of Alberta

Description:

- important sportfishery
- important fish species: Arctic Grayling, Mountain Whitefish (NE-most range) and Northern Pike
- wildlife movement corridor
- hydrologically important river
- diverse landforms including canyon and outcrops

Management Considerations:

- maintenance of natural cover will protect the watershed that supports the fishery

References:

- Westworth & Associates (1990)

ESA: PEACE RIVER

Name: High Level Salt Meadows

Area (ha): 1637

Location:

- Twp. 110 - Rge. 20 - W5
- salt meadows near High Level

NTS Map Sheet: 84J

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of few uncultivated salt meadows in northwestern Alberta

Description:

- salt meadows are rare in northern Alberta
- representation of all major vegetation types aside from four dry meadow associations, potential rare plant species
- limited human impact
- never cultivated

Management Considerations:

- cultivation eliminates native species and reduces biodiversity

References:

- Fairbarns (1990)
- file notes, Land & Forest Service
- R. Woods, pers. comm
- Herrmann (1993)

ESA: CALGARY

Name: Highwood-Pekisko Upland

Area (ha): 11010

Location:

- Twp. 17- Rge. 3 - W5
- area between the Highwood River and Pekisko Creek

NTS Map Sheet: 82J

Municipality: MD of Foothills

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of the finest Foothills Parkland areas in Alberta

Description:

- no permanent roads
- excellent Moose habitat

Management Considerations:

- maintenance of natural cover will keep the area attractive for a variety of wildlife

References:

- Lamoureux & Associates (1983)

ESA: BARRHEAD; BOREAL

Name: Holmes Crossing Sand Hills

Area (ha): 5989

Location:

- Twp. 61 - Rge. 6 to 7 - W5
- extensive sand dunes and boreal fens southwest of Holmes Crossing
- includes Holmes Crossing Natural Area

NTS Map Sheet: 83J

Municipality: County of Athabasca

Natural Subregions: Central Mixedwood

Significance: National

- the best examples of transverse dunes in Canada

Description:

- extensive sand dunes with jack pine and aspen woodland
- transverse dune formations which are said to be among the best in Canada as they are well preserved by the stabilizing effects of vegetation
- a variety of wetlands occur in the depressions between the dunes, including marl fens, sedge meadows, willow, swamp birch and tamarack fens, and iron-rich springs
- supports mature closed coniferous forest
- rare and uncommon plants including Franklin's sedge (*Carex franklinii*) and Indian-pipe (*Monotropa uniflora*)
- key White-tailed Deer and Moose habitat in the northern portion
- some waterfowl production on wetlands
- includes proposed Holmes Crossing Natural Area
- most interesting features are the transverse sand dunes
- parabolic dunes occur adjacent to the transverse dunes
- many erosional features such as bedrock failure and slumping occur along the river's banks
- high recreational use

Management Considerations:

- clearing, drainage and cultivation will reduce the attractiveness of the area for a variety of wildlife
- off-highway vehicle traffic can create erosion problems in the fragile dunes and alter hydrologic relationships in wetlands

References:

- Nelson, O'Leary and Downing (1989b)
- Fish and Wildlife key area maps
- 1989 and 1990 field notes
- Natural and Protected Areas Program files
- David (1977) for sand dunes
- Alberta Natural Resources Service files
- Mulira (1986)
- 1996 field notes

ESA: PEACE RIVER; POSTON

Name: Horse Lake (East)

Area (ha): 60

Location:

- Twp. 73 - Rge. 12 - W6
- Beaverlodge area

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- key waterfowl moulting and staging
- Trumpeter Swan nesting (a blue listed species in Alberta)
- wildlife viewing site
- key shorebird habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm



ESA: PARKLAND; GRASSLAND

Name: Horseshoe Lake

Area (ha): 470

Location:

- Twp. 39 - Rge. 6 - W4
- Horseshoe Lake south of Metiskow

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: National

- breeding Piping Plovers (a COSEWIC endangered species in Canada and a red-listed species in Alberta)

Description:

- alkali lake located north of Sounding Lake
- some wet meadows in upland
- significant shorebird staging and breeding lake
- contains brine shrimp which are an important food source for many shorebirds including Sanderlings
- key ungulate habitat

Management Considerations:

- significance is reduced by industrial development of this site

References:

- Morrison et al. (1995)
- Goossen (in prep)
- Byersbergen (pers. comm. 1995)
- field notes (1995)
- Wildlife key area maps

ESA: PINCHER CREEK

Name: Horseshoe Lake

Area (ha): 75

Location:

- Section 31 - Twp. 2 - Rge. 29 - W4
- 16 km NNE of Waterton townsite along Waterton Lakes National Park boundary

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of a handful of Trumpeter Swan nesting locations in southern Alberta

Description:

- nesting area for Trumpeter Swans (Alberta blue-listed species)

Management Considerations:

- minimizing human disturbance during nesting and maintaining surrounding natural habitat will keep the area attractive to swans

References:

- 1986 field notes
- Fish and Wildlife key area maps

ESA: BOREAL

Name: Hume-Steeprock Creeks

Area (ha): 379

Location:

- Twp. 72 - Rge. 13 - W6
- confluence of Hume Creek and Steeprock Creek

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive stream-influenced wetlands in the Boreal Forest of Alberta

Description:

- productive Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- key waterfowl production, moulting and staging habitat
- Steeprock Creek supports Arctic Grayling and local sport fishery

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Walty (1996) pers. comm
- 1996 field notes

ESA: BOREAL

Name: Iosegun River

Area (ha): 8389

Location:

- Twp. 64 - Rge. 19 - W5
- Iosegun River and associated wetlands

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse "wetland" streams in the Central Mixedwood Boreal Forest of Alberta

Description:

- part of the Peace River drainage system
- supports Bull Trout and Arctic Grayling
- surrounding uplands provide good ungulate habitat, especially for Elk and Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) to a lesser extent

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- Walty (1996) pers. comm

ESA: POSTON

Name: Ironwood Lake

Area (ha): 979

Location:

- Twp. 65- Rge. 11 - W4
- Ironwood Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant Common Tern breeding habitat

Description:

- wooded boreal forest lake with islands and marsh
- productive waterfowl nesting and staging
- significant Forster's Tern colony
- Bald Eagles in nesting season

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: CALGARY; POSTON

Name: Irricana Reservoir

Area (ha): 237

Location:

- Twp. 27- Rge. 26 - W4
- Irricana Reservoir

NTS Map Sheet: 82P

Municipality: MD of Rocky View

Natural Subregions: Foothills Fescue

Significance: National

- Poston lists as nationally significant California Gull breeding habitat

Description:

- Poston lists as provincially significant Ring-billed Gull and goose breeding habitat

Management Considerations:

- maintenance of water levels will protect nesting islands

References:

- Lamoureux & Associates (1983)

ESA: BOREAL

Name: Jackfish Lake

Area (ha): 431

Location:

- Twp. 64 - Rge. 19 - W5
- Jackfish Lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity observed in 1996 field survey
- supports nesting Ospreys
- surrounding uplands mostly deciduous and white spruce

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- 1996 field notes

ESA: CALGARY; POSTON

Name: Janet Sloughs

Area (ha): 365

Location:

- Twp. 23- Rge. 28 - W4
- alkali sloughs near Janet

NTS Map Sheet: 82I

Municipality: MD of Rocky View

Natural Subregions: Foothills Fescue

Significance: Provincial

- Poston lists as provincially significant for breeding Eared Grebe

Description:

- shallow alkali slough

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for water birds

References:

- Lamoureux & Associates (1983)



## ESA: FOOTHILLS; MODEL FOREST

Name: Jarvis Creek

Area (ha): 4505

Location:

- Twp. 51 to 53 - Rge. 26 - W5
- valley of Jarvis Creek, northwest of Hinton
- includes: William A. Switzer Provincial Park; slopes below Athabasca Lookout; Jarvis, Blue, Cache, Graveyard and Gregg Lakes; and small portions of Peppers and Winter Creeks

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills

Significance: Provincial

- one of the most diverse, relatively intact and productive river valley habitat complexes in the Foothills of Alberta

Description:

- high plant community diversity and rare plant species (provincially and nationally)
- extensive grassy and wet meadows, open water, sedge marshes, willow shrubbery, springs (including calcareous tufa) and boreal wetlands
- high wildlife diversity
- important Elk, Moose and deer habitat and critical terrestrial furbearer habitat
- key terrestrial bird habitat
- springs (including calcareous tufa)
- classic examples of pitted outwash
- nesting habitat for Osprey
- productive waterfowl and marshbird nesting area
- Upper Foothills habitats
- sandstone cliffs, hoodoos, eskers and classic examples of pitted outwash
- provincially and nationally rare plants including: *Woodsia glabella*, *Haplopappus uniflorus*
- breeding bird diversity in deciduous shrubbery and mixed woods on east side of Gregg Lake
- uncommon birds including: Yellow-bellied Flycatcher, Philadelphia Vireo, and Great Gray Owl, Winter Wren, Black-backed Woodpecker, Barred Owl, and Pileated Woodpecker
- Wolf, Grizzly Bear (a COSEWIC vulnerable species), Moose, Cougar, River Otter, and Fisher

Management Considerations:

- Osprey and Common Loons are sensitive to recreational use, particularly motorized boating, near nesting areas
- several bird species require mature and older stands
- ungulates are sensitive to human activities on critical winter ranges
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Government (1984) for zoning
- M.V. Jones and Associates (1973)
- Roed (1970) for significance of pitted outwash at Jarvis Lake
- Borneuf (1983) for springs
- nomination by Jeanette Brooks, Park Ranger - William A. Switzer Provincial Park, 1994, for Candidate ESA to Foothills Model Forest

ESA: PEACE RIVER

Name: Jean D'Or Meadows

Area (ha): 1689

Location:

- Twp. 110 - Rge. 6 - W5
- near Jean D'Or Prairie

NTS Map Sheet: 84J

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of a few areas of upland Peace River Parkland remaining in a natural state

Description:

- natural meadows
- remnant of Peace River parkland
- consist of extensive shrubby grasslands interspersed with aspen groves and surrounded by aspen forest

Management Considerations:

- clearing and cultivation reduce biodiversity

References:

- R. Woods, pers. comm
- file notes, Land & Forest Service

ESA: GRASSLAND; POSTON: LOWER RED DEER

Name: Jenner Moraine

Area (ha): 164297

Location:

- Twp. 21 to 23 - Rge. 6 to 10 - W4
- uplands north and south of the Red Deer River in the vicinity of Jenner

NTS Map Sheet: 72L

Municipality: Special Area 2

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists Birkshire Reservoir as provincially significant goose staging habitat
- one of few areas of relatively intact extensive mixed grassland in Alberta

Description:

- extensive mixed grassland and ephemeral wetlands on rolling hummocky moraine
- key Pronghorn habitat in eastern section
- nesting and feeding areas for Prairie Falcons (Yellow A-listed species in Alberta) Golden Eagles, Ferruginous Hawks (a COSEWIC vulnerable species in Canada and a blue-listed species in Alberta) and Burrowing Owls (a COSEWIC endangered species in Canada and a red-listed species in Alberta)

Management Considerations:

- cultivation reduces the productivity of the grasslands for native plants and animals
- a diversity of grazing regimes will ensure the survival of a variety of grassland plants and animals

References:

- Schmutz (1994)
- Fish and Wildlife key area maps

ESA: WETLANDS

Name: Jenner Springs

Area (ha): 962

Location:

- Twp. 21 - Rge. 8 - W4
- east of Jenner

NTS Map Sheet: 72L

Municipality: Special Area 2

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- one of the most intact and extensive upland spring systems in the Dry Mixedgrass of Alberta

Description:

- lightly grazed, extensive springs at edge of alkali wetlands
- diverse slightly saline spring-fed communities creating fen-like conditions with floating mats of organic material
- surrounded by native mixed grassland
- wire rush (*Juncus balticus*)-northern reed grass (*Calamagrostis inexpansa*) community on driest upper side which has open dessicated areas with saline shooting-star (*Dodecatheon pulchellum*), tufted hair grass (*Deschampsia cespitosa*), green sedge (*Carex viridula*), creeping spike-rush (*Eleocharis palustris*), northern grass-of-parnassus (*Parnassia palustris*), and rayless aster (*Aster brachyactis*)
- most widespread vegetation types are a three-square rush (*Scirpus pungens*) community and a northern reed grass (*Calamagrostis inexpansa*) community with scattered hoary willow (*Salix candida*), tea-leaf willow (*Salix planifolia*), and Bebb willow (*Salix bebbiana*), northern grass-of-parnassus (*Parnassia palustris*), marsh willowherb (*Epilobium palustre*), and bog aster (*Aster borealis*)
- wetter great bulrush (*Scirpus acutus*)-common cattail (*Typha latifolia*) core and creeping spike-rush (*Eleocharis palustris*) dominated community in wettest areas surrounding the core
- communities dominated by green sedge (*Carex viridula*) or prairie sedge (*Carex prairea/diandra*) along pool edges with northern grass-of-parnassus (*Parnassia palustris*), slender arrow-grass (*Triglochin palustris*), and rough water horehound (*Lycopus asper*)
- lesser bladderwort (*Utricularia minor*), liverwort (*Marchantia* spp.), common duckweed (*Lemna minor*) in pools
- numerous plants which are rare or disjunct in the grassland region
- healthy populations of Northern Leopard Frog, a rare species in Alberta

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- C. Wallis and C. Wershler, field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Jessie Lake

Area (ha): 954

Location:

- Twp. 61 - Rge. 5 - W4
- Jessie Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Eared Grebe breeding habitat

Description:

- located within town limits of Bonnyville
- emergent vegetation provides excellent cover for nesting waterfowl
- highest density of breeding waterfowl in Alberta

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Pryor (pers. comm. 1996)
- field notes (1995)

ESA: PARKLAND

Name: Kakut Lake

Area (ha): 544

Location:

- Twp. 76 - Rge. 4 - W6
- Kakut Lake

NTS Map Sheet: 83M

Municipality: MD of Fairview

Natural Subregions: Peace River Parkland

Significance: Provincial

- one of the most productive wetlands in the Peace River Parkland of Alberta

Description:

- significant Trumpeter Swan nesting lake, a blue-listed species in Alberta
- significant staging and production wetland for waterfowl
- only basin immediately north of the Saddle Hills within the Peace River Parkland
- no flow of water between Kakut Lake and pond except when weir is open
- Ducks Unlimited conservation project on lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- field notes (1995)
- Fisheries inventory maps
- Ducks Unlimited

ESA: FOOTHILLS

Name: Kakwa River

Area (ha): 50728

Location:

- Twp. 62 - Rge. 5 - W6
- Kakwa River valley and adjacent upland

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- one of few key Grizzly Bear habitats in the Foothills of Alberta
- critical habitat for the mountain ecotype of Caribou, rare in Alberta

Description:

- high wildlife diversity
- key ungulate habitat (Elk, deer and Moose)
- critical terrestrial furbearer habitat
- key Bull Trout, Arctic Grayling and Mountain Whitefish fishery
- key Grizzly Bear habitat
- high diversity of fluvial landforms

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Wildlife key area maps
- Fisheries inventory maps

ESA: BOREAL

Name: Kamisak Lake

Area (ha): 236

Location:

- Twp. 71 - Rge. 12 - W6
- Kamisak Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- key waterfowl moulting and staging site
- surrounded by aspen woodland
- adjacent uplands provide good habitat for migratory birds, ungulates and furbearers

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes



ESA: BOREAL

Name: Keeping Lake Complex

Area (ha): 139

Location:

- Twp. 74 - Rge. 13 - W6
- two lakes, including Keeping Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- good waterfowl production site due to abundant shoreline vegetation
- adjacent uplands provide good Elk habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: LETHBRIDGE; POSTON

Name: Keho Lake

Area (ha): 2016

Location:

- Twp. 11 and 12 - Rge. 22 and 23 - W4
- 8 km N of Nobleford

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose and California and Ring-billed Gull breeding habitat
- Double-crested Cormorant colonies are rare in Alberta

Description:

- large reservoir with some marsh developing along the edge
- waterfowl staging and production area, including "diving" ducks
- Double-crested Cormorant colony has been recorded in past years

Management Considerations:

- relative stability in the water levels will enhance the area for waterfowl production
- high water levels flood out islands for nesting Double-crested Cormorants

References:

- 1986 field notes
- Fish and Wildlife key area maps and Clark (1982) for Double-crested Cormorant colony

ESA: LLOYDMINSTER; PARKLAND; POSTON

Name: Kenilworth Lake

Area (ha): 1218

Location:

- Twp. 50 - Rge. 4 - W4
- Kenilworth Lake west of Kitscoty, Alberta

NTS Map Sheet: 73E

Municipality: County of Vermilion River

Natural Subregions: Central Parkland

Significance: National

- one of the most important duck staging areas in the Aspen Parkland of Canada

Description:

- subsaline to moderately saline lake with very little exposed shore
- southeast of the lake is a large moderately saline wetland dominated by prairie bulrush (*Scirpus paludosus*)
- important waterfowl and shorebird staging and production area
- Eared Grebe nesting colony (up to 92 nests)
- upland native fescue grassland and aspen woodland
- emergent vegetation

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife
- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Alberta Fish and Wildlife key area maps
- 1995 field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Kerr Lake

Area (ha): 517

Location:

- Twp. 64 - Rge. 14 - W4
- Kerr Lake

NTS Map Sheet: 83I

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- small lake basin located immediately north of the Amisk River
- Great Blue Heron and Double-crested Cormorant colonies
- production lake for waterfowl
- extensive forested cover in upland except for the recently burned area
- fisheries resources include Northern Pike, Yellow Perch and suckers

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: PARKLAND

Name: Killarney/Dillberry/Leane Lake Complex

Area (ha): 3447

Location:

- Twp. 41 - Rge. 1 - W4
- site includes Killarney Lake, Dillberry Lake, Long Lake and Leane Lake
- includes Dillberry Lake Provincial Park

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: International

- major nesting area for Piping Plover, a COSEWIC endangered species in Canada and a red-listed species in Alberta
- internationally significant shorebird migration area
- some of the largest reported concentrations of Stilt Sandpipers in the world

Description:

- high diversity of breeding and migratory birds
- diverse kame moraine, sandy plain and sand dune habitat
- small alkali lake complex located on the Alberta-Saskatchewan border
- aquatic vegetation grows abundantly in the shallow bays of these lakes and in a narrow fringe along parts of the shoreline
- Leane and Long Lake provide habitat for nesting waterfowl and marsh birds
- Dillberry Lake is regularly stocked with Rainbow Trout, which, along with Yellow Perch, supports a popular sport fishery
- 21 species of mammals have been reported to occur within lake complex including White-tailed Jackrabbit and Long-tailed Weasel, a yellow A-listed species in Alberta, and Mule and White-tailed Deer
- six species of amphibians and reptiles including Chorus and Northern Leopard Frog (a red-listed species in Alberta)
- rare plants

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Byersbergen (pers. comm. 1995)
- Mitchell and Prepas (1990)
- Wildlife key area maps

ESA: BOREAL

Name: Kilome Lake Complex

Area (ha): 51862

Location:

- Twp. 126 - Rge. 1 - W5
- approximately 30 small lakes, including Kilome Lake

NTS Map Sheet: 84O

Municipality: Municipality of Wood Buffalo

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the most diverse wetland complexes in the Wetland Mixedwood Boreal Forest

Description:

- American White Pelicans observed during 1996 field survey
- excellent area of waterfowl production and staging around most of the lakes
- lots of suitable shoreline for waterfowl nesting
- Black Bear and Moose observed near Buffalo River
- white spruce and aspen dominated uplands
- Arctic Grayling found in Buffalo River

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Walty (1996) pers. comm
- 1996 field notes

ESA: PEACE RIVER; POSTON

Name: Kimiwan Lake

Area (ha): 7374

Location:

- Twp. 78 - Rge. 19 - W5
- Kimiwan Lake

NTS Map Sheet: 83N

Municipality: MD of Smoky River; MD of East Peace

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant for staging ducks and non-breeding Franklin's Gull

Description:

- Poston lists as provincially significant for moulting ducks
- locally important for staging geese
- Trumpeter Swans staging (a blue listed species in Alberta)
- American White Pelican foraging habitat
- important shorebird nesting and staging
- high bird diversity
- Bald Eagle nesting
- popular wildlife viewing site, developed wildlife viewing site with a boardwalk and viewing platform present in the town of McLennan on the south shore of the lake
- an area around the lake has been the protected as a natural area
- critical Moose habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Nietfeld et. al. (1985)
- D. Walty, pers. comm
- D. Moyles, pers. comm
- L. Faulkner, pers. comm
- B. Himer, pers. comm
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm
- NAWMP, unpubl. data
- MacDonald (1987)
- Semenchuk (1992)

ESA: NEWELL; POSTON

Name: Kininvie

Area (ha): 7930

Location:

- Twp. 16 to 17 - Rge. 11 to 12 - W4
- wetlands and uplands west of Kininvie

NTS Map Sheet: 72L

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose breeding habitat

Description:

- open water, extensive marshes and islands associated with irrigation developments
- shorebird and waterfowl staging and production area, for grebes and diving and dabbling ducks
- diversity of marshbirds
- possible Black-necked Stilt nesting area, a rare species in Canada
- numerous ephemeral saline wetlands
- includes adjacent native mixed grassland
- abundant Richardson ground squirrel and associated badger populations
- unusual flat terrain nesting area for rare birds of prey, including the COSEWIC vulnerable Ferruginous Hawk
- nesting habitat for Burrowing Owls, a COSEWIC endangered species

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals

References:

- Smith and Dickson (1989) for shorebirds
- Fish and Wildlife key area maps
- 1991 field notes



ESA: LETHBRIDGE

Name: Kipp Section

Area (ha): 107

Location:

- Section 18 - Twp. 9 - Rge. 22 - W4, especially LSD 10
- 3 km S of Kipp on east bank of Oldman River

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass

Significance: International

- very few till sequences of this extent exist anywhere and they are important in research regarding glaciation
- megablocks are poorly known but it is thought that they are very localized in the world

Description:

- eroded cutbank of the Oldman River which has exposed one of the best sequences of Quaternary deposits in Canada, including preglacial, glacial, interglacial and post-glacial sediments
- Kipp "megablock" also is found here, large bedrock sections (up to 4 km long) which were rafted during glaciation and deposited on top of glacial till; now exposed in the cutbank

References:

- Stalker (1963a)
- Beaty (1975)
- Rutter & Christiansen (1972)
- Barendregt (1983)

ESA: GRASSLAND; POSTON

Name: Kirkpatrick Lake

Area (ha): 3821

Location:

- Twp. 33 - Rge. 10 - W4
- vicinity of Kirkpatrick Lake

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: National

- Poston lists as nationally significant for goose staging

Description:

- significant waterfowl production and staging lake
- water levels low during aerial survey
- significant upland habitat
- small ephemeral ponds around perimeter provide suitable waterfowl habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: GRASSLAND; POSTON

Name: Kirkpatrick Native Prairie

Area (ha): 35572

Location:

- Twp. 34 - Rge. 9 - W4
- vicinity of Kirkpatrick Lake

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Northern Fescue; Dry Mixedgrass

Significance: International

- one of a few sizeable areas of intact fescue grassland in the world

Description:

- situated east of Kirkpatrick Lake
- significant fescue grassland community
- excellent habitat for terrestrial breeding birds
- key Mule Deer habitat
- Sharp-tailed Grouse dancing ground
- high potential for rare avian species although none documented
- contains Ensleigh, Wiste and Grays Lakes which Poston lists as provincially significant for staging geese
- contains Oldman Lake which Poston lists as provincially significant staging duck and geese habitat
- contains Fitzgerald Lake which Poston lists as nationally significant for staging geese and provincially significant for moulting ducks

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- field notes (1995)
- Wildlife key area maps

ESA: PARKLAND

Name: Kleskun Hill

Area (ha): 2420

Location:

- Twp. 72 - Rge. 4 - W6
- east of Grande Prairie

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: National

- one of a handful of upland Peace River grasslands left in Canada

Description:

- relict dry grassland which represents one of the few remaining Peace River Parkland grasslands in the province
- plant species are at their northern most limit such as prickly pear cactus
- most northerly badland landform features with significant fossils
- includes Natural Area

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Alberta Wilderness Association (1990)
- Natural and Protected Area Files

ESA: POSTON

Name: Kleskun Lake

Area (ha): 1601

Location:

- Twp. 72 - Rge. 4 - W4
- Kleskun Lake wetlands

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: Provincial

- Poston lists as provincially significant staging duck and breeding and non-breeding Franklin's Gull habitat

Description:

- extensive sedge and willow wetlands
- modified for grazing

Management Considerations:

- provision of natural habitats will support the greatest diversity of native species

References:

- Poston et al. (1990)

ESA: MONTANE; DAVID THOMPSON CORRIDOR

Name: Kootenay Plains

Area (ha): 13587

Location:

- Twp. 35 to 37 - Rge. 17 to 18 - W5M
- valley bottom along the North Saskatchewan River

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Montane; Subalpine

Significance: Provincial

- the largest, most diverse area of disjunct Montane vegetation in Alberta
- largest populations of *Haplopappus uniflorus* in Alberta

Description:

- large, diverse area of disjunct Montane habitat
- extensive grassland, limber pine and Douglas fir
- rare calcareous spring wetlands and cliff habitats
- spring Grizzly Bear habitat on south-facing slopes
- Elk wintering area
- Spotted Frog habitat (rare species in the region)
- classic braided streams
- silt dunes
- numerous rare and uncommon plants including: moonwort (*Botrychium sp.*), slender lip fern (*Cheilanthes feei*), cliff brake (*Pellaea glabella*), Franklin's sedge (*Carex franklinii*) cottongrass (*Eriophorum scheuchzeri*), Alaska willow (*Salix alaxensis*), glandular Labrador tea (*Ledum glandulosum*), dwarf Canadian primrose (*Primula mistassinica*), one-flowered ironplant (*Haplopappus uniflorus*)
- numerous disjunct grassland or montane plant species
- geological section at Whirlpool Point with representation of the Bourgeau/Siffleur Thrust

Management Considerations:

- grazing by horses can result in a reduction in diversity of plant species in the grassland
- off-highway vehicle use has adverse effects on grassland vegetation and wildlife
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- 1988 field notes
- Fish and Wildlife (personal communication)
- Wallis and Wershler (1981) for Kootenay Plains
- Nordegg-Red Deer River Sub-regional Integrated Plan
- Jones and Workum (1978) for geology

ESA: PINCHER CREEK

Name: Kylo Hill-Mount Backus

Area (ha): 345

Location:

- Twp. 5 and 6 - Rge. 2 and 3 - W5
- ridges between the Castle River and Beaver Mines Creek west and southwest of the town of Beaver Mines

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane

Significance: Provincial

- these are the only known populations of bitter-root in Alberta

Description:

- high montane ridges with a variety of woodland and grassland habitats
- black shale areas are habitat for rare plants, including Nuttall's sandwort (*Arenaria nuttallii*) and bitter-root (*Lewisia rediviva*) in Sections NE12 - Twp. 6 - Rge. 3 - W5 and N31 - Twp. 5 - Rge. 2 - W5
- key Mule Deer and Elk habitat

Management Considerations:

- heavy grazing reduces the suitability of these habitats for wildlife and rare plants

References:

- Kuijt & Michener (1985)
- 1986 field notes
- Fish and Wildlife key area maps

ESA: CANADIAN SHIELD

Name: La Butte Creek

Area (ha): 6403

Location:

- Twp. 119 to 120 - Rge. 6 to 9 - W4
- La Butte Creek drainage

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland; Peace River Lowlands

Significance: Provincial

- from aerial photographic interpretation and geological maps, La Butte Creek stands out as the largest stream on the Kazan Upland in Alberta

Description:

- large stream flowing from Kazan Upland to Slave River
- situated in diverse area of sand plains, wetland complexes and Precambrian Shield outcrops

Management Considerations:

- no biological field investigations have been conducted in this drainage or in other streams flowing into the Slave River, including Ryan Creek, Bocquene River and Dog River

References:

- Godfrey (1986)
- Vitt (1992)



ESA: PEACE RIVER

Name: La Crete Sand Hills

Area (ha): 6794

Location:

- Twp. 106 - Rge. 16 - W5
- sand hills along the Peace River near La Crete

NTS Map Sheet: 84K

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood

Significance: National

- dune morphology unique in Canada

Description:

- dune-wetland complex
- good examples of rare lacadena dune formations
- diverse vegetation, pine ridges
- contains Linton, Mustus and South Mustus lakes
- key waterfowl staging and staging
- locally important recreation area

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Mulira (1986)
- David (1977)
- A. Doepel, pers. comm
- file notes, Land & Forest Service
- D. Moyles, pers. comm
- NAWMP, unpubl. data

ESA: PEACE RIVER: POSTON

Name: La Glace Lake

Area (ha): 1514

Location:

- Twp. 74 - Rge. 9 - W6
- La Glace Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- key waterfowl moulting and staging
- locally important geese staging habitat
- Trumpeter Swan nesting (a blue listed species in Alberta)

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data
- Nietfeld et. al. (1985)

ESA: EASTERN BOREAL

Name: La Saline Springs Natural Area

Area (ha): 733

Location:

- Twp. 93 - Rge. 10 - W4
- east side of Athabasca River

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- a unique saline spring system in the boreal forest of Alberta

Description:

- large travertine cone and mineralized (saline) springs flowing into oxbow lake
- best known example of saline springs in the eastern boreal forest region
- rare vegetation species
- important waterfowl area (breeding and staging)

Management Considerations:

- maintenance of natural cover on the uplands will keep the area attractive for a variety of birds

References:

- Westworth & Associates (1990)

ESA: POSTON

Name: Lac Brosseau

Area (ha): 3946

Location:

- Twp. 56 - Rge. 12 - W4
- Lac Brosseau

NTS Map Sheet: 73E

Municipality: County of Two Hills

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- productive waterfowl lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: DRY MIXEDWOOD; POSTON

Name: Lac Canard

Area (ha): 18340

Location:

- Twp. 56 - Rge. 10 - W4
- Lac Canard

NTS Map Sheet: 73E

Municipality: County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston describes as provincially significant Great Blue Heron breeding habitat

Description:

- small lake in Dry Mixedwood area
- Great Blue Heron and Double-crested Cormorant reported to nest on small island in lake
- fish include Northern Pike and Yellow Perch

Management Considerations:

- Great Blue Herons are sensitive to human intrusion around their nesting colonies

References:

- Natural and Protected Areas files
- Fisheries inventory maps

ESA: DRY MIXEDWOOD; POSTON

Name: Lac La Biche

Area (ha): 28583

Location:

- Twp. 68 - Rge. 15 - W4
- Lac La Biche

NTS Map Sheet: 83I

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Western Grebe and California Gull breeding habitat

Description:

- largest lake within this portion of the study area
- site includes surrounding upland and creeks
- lake designated as Provincial Bird Sanctuary
- forest and wetland communities in upland
- significant ungulate habitat in upland
- numerous songbirds reported for area
- lake is an important waterfowl staging and production lake
- numerous islands within basin create excellent habitat for Great Blue Herons ( a yellow listed species in Alberta) several colonies noted to occur
- American White Pelican breeding, staging and foraging habitat (a blue listed species in Alberta)
- Osprey ( a blue listed species in Alberta), Bald Eagle (a blue listed species in Alberta) and Great Grey Owl habitat
- significant commercial and sport fishery
- spawning, rearing and overwintering habitat for numerous fish species
- fish populations include Lake Whitefish, Northern Pike, Walleye, Yellow Perch, and suckers
- this site includes Black Fox Island Natural Area and Sir Winston Churchill Provincial Park
- heavy recreational use on lake may decrease significance of lake
- Poston lists as provincially significant Common Tern breeding habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Natural and Protected Areas Files
- Wildlife key area maps
- Fisheries inventory maps

ESA: DRY MIXEDWOOD

Name: Lac La Biche Peatlands

Area (ha): 10917

Location:

- Twp. 68 - Rge. 16 - W4
- wetlands along the Lac La Biche River

NTS Map Sheet: 83I

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Dale Vitt describes this as one of the best fen and bog complexes in Alberta

Description:

- northern sphagnum plateau peatland on the north shore of Lac La Biche, at the mouth of the Gold River
- sphagnum dominated peat plateaus with associated non patterned open horizontal fens
- extensive, relatively undisturbed fen and bog complex
- excellent Moose and White-tailed Deer habitat
- water recharge area
- significant hydrological function within this area
- songbird habitat
- furbearer habitat
- comprised of 2 polygons (25521 to 25523)
- high diversity

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Nicholson (1991)
- Mitchell and Prepas (1990)
- Hay and O'Leary (1988)
- field notes (1995)
- Vitt (pers. comm.)

ESA: DRY MIXEDWOOD; POSTON

Name: Lac Magloire

Area (ha): 1250

Location:

- Twp. 79 - Rge. 21 - W5
- Lac Magloire

NTS Map Sheet: 83N

Municipality: MD of Smoky River

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- key waterfowl moulting and staging
- nationally important for staging ducks
- regionally important for moulting ducks and staging geese

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data
- Nietfeld et. al. (1985)



ESA: DRY MIXEDWOOD; POSTON

Name: Lac Sante

Area (ha): 958

Location:

- Twp. 57 - Rge. 11 - W4
- Lac Sante

NTS Map Sheet: 73E

Municipality: County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Franklin's Gull breeding habitat

Description:

- lake located just north of the North Saskatchewan River
- lake contains island habitat with mixed aspen and white spruce stands
- good emergent vegetation proving excellent nesting and feeding habitat for dabbling ducks
- significant deer habitat in upland
- relatively undisturbed lake
- active Black Tern colony (a yellow A-listed species) on lake
- fisheries resources include Northern Pike and Yellow Perch
- spawning area for Northern Pike
- suitable habitat for Great Blue Herons although not reported to occur at lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Fisheries inventory maps
- field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Lac St. Anne

Area (ha): 8170

Location:

- Twp. 55 - Rge. 3 - W5
- Lac St. Anne

NTS Map Sheet: 83G

Municipality: County of Lac Ste. Anne

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant for breeding Western Grebe

Description:

- lake with several islands
- significant fish spawning, rearing and overwintering habitat
- site of scientific research
- University of Alberta biological station on lake
- high fish species diversity including Northern Pike, Walleye, Lake Whitefish, Yellow Perch, Burbot, and suckers
- excellent waterfowl staging and production lake
- good upland habitat
- Poston lists as provincially significant for non-breeding Western Grebe

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- McKay (pers. comm. 1996)
- Wildlife key area maps
- field notes (1995)

ESA: GRASSLAND

Name: Lafine White-Tailed Deer Habitat

Area (ha): 18068

Location:

- Twp. 27 - Rge. 6 - W4
- near Cereal

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- extensive, relatively intact blocks of native grassland are rare in Alberta

Description:

- hummocky moraine area within dry mixed grassland that is relatively undisturbed
- a number of small lakes
- waterfowl staging and production site
- significant nesting habitat for dabblers
- evidence of Loggerhead Shrike breeding, a COSEWIC endangered species in Canada and a yellow A-listed species in Alberta
- critical White-tailed Deer habitat
- some Sharp-tailed Grouse dancing grounds

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Bjorge (pers. comm. 1995)
- Schmutz (1994)
- Wildlife key area maps

ESA: CANADIAN SHIELD

Name: Lake Athabasca-North Shore/Fidler-Gray Willow Points

Area (ha): 6969

Location:

- Twp. 116 to 118 - Rge. 1 to 3 - W4
- north shore of Lake Athabasca between Fidler and Gray Willow Points

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland; Athabasca Plain

Significance: Provincial

- one of the most diverse portions of the north shore of Lake Athabasca in Alberta; the western half of this unit contains the most varied topography and vegetation
- several rare plant species that are unknown elsewhere in Alberta, e.g. rush (*Luzula groenlandica*) or from very few locales, e.g. (*Carex oligosperma*), pearlwort (*Sagina nodosa*), and hoary tansy (*Tanacetum huronense*)
- best exposures of Athabasca Sandstone outcrops in Alberta

Description:

- extensive sandy beach, beach ridges and Precambrian Shield rock outcrops
- well-exposed outcrops of Athabasca Sandstone
- black spruce, jack pine and paper birch vegetation with some shrub and sedge wetlands
- adjoins the Wylie Lake area

Management Considerations:

- maintenance of natural vegetation cover will support a variety of Shield wildlife

References:

- Alberta Recreation and Parks (1980)
- Godfrey (1986)
- Bradley (1978)

ESA: CANADIAN SHIELD

Name: Lake Athabasca - Shelter-Sand Points

Area (ha): 19439

Location:

- Twp. 112 to 115 - Rge. 4 to 5 - W4
- north shore of Lake Athabasca between Shelter and Sand Points including offshore islands - Bustard and Burntwood

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain; Kazan Upland

Significance: Provincial

- a provincially unique complex of sand plains, water and rock outcrops
- provincially rare and uncommon plants including club-moss (*Lycopodium selago*), stemless lady's slipper (*Cypripedium acaule*), quillwort (*Isoetes echinospora*), rye grass (*Elymus mollis*), pearlwort (*Sagina nodosa*), St. John's wort (*Hypericum majus*), rush (*Juncus filiformis*) and oak fern (*Gymnocarpium jessoense*)

Description:

- extensive sandy beaches and jack pine forest
- black spruce and shrub wetlands and sheltered lagoons
- large islands with sandy and rocky beaches
- rubbly outcrops of Athabasca Sandstone
- abandoned beach ridges
- Athabasca Sandstone rock outcrops
- park-like white spruce forests
- uniquely shaped trees

Management Considerations:

- sandy habitats are relatively fragile

References:

- Alberta Recreation and Parks (1980), Bradley (1978) and Raup (1928, 1930, 1936)

ESA: CANADIAN SHIELD

Name: Lake Athabasca - South Shore

Area (ha): 3665

Location:

- Twp. 113 to 115 - Rge. 1 to 3 - W4
- south shore of Lake Athabasca just west of the Saskatchewan-Alberta boundary

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain

Significance: Provincial

- the most diverse and representative area of Lake Athabasca South Shore terrain features in Alberta

Description:

- sand dunes and sandy beaches
- glaciolacustrine sand plain and scattered outcrops of Athabasca Sandstone
- park-like white spruce
- extensive DeGeer Moraine

Management Considerations:

- area has not been ground-truthed from a biological perspective

References:

- Bayrock (1972b)
- Vitt (1992)

ESA: BOREAL

Name: Lake Claire

Area (ha): 171692

Location:

- Twp. 110 - Rge. 13 - W4
- Lake Claire

NTS Map Sheet: 84I

Municipality: Municipality of Wood Buffalo

Natural Subregions: Peace River Lowlands; Central Mixedwood

Significance: National

- part of Wood Buffalo National Park

Description:

- supports Canada's most northerly Great Blue Heron breeding colony
- critical waterfowl habitat
- sulphur springs occur on south-west corner of lake
- hydrologically significant lake
- part of the Peace-Athabasca Delta and Athabasca Lake drainage basin
- fish species supported include Lake Whitefish, Northern Pike, Goldeye, Walleye, Yellow Perch and Burbot
- provides critical nesting and foraging habitat for Peregrine Falcons (red-listed species in Alberta, COSEWIC endangered species)
- part of a key Bison range for Wood Buffalo National Park

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files
- Borneuf (1983)
- Kristensen (1981)
- Mitchell and Prepas (1990)

ESA: NEWELL; POSTON

Name: Lake Newell

Area (ha): 30387

Location:

- Twp. 17 to 18 - Rge. 14 to 15 - W4
- Lake Newell, Kitsim Reservoir, Little Rolling Hills Reservoir, and adjacent uplands south of Brooks

NTS Map Sheet: 72L

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: National

- nationally significant populations of breeding Ring-billed Gulls and non-breeding American White Pelicans; provincially significant populations of several other colonial waterbirds
- one of three known Alberta locations for slender mouse-ear cress (a COSEWIC endangered plant species) and possibly the only location in Canada for water hyssop

Description:

- large reservoirs, marshes and upland mixed grassland
- nesting islands for gulls, Double-crested Cormorants and American White Pelicans
- Great Blue Heron colonies
- breeding ponds for Great Plains Toad, an Alberta red-listed species
- locally important for staging geese
- shorebird staging area
- COSEWIC endangered birds including Burrowing Owls
- rare plants including the COSEWIC endangered slender mouse-ear cress (*Thellungiella salsuginea*) and, possibly, water hyssop (*Bacopa rotundifolia*) -- the only known locality for this species in Canada
- Poston lists as provincially significant Double-crested Cormorant habitat

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals
- American White Pelicans and Great Blue Herons are sensitive to disturbance during the nesting season

References:

- Coupland (1973)
- Brechtel (1981)
- Smith and Dickson (1989) for shorebirds
- Matt Fairbarns (pers. comm.) for water hyssop; Harold Pinel (pers. comm.) for mouse-ear cress
- Fish and Wildlife key area maps
- 1991 field notes



ESA: EASTERN BOREAL

Name: Lakeland Diversity Area

Area (ha): 22565

Location:

- Twp. 68 - Rge. 10 - W4
- Pinehurst-Touchwood area

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse upland-lake complexes in the Central Mixedwood Boreal Forest of Alberta

Description:

- outstanding sportfishery
- important fish species: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot
- hydrologically important lake
- high landform diversity

Management Considerations:

- maintenance of upland vegetation, especially old growth, will protect the diversity of boreal wildlife

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Lakeland Provincial Park

Area (ha): 12671

Location:

- Twp. 66 - Rge. 11 - W4
- Lakeland Provincial Park northeast of Lac la Biche

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse upland-lake complexes in the Central Mixedwood Boreal Forest of Alberta

Description:

- mixedwood forest composed of spruce, poplar and pine
- old growth forest covers 36% of the park's area
- hydrologically significant: includes Shaw, McGuffin, Kinnaird, Dabbs, Blackett and Helena Lakes
- colonies of Yellow-headed Blackbirds and Common Terns
- numerous Osprey and Bald Eagle nesting sites
- many waterfowl species breed and migrate through the area
- large numbers of Common Loons and Red-necked Grebes
- important Moose, White-tailed Deer, Mule Deer and Black Bear habitat
- Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) occur in small numbers within the park
- high bird diversity including those neotropical migrants with restricted ranges or exhibiting dependence on mature forest e.g. Blackburnian, Cape May and Mourning Warblers
- dark morph of the Broad-winged Hawk is present
- excellent songbird habitat
- critical habitat for terrestrial and semiaquatic furbearers
- pitcher plant (*Sarrcenia purpurea*) were found within the park - an uncommon species
- Lake Whitefish, Northern Pike, Walleye, Yellow Perch, Longnose Sucker and White Suckers

Management Considerations:

- certain developments may be carried out subject to environmental impact analysis and appropriate mitigation if no feasible alternatives are available
- to manage this chain of lakes and the surrounding land area to provide wildland, water-based recreation opportunities
- abutment of park and recreation area to the Cold Lake Air Weapons range to the east increases the potential value for large-scale conservation management
- the large area protected by the Lakeland Provincial Park and Recreation Area acts as an effective conservation unit through its sheer size as it allows for natural disturbance patterns to develop in a way that still provides for forest interior species
- Daly (1996 pers. comm.) suggests that if logging occurs, >1000 ha in each seral stage are needed

References:

- Alberta Energy and Natural Resources (1985)
- Alberta Natural Resources Service files
- Dale 1996 pers. comm
- Eagles (1984)
- Wallis et al. (1994)

ESA: BOREAL

Name: Lakeland Provincial Recreation Area

Area (ha): 27101

Location:

- Twp. 65 - Rge. 10 - W4
- Lakeland Provincial Recreation Area northeast of Lac la Biche

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse upland-lake complexes in the Central Mixedwood Boreal Forest of Alberta

Description:

- adjacent to Lakeland Provincial Park
- Includes Siebert, and Pinehurst Lakes
- Osprey present on all three lakes
- Bald Eagles and American White Pelicans noted on Pinehurst Lake
- Great Blue Heron noted on Pinehurst Lake
- high bird diversity including those neotropical migrants with restricted ranges or exhibiting dependence on mature forest e.g. Blackburnian, Cape May and Mourning Warblers
- all lakes support a variety of water birds including ducks (especially on Pinehurst Lake), Double-crested Cormorants and Common Loons, grebes, Common Terns, and gulls
- shorebirds also supported
- large number of common mergansers are noted from the north shore of Seibert Lake
- Siebert Lake supports spawning Northern Pike, Walleye and Lake Whitefish
- all lakes support Lake Whitefish, Northern Pike, Walleye, Yellow Perch, Cisco, Burbot and suckers
- Siebert Lake is an important fish habitat including fish migration route, overwintering, feeding and rearing, and is thus designated as a trophy lake
- commercial domestic and sport fishery in all lakes
- surrounding upland riparian areas contain old growth forest which covers 23% of the recreation area

Management Considerations:

- abutment of park and recreation area to the Cold Lake Air Weapons Range to the east increases the potential value for large-scale conservation management
- the large area protected by the Lakeland Provincial Park and the Provincial Recreation Area acts as an effective conservation unit through its sheer size because it allows for natural disturbance patterns to develop in a way that still provides for forest interior species
- Dale (1996 pers. comm.) recommends that if any logging is undertaken in the area, >1000 ha in each seral stage should be maintained

References:

- Alberta Natural Resources Service files
- Dale 1996 pers. comm
- Westworth & Associates Ltd. (1990)
- Longmore et al. (1982)
- Mitchell and Prepas (1990)
- Poston et al. (1990)
- Wallis et al. (1994)
- 1996 field notes

ESA: PAINTEARTH; POSTON

Name: Lanes Lake

Area (ha): 1208

Location:

- Twp. 37 to 38 - Rge. 14 to 15 - W4
- Lanes Lake

NTS Map Sheet: 73D, 83A

Municipality: County of Paintearth

Natural Subregions: Northern Fescue

Significance: Provincial

- Poston lists as provincially significant duck breeding and goose staging habitat

Description:

- waterfowl production in wetter years
- regionally local and uncommon birds in dry, grassy lake bottom: Baird's Sparrow and Sprague's Pipit

Management Considerations:

- drainage and cultivation will reduce the attractiveness of the area for a variety of wildlife
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production

References:

- 1988 field notes
- Fish and Wildlife key area maps

ESA: NEWELL; POSTON

Name: Lathom-San Francisco Lakes

Area (ha): 11889

Location:

- Twp. 19 to 20 - Rge. 15 to 17 - W4
- wetlands and uplands in the vicinity of Lathom and San Francisco Lakes

NTS Map Sheet: 82I

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- provincially significant for moulting ducks

Description:

- open water and extensive marshes associated with irrigation developments; including the Antelope Creek Habitat Development Area and several Ducks Unlimited Projects
- waterfowl staging and production area, mainly for puddle ducks but also for diving ducks and grebes
- diverse marsh and shore bird populations
- locally important for breeding geese
- includes adjacent native mixed grassland
- abundant Richardson ground squirrel populations
- feeding area for American White Pelicans and rare birds of prey, including Prairie Falcons and threatened Ferruginous Hawk

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals upon which rare birds of prey are dependent
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey

References:

- Fish and Wildlife key area maps
- 1991 field notes

ESA: BOREAL

Name: Lattice Creek

Area (ha): 171

Location:

- Twp. 69 - Rge. 13 - W6
- Lattice Creek and associated wetlands

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive stream wetland complexes in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- creek and associated wetlands

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files

ESA: CARDSTON

Name: Lee Creek Ponds

Area (ha): 98

Location:

- 12 km SE of Mountain View
- Section 26 - Twp. 1 - Rge. 27 - W4

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of a handful of Trumpeter Swan nesting areas in southern Alberta

Description:

- significant nesting ponds for Trumpeter Swans (Alberta blue-listed species)

Management Considerations:

- minimizing human disturbance during nesting and maintaining the surrounding natural habitat will keep the area attractive to swans

References:

- Fish and Wildlife key area maps

ESA: CANADIAN SHIELD

Name: Leland-Tulip Lakes

Area (ha): 31421

Location:

- Twp. 123 to 126 - Rge. 6 to 8 - W4
- Leland Lakes, Tulip Lake and surrounding uplands and smaller lakes

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- one of two Alberta breeding sites for Pacific Loon, a provincially rare species
- Precambrian Shield dome bedrock feature not found elsewhere in Alberta

Description:

- deep Precambrian Shield lakes
- jack pine-lichen forest with areas of aspen and spruce
- extensive rock outcrops
- uplands at Tulip Lake have a unique shape due to unusual geological processes that resulted in an elliptical granite pluton dome
- Leland Lakes are a well-developed example of bedrock structurally controlled water bodies (lakes follow a major fault structure)
- important prehistoric and historic archeological sites
- good to excellent sport fishing potential
- nesting area for rare or sensitive birds (e.g. Bald Eagle)
- adjoins McLelland-Myers Lakes and the Dog River

Management Considerations:

- maintenance of natural vegetation will continue to support a variety of Shield species

References:

- Langenberg and Godfrey(1977)
- Godfrey and Langenberg (1986)
- Godfrey (1958)
- Höhn (1972)
- Vitt (1992)
- Godfrey (1986)
- Bradley (1978)
- Alberta Recreation and Parks (1980)
- Rhude (1977)
- Renewable Resources Consulting Services (n.d.)



ESA: LETHBRIDGE

Name: Lenzie Section

Area (ha): 91

Location:

- Section SE11 - Twp. 9 - Rge. 22 - W4
- just north of Highway 3 bridge over Oldman River west of Lethbridge

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass

Significance: International

- type sections are unique and form the basis upon which future geological investigations are based

Description:

- type section of Lenzie silt, a Pleistocene geological strata

Management Considerations:

- relatively undisturbed geological sections are important for continuing studies

References:

- Dawson & McConnell (1895)
- Alden (1932)
- Horberg (1952)

ESA: BOREAL

Name: Lessard Creek Peat Plateau Bog

Area (ha): 3784

Location:

- Twp. 126 - Rge. 15 - W5
- near Northwest Territories border west of the Caribou Mountains

NTS Map Sheet: 84N

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- provincially rare wetland feature

Description:

- peat plateau bog with collapse scar fens with some evidence of string and flark formation occurring

Management Considerations:

- drainage alterations can have profound influences on fen wetlands
- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

ESA: PEACE RIVER

Name: Lesser Slave Lake

Area (ha): 137126

Location:

- Twp. 74 - Rge. 11 - W5
- Lesser Slave Lake

NTS Map Sheet: 83O

Municipality: MD of Opportunity

Natural Subregions: Dry Mixedwood; Central Mixedwood; Lower Foothills

Significance: Provincial

- one of the largest lakes in northern Alberta
- one of a handful of commercial fisheries in the boreal forest of Alberta

Description:

- contains Lesser Slave Lake and Hilliard's Bay Provincial Parks
- high bird diversity
- nationally important for Forster's Tern colonies in eastern portion
- locally important for duck staging
- American White Pelican staging
- Bald Eagle (on north shore) and Osprey nesting
- Western Grebe nesting (sensitive to disturbance) in Hilliard's Bay Provincial Park
- popular wildlife viewing site
- sand dune ridges and dune-wetland complex along east shore
- supports a sport fishery of Northern Pike, Walleye, Arctic Grayling, Yellow Perch and Lake whitefish
- second favored fishing spot in Alberta, most favored unstocked lake in province
- supports a commercial Lake whitefish, Northern Pike, Walleye and Yellow Perch fishery
- Dog Island is relatively undisturbed
- high vegetation community diversity
- critical terrestrial furbearer habitat
- key shorebird habitat

Management Considerations:

- maintenance of natural cover on the shorelines will keep the area attractive for a variety of water birds

References:

- Poston et al. (1990)
- Quinn (1989)
- D. Moyles, pers. comm
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm
- D. Walty, pers. comm
- Graham et al. (1995)

ESA: BOREAL

Name: Lesser Slave Lake Horizontal Fen

Area (ha): 14953

Location:

- Twp. 73 - Rge. 4 - W5
- wetland north of the Lesser Slave River

NTS Map Sheet: 83O

Municipality: MD of Lesser Slave River

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse and representative wetlands of this type in the Central Mixedwood of Alberta

Description:

- moderately rich horizontal fen containing a variety of peatland types such as: open non-patterned fens, forested fens and Sphagnum peat plateaus

Management Considerations:

- drainage alterations can have profound influences on fen wetlands
- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

ESA: BOREAL

Name: Lesser Slave River

Area (ha): 5246

Location:

- Twp. 72 - Rge. 2 - W5
- Lesser Slave River

NTS Map Sheet: 83O

Municipality: MD of Lesser Slave River

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more diverse "wetland" streams in the Central Mixedwood Boreal Forest of Alberta

Description:

- only outlet of Lesser Slave Lake flowing east into the Athabasca River at Smith
- meandering channel in a relatively wide valley
- well developed fluvial landforms including large fluvial terraces and oxbow lakes
- diverse floodplain vegetation communities including old growth mixedwood forest and willow shrubland
- important fisheries habitat including significant sport fishery for Northern Pike, Walleye and Goldeye
- other fish present include Lake Whitefish, Yellow Perch, Arctic Grayling and suckers
- Northern Pike spawning habitat occurs in backwater channels closer to Lesser Slave Lake
- channel fairly deep with relatively low gradient

Management Considerations:

- water level regulation of Lesser Slave by Alberta Environment initiated in 1980 on the Lesser Slave River and included eighth meander "cut-offs" in the upper 24 km of the river and a fixed crest weir and a fish way to allow fish to migrate into the lake
- private agricultural lands north of river are a potential source of pollutants
- weir at the western end of the river acts as the major water level control structure for Lesser Slave Lake
- waste water effluent from Weyerhaeuser Canada Ltd. pulp mill is discharged into the river, monitoring of water quality conducted by Weyerhaeuser and Environmental Protection

References:

- Alberta Natural Resources Service files
- Bentz and Saxena (1993)
- D. A. Westworth & Associates Ltd. (1990)
- Walty (1996) pers. comm

ESA: VULCAN

Name: Little Bow Reservoir

Area (ha): 2910

Location:

- Twp. 14 - Rge. 20 - W4
- Little Bow Reservoir, 16 km south of Lomond

NTS Map Sheet: 82I

Municipality: County of Vulcan

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: Provincial

- Double-crested Cormorant colonies are uncommon in Alberta
- provincially significant waterfowl staging area

Description:

- reservoir with several islands
- waterfowl staging and production area, for diving ducks and grebes as well as puddle ducks
- Double-crested Cormorant colony
- American White Pelicans feed on this reservoir
- some shorebird and marsh bird production
- some adjacent native mixed grassland
- nesting Burrowing Owls (a COSEWIC endangered species)

Management Considerations:

- maintenance of uncultivated land adjacent these wetlands will keep the area attractive for a variety of waterfowl
- Double-crested Cormorants are sensitive to human intrusion on and around nesting islands
- relative stability in the water levels will enhance the area for waterfowl production
- high water levels could flood out islands for nesting Double-crested Cormorants

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Harold Pinel (personal communication) for waterfowl and Burrowing Owls

ESA: GRASSLAND

Name: Little Fish Lake

Area (ha): 1849

Location:

- Twp. 28 - Rge. 16 - W4
- Little Fish Lake

NTS Map Sheet: 82P

Municipality: Special Area 2

Natural Subregions: Northern Fescue

Significance: International

- significant breeding lake for Piping Plover, a COSEWIC endangered species in Canada and a red-listed species in Alberta

Description:

- located on the edge of the southeastern edge of the Hand Hills
- lake is shallow, slightly saline and very productive
- algal blooms flourish in summer
- water levels have been declining since the early 1980's
- significant habitat for other shorebirds
- a number of bird species were observed during survey including a large ring-billed colony, waterfowl and shorebirds
- significant waterfowl production and staging lake
- Yellow Perch and White Suckers reported for lake
- includes Little Fish Lake Provincial Park
- recreational use declining because of poor water quality and decreasing water levels

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Hofman (pers. comm. 1995)
- field notes (1995)
- Mitchell and Prepas (1990)
- Wallis and Wershler (1985)
- Wildlife key area maps
- Ducks Unlimited

ESA: NEWELL

Name: Little Rolling Hills

Area (ha): 23630

Location:

- Twp. 14 to 16 - Rge. 13 to 15 - W4
- Little Rolling Hills and adjacent reservoirs and sand dunes

NTS Map Sheet: 72L

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- one of the more productive Alberta breeding areas for Great Plains Toads, an Alberta red-listed species
- the only known location for blue toadflax in Alberta

Description:

- Little Rolling Hills, a prominent hill system in the region
- open water, extensive marshes and islands associated with irrigation developments
- waterfowl staging and production area
- springs and several ephemeral saline wetlands
- sand plains and stabilized and active sand dunes, including gravelly phases, with rare plants including annual lupine (*Lupinus pusillus*), bur ragweed (*Franseria acanthicarpa*), sand nut-grass (*Cyperus schweinitzii*), annual skeletonweed (*Lygodesmia rostrata*), obscure evening-primrose (*Oenothera andina*), and blue toadflax (*Linaria canadensis*); the last two species are considered rare in Canada
- nesting area for COSEWIC species including endangered Loggerhead Shrikes and vulnerable Ferruginous Hawks
- breeding populations of Great Plains Toads and Spadefoot Toads
- Sharp-tailed Grouse dancing grounds
- key Pronghorn and deer habitat

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Wallis and Wershler (1988)
- Fish and Wildlife key area maps
- 1991 field notes



ESA: FOOTHILLS

Name: Little Smoky Caribou Range

Area (ha): 147859

Location:

- Twp. 59 - Rge. 26 - W5
- vicinity of Little Smoky River

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- critical Caribou habitat (most southwesterly herd in the province)
- one of few key Grizzly Bear habitats in the Foothills of Alberta

Description:

- high plant community diversity and old-growth coniferous forest
- critical terrestrial furbearer habitat
- significant Grizzly Bear population
- key Arctic Grayling fishery in Little Smoky River
- high diversity of ecological features

Management Considerations:

- maintenance of unfragmented habitat is important to Caribou and Grizzly Bear

References:

- J. Edmonds (pers. comm.)
- Wildlife key area maps
- Nelson (1994)

ESA: FOOTHILLS; PEACE RIVER; BOREAL

Name: Little Smoky River

Area (ha): 57511

Location:

- Twp. 77 - Rge. 24 - W5
- Little Smoky River valley

NTS Map Sheet: 83K, 83N

Municipality: MD of Smoky River; MD of Greenview

Natural Subregions: Dry Mixedwood, Lower Foothills; Central Mixedwood; Upper Foothills

Significance: Provincial

- one of few Grizzly Bear habitats (COSEWIC vulnerable) in the Foothills
- one of the most diverse streams in the Mixedwood Boreal Forest and Foothills of Alberta

Description:

- high landform diversity
- river has numerous meander scrolls, especially in the areas of low relief
- scenic canyons with erosional features
- adjacent areas support the most southerly herd of Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) in Alberta (outside the mountain parks)
- productive Arctic Grayling, Walleye, Mountain Whitefish, Burbot and Bull Trout habitat
- contains a rare fish, the Redside Shiner (distribution is limited to the Peace River drainage system)
- key movement corridor
- important habitat for Grizzly Bears (blue-listed species in Alberta, COSEWIC vulnerable species) in the area
- migratory birds (in particular eagles, hawks, geese and shorebirds) and furbearers use the corridor extensively
- high potential for the discovery of prehistoric and historic archeological resources
- adjacent areas dominated by mature coniferous forest and organic fens
- key Elk, Moose and Mule Deer habitat
- ungulate winter range
- contains the Redside Shiner, a rare fish (distribution is limited to the Peace River drainage system)
- runs through the Little Smoky-Iosegun Natural Area

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- D. Moyles, pers. comm
- D. Hervieux, pers. comm
- Alberta Natural Resources Service files
- Nelson (1994)
- Nelson and Paetz (1992)
- Ojamaa (1976)
- Walty (1996) pers. comm

ESA: BOREAL

Name: Little Smoky-Iosegun Natural Area

Area (ha): 1618

Location:

- Twp. 66 - Rge. 22 - W5
- junction of Little Smoky and Iosegun Rivers

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- part of one of the most diverse streams in the Central Mixedwood Boreal Forest of Alberta

Description:

- due to its location at the confluence of three rivers, this area includes numerous features such as the riparian features of the Little Smoky, Iosegun and Waskahagan Rivers, undulating to gently rolling upland and flat floodplain terraces, fens, meadows, shrublands, meander scars and sloughs
- supports aspen, balsam poplar and mixedwood stands
- key ungulate habitat
- contains a mineral lick

Management Considerations:

- this area is covered by a protective notation and has been identified for conservation purposes

References:

- Alberta Natural Resources Service files
- Nelson (1994)
- 1996 field notes

ESA: PINCHER CREEK

Name: Livingstone Range

Area (ha): 257

Location:

- Twp. 7 and 8 - Rge. 3 - W5
- eastern side Livingstone Range north of Burmis

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane; Subalpine

Significance: Provincial

- magnetite deposits are rare in Alberta; it is unclear whether the bulk of this deposit lies within the Forest Reserve to the west

Description:

- mid to lower slopes of Livingstone Range
- mixture of woodland, grassland and willow shrubbery
- key Mountain Sheep habitat
- magnetite deposits in Twp. 7 - Rge. 3 - W5

Management Considerations:

- heavy grazing reduces the suitability of the area for wildlife

References:

- Fish and Wildlife key area maps
- J. Godfrey (personal communication) regarding magnetite deposit

ESA: DRY MIXEDWOOD

Name: Long Lake

Area (ha): 1780

Location:

- Twp. 63 - Rge. 19 - W4
- Long Lake

NTS Map Sheet: 83I

Municipality: County of Thorhild; County of Athabasca

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the most diverse valleys in the Dry Mixedwood of Alberta

Description:

- includes deep glacial spillway
- significant waterfowl production and staging lake
- large flocks of ducks and geese staging on lake during aerial survey
- part of a significant White-tailed Deer and Moose wildlife corridor
- lake has development on west
- increased recreational activity may decrease significance of lake
- important sport fishery

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Westworth (1990)
- Landlis (pers. comm. 1995)
- Wildlife Key area Maps
- Fisheries inventory maps
- field notes (1995)

ESA: CYPRESS; NEWELL

Name: Louisiana Lakes

Area (ha): 51201

Location:

- Twp. 16 to 19 - Rge. 10 to 13 - W4
- uplands and wetlands in the vicinity of the Louisiana Lakes east of Brooks

NTS Map Sheet: 72L

Municipality: County of Newell; MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- provincially significant for staging ducks and locally important for staging geese
- provincially significant numbers and variety of rare birds of prey

Description:

- open water, extensive marshes and islands associated with irrigation developments
- waterfowl staging and production area, mainly for puddle ducks but also for diving ducks and grebes
- diversity of shorebirds and marshbirds
- Double-crested Cormorant and gull colonies
- numerous ephemeral saline wetlands
- shorebird staging area
- American White Pelican feeding area
- includes adjacent native mixed grassland
- abundant Richardson ground squirrel and associated American Badger and Long-tailed Weasel populations
- unusual flat terrain nesting area for rare birds of prey, including the threatened Ferruginous Hawk
- important feeding area for Prairie Falcons and Golden Eagles
- COSEWIC endangered birds including Burrowing Owls and yellow-A listed Baird's Sparrows
- rare plants including woolly-heads (*Psilocarphus elatior*); a rare species in Canada

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals upon which rare birds of prey are dependent
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey

References:

- Brechtel (1981) and Poston et al (1990)
- Smith and Dickson (1989) for shorebirds
- 1991 field notes
- Fish and Wildlife key area maps
- Poston et al (1990)

ESA: RED DEER; STETTTLER

Name: Lousana Canyon

Area (ha): 7205

Location:

- Twp. 35 to 39 - Rge. 21 to 22 - W4
- valley of Red Deer River, and some adjacent upland, from Tail Creek south to McKenzie Crossing

NTS Map Sheet: 83A

Municipality: County of Red Deer; County of Stettler

Natural Subregions: Central Parkland

Significance: Provincial

- some of the best-developed mass-wasting valley features and associated diverse habitats in the Parkland Region of Alberta

Description:

- narrow, deep valley of the Red Deer River
- includes small patches of adjacent upland parkland
- diversity of habitats ranging from white spruce and aspen woodlands to a variety of tall and low shrub communities and wetlands
- mature balsam poplar woodlands
- minor badlands
- extensive slump blocks and perched wetland development with regionally uncommon plant species, including reed (*Phragmites australis*)
- nesting area for birds of prey including Prairie Falcon, a rare species in the region
- diversity of breeding birds
- regionally uncommon bird species, including Pileated Woodpecker and Rock Wren
- key Mule Deer and White-tailed Deer habitat
- priority habitat for duck staging, goose production and non-game migratory birds
- small patches of clearing and cultivation
- includes four Natural Areas (Lousana, Nevis, Delburne and Wood Lake)
- Northern Leopard Frog, a species which has been in decline through central Alberta
- regionally uncommon plant species, including Indian breadroot (*Psoralea esculenta*)

Management Considerations:

- additional clearing will further reduce the attractiveness of the area for a variety of wildlife
- heavy cattle use in perched wetland complexes reduces the suitability of these areas for wildlife and uncommon plants

References:

- Wallis (1977) and Canadian Wildlife Service (1979)
- Fish and Wildlife key area maps
- 1988 and 1989 field notes
- Cottonwood Consultants (1986a) for rare plants
- Natural and Protected Areas Program files

ESA: STETTLER

Name: Lowden Wetlands

Area (ha): 3554

Location:

- Twp. 36 to 38 - Rge. 18 to 19 - W4
- Lowden, Oxyoke, Ross, Lonepine and Burnett Lakes and adjacent alkali ponds; also Cameron Lake
- includes adjacent grassland and parkland

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Central Parkland

Significance: National

- Piping Plover (Alberta red-listed and COSEWIC endangered species) nesting area

Description:

- discontinuous alkali lakes and ponds in cultivated uplands
- nesting habitat for Piping Plovers (an endangered species in Canada) at Lowden Lake; potential habitat in other wetlands
- potential shorebird staging areas
- waterfowl production and staging in wet years
- productive deep marsh at Cameron Lake
- Baird's Sparrows and Sprague's Pipits, regionally uncommon bird species, in grassy backshores
- yellow lady's-slipper (*Cypripedium calceolus*), a regionally uncommon plant, at Ross Lake

Management Considerations:

- drainage would reduce the attractiveness of the area for shorebirds and waterfowl
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production
- heavy grazing can have negative impacts on nesting Piping Plovers

References:

- Wershler and Wallis (1987) and COSEWIC (1988) for Piping Plovers
- Fish and Wildlife key area maps
- 1988 field notes
- Buffalo Lake Naturalists (personal communication) regarding *Cypripedium calceolus*



ESA: CARDSTON; WILLOW CREEK

Name: Lower Belly River

Area (ha): 4565

Location:

- Twp. 7 to 8 - Rge. 24 to 25 - W4
- valley of the Belly River from the junction of the Waterton River upstream to Glenwood and downstream to McNab Coulee

NTS Map Sheet: 82H

Municipality: MD of Cardston; MD of Willow Creek

Natural Subregions: Mixedgrass; Foothills Fescue

Significance: National

- some of the most extensive narrow-leaved cottonwood riparian habitats in Canada
- extensive and productive riparian habitats are very localized in Alberta and are some of the most threatened habitats in arid and semi-arid regions of the world
- lightly grazed narrow-leaved cottonwood habitats are particularly uncommon

Description:

- extensive narrow-leaved cottonwood riparian woodland, shrubbery and channel wetlands
- includes some excellent sections; the largest and most lightly grazed areas are located at the junction of the Belly and the Waterton Rivers and in Section 27 - Twp. 6 - Rge. 25 - W4; Section 32 - Twp. 5 - Rge. 25 - W4 and 5; and Sections 8 and 9 - Twp. 5 - Rge. 26 - W4
- diverse breeding bird populations
- Great Blue Heron colony in Section 27 - Twp. 6 - Rge. 25 - W4
- open to lush understory vegetation
- key White-tailed Deer habitat
- includes Eagleson-Keewaters Ducks Unlimited project near McNab Coulee
- some waterfowl and shorebird production

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife and affects the regeneration of cottonwoods
- altered stream flow affects the reproduction of cottonwood forests
- clearing and cultivation eliminate habitat diversity
- Great Blue Herons are sensitive to human presence during the nesting season

References:

- 1986 and 1988 field notes
- Fish and Wildlife key area maps
- Wallis (1980 and 1987), Cottonwood Consultants (1983), Achuff et al. (1988) for riparian description and significance
- Bradley (1988), Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems

ESA: TABER

Name: Lower Bow Dunes

Area (ha): 8104

Location:

- Twp. 11 and 12 - Rge. 12 to 15 - W4
- uplands on west side of Bow River north of the junction with the Oldman River

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: National

- diversity of sand dune plants which are rare in Alberta or Canada
- *Abronia micrantha* is rare in Canada and this area contains the largest known population
- *Astragalus lotiflorus* and *Astragalus kentrophyta* are rare in Canada
- active sand blow-outs are rare in the mixed grasslands of Canada
- this area contains some of the largest and most productive Great Plains Toad breeding ponds in Canada
- major springs are rare in the grasslands

Description:

- native mixed grassland and sagebrush on sand dune terrain with active blowouts
- several rare plant species including *Astragalus lotiflorus* (low milk vetch), *Astragalus kentrophyta* (prickly milk vetch), *Lupinus pusillus* (low annual lupine), and *Abronia micrantha* (sand verbena - a COSEWIC threatened plant species)
- key Pronghorn habitat
- habitat for Grasshopper Sparrows and Lark Buntings (uncommon birds)
- feeding area for rare and threatened birds of prey which nest along the Oldman and Bow Rivers
- major spring
- breeding wetlands for Great Plains Toads (an Alberta red-listed species)
- waterfowl production and staging on wetlands in southern portion of this unit, including diving ducks, grebes and puddle ducks
- extensive oil and gas development, particularly in southern half

Management Considerations:

- active sand blowouts are essential to the long-term survival of most of the rare plants
- heavy grazing may be detrimental to some rare plant species and, in spring, to breeding Great Plains Toads
- clear, shallow water is required by Great Plains Toads for breeding
- cultivation eliminates many native plants and animals

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Westgate (1965), McPherson (1972) and Shetsen (1987) for surficial geology
- Cottonwood Consultants (1986a) for status of Great Plains Toads
- Borneuf (1976) for spring

ESA: EASTERN BOREAL

Name: Lower Christina River

Area (ha): 25496

Location:

- Twp. 86 - Rge. 5 - W4
- valley of Christina River near junction with the Clearwater

NTS Map Sheet: 74D

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse and intact river valleys in the Central Mixedwood of Alberta

Description:

- important sportfishery
- important Moose over-wintering habitat
- important raptor nesting area
- important Walleye spawning area
- other important fish: Lake Whitefish, Arctic Grayling, Mountain Whitefish, Northern Pike, Yellow Perch, Goldeye and Burbot
- diverse landforms including canyon and slumps

Management Considerations:

- maintenance of natural vegetation cover will help protect the full range of boreal forest species

References:

- Westworth & Associates (1990)

ESA: MODEL FOREST; FOOTHILLS

Name: Lower Pinto Creek

Area (ha): 13554

Location:

- Twp. 55 to 56 - Rge. 24 to 26 - W5
- valley of lower Pinto Creek and adjacent upland, and the mouth of Wroe Creek

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills; Lower Foothills

Significance: Provincial

- part of one of the most extensive and relatively undisturbed Upper Foothills habitat complexes in Alberta
- the largest of a handful of Mountain Goat populations in Alberta that exist in non-mountainous terrain

Description:

- contains a unique Mountain Goat population, isolated from other populations in the Rocky Mountains
- Upper Foothills habitats
- diverse valley habitats including grassy slopes, wet meadows, low shrubbery, and deciduous and coniferous woodland
- coniferous forest uplands
- back channel swamps and oxbows, springs
- cliffs and a spectacular, 200 metre deep valley
- reports of Fisher and Grizzly Bear (a COSEWIC vulnerable species)
- key terrestrial bird habitat
- key ungulate habitat
- critical terrestrial furbearer habitat
- habitat for Black-backed Woodpecker
- key fish habitat, including habitat for Bull Trout (being considered for COSEWIC listing) and, formerly, Arctic Grayling spawning

Management Considerations:

- permanent facilities and transportation corridors could negatively impact sensitive wildlife species and reduce habitat effectiveness for Grizzly Bear
- the full variety of habitats should be protected
- hunting would compromise this disjunct Mountain Goat population

References:

- Alberta Government (1984) and Alberta Environmental Protection (n.d.) for zoning
- Stelfox and Kerr (1962) and Penner and Jalkotzy (1982) for Mountain Goats
- Edson Fish and Wildlife (R. Hawryluk, personal communication) for key fish habitat
- Dan Wilson (personal communication) for Arctic Grayling spawning
- Semenchuk (1992) and Forestry, Lands and Wildlife (1991) for Black-backed Woodpecker
- Nagy et al (1989) for Grizzly Bear
- Achuff and Wallis (1992) for significance as a potential protected area (referenced as Lower Wildhay River region)
- aerial photograph interpretation for habitat diversity

ESA: CARDSTON

Name: Lower St. Mary River

Area (ha): 4915

Location:

- Twp. 23 - Rge. 5 - W4
- St. Mary River valley below St. Mary Reservoir to junction with Pothole Creek

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue; Mixedgrass

Significance: Provincial

- rich ammonite fossil beds are rare in Alberta
- magnificent sections of Bearpaw formation; among the best in Alberta

Description:

- grassy and rocky valley of the St. Mary River
- key Mule Deer and White-tailed Deer habitat
- massive rock outcrops with abundant ammonite fossils
- saline oxbow lake and reverse geological fault at junction of St. Mary River and Pothole Creek

Management Considerations:

- heavy grazing reduces the suitability of valley habitats for a variety of wildlife
- clearing and cultivation eliminate habitat diversity

References:

- Fish and Wildlife key area maps
- Russell and Landes (1940) for geological data

ESA: WARNER

Name: Lower Sweetgrass Hills

Area (ha): 2197

Location:

- Twp. 1 - Rge. 11, 12 and 13 - W4
- lower slopes of Sweetgrass Hills south of Writing-on-Stone

NTS Map Sheet: 72E

Municipality: County of Warner

Natural Subregions: Mixedgrass

Significance: National

- includes one of six igneous intrusive dikes on the plains of Canada
- only location for *Carex nebrascensis* in Canada
- concentration of rare and disjunct plants
- only outcrop of Alberta Formation rock on the plains
- Milk River Formation outcrops are very restricted in Canada

Description:

- well-managed mixedgrass grassland with foothills grassland components
- lush foothills grassland, diverse coulee shrubbery, massive sandstone rock outcrops of the Milk River Formation, moist stream meadows and aspen woodland
- diverse bird, butterfly and plant habitats
- many disjunct and rare plants including tufted hymenopappus (*Hymenopappus filifolius*), Nebraska sedge (*Carex nebrascensis*), nodding microseris (*Microseris nutans*), American pellitory (*Parietaria pensylvanica*), western hawksbeard (*Crepis occidentalis*), one-spike oat-grass (*Danthonia unispicata*) and slender yellow cress (*Rorippa tenerrima*)
- Yellow-bellied Marmots, an uncommon mammal in Alberta
- rare igneous intrusive dike in LSD 5, Section 18 - Twp. 1 - Rge. 11 - W4
- key Mule Deer and White-tailed Deer habitat
- isolated outcrop of Alberta Formation rock in Section NW32 - Twp. 1 - Rge. 12 - W4
- Sharp-tailed Grouse dancing grounds

Management Considerations:

- heavy grazing would reduce key plant populations
- cultivation eliminates many native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Russell and Landes (1940) and Irish (1967a) for geological features

ESA: MODEL FOREST; FOOTHILLS

Name: Lower Wildhay River

Area (ha): 23314

Location:

- Twp. 53 to 58 - Rge. 23 to 27 - W5
- lower stretches of Wildhay River valley and portions of adjacent upland, including Unnamed creeks

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- part of one of the most extensive and relatively undisturbed Upper and Lower Foothills fish and wildlife habitat complexes in Alberta

Description:

- Lower Foothills in the northern half; Upper Foothills in southern portions
- very diverse, extensive river valley habitats, including: deciduous, mixed and coniferous woodland (with stands of old white spruce, fir and lodgepole pine)
- variety of wetlands in the valley and adjacent uplands: fens, marshes, oxbows, meadows, Beaver pond complexes and patterned wetlands
- outwash and glacial sand deposits
- habitat for River Otter and Cougar
- key Elk, Moose and deer habitat
- habitat for Barred Owl, Black-backed Woodpecker, and Fisher
- key habitat for a diversity of fish species including Bull Trout (being considered for COSEWIC listing)

Management Considerations:

- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- several bird species require mature and older stands
- ungulates are sensitive to human activities on critical winter ranges
- the full variety of habitats should be protected

References:

- Alberta Government (1984) and Alberta Environmental Protection (n.d.) zoning
- Semenchuk (1992) for Black-backed Woodpecker
- Edson Fish and Wildlife (R. Hawryluk, K. Smith, personal communication) for Bull Trout and ungulates
- Achuff and Wallis (1992) for significance as a potential protected area
- aerial photograph interpretation for habitat diversity

ESA: BOREAL; POSTON

Name: Lubicon Lake

Area (ha): 4285

Location:

- Twp. 85 - Rge. 13 - W5
- Lubicon Lake

NTS Map Sheet: 84B

Municipality: MD of East Peace

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- significant duck staging site
- excellent waterfowl production and staging site
- south shore of lake is excellent Moose habitat
- American White Pelican sighted in 1996 field survey
- fish species include Northern Pike and Walleye
- aspen dominated uplands

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes



ESA: PINCHER CREEK

Name: Lynch Lakes

Area (ha): 3423

Location:

- Twp. 4 and 5 - Rge. 30 - W4
- 15 km S of Pincher Creek

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Montane; Foothills Fescue

Significance: Provincial

- very few lightly grazed areas of diverse foothills parkland remain in Alberta

Description:

- extensive willow and aspen with some wetlands
- appears to be more aspen parkland than montane despite placement on Natural Regions map; theme analysis based on Foothills Parkland representation
- diversity of breeding bird habitats
- moderate potential for rare plants
- parts are lightly grazed

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and animals
- clearing and cultivation eliminate many native plants and animals

References:

- 1986 field notes

ESA: VULCAN

Name: Majorville

Area (ha): 40989

Location:

- Twp. 17 to 19 - Rge. 18 to 21 - W4
- south and east of Majorville

NTS Map Sheet: 82I

Municipality: County of Vulcan

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: Provincial

- one of the few sizeable areas of well-managed native mixed grassland in Alberta

Description:

- well-managed native mixed grassland on rolling hummocky moraine
- several pairs of nesting Burrowing Owls, a COSEWIC endangered species
- feeding area for a variety of rare birds of prey including Golden Eagle, Prairie Falcon and Ferruginous Hawk (a COSEWIC vulnerable species)
- important for wintering and migrating birds of prey, including Snowy Owls and Rough-legged Hawks
- numerous wetlands, with some waterfowl production, especially in southwestern portions in wetter years
- major waterfowl production and staging ponds are found in
- Sections 36 - Twp. 17 - Rge. 21 - W4 and 3 - Twp. 18 - Rge. 21 - W4
- includes Ducks Unlimited project "Mason"
- Mule Deer habitat

Management Considerations:

- cultivation eliminates many native plants and animals
- a diversity of grazing regimes is needed to maintain a variety of native plants and animals
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey

References:

- 1987 field notes
- Stalker (1965) for surficial geology
- Wayne Smith (personal communication) regarding birds of prey

ESA: DRY MIXEDWOOD; POSTON

Name: Maloney Lake

Area (ha): 657

Location:

- Twp. 63 - Rge. 3 - W4
- Maloney Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant Black Tern breeding habitat

Description:

- small lake with irregular shoreline
- Great Blue Heron colony
- Black Tern colony
- Eared Grebe colony
- significant waterfowl production and nesting lake
- Northern Pike sport fishery

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Wildlife key area maps
- field notes (1995)

ESA: DRY MIXEDWOOD; POSTON

Name: Manatokan Lake

Area (ha): 843

Location:

- Twp. 63 - Rge. 7 - W4
- Manatokan Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- significant waterfowl production and staging lake
- Poston lists as provincially significant Eared Grebe breeding habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: STURGEON; POSTON

Name: Manawan (Egg) Lake

Area (ha): 1760

Location:

- Twp. 57 - Rge. 25 - W4
- Manawan Lake

NTS Map Sheet: 83H

Municipality: MD of Sturgeon

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- recognized in past reports, when combined with Big Lake, as excellent waterfowl habitat (provincial significance)
- many attributes complement nearby Big Lake, adding to Manawan Lake's value (provincial significance)
- excellent wetland habitat; designated as a Wetlands For Tomorrow site
- very important for the staging and migration of waterfowl; recognized by the Edmonton Bird Club as an important area
- emergency water supply for the town of Legal
- no significant limitation to waterfowl production; waterfowl may alternate use of Manawan Lake with Deadman Lake during the fall staging, increasing the importance of each as a staging lake
- excellent riparian habitats
- large colony of Marsh Wren; one of the most northerly colonies in the province
- the area of the lake is used by Snowy Owls during late fall and winter
- lake may support a Franklin's Gull colony
- muskrats are abundant

in spring, the surrounding farmland and wetland along the west shore provide important sheetwater areas used by waterfowl, shorebirds, gulls and other species

Management Considerations:

- agricultural activities impact the shoreline environment to some extent; shoreline fencing could improve wetland habitat
- the lakeshore and wetland bordering the lake have a high environmental sensitivity to disturbance

References:

- Ealey (pers. comm. 1988)
- Brown (1988)
- Kemper and Doberstein (1977)
- Ducks Unlimited files

ESA: CYPRESS; POSTON

Name: Many Island Lake

Area (ha): 19316

Location:

- Twp. 13 to 14 - Rge. 1 to 2 - W4
- Many Island Lake north of Walsh, includes part of Box Elder Creek

NTS Map Sheet: 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: National

- nationally important staging area for ducks

Description:

- large playa lake with extensive marshes in wetter years
- mixed grassland on rolling sand plain terrain
- waterfowl staging and production
- varied birdlife in wetter years including Eared Grebes, Canada Geese, Wilson's Phalaropes, American Avocets, Marbled Godwits, Willets, Franklin's Gulls, Common Terns, Black Terns, Gadwall, American Wigeon, Shoveler, Blue-winged Teal, Mallard, Northern Pintail, Lesser Scaup, Canvasback, Redhead, Red-winged Blackbird, Yellow-headed Blackbird, Ruddy Duck, and Marsh Wrens
- rare or vulnerable species including Baird's Sparrow, Plains Hognose Snake and Ferruginous Hawk
- one of a handful of areas in Alberta with extensive areas of alkali silt dunes vegetated by greasewood communities
- key Mule Deer and Pronghorn habitat

Management Considerations:

- relative stability in the water levels and maintenance of natural habitat in surrounding lands will keep productivity high, especially during wetter years

References:

- Munro (1929), Wallis and Wershler (1988)
- Coupland (1973)
- Fish and Wildlife key area maps
- 1991 field notes

ESA: CYPRESS; FORTY MILE

Name: Manyberries Creek Badlands

Area (ha): 26581

Location:

- Twp. 4 to 5 - Rge. 3 to 5 - W4
- prominent hill system east of Manyberries

NTS Map Sheet: 72E

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: National

- one of a handful of sites with significant populations of Short-horned Lizards in Canada
- the largest known stands of runcinate-leaved rush-pink in Canada

Description:

- extensive grasslands and badlands with intriguing juniper patterning on sandier soils
- extensive riparian tall shrubbery along southeastern drainages
- saline springs with diverse butterfly populations
- rare plants including one-spike oat-grass (*Danthonia unispicata*), Watson's knotweed (*Polygonum watsonii*), and extensive patches of runcinate-leaved rush-pink (*Stephanomeria runcinata*), a rare species in Canada
- extensive Short-horned Lizard habitat
- key Mule Deer habitat
- nesting area for COSEWIC species including vulnerable Ferruginous Hawks and endangered Burrowing Owls

Management Considerations:

- cultivation reduces the suitability of these habitats for a range of grassland plants and animals
- grouse can be disturbed by human activity in the vicinity of the dancing grounds
- petroleum development may adversely affect significant populations of Short-horned Lizards and runcinate-leaved rush-pink

References:

- Fish and Wildlife key area maps
- 1991 field notes

ESA: PINCHER CREEK

Name: Margaret Lake

Area (ha): 1216

Location:

- Twp. 3 and 4 - Rge. 30 - W4
- 5 km W of Twin Butte

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Parkland; Montane

Significance: Provincial

- few extensive areas of diverse foothills parkland remain in Alberta
- one of a handful of nesting areas for Trumpeter Swans in southern Alberta

Description:

- extensive aspen foothills parkland and wetland complex
- diverse breeding bird habitats
- uncommon plants; moderate potential for rare plants
- nesting area for Trumpeter Swans (rare birds)
- key Elk habitat

Management Considerations:

- heavy grazing reduces the suitability of this area for a variety of native plants and wildlife
- clearing and cultivation eliminate many native plants and animals
- minimizing human disturbance during nesting and maintaining the surrounding natural habitat will keep the area attractive to swans

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Mr. Fitzpatrick, local lessee, personal communication



ESA: BOREAL

Name: Margaret Lake

Area (ha): 9108

Location:

- Twp. 115 - Rge. 9 - W5
- Margaret Lake, Caribou Mountains

NTS Map Sheet: 84J

Municipality: MD of Mackenzie

Natural Subregions: Subarctic

Significance: Provincial

- Margaret Lake retains the only authenticated breeding record of Red-throated Loons within Alberta
- one of the most significant and diverse Subarctic sites in Alberta

Description:

- excellent sport fishery
- fish species include Lake Whitefish, Lake Trout, Northern Pike, Cisco
- Burbot and Longnose Suckers
- surrounding upland provides important Caribou (blue-listed species in Alberta, COSEWIC vulnerable species) habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Höhn and Marklevitz (1974); Höhn and Burns (1975, 1976a and b) and Höhn and Weseloh (1978) for birds
- Millson 1996 pers. comm
- Semenchuk (1992)
- Walty (1996) pers. comm

ESA: BIRCH MOUNTAINS

Name: Marguerite River Dissected Kame

Area (ha): 1668

Location:

- Twp. 100 - Rge. 1 - W4
- 20 km east of Johnson Lake

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- an excellent example of this terrain feature in northeastern Alberta

Description:

- deeply dissected kame deposits
- ice contact feature composed of coarse sand and gravel, with large boulders
- topography is rolling with local relief of 30-200 m

Management Considerations:

:

- fragile, sensitive to surface disturbance

References:

- 1992 field observations
- Fairbarns (1979a, b)

ESA: STETTLER; POSTON

Name: Marion-Shooting Lakes

Area (ha): 9525

Location:

- Twp. 37 - Rge. 16 to 18 - W4
- Marion and Shooting Lakes
- includes adjacent parkland and wetlands

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Central Parkland; Northern Fescue

Significance: Provincial

- Poston lists as provincially significant Black-crowned Night Heron and duck breeding habitat
- productive and diverse wetlands are important elements of the Parkland Region

Description:

- staging, moulting and production wetlands for waterfowl -- Shooting Lake is especially important
- diverse wetlands from shallow sedge meadows to deep bulrush-cattail marshes and open water; extensive marsh development and mudflats
- part of one of the largest areas of unbroken solonchic grassland in the region
- Baird's Sparrows and Upland Sandpipers, uncommon bird species in the region, in grassy backshores
- Great Blue Heron feeding habitat, concentrations of terns and gulls, and possible Black-crowned Night-Heron colony at Shooting Lake
- shorebird staging, especially at Marion Lake
- diversity of breeding marsh and shore birds
- hawthorn (*Crataegus rotundifolia*), a regionally uncommon plant, on islands in Marion Lake

Management Considerations:

- drainage would reduce the attractiveness of the area for shorebirds and waterfowl
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production

References:

- Fish and Wildlife key area maps
- Doberstein (1978) for water birds
- 1988 field notes

ESA: FOOTHILLS

Name: Marshybank Ecological Reserve

Area (ha): 1048

Location:

- Twp. 44 - Rge. 20 - W5
- Marshybank Lake area

NTS Map Sheet: 83C

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills

Significance: Provincial

- one of the most diverse Upper Foothills areas in Alberta

Description:

- a diversity of organic and mineral wetlands
- calcareous and marl pools and tufa deposits present in area
- high plant community diversity and rare plant species, including *Primula egalikensis*

Management Considerations:

- maintenance of upland cover will keep the area attractive for a variety of foothills species

References:

- O'Leary (1988)
- Bentz et al. (1986)

ESA: FOOTHILLS

Name: Marten Mountain

Area (ha): 16337

Location:

- Twp. 75 - Rge. 5 - W5
- Marten Mountain Upland
- includes part of Lesser Slave Lake Provincial Park

NTS Map Sheet: 83O

Municipality: MD of Lesser Slave River

Natural Subregions: Lower Foothills

Significance: Provincial

- eastern-most foothills outlier in the province

Description:

- capped by late Tertiary unconsolidated sands and preglacial gravels
- high landform diversity
- unique plant communities including disjunct populations of lodgepole pine, devil's club and dwarf bramble
- extensive peatland complexes with patterned fens and horizontal fens
- Lily Lake
- includes part of Lesser Slave Lake Provincial Park

Management Considerations:

- maintenance of natural cover will keep the area attractive for a variety of foothills species

References:

- Wildlife key area maps
- Fisheries inventory maps
- Bentz and Saxena (1993)
- Bradley (1980)
- Natural and Protected Areas files

ESA: BOREAL

Name: Maybelle River Sand Hills

Area (ha): 51855

Location:

- Twp. 106 - Rge. 7 - W4
- sand hills near Maybelle River

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood, Peace River Lowlands; Athabasca Plain

Significance: National

- part of a nationally significant dune field with unique dune formations

Description:

- an area of active parabolic sand dunes dominated by pine forest

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- dune areas are particularly sensitive to motorized vehicle use

References:

- Jaques (1987)
- Mulira (1986)
- 1996 field notes

ESA: CYPRESS

Name: McAlpine Creek

Area (ha): 6266

Location:

- Twp. 10 to 11 - Rge. 1 to 2 - W4
- McAlpine and Mackay Creeks and associated uplands south of Walsh

NTS Map Sheet: 72E

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: Provincial

- one of a handful of Cypress Hills-influenced, diverse creek systems which occur in Alberta
- includes part of one of the most important Pronghorn winter ranges in Alberta

Description:

- diverse riparian woodland and shrubbery along permanent creeks
- associated mixed grassland on uplands
- key Pronghorn, Mule Deer and White-tailed Deer habitat
- threatened species including Leopard Frog
- rare plants including tall meadow rue (*Thalictrum dasycarpum*)
- variety of breeding birds

Management Considerations:

- clearing and cultivation reduces the suitability of these habitats for a variety of wildlife species
- heavy grazing in wooded areas may reduce wildlife populations, including rare plants

References:

- Fish and Wildlife key area maps
- 1991 field notes

ESA: POSTON; EASTERN BOREAL

Name: McClelland Lake

Area (ha): 6405

Location:

- Twp. 98 - Rge. 9 - W4
- McClelland Lake

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant staging duck habitat

Description:

- hydrologically important lake
- important waterfowl staging area
- important Bald Eagle nesting area

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)



ESA: EASTERN BOREAL

Name: McClelland Lake Fen

Area (ha): 3071

Location:

- Twp. 97 - Rge. 9 - W4
- McClelland Lake area, east side of Athabasca River

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most significant and largest patterned fens in Alberta

Description:

- rare vegetation species
- significant plant species
- Sandhill Crane nesting area

Management Considerations:

- maintenance of natural cover will keep the area attractive for a variety of boreal species

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: McClelland Lake Sinkholes

Area (ha): 2052

Location:

- Twp. 98 - Rge. 9 - W4
- McClelland Lake area, east side of Athabasca River

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- sinkhole features are rare in Alberta's boreal forest

Description:

- significant sinkhole features (string of 12 karst lakes in mixedwood forest)
- hydrologically important lake

Management Considerations:

- sinkholes can be impacted by adjacent developments affecting the aquifers

References:

- Westworth & Associates (1990)

ESA: POSTON

Name: McCullough Lake

Area (ha): 159

Location:

- Twp. 60 - Rge. 11 - W
- McCullough Lake

NTS Map Sheet: 73L

Municipality: County of St. Paul

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- small boreal forest lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: VULCAN; POSTON

Name: McGregor Lake

Area (ha): 8860

Location:

- Twp. 15 to 18 - Rge. 21 and 22 - W4
- McGregor Lake and surrounding valley

NTS Map Sheet: 82I

Municipality: County of Vulcan

Natural Subregions: Mixedgrass

Significance: National

- Poston lists as nationally significant American White Pelican non-breeding habitat
- numbers of American White Pelicans at McGregor Lake are some of the highest observed in Alberta

Description:

- large reservoir with little marsh development
- major waterfowl staging and production area
- large numbers of American White Pelicans feed on the reservoir
- includes adjacent native mixed grassland
- habitat for shorebird production and migration, especially at north end of reservoir

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl and shorebirds

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Wayne Smith and Harold Pinel (personal communication) regarding waterfowl

## ESA: MODEL FOREST

Name: McLeod River Headwaters

Area (ha): 8885

Location:

- Twp. 45 to 46 - Rge. 22 to 24 - W5
- Front Range Mountains: Tripoli, Cheviot and Prospect; Miette Range; Drummond, Thornton and Prospect Creeks; small portions of Whitehorse and Cheviot Creeks; high terrain north of Cardinal River

NTS Map Sheet: 83C

Municipality: MD of Yellowhead

Natural Subregions: Alpine and Subalpine

Significance: National

- together with Cardinal River headwaters, one of the most extensive, continuous vegetated Alpine in the Front Ranges of the Rocky Mountains

Description:

- extensive and diverse Alpine and Subalpine habitats including meadows, spruce-fir and lodgepole pine forests, and willow-dwarf birch shrubbery
- abundant and diverse periglacial features (patterned ground)
- diversity of geomorphological features
- provincially rare vegetation type
- an everlasting-boreal wormwood herb community
- nationally and provincially uncommon, rare and disjunct plant and invertebrate species
- habitat for Bull Trout and Grizzly Bear, a COSEWIC vulnerable species
- key habitat for Elk and Bighorn Sheep
- diverse breeding bird habitat
- habitat for Wolf, Wolverine (a COSEWIC vulnerable species in Canada) and Fisher

Management Considerations:

- Alpine tundra is vulnerable to disturbance
- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and access roads reduce habitat effectiveness for Grizzly Bear
- current prohibitions on motorized recreational access should be maintained on all Zone 1 and 2 lands
- wildlife and erosion problems associated with motorized recreational use should be monitored and, if warranted by declining wildlife or expanding erosion problems, there should be full closure of all lands to motorized use including designated access corridors

References:

- Alberta Forestry, Lands and Wildlife (1990) for zoning and access
- draft access management plan for the Coal Branch
- Alberta Forestry, Lands and Wildlife (1990) for Elk and Bighorn Sheep
- Alberta Ecological Survey (1977) and Komex Int. Ltd. (1992)
- Salt (1985 a & b) for birds and mammals
- Packer and Vitt (1974), Natural Areas Program (1983), and Mortimer (1978) for rare plants
- Belicek (1976), Daborn (1976), Clifford and Bergstrom (1976) and Pike (1978) for invertebrates
- Natural and Protected Areas file material
- Edson Fish and Wildlife (R. Hawryluk, personal communication) for Bull Trout
- draft access management plan for the Coal Branch

ESA: PEACE RIVER

Name: McNaught Lake

Area (ha): 248

Location:

- Twp. 71 - Rge. 10 - W6
- McNaught Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- significant Trumpeter Swan nesting (a blue listed species in Alberta)
- key waterfowl moulting and staging
- Great Blue Heron colony

Management Considerations:

- Great Blue Herons are sensitive to human activities in the vicinity of nesting colonies

References:

- NAWMP, unpubl. data
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm

ESA: POSTON

Name: Meinsinger Lake

Area (ha): 23

Location:

- Twp. 15 - Rge. 2 - W5
- Meinsinger Lake

NTS Map Sheet: 82J

Municipality: MD of Ranchland

Natural Subregions: Foothills Parkland

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- small wetland in Foothills Parkland environment

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Merryweather Lake

Area (ha): 1971

Location:

- Twp. 119 - Rge. 20 - W4
- Merryweather Lake

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the more productive lakes in the Central Mixedwood Boreal Forest of Alberta

Description:

- 10-12 American White Pelicans observed during 1996 field survey
- the east end of the lake provides excellent habitat for waterfowl production
- good waterfowl staging wetland
- hydrologically significant

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- 1996 field notes



ESA: PARKLAND

Name: Metiskow Lake

Area (ha): 305

Location:

- Twp. 40 - Rge. 5 - W4
- Metiskow Lake, west of Metiskow

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: National

- breeding area for Piping Plover
- important spring staging for migrant shorebirds

Description:

- large number (20, 000) shorebirds staging on lake in spring
- contains brine shrimp which are an important food source for many shorebirds including Sanderlings
- breeding area for Piping Plovers, a COSEWIC endangered species in Canada and a red-listed species in Alberta

Management Considerations:

- maintenance of natural shorelines will keep the area attractive to a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Byersbergen (pers. comm. 1995)

ESA: MODEL FOREST; FOOTHILLS

Name: Middle Berland River

Area (ha): 11650

Location:

- Twp. 58 - Rge. 23 to 26 - W5
- middle stretches of Berland River valley and a portion of adjoining upland

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- some of the most extensive and productive riparian woodland habitat in the Upper Foothills of Alberta
- one a handful of remote, relatively undisturbed and productive riparian woodland habitats in the Lower Foothills of Alberta

Description:

- very diverse Lower Foothills and, along western reaches, Upper Foothills riparian habitat, including mature spruce and poplar
- oxbows and springs
- critical ungulate habitat
- reports of River Otter
- patterned wetland with Sandhill Crane nesting habitat
- extensive coniferous upland forest
- important fishery
- habitat for Bull Trout (being considered for COSEWIC listing)

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could act as impediments to movement of sensitive wildlife species and should be kept out of the valley and immediately adjacent upland
- the full variety of habitats should be protected

References:

- Alberta Environmental Protection (n.d.) for zoning
- Tokarsky (1977) and Borneuf (1983) for springs
- Edson Fish and Wildlife (R. Hawryluk and K. Smith, personal communication) for Bull Trout and ungulates
- Christy Butt (personal communication) for Sandhill Crane
- Alberta Environmental Protection (n.d.) for fish
- Achuff and Wallis (1992) for significance as a potential protected area (referenced as Lower Wildhay River region)
- aerial photograph interpretation for habitat diversity

ESA: GRASSLAND; POSTON

Name: Middle Lakes

Area (ha): 6782

Location:

- Twp. 37 - Rge. 8 - W4
- south of the Neutral Hills

NTS Map Sheet: 73D

Municipality: Special Area 4

Natural Subregions: Northern Fescue

Significance: National

- breeding habitat for Piping Plover (COSEWIC endangered species)

Description:

- good representation of hummocky moraine,-sandy plain and wetland themes
- waterfowl production wetland and probably significant shorebird habitat
- Poston lists as provincially significant breeding duck habitat
- the only diverse alkali wetlands identified in the Northern Fescue

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- field notes (1995)
- Wildlife key area maps
- Natural and Protected Area Files

ESA: CYPRESS

Name: Middle Sand Hills

Area (ha): 12827

Location:

- Twp. 19 - Rge. 1 to 2 - W4
- Middle Sand Hills east of the South Saskatchewan River

NTS Map Sheet: 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- one of the most diverse sand dune habitats in the Mixedgrass region of Alberta
- concentration of significant sand dune features

Description:

- diverse sand plain, ephemeral wetlands and dune vegetation ranging from aspen woodland and a variety of tall and low shrubbery and grassland to active blow-outs
- rare, vulnerable, threatened or endangered species including Ord's Kangaroo Rats, Baird's Sparrow, Loggerhead Shrike, Ferruginous Hawk, Great Plains Toad, Plains Hognose Snake
- numerous Sharp-tailed Grouse dancing grounds
- key Mule Deer and Pronghorn habitat
- rare plants including bur ragweed (*Franseria acanthicarpa*), Pursh's milk-vetch (*Astragalus purshii*), annual skeletonweed (*Lygodesmia rostrata*), and the COSEWIC vulnerable smooth goosefoot (*Chenopodium subglabrum*)

Management Considerations:

- active sand blowouts are essential to the long-term survival of most of the rare plants
- heavy grazing may be detrimental to some rare plant species and, in spring, to breeding Great Plains Toads
- clear, shallow water is required by Great Plains Toads for breeding
- cultivation eliminates many native plants and animals

References:

- Wallis and Wershler (1988), Coupland (1973), and David (1977)
- Smith and Bradley (1990a) for rare plant status
- Clark (1984) for grouse
- Fish and Wildlife key area maps
- Cottonwood Consultants (1986a) for status of Great Plains Toads
- 1991 field notes

ESA: RED DEER

Name: Mikwan-Goosequill-Hummock Lakes

Area (ha): 3510

Location:

- Twp. 35 to 36 - Rge. 22 to 23 - W4
- Mikwan, Goosequill and Hummock Lakes and adjacent discontinuous aspen parkland and wetlands

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: National

- nesting Piping Plover, an endangered species, at Goosequill Lake

Description:

- alkali lakes and ponds
- important shorebird and waterfowl staging areas on Mikwan Lake
- extensive bulrush marsh east of southeast corner of Mikwan Lake
- diverse and productive habitats for waterfowl and shorebirds are localized in Alberta
- Mikwan is one of a limited number of important shorebird migration lakes in southern Alberta
- important for a variety of marshbirds and as a production and staging area for waterfowl, including diving ducks and grebes
- partially cleared upland with remnant patches of aspen parkland and fescue grassland
- key White-tailed Deer habitat

Management Considerations:

- maintenance of native vegetation cover on shorelines and backshore will keep the area attractive for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for wildlife

References:

- Fish and Wildlife key area maps
- 1989 field notes

ESA: FORTY MILE

Name: Milk River-Breed Creek

Area (ha): 17153

Location:

- Twp. 1 to 2 - Rge. 10 to 11 - W4
- Milk River valley and surrounding uplands from Black Coulee to Breed Creek

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: National

- part of the most extensive well-managed, mixed grassland area left in Canada

Description:

- well-managed extensive mixed grassland with shallow, diverse coulees
- key Mule Deer and White-tailed Deer habitat
- rare fish including Stonecat
- extensive (greasewood) *Sarcobatus vermiculatus* stands
- rare plants including Nebraska sedge (*Carex nebrascensis*), considered rare in Canada
- Sharp-tailed Grouse dancing grounds
- nesting area for Burrowing Owl, a COSEWIC endangered species
- part of the most diverse and largest continuous Mixedgrass habitat in Canada

Management Considerations:

- a diversity of grazing regimes is needed to maintain a variety of native plants and animals
- cultivation eliminates many native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Clayton and Ash (1980) for fish

ESA: FORTY MILE

Name: Milk River-Pakowki/Pinhorn

Area (ha): 44450

Location:

- Twp. 1 to 3 - Rge. 7 to 10 - W4
- uplands and valley along Milk River from Pakowki Coulee to the Pinhorn Grazing Reserve

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: National

- one of few well-managed, extensive mixed grassland areas left in the region; part of the most diverse and largest continuous Mixedgrass habitat in Canada

Description:

- extensive mixed grassland with rugged, diverse coulees
- impressive glacial spillway channel
- riparian woodlands, shrubbery, and wetlands
- diversity of breeding birds
- two igneous dikes near the mouth of Pakowki coulee and another along Philp Coulee
- key Pronghorn, Mule and White-tailed Deer habitat
- rare fish including Stonecat
- rare plants including prickly milk-vetch (*Astragalus kentrophyta*) and tufted hymenopappus (*Hymenopappus filifolius*), both considered rare in Canada
- nesting rare birds of prey including Prairie Falcon and Golden Eagle
- rare or vulnerable species including the Plains Hognose Snake, Ferruginous Hawk, Baird's Sparrow and Leopard Frog
- snake hibernacula (overwintering sites) in badlands and rock outcrops
- alkaline springs
- excellent bedrock exposures along coulees

Management Considerations:

- a diversity of grazing regimes is needed to maintain a variety of native plants and animals
- cultivation eliminates many native plants and animals
- altered stream flow affects the reproduction of cottonwood forests
- heavy grazing reduces the suitability of these habitats for a variety of plants and wildlife and affects the regeneration of cottonwoods
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses
- some birds of prey, e.g. Golden Eagle, are sensitive to human activity in parts of the nesting season

References:

- Coupland (1973) and Wallis (1976)
- Fish and Wildlife key area maps
- Willock (1968), Paetz and Nelson (1970), McAllister (1970) and Clayton and Ash (1980) for fish
- Wallis (1987) for riparian description and significance
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- Ollerenshaw and Hills (1978), Christiansen (1977) and Russell and Landes (1940) for geology

ESA: FORTY MILE; CYPRESS

Name: Milk River Canyon

Area (ha): 50061

Location:

- Twp. 1 to 2 - Rge. 4 to 7 - W4
- Milk River-Lost River area and associated uplands along the United States-Canada border

NTS Map Sheet: 72E

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: National

- the diversity of habitats and landscapes is unsurpassed in the mixed grasslands of Canada
- concentration of significant features
- contains populations of plants and animals which are rare in Canada, some of which occur nowhere else in Canada
- ungrazed habitats in the mixed grassland region of Canada are rare
- high concentration of rare plants, wildlife and fish, including some which are threatened or endangered
- clear flowing streams are rare in the grassland region
- significant archeological resources complement the natural features

Description:

- remote wilderness setting surrounding the spectacular canyon of the Milk River and the valley of the Lost River
- major concentration of significant features
- extensive rugged badlands and massive sandstone outcrops
- intriguing rock formations
- eskers, kames, drumlins
- one of the most spectacular igneous dikes on the Canadian Plains
- springs, including some which are ungrazed or lightly grazed
- diverse riparian woodlands, shrubbery, and wetlands
- minor sand dune area
- extensive lightly to ungrazed grasslands and wooded springs
- numerous rare and uncommon plants including one-spoke oatgrass (*Danthonia unispicata*), scratch grass (*Muhlenbergia asperifolia*), pellitory (*Parietaria pensylvanica*), Pursh's milk-vetch (*Astragalus purshii*), Watson's knotweed (*Polygonum watsonii*), plains boisduvalia (*Boisduvalia glabella*), green milkweed (*Asclepias viridiflora*), bur ragweed (*Franseria acanthicarpa*), annual skeletonweed (*Lygodesmia rostrata*), annual lupine (*Lupinus pusillus*), downy paintbrush (*Castilleja sessiliflora*), annual foxtail (*Hordeum pusillum*), bushy cinquefoil (*Potentilla paradoxa*), Nevada bulrush (*Scirpus nevadensis*), Rocky Mountain juniper (*Juniperus scopulorum*), hawksbeard spp. (*Crepis atrabarba* and *occidentalis*), soapweed (*Yucca glauca*), nodding umbrella-plant (*Eriogonum cernuum*), Moquin's sea-blite (*Suaeda moquinii*), Nebraska sedge (*Carex nebrascensis*), plains boisduvalia (*Boisduvalia glabella*), obscure evening-primrose (*Oenothera andina*), prickly milk-vetch (*Astragalus kentrophyta*), dwarf fleabane (*Erigeron radicans*), plains nothocalais (*Nothocalais cuspidata*), tufted hymenopappus (*Hymenopappus filifolius*), woolly-heads (*Psilocarphus elatior*), and the COSEWIC vulnerable smooth goosefoot (*Chenopodium subglabrum*) and COSEWIC threatened plant species, sand verbena (*Abronia micrantha*); many species are considered rare in Canada

continued on next page



Name: Milk River Canyon (continued)

Description:

- several rare, uncommon, vulnerable or endangered animals including Weidemeyer's Admiral Butterfly, Scriptura Skipper, Crenulated Grasshopper, Stonecat, Silvery Minnow, Brassy Minnow, Great Plains Toad, Northern Leopard Frog, Plains Hognose Snake, Short-horned Lizard, Western Painted Turtle, Golden Eagle, Burrowing Owl, Loggerhead Shrike, Baird's Sparrow, Violet-green Swallow, Lazuli Bunting, Black-headed Grosbeak, Bullock's form of the Northern Oriole, and Swift Fox
- several Swift Fox release sites
- Sharp-tailed Grouse dancing grounds
- Prairie Rattlesnake and Bull Snake hibernacula (overwintering areas)
- diversity of breeding birds
- nesting rare birds of prey including Prairie Falcon, Golden Eagle and Ferruginous Hawk, a COSEWIC vulnerable species
- key Pronghorn, Mule Deer, and White-tailed Deer habitat
- snake hibernacula (overwintering areas)

Management Considerations:

- a variety of grazing regimes from heavy to ungrazed is required to maintain the full variety of Mixedgrass species, e.g. Mountain Plovers require extremely heavily grazed range while Baird's Sparrows prefer pastures which have been idled for numerous years
- altered stream flow affects the reproduction of cottonwood forests
- heavy grazing reduces the suitability of these habitats for a variety of plants and wildlife and affects the regeneration of cottonwoods
- cattle usage and developments along creeks could reduce water quality, degrade springs and destroy spawning grounds for rare fish like the Silvery Minnow
- clearing and cultivation eliminate habitat diversity
- some birds of prey, e.g. Golden Eagle, are sensitive to human presence during portions of the nesting season
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- Coupland (1973) and Wallis (1976) and (1989)
- Fish and Wildlife key area maps
- Barendregt (n.d.-a), Russell and Landes (1940), Christiansen (1977), and Beaty (1975) for geology
- Smith and Bradley (1990a and b) for rare plant status
- Willock (1968), Paetz and Nelson (1970), McAllister (1970) and Clayton and Ash (1980) for fish
- Wallis (1987) for riparian description and significance
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- Scott-Brown et al. (1986) for Swift Fox
- Natural and Protected Area Program files
- 1991 field notes

ESA: CARDSTON

Name: Milk River Ridge-Northeast

Area (ha): 29523

Location:

- Twp. 2, 3 and 4 - Rge. 17 to 20 - W4
- northeast portion of Milk River Ridge

NTS Map Sheet: 82H

Municipality: County of Warner; MD of Cardston

Natural Subregions: Foothills Fescue; Mixedgrass

Significance: Provincial

- part of the only extensive area of foothills grassland in Alberta
- major Sharp-tailed Grouse habitats are very localized in Alberta

Description:

- key Pronghorn habitat in southern portion
- extensive foothills grassland
- numerous Sharp-tailed Grouse dancing grounds
- numerous wetlands, with some waterfowl production, especially in wetter years
- key Mule Deer habitat
- glacial spillway along Lonely Valley
- esker in the northwest part of Twp. 3 - Rge. 18 - W4

Management Considerations:

- heavy grazing will reduce the suitability of the area for many plants and wildlife
- cultivation eliminates many native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Clark (1984) for Sharp-tailed Grouse dancing grounds
- Beaty (1975) and Stalker (1963b) for surficial geology

ESA: WARNER

Name: Milk River Ridge-Northeast Slope

Area (ha): 7585

Location:

- Twp. 3 and 4 - Rge. 17, 18 and 19 - W4
- northeast slope of the Milk River Ridge west of Warner to Milk River Ridge Reservoir

NTS Map Sheet: 82H

Municipality: County of Warner

Natural Subregions: Foothills Fescue; Mixedgrass

Significance: Provincial

- part of the largest area of foothills grassland in Alberta

Description:

- deeply incised ravines with intervening ridges
- diverse ravine shrubbery and grassland
- several disjunct plants; moderate potential for rare plants
- diversity of breeding birds
- key White-tailed Deer habitat

Management Considerations:

- heavy grazing reduces the suitability of these areas for a wide variety of wildlife
- cultivation eliminates many native plants and animals

References:

- 1986 field notes
- Fish and Wildlife key area maps

ESA: CARDSTON

Name: Milk River Ridge-Northwest

Area (ha): 42973

Location:

- Twp. 2, 3 and 4 - Rge. 21, 22 and 23 - W4
- 20 km S of Magrath

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: National

- the most extensive area of well-managed foothills grassland in Canada
- the McIntyre Ranch comprises the largest part of this unit and is particularly well-managed

Description:

- lightly grazed fescue grasslands, wetlands and ravine shrubbery
- Ross Lake is a large open water body which is a major waterfowl moulting and staging area; grazing levels along the shoreline are low in many areas
- large wetlands in the vicinity of and including Reed Lake are major waterfowl production and staging areas and support diving ducks and Eared Grebes
- key Mule Deer and White-tailed Deer habitat
- numerous Sharp-tailed Grouse dancing grounds on uplands
- key Pronghorn habitat in southeastern portion
- report of a Sage Grouse dancing ground needs confirmation
- Yellow-bellied Marmots (uncommon mammal)
- historic Peregrine Falcon (endangered species) and current Ferruginous Hawk (vulnerable species) nesting area in Section 19 - Twp. 3 - Rge. 23 - W4
- several erratics of the McNeill Erratics Train

Management Considerations:

- continued light grazing will help maintain the diversity of plants and wildlife which inhabit the area
- cultivation would reduce habitat diversity and eliminate many native plants and animals
- maintenance of native grasslands provides feeding areas for birds of prey
- good potential for reintroduction of endangered species

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Clark (1984) for Sharp-tailed Grouse dancing grounds
- Canadian Wildlife Service (personal communication)
- Barendregt (n.d.-b) for erratics

ESA: CARDSTON

Name: Milk River Ridge-Unglaciaded

Area (ha): 3886

Location:

- Twp. 1 - Rge. 21 to 23 - W4
- unglaciaded portion of the Milk River Ridge

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue; Mixedgrass

Significance: National

- the Milk River Ridge contains one of three unglaciaded areas on the Plains of Canada
- numerous rare plants

Description:

- unglaciaded plateau of the Milk River Ridge, south of the Milk River
- numerous rare or disjunct plants including tufted hymenopappus (*Hymenopappus filifolius*), the COSEWIC vulnerable hare-footed locoweed (*Oxytropis lagopus*), gray hawksbeard (*Crepis intermedia*), and American thoroughwax (*Bupleurum americanum*)
- disjunct populations of clouded Parnassian butterflies (*Parnassius phoebus*)

Management Considerations:

- heavy grazing or cultivation would eliminate several rare plants
- gravel operations along plateau rims can have significant local impacts on rare plant communities

References:

- 1986 field notes
- N. Kondla (personal communication) for butterflies
- Shetsen (1980) and Stalker (1963b) for glacial geology

ESA: WARNER; POSTON

Name: Milk River Ridge Reservoir

Area (ha): 2233

Location:

- Twp. 5 - Rge. 19 and 20 - W4
- 10 km S of Raymond

NTS Map Sheet: 82H

Municipality: County of Warner

Natural Subregions: Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose breeding habitat

Description:

- large reservoir north of the Milk River Ridge
- gull and Double-crested Cormorant colonies
- waterfowl staging and production area
- American White Pelicans feed on the reservoir

Management Considerations:

- relative stability in the water levels would make this wetland more attractive to nesting waterfowl
- maintenance of natural habitats around the reservoir will keep the area attractive to a variety of bird life
- Double-crested Cormorants are sensitive to human intrusion on and around nesting islands

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Clark (1982) for Double-crested Cormorant colony

ESA: WARNER

Name: Milk River Section

Area (ha): 135

Location:

- Section 31 and 32 - Twp. 1 - Rge. 11 - W4
- east of Writing-on-Stone Provincial Park in Black Coulee

NTS Map Sheet: 72E

Municipality: County of Warner

Natural Subregions: Dry Mixedgrass

Significance: International

- geological type localities are unique and form the basis upon which further geological investigations proceed
- Milk River formation outcrops are very restricted in Canada

Description:

- type section for Upper Milk River Formation

Management Considerations:

- relatively undisturbed sections are important for future study

References:

- Barendregt (n.d.-a)
- Russell and Landes (1940)

ESA: DRY MIXEDWOOD; LEDUC; POSTON

Name: Ministik Lake

Area (ha): 10876

Location:

- Twp. 49 to 50 - Rge. 21 - W4
- includes Oliver-Mandy Lakes ESA

NTS Map Sheet: 83H

Municipality: County of Wetaskiwin; County of Leduc; County of Beaver; County of Camrose

Natural Subregions: Dry Mixedwood; Central Parkland

Significance: Provincial

- excellent undisturbed example of remnant dry mixedwood habitat
- part of the provincially significant Cooking Lake Moraine
- Poston lists as provincially important moulting, staging and breeding duck habitat

Description:

- important for spring and fall migration, moulting and production of waterfowl: 7 species of dabbling and 6 diving ducks as well as numerous shorebirds and Canada Geese
- important spring and fall staging area for migrating Tundra Swans
- part designated as a Provincial Bird Sanctuary, the first in Alberta (1911)
- wetland complex -- wet meadow and shallow marsh with emergent vegetation and alkaline shore
- saline lake
- the irregular shoreline, shallow marsh, islands and exposed mudflats create excellent habitat for dabbling ducks and shorebirds
- diversity of upland habitat, including a variety of aspen vegetation
- songbird migratory route
- Piping Plover, a COSEWIC endangered species in Canada and a red listed species in Alberta
- the majority of the shoreline is in a natural state
- lake offers good Muskrat and Beaver habitat
- Double-crested Cormorant colony on Joseph Lake
- high level of recreation use
- key wildlife area for Moose, White-tailed Deer and waterfowl
- very small area of parkland along southern fringe

Management Considerations:

- shoreline communities are highly sensitive to disturbance and livestock grazing
- Joseph Lake is extremely sensitive to existing land uses along most of the shoreline
- energy developments need to be monitored for possible contamination of water bodies
- Ducks Unlimited has been manipulating water levels since 1938

References:

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| - Pryor (pers. comm. 1995)          | - Westworth and Knapik (1987)       |
| - Borge (pers. comm. 1995)          | - Brechtel (1981)                   |
| - Mitchell and Prepas (1990)        | - 1990 field notes                  |
| - Natural and Protected Areas Files | - Fish and Wildlife Division (1989) |
| - Wildlife key area maps            | - Infotech (1989)                   |
| - Goossen et al. (in prep)          | - Kemper (1976)                     |
| - Pryor (pers. comm. 1995)          | - Westworth and Knapik (1987)       |
| - Griffiths (1987)                  | - Zelt and Glasgow (1976)           |
| - Brown (1988)                      | - Lacy (1971)                       |



ESA: DRY MIXEDWOOD

Name: Miquelon Lake

Area (ha): 3591

Location:

- Twp. 49 - Rge. 20 - W4
- includes Miquelon Lake Provincial Park

NTS Map Sheet: 83H

Municipality: County of Beaver

Natural Subregions: Dry Mixedwood

Significance: National

- Piping Plover, a COSEWIC endangered species in Canada and a red listed species in Alberta, nesting area

Description:

- designated as a Provincial Migratory Bird Sanctuary
- diversity of upland, morainal habitats
- variety of typical aspen stands
- part of the provincially significant Cooking Lake Moraine
- saline lake
- significant waterfowl production, staging and moulting lake
- excellent emergent vegetation
- shorebird staging lake
- songbird migratory route
- nesting American White Pelicans and Double-crested Cormorants
- American White Pelican and Double-crested Cormorants nest on the islands, particularly the larger one near the north shore, known as Pelican Island
- gulls colonize islands on the west arm of lake

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Pryor (pers. comm. 1995)
- Bjorge (pers. comm. 1995)
- Mitchell and Prepas (1990)
- Natural and Protected Areas Files
- Wildlife key area maps

ESA: CARDSTON

Name: Mokowan Butte

Area (ha): 986

Location:

- Twp. 1 - Rge. 28 - W4
- along the eastern edge of Waterton Lakes National Park

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Montane

Significance: National

- part of the highly significant Waterton Lakes National Park ecosystem
- some of the best pre-Wisconsin paleosol and Flaxville Plain examples in Canada

Description:

- highest parts of Mokowan Butte
- lush montane woodland
- rare plants such as mountain brome (*Bromus vulgaris*), melic grass (*Melica smithii*), Alaska onion grass (*Melica subulata*) and mountain hollyhock (*Iliamna rivularis*); several are rare in Canada
- uncommon birds such as Steller's Jay
- diverse habitats including rock outcrops, lush flower meadows, lodgepole pine, Douglas fir, and aspen woodland
- pre-Wisconsin paleosols (buried soil horizons from prehistoric times); best and most complete single section yet observed in the region
- one of about twelve remnants of the Miocene-Pliocene Flaxville Plain, only known in southwestern Alberta and northwestern Montana

Management Considerations:

- heavy grazing will reduce the suitability of the site for several rare species of plants and animals

References:

- 1986 field notes
- Karlstrom (1985) for paleosols
- Horberg (1954) for Flaxville Plain

ESA: BOREAL

Name: Moose Lake

Area (ha): 531

Location:

- Twp. 67 - Rge. 23 - W5
- Moose Lake, northwestern Alberta

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swans (blue-listed species in Alberta) observed in 1996 field survey
- surrounded by fragmented mixedwood forest, predominantly aspen and black spruce and some open muskeg meadows
- permanent spring located near the lake
- adjacent upland provides key ungulate habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Borneuf (1983)
- 1996 field notes

ESA: GRASSLAND

Name: Muddy Buttes

Area (ha): 11503

Location:

- Twp. 33 - Rge. 4 - W4
- south of Monitor

NTS Map Sheet: 72M

Municipality: Special Area 4

Natural Subregions: Northern Fescue; Dry Mixedgrass

Significance: Provincial

- one of the larger blocks of Northern Fescue in Alberta

Description:

- key Mule and White-tailed Deer habitat
- some cultivation

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Kupsch (1961)
- Wildlife key area maps
- Natural and Protected Area Files

ESA: GRASSLAND

Name: Muddy Buttes Badlands

Area (ha): 625

Location:

- Twp. 33 - Rge. 5 - W4
- south of Monitor

NTS Map Sheet: 72M

Municipality: Special Area 4

Natural Subregions: Northern Fescue

Significance: Provincial

- the best-exposed example of ice-thrust contorted bedrock in the Alberta plains

Description:

- prominent ice thrust ridge in northern fescue grassland rising 100 m above surrounding grassland
- some badlands development where thrust sedimentary rocks are prominently displayed
- key Mule and White-tailed Deer habitat

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Kupsch (1961)
- Wildlife key area maps
- Natural and Protected Area Files

ESA: STARLAND

Name: Mudspring Lake

Area (ha): 2344

Location:

- Twp. 33 - Rge. 20 - W4
- Mudspring Lake and Rumsey Lake south and east of Rumsey

NTS Map Sheet: 82P

Municipality: MD of Starland

Natural Subregions: Northern Fescue; Central Parkland

Significance: Provincial

- one of the largest concentrations of soapholes in the grassland/parkland region of Alberta

Description:

- alkali lake, alkali meadows, springs and soapholes
- waterfowl and shorebird staging area
- potential for rare plants in springs
- potential for Baird's Sparrows, a threatened bird species

Management Considerations:

- "quick" ground conditions make these areas unsafe and they should be fenced off to avoid loss of livestock
- drainage or blockage of flows into the wetland basins would reduce the attractiveness of the area for shorebirds and waterfowl
- maintenance of adjacent native vegetation cover will be beneficial for waterfowl production in wetter years
- groundwater withdrawals may affect spring activity and permanence of water in wetlands

References:

- Borneuf (1983) for springs and soapholes
- 1990 field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Muriel Lake

Area (ha): 7949

Location:

- Twp. 59 - Rge. 5 - W4
- Muriel Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant for breeding Western Grebe

Description:

- large lake located west of Cold Lake
- two moderately large islands that include large complex consisting of shallow marsh and lagoon that is protected from wave action
- significant waterfowl production and staging
- Double-crested Cormorants (a yellow listed species in Alberta) and American White Pelicans ( a blue listed species in Alberta) observed during aerial survey
- lake is managed for commercial and sport fisheries
- fisheries resources include Lake Whitefish, Northern Pike Walleye, Yellow Perch and suckers
- significant Lake Whitefish spawning
- upland excellent White-tailed and Mule Deer habitat with lower densities of Moose on eastern slopes

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Natural and Protected Area Files
- Fisheries Resources Maps
- Mitchell and Prepas (1990)
- field notes (1995)

ESA: CYPRESS; FORTY MILE; POSTON

Name: Murray Lake

Area (ha): 2224

Location:

- Twp. 9 to 10 - Rge. 7 to 8 - W4
- Murray Lake southwest of Seven Persons

NTS Map Sheet: 72E

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat
- provincially important area for breeding geese and Ring-billed Gull

Description:

- large reservoir with numerous islands
- waterfowl production and staging
- extensive riparian shrubbery
- colonial nesting birds including Double-crested Cormorant, Eared Grebes, and gulls
- diversity of breeding marsh birds
- Great Blue Heron nesting Colony

Management Considerations:

- relative stability in the water levels and maintenance of natural habitat in surrounding lands will keep productivity high
- Great Blue Herons are sensitive to human intrusion during the nesting season

References:

- Brechtel (1981)
- Fish and Wildlife key area maps
- 1991 field notes



ESA: FOOTHILLS

Name: Muskeg-Little Smoky Rivers

Area (ha): 35201

Location:

- Twp. 57 - Rge. 4 - W6
- valleys of the Muskeg and Little Smoky Rivers and adjacent uplands

NTS Map Sheet: 83E

Municipality: MD of Greenview

Natural Subregions: Upper Foothills

Significance: Provincial

- key Grizzly Bear habitat is local in the foothills of Alberta

Description:

- dominance of mature upland coniferous forest provide key Caribou winter range
- key ungulate habitat (Elk and Moose)
- critical Woodland Caribou habitat
- critical terrestrial furbearer habitat
- key wolf habitat
- key fisheries (including Bull Trout)
- includes extreme-rich minerotrophic ribbed fens

Management Considerations:

- maintenance of unfragmented landscapes, including old growth forest, is critical for Caribou
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Environmental Protection (n.d.)
- Wildlife key area maps
- Fisheries inventory maps
- Nicholson (1991)

ESA: CALGARY; POSTON

Name: Namaka-Stobart Lakes

Area (ha): 1076

Location:

- Twp. 24 - Rge. 22 - W4
- southeast of Strathmore

NTS Map Sheet: 82I

Municipality: County of Wheatland

Natural Subregions: Mixedgrass

Significance: National

- Poston lists as nationally important for non-breeding Western Grebe

Description:

- waterbird production and staging areas of regional and even provincial significance
- Stobart Lake listed as medium priority duck and goose staging lake by Canadian Wildlife Service (1979)
- Namaka and Stobart Lakes considered important production and staging areas on Wildlife key area maps
- Poston lists as provincially significant for duck staging and shorebirds

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Lamoureux & Associates (1983)

ESA: FOOTHILLS

Name: Narraway River

Area (ha): 23890

Location:

- Twp. 65 - Rge. 13 - W6
- Narraway River valley

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- one of few key Grizzly Bear habitats in the Foothills of Alberta

Description:

- key Bull Trout, Arctic Grayling, Mountain Whitefish, Rainbow Trout and Cutthroat Trout fisheries habitat
- key Elk range
- important Grizzly Bear habitat
- diversity of riparian landforms and riparian vegetation communities

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Fisheries inventory maps
- Wildlife key area maps
- Peace River fisheries files

ESA: GRASSLAND

Name: Native Prairie (Brostem Reservoir)

Area (ha): 15940

Location:

- Twp. 28 - Rge. 8 - W4
- native grassland in vicinity of Brostem Reservoir

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- relatively undisturbed, extensive dry mixed grassland communities are rare in Alberta

Description:

- a number of wetland types including wet meadows, and alkali ponds
- alkali ponds important shorebird staging habitat
- Loggerhead Shrike nesting area (a COSEWIC endangered species in Canada and a yellow A-listed species in Alberta)

Management Considerations:

- maintenance of natural grassland habitats will support a variety of wildlife

References:

- Bjorge (pers. comm. 1995)
- field notes (1995)

ESA: GRASSLAND

Name: Native Prairie (Major Lake)

Area (ha): 67600

Location:

- Twp. 25 - Rge. 9 - W4
- native prairie in vicinity of Major Lake

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- relatively undisturbed, extensive mixed grassland communities are rare in Alberta

Description:

- wet meadow, ephemeral ponds and alkali wetland
- supports a number of grassland species including Baird's Sparrow, a yellow A-listed species in Alberta and Upland Sandpiper, a red listed species in Alberta
- potential habitat for Burrowing Owls, a COSEWIC endangered species in Canada and a red listed species in Alberta
- nesting habitat for Long-billed Curlew, a COSEWIC vulnerable and Alberta blue-listed species
- two staging and production waterfowl lakes included within site

Management Considerations:

- maintenance of native grassland in a variety of grazing regimes will keep the area attractive for a variety of grassland species

References:

- Bjorge (pers. comm. 1995)
- Schmutz (1994)
- Wildlife key area maps

ESA: BOREAL

Name: Needle Lake Bison Range

Area (ha): 168573

Location:

- Twp. 124 - Rge. 20 - W4
- northern part of Wood Buffalo National Park

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Wetland Mixedwood; Central Mixedwood

Significance: National

- located within Wood Buffalo National Park

Description:

- three known natural springs
- provides habitat for one of the last large free ranging herds of Bison in North America- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) breeding habitat
- includes a number of small lakes that provide good waterfowl habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)

ESA: GRASSLAND

Name: Neutral Hills

Area (ha): 9316

Location:

- Twp. 36 - Rge. 6 - W4
- Neutral Hills upland near Consort

NTS Map Sheet: 73D

Municipality: Special Area 4

Natural Subregions: Northern Fescue

Significance: Provincial

- one of the largest and most diverse fescue grassland/parkland areas left in Alberta

Description:

- prominent ice thrust ridges create an elevation change of 100 m
- this area has highly diverse and significant landforms
- transition zone between grassland in the south and parkland in the north
- highly diverse habitat for terrestrial breeding birds
- cultivation and seismic disturbance

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Bradley and Bradley (1977)
- Kupsch (1961)
- Wildlife key area maps
- Natural and Protected Area Files

ESA: BOREAL

Name: Nipisi Lake

Area (ha): 2588

Location:

- Twp. 78 - Rge. 7 - W5
- Nipisi Lake

NTS Map Sheet: 83O

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive lakes in the Central Mixedwood Boreal Forest of Alberta

Description:

- numerous non-breeding American White Pelicans observed on lake (major pelican lake)
- important for sport, commercial and domestic fisheries
- fish species include Lake Whitefish, Northern Pike, Walleye, Yellow Perch and Cisco
- important production and staging habitat for waterfowl
- hydrologically important lake
- white spruce and aspen on north side of lake while black spruce and aspen are dominant on the south side
- the upland surrounding the lake supports a population of Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species)

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- D. A. Westworth & Associates Ltd. (1990)
- Walty (1996) pers. comm
- 1996 field notes



ESA: CARDSTON

Name: North Fork Milk River A

Area (ha): 12767

Location:

- Twp. 1 and 2 - Rge. 20 to 23 - W4
- North Milk River valley and surrounding uplands, west of Highway 62

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: Provincial

- productive bird of prey habitats are very local in Alberta
- concentration of rare plants and animals
- the only exposure of the No. 3 bench pre-glacial erosional surface in Alberta

Description:

- moderately incised valley with numerous sandstone outcrops
- moderate density of nesting birds of prey, including Ferruginous Hawks (COSEWIC vulnerable species) and Golden Eagles
- historical Peregrine Falcon nest site
- interesting sandstone rock formations
- Yellow-bellied Marmot (uncommon mammal)
- Mottled Sculpin (rare fish)
- rare plants including American thoroughwax (*Bupleurum americanum*), COSEWIC threatened western blue flag (*Iris missouriensis*), Cusick's paintbrush (*Castilleja cusickii*) and COSEWIC vulnerable hare-footed locoweed (*Oxytropis lagopus*)
- spillway channel at Whiskey Gap
- remnant of pre-glacial erosional surface at U.S. boundary in Sections 1, 2, 11 and 12 - Twp. 1 - Rge. 23 - W4

Management Considerations:

- some birds of prey like Golden Eagles are sensitive to human activity during the nesting season
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey
- in Alberta, Mottled Sculpins are found only in the Milk River and upper St. Mary River
- cultivation reduces habitat diversity and eliminates many native plants and animals
- heavy grazing reduces the suitability of moist grassland habitats for several rare plant species

References:

- 1986 field notes
- Fish and Wildlife key area maps
- de Vries (1966) for western blue flag
- Paetz and Nelson (1970) and Clayton and Ash (1980) for fish
- Beaty (1975) for spillway description
- Horberg (1954) for pre-glacial land surface

ESA: FOOTHILLS

Name: North Ram River

Area (ha): 10608

Location:

- Twp. 38 - Rge. 13 - W5
- valley of North Ram River

NTS Map Sheet: 83B

Municipality: MD of Clearwater

Natural Subregions: Upper Foothills; Subalpine

Significance: Provincial

- one of the most diverse Foothills streams

Description:

- key ungulate habitat (Bighorn Sheep, Elk and Mule Deer)
- important movement corridor
- includes the ecologically significant area along the North Ram River that contains diverse plant communities including shrublands, meadows, forest and peatlands
- high fish species diversity (including Bull Trout); sport fishery

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Fisheries inventory maps
- Key Wildlife Area Maps
- Rayner (1984)

ESA: FOOTHILLS; BRAZEAU

Name: North Saskatchewan River - Drayton Valley

Area (ha): 23700

Location:

- Twp. 46 - Rge. 9 - W5
- North Saskatchewan River valley

NTS Map Sheet: 83B, 83G

Municipality: MD of Clearwater; MD of Brazeau

Natural Subregions: Lower Foothills

Significance: National

- major interprovincial waterway
- very important Albertan and Western Canadian watercourse (the major river valley and river system in Central Alberta)
- nationally significant, relatively undisturbed reaches

Description:

- significant hydrological function
- high diversity of bird species
- diverse riparian and valley habitats
- key Mule and White-tailed Deer habitat
- the bluffs form significant raptor nesting area and are also historical nesting habitat for the endangered Peregrine Falcon
- significant geological and palaeontological features
- significant wintering, spawning and rearing of a high diversity of fish species
- important sport and commercial fishery
- many sites of interpretative and educational value for geological and paleontological history, also ongoing fluvial processes
- possesses scenic and recreational traits not found elsewhere in Central Alberta
- regionally important resting area for migrating waterfowl
- historical importance as a focal point of native culture and as a transport corridor during the fur trade

Management Considerations:

- riparian forests have a high sensitivity to disturbance
- maintenance of water quality should be a priority
- future developments crossing the river valley or utilizing a site within the valley should try to prevent or minimize degradation of the key riparian wildlife habitat

References:

- Natural and Protected Areas files
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)
- Steve Brechtel, Alberta Fish and Wildlife (pers. comm.)
- John Folinsbee, Alberta Fish and Wildlife (pers. comm.)
- Terry Kosinski, Alberta Fish and Wildlife (pers. comm.)

ESA: PARKLAND; LEDUC; DRY MIXEDWOOD

Name: North Saskatchewan River - Edmonton

Area (ha): 11970

Location:

- Twp. 50 - Rge 1 - W5
- North Saskatchewan River valley

NTS Map Sheet: 83G, 83H

Municipality: County of Parkland; County of Leduc

Natural Subregions: Central Parkland; Dry Mixedwood

Significance: Provincial

- very important Albertan and Western Canadian watercourse (the major river valley and river system in Central Alberta)
- interprovincial waterway, somewhat degraded by development in the valley
- although watercourse is of national significance, the valley in which it sits varies considerably
- provincially significant where valley sides subject to modification; regionally significant (not mapped) where modification is extensive
- one of the most productive White-tailed and Mule Deer corridors in Alberta

Description:

- significant hydrological function
- includes river valley and deep ravines
- high diversity of bird species
- moderate to steep, highly erodible slopes with exposed bedrock to level terraces adjacent to the river
- diverse riparian and valley habitats
- key Mule and White-tailed Deer habitat (corridor throughout most of the province)
- significant geological and palaeontological features
- historical importance as a focal point of native culture and as a transport corridor during the fur trade
- the bluffs form significant raptor nesting area and are also historical nesting habitat for the endangered Peregrine Falcon
- significant wintering, spawning and rearing of a high diversity of fish species
- important sport and commercial fishery
- depth of valley varies and can range up to 60 m below the surrounding plains
- many sites of interpretative and educational value relative to geological and paleontological history, as well as present day fluvial processes
- possesses scenic and recreational traits not found elsewhere in Central Alberta
- regionally important resting area for migrating waterfowl

Management Considerations:

- high sensitivity to disturbance along the valley walls due to instability
- maintenance of natural habitats will support a wide variety of native species

References:

- Natural and Protected Areas files
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: PARKLAND; DRY MIXEDWOOD

Name: North Saskatchewan River - Elk Point

Area (ha): 17057

Location:

- Twp. 55 - Rge. 9 - W4
- North Saskatchewan River valley

NTS Map Sheet: 73D, 73E, 83G, 83H

Municipality: County of St. Paul; County of Two Hills

Natural Subregions: Central Parkland; Dry Mixedwood

Significance: Provincial

- very important Albertan and Western Canadian watercourse (the major river valley and river system in Central Alberta)
- interprovincial waterway, somewhat degraded by development in the valley
- although watercourse is of national significance, the valley in which it sits varies considerably
- provincially significant where valley sides subject to modification; regionally significant (not mapped) where modification is extensive
- one of the most productive White-tailed and Mule Deer corridors in Alberta

Description:

- significant hydrological function
- majority in Dry Mixedwood; portion dips into the Central Parkland
- high diversity of bird species
- diverse riparian and valley habitats
- key Mule and White-tailed Deer habitat (corridor throughout most of the province)
- historical importance as a focal point of native culture and as a transport corridor during the fur trade
- significant wintering, spawning and rearing of a high diversity of fish species
- important sport and commercial fishery
- many sites of interpretative and educational value relative to geological and paleontological history, as well as present day fluvial processes
- possesses scenic and recreational traits not found elsewhere in Central Alberta
- regionally important resting area for migrating waterfowl

Management Considerations:

- maintenance of natural habitats will support a wide variety of native species

References:

- Natural and Protected Areas files
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: PARKLAND; LEDUC; DRY MIXEDWOOD; BRAZEAU

Name: North Saskatchewan River - Genessee-Drayton Valley

Area (ha): 14629

Location:

- Twp. 50 - Rge. 6 - W5
- North Saskatchewan River valley

NTS Map Sheet: 83G, 83H

Municipality: County of Parkland; County of Leduc; MD of Brazeau

Natural Subregions: Dry Mixedwood

Significance: Provincial

- very important Albertan and Western Canadian watercourse (the major river valley and river system in Central Alberta)
- interprovincial waterway, somewhat degraded by development in the valley
- although watercourse is of national significance, the valley in which it sits varies considerably
- provincially significant where valley sides subject to modification; regionally significant (not mapped) where modification is extensive
- one of the most productive White-tailed and Mule Deer corridors in Alberta

Description:

- significant hydrological function
- includes river valley and deep ravines
- high diversity of bird species
- steep, highly erodible slopes with exposed bedrock to level terraces adjacent to the river
- diverse riparian and valley habitats
- key Mule and White-tailed Deer habitat (corridor throughout most of the province)
- significant geological and palaeontological features
- historical importance as a focal point of native culture and as a transport corridor during the fur trade
- the bluffs form significant raptor nesting area and are also historical nesting habitat for the endangered Peregrine Falcon
- significant wintering, spawning and rearing of a high diversity of fish species
- important sport and commercial fishery
- depth of valley varies and can range up to 60 m below the surrounding plains
- many sites of interpretative and educational value relative to geological and paleontological history, as well as present day fluvial processes
- possesses scenic and recreational traits not found elsewhere in Central Alberta
- regionally important resting area for migrating waterfowl

Management Considerations:

- high sensitivity to disturbance along the valley walls due to instability
- maintenance of natural habitats will support a wide variety of native species

References:

- Natural and Protected Areas files
- Wildlife key area maps
- Fisheries inventory maps
- field notes (1995)

ESA: BOREAL

Name: North Shore Moose Area

Area (ha): 19068

Location:

- Twp. 76 - Rge. 10 - W5
- north shore of Lesser Slave Lake

NTS Map Sheet: 83O

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood; Dry Mixedwood

Significance: Provincial

- provincially recognized key Moose habitat

Description:

- high diversity of vegetation communities including aspen-balsam poplar, aspen-white spruce, black spruce-tamarack fens, tamarack-dominated patterned fens, sedge fens and willow-sedge wetlands
- extensive Beaver activity has created numerous small lakes and ponds along stream channels
- contains the same features found in the North Narrows Creek Old Growth Forest (Boreal ESA site 808) and the Narrows Creek Peatland Complex (Boreal ESA site 807)

Management Considerations:

- timber harvesting and oil and gas activities should conform to provincial guidelines
- habitat destruction and fragmentation which adversely affect "old growth" dependent species should be considered during resource development activities

References:

- Bentz and Saxena (1993)
- Boyd (1977)
- Nietfeld et al. (1985)

ESA: EASTERN BOREAL

Name: North Wabasca Lake

Area (ha): 16056

Location:

- Twp. 82 - Rge. 25 - W4
- North Wabasca Lake

NTS Map Sheet: 83P, 84A

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- important sport and domestic/commercial fishery

Description:

- important fish: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)



ESA: FOOTHILLS

Name: Nose Creek

Area (ha): 9030

Location:

- Twp. 65 - Rge. 12 - W6
- Nose Creek valley

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- one of few key Grizzly Bear habitats in the Foothills of Alberta

Description:

- key Bull Trout, Arctic Grayling and Mountain Whitefish fisheries habitat
- key Moose and Elk range
- important Grizzly Bear habitat
- diversity of fluvial land forms and riparian plant communities

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bears are particularly sensitive to the effects of habitat fragmentation

References:

- Wildlife key area maps
- Natural and Protected Areas Program files
- Fisheries inventory maps

ESA: CALGARY

Name: Okotoks Erratic

Area (ha): 9

Location:

- Twp. 20- Rge. 2 - W5
- west of Okotoks

NTS Map Sheet: 82J

Municipality: MD of Foothills

Natural Subregions: Foothills Parkland

Significance: International

- one of the largest glacial features of its kind in the world

Description:

- currently designated under the Historical Resources Act
- pictographs, rare in the region

Management Considerations:

- has been subject to extensive vandalism

References:

- Lamoureux & Associates (1983)

ESA: CANADIAN SHIELD

Name: Old Fort Bay Dunes

Area (ha): 38285

Location:

- Twp. 109 to 112 - Rge. 2 to 3 - W4
- dunes and sand plains surrounding Old Fort Bay

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain

Significance: Provincial

- Old Fort River floodplains are some of the best developed alluvial deposits and associated habitats within the Athabasca Plain of Alberta

Description:

- diverse surficial geology and vegetation
- important as a component of a larger dune complex
- mostly parabolic dunes with local ridges of crevasse fillings or minor moraines in the interdune areas
- glacial outwash, sheet and dune sand
- jack pine forest and wetlands
- floodplain of the Old Fort River
- canoeing potential along Old Fort River
- substantial delta at the mouth of the Old Fort River

Management Considerations:

- area has not been ground-truthed from a biological perspective

References:

- David (1977)
- Bayrock (1972b)
- Landals (1978)

ESA: PINCHER CREEK

Name: Oldman River-Brocket

Area (ha): 2008

Location:

- Twp. 7 - Rge. 28 and 29 - W4
- Oldman River valley and remnant native grasslands on upland east of the Oldman Dam site to the boundary of the Peigan Indian Reserve

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Mixedgrass; Foothills Fescue

Significance: National

- concentration of significant features
- these represent part of the most extensive narrow-leaved cottonwood habitats in Canada
- extensive and productive riparian habitats are very localized in Alberta and are some of the most threatened habitats in arid and semi-arid regions of the world
- relatively complete Pleistocene geological sections are rare

Description:

- part of Canada's most extensive narrow-leaved and balsam poplar riparian woodland, shrubbery and moist channel habitats
- diverse breeding bird habitat
- eroding slopes with rare plants, including rush-pink *Stephanomeria runcinata* (rare in Canada) in Section NW13 - Twp. 7 - Rge. 29 - W4
- extensive hoodoo cliffs of eroding till with excellent Pleistocene geological sections
- key Mule Deer and White-tailed Deer habitat
- nesting Prairie Falcons in Sections S17 - Twp. 7 - Rge. 29 - W4 and
- NW18 - Twp. 7 - Rge. 28 - W4
- minor vegetated sand dunes at the edge of the valley on the uplands south of river
- productive fishery

Management Considerations:

- heavy grazing reduces the suitability of these sites for a wide variety of wildlife and affects the regeneration of cottonwoods
- altered stream flow affects the reproduction of cottonwood forests
- clearing and cultivation eliminate habitat diversity
- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Stalker (1957 and 1963a) and Rutter and Christiansen (1972) for geology
- Cottonwood Consultants (1983) and Wallis (1980 and 1987) for riparian
- Longmore and Stenton (1981) and C. Bradley, Trout Unlimited (personal communication) for fish
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems

ESA: TABER; LETHBRIDGE

Name: Oldman River-Lethbridge East

Area (ha): 13252

Location:

- Twp. 10 and 11 - Rge. 18 and 19 - W4
- Oldman River valley from Lethbridge to Little Bow River junction

NTS Map Sheet: 82H

Municipality: MD of Taber; County of Lethbridge

Natural Subregions: Mixedgrass and Dry Mixedgrass

Significance: Provincial

- productive nesting habitat for birds of prey is very localized in Alberta
- extensive, ungrazed productive riparian habitats are very localized in Alberta
- Great Blue Heron colonies are local in Alberta
- bedrock faults with large displacement are local in the plains region

Description:

- deeply cut river valley with eroding cutbanks and extensive rock outcrops of the Bearpaw and Oldman formations; good exposure of Oldman formation in NE22 - Twp. 10 - Rge. 21 - W4
- extensive slump blocks particularly in areas of thick glacial lake deposits and east-facing slopes
- well-developed aligned coulees in western portion
- normal fault with about 30 metre displacement of the bedrock in Section S6 - Twp. 10 - Rge. 21 - W4
- good Pleistocene geological sections in Sections NE35 - Twp. 10 - Rge. 20 - W4, N24 - Twp. 9 - Rge. 22 - W4, and E30 - Twp. 9 - Rge. 21 - W4
- extensive nesting area for birds of prey including Prairie Falcons, Golden Eagles and Ferruginous Hawks (a COSEWIC vulnerable species); has been used as a foster site for endangered Peregrine Falcons; Burrowing Owls (a COSEWIC endangered species) nest on adjacent grassland uplands
- high diversity of breeding birds
- extensive riparian woodland, shrubbery and grassland, especially well-developed in the area of the Little Bow junction; minor springs
- feeding area for American White Pelicans
- key Mule Deer and White-tailed Deer habitat
- habitat for Lark Sparrows (uncommon bird)
- occurrence of *Juniperus scopulorum* (Rocky Mountain juniper) a rare tree in Alberta
- some cultivation of river terraces
- Great Blue Heron colony in Section 1 - Twp. 11 - Rge. 19 - W4
- ungrazed riparian woodland island in Section 26 - Twp. 10 - Rge. 21 - W4

Management Considerations:

- heavy grazing reduces suitability for a wide variety of wildlife and affects the cottonwood regeneration
- altered stream flow affects the reproduction of cottonwood forests
- clearing and cultivation eliminate habitat diversity
- some birds of prey (e.g. Golden Eagles) and Great Blue Herons are sensitive to human presence during the nesting season
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey

continued on next page

Name: Oldman River-Lethbridge East (continued)

References:

- 1986 and 1987 field notes
- Irish (1967e) for bedrock geology
- Williams & Dyer (1930) for normal fault
- Russell & Landes (1940) for Oldman formation outcrop
- Horberg (1952) for Pleistocene sections
- Beaty (1975) for landscape features
- Kuijt and Trofymow (1975) for Rocky Mountain Juniper
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- Fish and Wildlife key area maps
- Vermeer (1969) and Clark (1982) for Great Blue Heron colony

ESA: WILLOW CREEK

Name: Oldman River-Macleod

Area (ha): 5323

Location:

- Twp. 8 to 10 - Rge. 24 to 27 - W4
- Oldman River from Peigan Indian Reserve downstream to Rocky Coulee

NTS Map Sheet: 82H

Municipality: MD of Willow Creek

Natural Subregions: Mixedgrass

Significance: National

- concentration of significant features
- part of the most extensive narrow-leaved cottonwood habitats in Canada

Description:

- part of Canada's most extensive narrow-leaved and balsam poplar riparian woodland, shrubbery and moist channel habitats
- some lightly grazed areas
- productive and diverse breeding bird habitat
- uncommon birds including Black-headed Grosbeak
- eroding slopes with rare plants, including rush-pink *Stephanomeria runcinata* (rare in Canada) and mock pennyroyal (*Hedeoma hispida*)
- rare plants on the floodplain include crested beard-tongue (*Penstemon eriantherus*) and water speedwell (*Veronica catenata*)
- key Mule Deer and White-tailed Deer habitat
- nesting Ferruginous Hawks and Prairie Falcons; Golden Eagles reported
- Great Blue Heron colony in Section SE33 - Twp. 9 - Rge. 35 - W4
- American White Pelican feeding area
- important Pleistocene and Cretaceous geological sections

Management Considerations:

- heavy grazing reduces the suitability of these sites for a wide variety of wildlife and affects the regeneration of cottonwoods
- Great Blue Herons are sensitive to human presence during nesting
- alterations in stream flow can affect regeneration of cottonwoods
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey
- clearing and cultivation reduces habitat diversity and eliminates many native plants and animals

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Wallis (1980 and 1987), Cottonwood Consultants (1983), Achuff et al. (1988) for riparian description and significance
- Bradley (1988), Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- McCulley (1983b) on riparian islands
- Horberg (1952) for Pleistocene section and Williams and Dyer (1930) for Cretaceous (Willow Creek) section

ESA: PINCHER CREEK

Name: Oldman River-Porcupine Hills

Area (ha): 2956

Location:

- Twp. 11 - Rge. 2 - W5
- valley of the Oldman River from the proposed Oldman Reservoir upstream to Hwy 22

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Fescue

Significance: Provincial

- one of the best trout fisheries in Alberta

Description:

- extensive balsam poplar riparian woodland and shrubbery
- diverse rock outcrops, slump blocks, grassland, shrub thickets and Douglas fir woodland along slopes
- diverse breeding bird populations
- prime quality fisheries

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of wildlife
- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries

References:

- 1986 field notes
- Stalker (1963b) for geology
- Longmore and Stenton (1981) and C. Bradley, Trout Unlimited (personal communication) for fish



ESA: LETHBRIDGE

Name: Oldman Section

Area (ha): 56

Location:

- Section 11 - Twp. 8 - Rge. 22 - W4
- at south edge of Lethbridge city limit on south bank of Oldman River

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass

Significance: International

- geological type localities are unique and form the basis upon which further geological investigations proceed

Description:

- type locality of Upper Cretaceous rocks of the Oldman formation

Management Considerations:

- relatively undisturbed sections are important for future study

References:

- Barendregt (n.d.-a)

ESA: BOREAL

Name: Orloff Lake

Area (ha): 2444

Location:

- Twp. 74 - Rge. 23 - W4
- Orloff Lake

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- listed by Poston as provincially important Great Blue Heron breeding habitat

Description:

- Orloff lake contains no major permanent inlets
- most water appears to enter the lake from springs, minor creeks and by diffuse discharge from peatlands
- supports grebe colonies
- supports Bald Eagle nesting and a Great Blue Heron colony
- White Pelicans summer on the lake, but do not breed due to scarcity of suitable nesting islands
- Osprey and terns have also been observed utilizing the lake
- key waterfowl production, staging and moulting habitat
- important fishery habitat
- supports fish populations of Walleye, Northern Pike, perch, Lake Whitefish and Cisco
- active sports fisheries for Walleye and Northern Pike exist
- commercial fisheries primarily harvest Lake Whitefish and Cisco
- adjacent uplands provide good to excellent Moose habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Pedocan Land Evaluation Ltd. et al. (1992)
- Poston et al. (1990)
- Walty (1996) pers. comm
- 1996 field notes

ESA: CARDSTON

Name: Paine-Beaverdam

Area (ha): 4262

Location:

- Twp. 1 and 2 - Rge. 27 and 28 - W4
- encompasses an arc extending from Paine Lake through Beaverdam Lake, almost to Tough Creek

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue; Foothills Parkland; Montane

Significance: National

- part of the Waterton Lakes National Park ecosystem
- lightly grazed moist foothills parkland habitats are rare in Canada
- numerous plants which are rare in Canada

Description:

- extensive willow and aspen foothills parkland, some lands in good condition
- numerous rare or uncommon plants including waterleaf (*Hydrophyllum capitatum*), blue phlox (*Phlox alyssifolia*), sweet marsh ragwort (*Senecio hydrophylloides*), slender-leaved spring beauty (*Montia linearis*) and Cusick's paintbrush (*Castilleja cusickii*)
- diverse breeding bird populations
- rare birds such as the Black-headed Grosbeak
- eskers

Management Considerations:

- heavy grazing will reduce the suitability of the area for many kinds of wildlife and plants
- brome and timothy invasion is crowding out rare native plants
- cultivation would eliminate many native plants and animals

References:

- Wallis (1980 and 1987)
- Cottonwood Consultants (1983)
- 1986 field notes
- Fish and Wildlife key area maps
- Stalker (1958) for eskers

ESA: PAINTEARTH

Name: Paintearth

Area (ha): 7767

Location:

- Twp. 39 to 40 - Rge. 14 to 16 - W4
- valley of Paintearth Creek and small tributaries, as well as some adjacent upland

NTS Map Sheet: 73D

Municipality: County of Paintearth

Natural Subregions: Central Parkland; Northern Fescue

Significance: Provincial

- some of the most picturesque and extensive badlands in the Aspen Parkland/Grassland region of Alberta

Description:

- diverse badlands with a mixture of grassland, aspen woods and scattered spruce
- extensive willow shrubbery, some poplar and paper birch woodland, and
- Beaver ponds along the stream courses
- grassland and parkland on adjacent uplands
- includes candidate Natural Area (SW 20, 29, S30 and SW 32 - Twp. 39 - Rge. 15 - W4)
- diversity of breeding birds including regionally uncommon species like the Rock Wren
- key Mule Deer and White-tailed Deer habitat
- former Sharp-tailed Grouse dancing ground
- most productive, least disturbed habitat is in the western half of the area
- patchy cultivation throughout the area, with ongoing clearing

Management Considerations:

- additional clearing and cultivation will further reduce the attractiveness of the area for a variety of wildlife

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Natural Areas Program files

ESA: FORTY MILE

Name: Pakowki Lake

Area (ha): 37606

Location:

- Twp. 3 to 6 - Rge. 7 to 9 - W4
- Pakowki Lake and surrounding uplands

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Dry Mixedgrass

Significance: National

- concentration of nationally significant features
- nesting area for birds which occur in few other places in Canada
- the only known population of western spiderwort (*Tradescantia occidentalis*) in Alberta, a COSEWIC threatened plant species

Description:

- large intermittent (playa) lake and sand dune-wetland complex
- extensive bulrush marshes and open water
- waterfowl staging and production area
- impressive glacial spillway channel
- American White Pelican and Double-crested Cormorant nesting colonies
- nesting area for rare species such as Black-necked Stilt and, possibly, White-faced Ibis and for COSEWIC species including vulnerable Ferruginous Hawk and endangered Loggerhead Shrike
- rare or uncommon species such as Plains Hognose Snake, Western Grebe, Black-crowned Night Heron, Caspian Tern, Whimbrel, Snowy Egret, Eurasian Wigeon and Forster's Tern
- shorebird staging area
- diversity of marshbirds and colonial nesting birds such as gulls and terns
- rare or uncommon species of plants on sand dunes and in wetlands including the sand nut-grass (*Cyperus schweinitzii*), annual skeletonweed (*Lygodesmia rostrata*), bur ragweed (*Franseria acanthicarpa*), nationally rare Great Basin downingia (*Downingia laeta*), and COSEWIC vulnerable smooth goosefoot (*Chenopodium subglabrum*)
- Sharp-tailed Grouse and Sage Grouse dancing grounds
- key deer habitat
- key Pronghorn habitat along east shore
- provincially significant area for staging and moulting ducks

Management Considerations:

- some birds, e.g. White Pelican, are very sensitive to human activity during the nesting season
- loss of water to other uses in the surrounding basin may cause the basin to dry up more frequently
- active sand blowouts are essential to the long-term survival of most of the rare plants

References:

- Munro (1929), Smith and Wallis (1976), Brechtel (1981) and Poston et al. (1990)
- Smith and Dickson (1989) for shorebirds
- Clark (1984) for grouse
- Smith and Bradley (1990a to c) for rare plant status
- Fish and Wildlife key area maps
- 1991 field notes

ESA: EASTERN BOREAL

Name: Parallel Creek Peatland

Area (ha): 356052

Location:

- Twp. 82 - Rge. 21 - W4
- east of Wabasca Lake

NTS Map Sheet: 83P, 84A

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood; Lower Foothills

Significance: Provincial

- one of the most diverse and extensive wetland complexes in the Mixedwood Boreal Forest of Alberta

Description:

- important Caribou habitat
- significant channel/discharge fens
- high landform diversity

Management Considerations:

- maintenance of unfragmented natural cover is critical for Caribou

References:

- Westworth & Associates (1990)

ESA: CANADIAN SHIELD

Name: Paxton-Larocque Lakes

Area (ha): 37694

Location:

- Twp. 104 to 107 - Rge. 4 to 6 - W4
- rugged terrain between Larocque and Paxton Lakes

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain; Central Mixedwood

Significance: National

- when combined with the paleodune and active Richardson-Maybelle River dune areas to the west, this area forms some of the most diverse and unique area of sandy terrain in Canada

Description:

- classic ice-contact features
- rolling terrain comprised of highly fluted and drumlinized outwash deposits and kames
- jack pine forests and small lakes
- low to moderate sport fishing potential; best at Larocque Lake
- beach at Larocque Lake has significant recreation potential
- although classified as evidently eutrophic, many lakes indicate intermediate characteristics and are considered mesotrophic for the purposes of this classification

Management Considerations:

- sandy habitats are relatively fragile

References:

- Alberta Recreation and Parks (1980)
- Landals (1978)
- Bayrock (1972b)

ESA: PARKLAND; DRY MIXEDWOOD; BOREAL

Name: Peace River

Area (ha): 470740

Location:

- Twp. 94 - Rge. 20 - W5
- Peace River Valley

NTS Map Sheet: 84C, 84F, 84K, 84J, 84P

Municipality: MD of Northern Lights; MD of East Peace; MD of Mackenzie; Municipality of Wood Buffalo

Natural Subregions: Peace River Parkland; Dry Mixedwood; Peace River Lowlands; Central Mixedwood

Significance: National

- one of the most diverse and productive river valleys in the Parkland and Boreal Forest of Canada
- the Peace River is a nationally significant waterway which supplies water to the Peace-Athabasca Delta, one of the largest freshwater deltas in the world

Description:

- the river valley provides key year round habitat for Moose, Elk and deer
- significant habitat for rare birds of prey such as the Golden Eagle, Bald Eagle and Osprey
- high species diversity of fish
- fisheries resources include Lake Whitefish, Mountain Whitefish, Bull Trout, Northern Pike, Goldeye, Walleye, Yellow Perch, Burbot
- Bull Trout (being considered for COSEWIC listing) overwinter in the river
- Northern Squawfish are present only in the Peace River
- rare Largescale Suckers are also found in the river (distribution in Alberta is restricted to the Peace River drainage system)
- important waterfowl habitat
- Poston lists as provincially significant geese staging habitat
- critical semi-aquatic furbearer habitat
- the river valley is an important movement corridor
- Wandering and Red-sided Gartersnakes and hibernaculum are common along the banks of the river, Lambert Point (TWP109-RG12 - W5) is the location of a hibernacula
- the river from Moose Island (TWP106-RG16 - W5) to the Beaver Ranch Indian Reserve (TWP109-RG12 - W5) provides key waterfowl moulting and staging habitat
- high bird diversity has been noted along the river northeast of the town of Peace River (TWP83&84-RG21 - W5) and northwest of Mushikitee Island (TWP81&82-RG24 - W5), Bald Eagles nest along the river
- Peregrine Falcons (endangered COSEWIC species) historically nested along the steep cliffs east of Ft. Vermilion
- diverse vegetation community types occur along river
- south facing slopes support typical prairie vegetation
- small areas of old growth forest occur along the river and on islands in the lower reaches of the river (OG-5 TWP105-RG17 - W5, OG-6 TWP106-RG17 - W5, OG-7 TWP107-RG16 - W5, OG-12 TWP99-RG19 - W5)
- fossil beds are abundant in bedrock exposures along the valley walls, the banks at Prairie Point (TWP108-RG14 - W5) have abundant Devonian fauna fossil beds
- the Vermilion Chutes (TWP108-RG6 - W5) are a set of rapids where the river abruptly drops 7 m in elevation
- tar pits are present along the river banks north of the Town of Peace River

continued on next page



Name: Peace River (continued)

- recreation opportunities and wilderness areas exist all along the river for camping, canoeing, hiking and fishing
- Notikewin Provincial Park, which contains some old growth forest, is located along the west side of the Peace River across from the Cache Creek/Wolverine Sand Hills
- lies within a significant Bison range
- Peace Point retains native historical value
- as exposed slope is not recognized as a theme in the Dry Mixedwood, exposed slopes are classified as "special" in the theme analysis (the Peace River was not originally part of the Dry Mixedwood region in earlier versions of the Natural Regions Map)

Management Considerations:

- maintenance of natural cover will support the widest variety of wildlife and native plants
- altered flow regime due to upstream dams may negatively impact riparian ecosystem functioning

References:

- Wildlife key area maps
- Fisheries Resources Map
- field notes (1995)
- Poston et al. (1990)
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm
- A. Doepel, pers. comm
- file notes, Land & Forest Service; D. Moyles, pers. comm
- Russell and Bauer (1993)
- T. Fimrite, pers. comm
- Graham et al. (1995)
- NAWMP, unpub. data
- Kindle (1928)
- D. Walty, pers. comm
- Alberta Wilderness Association (1985)
- Herrmann (1993)
- B. Avery, pers. comm
- Semenchuk (1992)
- Alberta Forest Inventory Phase III database
- Nelson and Paetz (1992)
- Boag (1993)
- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files
- Borneuf (1983)
- Stolley 1996 pers. comm

ESA: PARKLAND; DRY MIXEDWOOD; BOREAL

Name: Peace River - Dunvegan

Area (ha): 55864

Location:

- Twp. 84 - Rge. 7 - W6
- Peace River Valley from vicinity of Smoky River upstream to British Columbia border

NTS Map Sheet: 84C, 84D, 83M, 83N

Municipality: MD of Saddle Hills; MD of Peace; MD of Fairview; MD of Spirit River; MD of Birch Hills

Natural Subregions: Peace River Parkland; Dry Mixedwood

Significance: National

- one of the most diverse and productive river valleys in the Parkland and Boreal Forest of Canada
- the Peace River is a nationally significant waterway which supplies water to the Peace-Athabasca Delta, one of the largest freshwater deltas in the world

Description:

- the river valley provides key year round habitat for Moose, Elk and deer
- significant habitat for rare birds of prey such as the Golden Eagle, Bald Eagle and Osprey
- high species diversity of fish
- fisheries resources include Lake Whitefish, Mountain Whitefish, Bull Trout, Northern Pike, Goldeye, Walleye, Yellow Perch, Burbot
- Bull Trout (being considered for COSEWIC listing) overwinter in the river
- Northern Squawfish are present only in the Peace River
- rare Largescale Suckers are also found in the river (distribution in Alberta is restricted to the Peace River drainage system)
- important waterfowl habitat
- Poston lists as provincially significant geese staging habitat
- critical semi-aquatic furbearer habitat
- the river valley is an important movement corridor
- Wandering and Red-sided Gartersnakes and hibernaculum are common along the banks of the river
- high bird diversity
- diverse vegetation community types occur along river
- south facing slopes support typical prairie vegetation such as grasses and cacti, the microclimate at Dunvegan (TWP80-RG4 - W6) results in this warm dry community of species such as cacti, Western Meadowlarks and Savannah Sparrows
- fossil beds are abundant in bedrock exposures along the valley walls
- hoodoos occur along the south slopes along the upper reaches east of the B.C. border
- recreation opportunities and wilderness areas for camping, canoeing, hiking and fishing
- as exposed slope is not recognized as a theme in the Dry Mixedwood, exposed slopes are classified as "special" in the theme analysis (the Peace River was not originally part of the Dry Mixedwood region in earlier versions of the Natural Regions Map)
- Dunvegan Natural Area is located within the Peace River valley

Management Considerations:

- maintenance of natural cover will support the widest variety of wildlife and native plants
- altered flow regime due to upstream dams may negatively impact riparian ecosystem functioning

continued on next page

Name: Peace River - Dunvegan (continued)

References:

- Wildlife key area maps
- Fisheries Resources Map
- field notes (1995)
- Poston et al. (1990)
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm
- A. Doepel, pers. comm
- file notes, Land & Forest Service; D. Moyles, pers. comm
- T. Fimrite, pers. comm
- Graham et al. (1995)
- NAWMP, unpub. data
- D. Walty, pers. comm
- Alberta Wilderness Association (1985)
- Herrmann (1993)
- B. Avery, pers. comm
- Semenchuk (1992)
- Nelson and Paetz (1992)
- Boag (1993)
- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files
- Stolley 1996 pers. comm

ESA: PARKLAND; DRY MIXEDWOOD; BOREAL

Name: Peace River - Parkland

Area (ha): 6789

Location:

- Twp. 82 - Rge. 23 - W5
- Peace River valley at junction with Smoky River (west side of valley)

NTS Map Sheet: 83N

Municipality: MD Peace

Natural Subregions: Peace River Parkland; Dry Mixedwood

Significance: National

- one of the most diverse and productive river valleys in the Parkland of Canada
- the Peace River is a nationally significant waterway which supplies water to the Peace-Athabasca Delta, one of the largest freshwater deltas in the world

Description:

- the river valley provides key year round habitat for deer
- high species diversity of fish
- fisheries resources include Lake Whitefish, Mountain Whitefish, Bull Trout, Northern Pike, Goldeye, Walleye, Yellow Perch, Burbot
- Bull Trout (being considered for COSEWIC listing) overwinter in the river
- Northern Squawfish are present only in the Peace River
- rare Largescale Suckers are also found in the river (distribution in Alberta is restricted to the Peace River drainage system)
- important waterfowl habitat
- Poston lists as provincially significant geese staging habitat
- critical semi-aquatic furbearer habitat
- the river valley is an important movement corridor
- Wandering and Red-sided Gartersnakes and their hibernaculum are common along the banks of the river
- high bird diversity
- diverse vegetation community types occur along river
- south facing slopes support typical prairie and parkland vegetation such as aspen, grasses and cacti

Management Considerations:

- maintenance of natural cover will support the widest variety of wildlife and native plants

References:

- Wildlife key area maps
- Fisheries Resources Map
- field notes (1995)
- Poston et al. (1990)
- Alberta Wilderness Association (1985)
- Nelson and Paetz (1992)
- Boag (1993)
- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files

ESA: PARKLAND; DRY MIXEDWOOD; BOREAL

Name: Peace River - Smoky Junction

Area (ha): 14769

Location:

- Twp. 82 - Rge. 22 - W5
- Peace River valley at junction with Smoky River

NTS Map Sheet: 84C, 84F, 84K, 84J, 84P

Municipality: MD of Northern Lights; MD of East Peace; MD of Mackenzie; Municipality of Wood Buffalo

Natural Subregions: Dry Mixedwood

Significance: National

- one of the most diverse and productive river valleys in the Boreal Forest of Canada
- the Peace River is a nationally significant waterway which supplies water to the Peace-Athabasca Delta, one of the largest freshwater deltas in the world

Description:

- the river valley provides key year round habitat for Moose, Elk and deer
- significant habitat for rare birds of prey such as the Golden Eagle, Bald Eagle and Osprey
- high species diversity of fish
- fisheries resources include Lake Whitefish, Mountain Whitefish, Bull Trout, Northern Pike, Goldeye, Walleye, Yellow Perch, Burbot
- Bull Trout (being considered for COSEWIC listing) overwinter in the river
- Northern Squawfish are present only in the Peace River
- rare Largescale Suckers are also found in the river (distribution in Alberta is restricted to the Peace River drainage system)
- important waterfowl habitat; Poston lists as provincially significant geese staging habitat
- critical semi-aquatic furbearer habitat
- the river valley is an important movement corridor
- diverse vegetation community types occur along river
- as exposed slope is not recognized as a theme in the Dry Mixedwood, exposed slopes are classified as "special" in the theme analysis (the Peace River was not originally part of the Dry Mixedwood region in earlier versions of the Natural Regions Map)
- Peace Smoky Islands and Shaftesbury Islands Natural Areas in the Peace River valley

Management Considerations:

- maintenance of natural cover will support the widest variety of wildlife and native plants
- altered flow regime due to upstream dams may negatively impact riparian ecosystem functioning

References:

- Wildlife key area maps
- Fisheries Resources Map
- field notes (1995)
- Poston et al. (1990)
- Alberta Wilderness Association (1985)
- Herrmann (1993)
- Semenchuk (1992)
- Nelson and Paetz (1992)
- Boag (1993)
- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files

ESA: BOREAL

Name: Peace-Athabasca Rivers Delta

Area (ha): 283079

Location:

- Twp. 111 - Rge. 8 - W4
- confluence of Peace and Athabasca Rivers

NTS Map Sheet: 74L

Municipality: Municipality of Wood Buffalo

Natural Subregions: Peace River Lowlands; Central Mixedwood

Significance: International

- confluence of the Athabasca River and Peace River creates one of the world's largest freshwater deltas

Description:

- extremely significant Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) habitat
- key duck staging and moulting habitat
- key goose staging wetland
- Black Tern colony on Richardson Lake
- non-breeding colonies of Western Grebes, Eared Grebes, Ring-billed Gulls and Common Terns
- key waterfowl production habitat
- hydrologically significant
- international RAMSAR wetland
- rare plants such as Horned Bladderwort (*Utricularia cornuta*) and Stemless Lady's slipper (*Cypripedium acaule*)
- unique because it is situated on all four of the continent's major waterfowl flyways
- supports the largest area of undisturbed sedge and grass meadows in North America and provides key grazing range for the Bison of Wood Buffalo National Park
- vital staging area for Whooping Crane (red-listed species in Alberta, COSEWIC endangered species)
- important habitat for Bald Eagles and Osprey
- critical semi-aquatic furbearer range
- critical spawning and nursery habitat for fish species from Lake Claire and Lake Athabasca
- fish species include Lake Trout, Lake Whitefish, Round Whitefish, Cisco, Shortjaw Cisco (COSEWIC threatened species), Arctic Grayling, Longnose Suckers, White Suckers, Lake Chub, Flathead Chub, Emerald Shiners, Spottail Shiners, Goldeye, Northern Pike, Ninespine Stickleback, Trout-perch, Yellow Perch, Walleye, Spoonhead Sculpin, Deepwater Sculpin and Burbot
- important commercial and sport fishery

Management Considerations:

- proper management of the Bennett Dam on the Peace River will be a crucial element in managing the water resources of the delta
- abnormal fluctuations in water levels could result in disastrous effects upon all aspects of the delta

References:

- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files
- Edwards 1996 pers. comm
- Mitchell and Prepas (1990)
- Poston et al. (1990)
- Stolley 1996 pers. comm
- 1996 field notes

ESA: EASTERN BOREAL

Name: Peerless/Graham Lake Watershed

Area (ha): 95576

Location:

- Twp. 88 - Rge. 3 to 5 - W5
- Peerless/Graham Lake and surrounding uplands

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Boreal Highlands

Significance: Provincial

- excellent representative of Boreal Highlands
- an important commercial fishery in the boreal forest

Description:

- outstanding sport and commercial fish production, including Lake Trout
- high wildlife diversity
- hydrologically important lake
- breeding and staging waterfowl

Management Considerations:

- maintenance of natural vegetation will keep the area attractive for a variety of wildlife

References:

- Westworth & Associates (1990)

ESA: CALGARY

Name: Pekisko Creek

Area (ha): 6064

Location:

- Twp. 16- Rge. 3 - W5
- Pekisko Creek and uplands to the south

NTS Map Sheet: 82J

Municipality: MD of Foothills

Natural Subregions: Foothills Parkland

Significance: Provincial

- some of the most extensive foothills parkland willow in Alberta
- one of the finest Moose ranges in Alberta

Description:

- excellent Elk habitat
- important spawning habitat for Bow River Rainbow Trout in Pekisko Creek
- area has figured prominently in the history of ranching in southern Alberta
- historical interest because the Prince-of-Wales (Edward VIII) once owned a ranch there

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Lamoureux & Associates (1983)



ESA: EASTERN BOREAL; POSTON

Name: Pelican Lake

Area (ha): 5307

Location:

- Twp. 78 - Rge. 21 - W4
- Pelican Lake

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- important White Pelican nesting area
- Poston lists as provincially significant Great Blue Heron nesting habitat

Description:

- important waterfowl area (breeding and staging)
- hydrologically important lake

Management Considerations:

- American White Pelicans are extremely sensitive to human intrusion in their nesting areas

References:

- Westworth & Associates (1990)

ESA: BOREAL; DRY MIXEDWOOD; BRAZEAU; FOOTHILLS

Name: Pembina River

Area (ha): 35709

Location:

- Twp. 64 - Rge. 1 - W5
- Pembina River valley
- two discontinuous units

NTS Map Sheet: 83G, 83F, 83J

Municipality: MD of Yellowhead; MD of Brazeau; County of Parkland; MD of Lesser Slave River

Natural Subregions: Upper and Lower Foothills; Central and Dry Mixedwood

Significance: Provincial

- one of the most diverse streams in the Foothills of Alberta; small significant Boreal portion
- although the river is provincially significant, much of the stream valley has been heavily modified by human activities in the Boreal Forest portion and its significance has been downgraded

Description:

- diversity of stream valley habitats including meadows; old meander channels; lodgepole pine, white spruce and pine-black spruce woodlands; willow-dwarf birch shrubbery; Beaver ponds, and springs
- strongly meandering river with steep banks
- important hydrological function and high landform diversity, including Pembina Falls
- diversity of fish species in Pembina River; important sport fishery
- key spawning, rearing and overwintering habitat for Bull Trout and Mountain Whitefish
- Walleye, Northern Pike, and Rainbow Trout fishery
- habitat for Bull Trout (being considered for COSEWIC listing) at west end tributaries
- suitable nesting habitat for raptors including Osprey and Bald Eagle
- valley is a travel corridor for ungulates and furbearing mammals
- critical Wildlife Zone and important ungulate habitat, especially for Moose
- productive for a variety of songbirds, marsh birds and waterfowl
- mature deciduous woods provide habitat for Cooper's Hawk and regionally uncommon songbirds
- potential Great Blue Heron rookery
- bluffs were historical nest sites for Peregrine Falcons (COSEWIC endangered species)
- suitable nesting habitat for raptors including Osprey and Bald Eagle

Management Considerations:

- channelization, clearing, drainage and cultivation will reduce the attractiveness for a variety of wildlife
- Great Blue Herons are sensitive to human disturbance during the nesting season
- any stream crossings should be constructed in a manner that minimizes siltation
- permanent facilities, access roads and motorized use could significantly impact the wildlife corridor

References:

- Champion Forest Products (n.d.) for Bull Trout
- Borneuf (1983) for springs
- aerial photograph interpretation for habitat diversity
- Mitchell and Prepas (1990)
- Wildlife key area; Fisheries inventory maps
- field notes
- Alberta Natural Resources Service files
- Westworth and Associates Ltd. (1990)

ESA: RED DEER; POSTON

Name: Peter's Pond

Area (ha): 341

Location:

- Twp. 36 to 37 - Rge. 22 - W4
- wetland and aspen parkland 12 km southwest of Delburne

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat
- productive wetlands are important elements of the Parkland Region

Description:

- extensive sedge, cattail and bulrush marsh
- productive for a variety of marsh birds and waterfowl, including diving ducks
- includes a small remnant of adjacent aspen parkland
- key White-tailed Deer habitat

Management Considerations:

- maintenance of native vegetation cover on shorelines and backshore will keep the area attractive for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for wildlife

References:

- Fish and Wildlife key area maps
- 1989 field notes
- Poston et al. (1990)

ESA: PARKLAND; DRY MIXEDWOOD; LEDUC; POSTON

Name: Pigeon Lake

Area (ha): 11633

Location:

- Twp. 46 - Rge. 1 - W5
- Pigeon Lake

NTS Map Sheet: 83G

Municipality: County of Wetaskiwin; County of Leduc

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston describes as nationally significant Red-necked Grebe non-breeding habitat; recreational activities have reduced this significance
- provincially important commercial and sport fisheries

Description:

- well-buffered freshwater lake
- large shallow lake
- nesting gulls and terns; historical Great Blue Heron colony
- high diversity of fish with sport and commercial fisheries
- fish species include Lake Whitefish, Yellow Perch, Burbot, suckers, Walleye, Northern Pike, trout perch and Iowa darter
- managed for commercial, recreation and sport fishery
- two Provincial Parks
- poor waterfowl nesting habitat because low marshy areas are scarce but lake is an important staging lake during fall migration
- significant recreational lake
- well developed cottage community
- the shallow bays with emergent vegetation provide suitable habitat for nesting waterfowl
- upland habitat is important for Moose and White-tailed Deer
- over 130 species of birds recorded

Management Considerations:

- further recreational cottage development may negatively impact the lake
- overfishing by commercial fishermen may deplete the resource
- increasing agricultural and recreational activities will seriously reduce wildlife habitat
- maintaining remnant tree cover on shoreline and inflow streams is important for watershed protection
- clearing of submergent vegetation seriously impacts fish spawning
- septic systems should meet standards to minimize eutrophication and water quality problems

References:

- Wildlife key area maps
- Mitchell and Prepas (1990)
- field notes (1995)
- Poston et al. (1990)
- Brechtel (1981)
- Battle River Regional Planning Commission (1966, 1984, 1985)
- Edmonton Regional Planning Commission (1974)
- Pigeon Lake Study Group (1975)
- J. Martin, Ducks Unlimited Biologist, Camrose, personal communication

ESA: RED DEER; POSTON

Name: Pine Lake

Area (ha): 1300

Location:

- Twp. 35 to 36 - Rge. 24 to 25 - W4
- Pine Lake and portions of Ghostpine Creek

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat

Description:

- spawning areas in Pine Lake for Northern Pike, Walleye and Suckers
- rearing areas for Northern Pike and Yellow Perch along Ghostpine Creek
- former Osprey nesting area

Management Considerations:

- recreation development around the lake could impact water quality

References:

- Fish and Wildlife key area maps
- 1989 field notes

ESA: BOREAL

Name: Pine Lake Bison Range

Area (ha): 377008

Location:

- Twp. 119 - Rge. 11 - W4
- eastern portion of Wood Buffalo National Park

NTS Map Sheet: 74M

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Peace River Lowlands

Significance: National

- Wood Buffalo National Park
- provides habitat for one of the last large free ranging Bison herds in North America

Description:

- significant Bison range
- especially good riparian areas along the floodplain and terraces of Murdock Creek to the east
- numerous permanent springs occur in the area
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) breeding habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)
- 1996 field notes

ESA: PINCHER CREEK

Name: Pine Ridge

Area (ha): 5183

Location:

- Twp. 2 and 3 - Rge. 29 - W4
- area between the Waterton River and Highway 6, from Waterton National Park north to Dungarvan Creek

NTS Map Sheet: 82H

Municipality: MD of Pincher Creek

Natural Subregions: Foothills Parkland; Foothills Fescue

Significance: Provincial

- few extensive areas of diverse foothills parkland remain in Alberta

Description:

- extensive foothills aspen parkland
- some of the grassland is in excellent condition
- numerous uncommon plants; moderate potential for rare plants
- kames and drumlins
- some key Elk habitat at northwestern edge

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and wildlife
- clearing and cultivation eliminate many native plants and animals

References:

- 1986 field notes
- Stalker (1958), Shetsen (1980) and Harrison (1976) for surficial geology
- Cottonwood Consultants (1983)
- Fish and Wildlife key area maps

ESA: BOREAL

Name: Pinto Creek Elk Range

Area (ha): 3975

Location:

- Twp. 68 - Rge. 10 - W6
- south of Beaverlodge

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of few important Grizzly Bear ranges in the Boreal Forest of Alberta

Description:

- key Elk range
- Pinto Creek supports Arctic Grayling, Bull Trout and Mountain Whitefish
- creek lies in a deeply incised valley
- adjacent forest stands consist of mature mixedwood
- important movement corridor for numerous ungulates and Grizzly Bears (blue-listed species in Alberta, COSEWIC vulnerable species)

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- 1996 field notes



ESA: PEACE RIVER

Name: Pipestone Creek

Area (ha): 303

Location:

- Twp. 70 - Rge. 8 - W6
- Pipestone Creek valley

NTS Map Sheet: 83M

Municipality: MD of Greenview

Natural Subregions: Dry Mixedwood

Significance: National

- nationally (possibly internationally) significant dinosaur find

Description:

- *Pachyrhinosaurus* dinosaur located here

Management Considerations:

- fossil localities are difficult to protect from collectors

References:

- D. Tanke, pers. comm
- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm

ESA: PARKLAND; POSTON

Name: Plain Lake

Area (ha): 842

Location:

- Twp. 53 - Rge. 12 - W4
- Plain Lake

NTS Map Sheet: 73E

Municipality: County of Minburn

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant for breeding Bonaparte's Gull

Description:

- significant waterfowl production and staging lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Wildlife key area maps
- field notes (1995)

ESA: GRASSLAND; POSTON

Name: Plover Lake

Area (ha): 1161

Location:

- Twp. 29 - Rge. 10 - W4
- Plover Lake

NTS Map Sheet: 72M

Municipality: Special Area 2

Natural Subregions: Dry Mixedgrass

Significance: National

- Poston lists as nationally significant staging habitat for geese
- productivity is reduced when the lake dries up in drought years

Description:

- significant waterfowl production and staging lake
- large flock of geese and ducks staging on lake during aerial survey
- Ring-billed Gull colony
- exposed mud flats
- significant shorebird habitat
- island habitat for nesting geese created by Ducks Unlimited

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of wildlife

References:

- Ducks Unlimited
- Wildlife key area maps
- field notes (1995)

ESA: PEACE RIVER

Name: Pluvius Lake

Area (ha): 377

Location:

- Twp. 87 - Rge. 23 - W5
- Pluvius Lake

NTS Map Sheet: 84C

Municipality: MD of Northern Lights

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- important Trumpeter Swan staging (a blue listed species in Alberta)
- key waterfowl moulting and staging
- regionally significant Moose range
- the shoreline is relatively undeveloped
- bordered by a bog-fen complex

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Poston et al. (1990)
- NAWMP, unpubl. data
- D. Moyles, pers. comm
- D. Moyles, pers. comm

ESA: STRATHCONA

Name: Pointe-Aux-Pins Soapholes

Area (ha): 89

Location:

- Twp. 53 - Rge. 22 - W4
- northeast of Edmonton

NTS Map Sheet: 83H

Municipality: County of Strathcona

Natural Subregions: Central Parkland

Significance: Provincial

- a provincially scarce hydrogeological feature

Description:

- the close proximity to urban centre gives the site unusually high educational/interpretive value
- springs are characterized by a mounded surface and crusted, soaplike appearance
- the area is soft and 'quicked'
- surface of the feature is maintained by hydrostatic pressure
- heavily impacted by cattle

Management Considerations:

- high sensitivity to disturbance
- perimeter fencing to restrict livestock access to the feature would prevent further degradation

References:

- Borneuf (1983)
- Toth (1966)
- Westworth and Knapik (1987)

ESA: CARDSTON

Name: Police Outpost

Area (ha): 532

Location:

- Twp. 1 - Rge. 26 - W4
- 7 km W of Carway

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Parkland

Significance: National

- numerous rare plants; one of three naturally occurring populations of COSEWIC threatened western blue flag in Canada
- ungrazed and productive habitats
- ungrazed moist foothills parkland is rare in Canada

Description:

- diverse foothills parkland area encompassing Boundary Creek wetlands, Police Outpost Provincial Park and surrounding lands
- the rare western blue flag plant (*Iris missouriensis*) is located along the shore of Police Lake
- numerous rare plants including conimitella (*Conimitella williamsii*), one-flowered goldenweed (*Haplopappus uniflorus*), blue phlox (*Phlox alyssifolia*), arrow-leaved rattlesnake-root (*Prenanthes sagittata*), sharptooth angelica (*Angelica arguta*), sweet marsh ragwort *Senecio hydrophyloides*, and Cusick's paintbrush (*Castilleja cusickii*)
- productive marshes along Boundary Creek
- ungrazed woodlands, wetlands and grassland at Police Outpost Provincial Park
- diverse breeding bird populations
- uncommon birds (Black-headed Grosbeak)

Management Considerations:

- heavy grazing would result in the loss of several key plants and wildlife
- cultivation reduces habitat diversity and eliminates many native plants and wildlife
- recreational use can have locally heavy impacts on fragile habitats

References:

- 1986 field notes
- Wallis (1980 and 1987)
- Crack and Danielson (1974b) for general natural history data

ESA: PINCHER CREEK; WILLOW CREEK

Name: Porcupine Hills

Area (ha): 45543

Location:

- Twp. 9 to 11 - Rge. 27 to 30 - W4 and Twp. 8, 9 and 10 - Rge. 1 - W5
- Porcupine Hills from Head-Smashed-In northwest to the summit
- ridges along southwest side of Porcupine Hills

NTS Map Sheet: 82G, 82H

Municipality: MD of Willow Creek; MD of Pincher Creek

Natural Subregions: Foothills Fescue; Montane

Significance: Provincial

- concentration of significant features
- unglaciated areas on the plains are rare
- few extensive areas of lightly grazed, diverse montane ridges occur in Alberta
- part of the most productive ungulate habitat in Alberta

Description:

- diverse montane ridges with massive sandstone outcrops, lush fescue grassland and forb communities, low and tall shrubbery, and open Douglas fir and limber pine woodland
- dense forests of Engelmann spruce, lodgepole pine, Douglas fir and aspen at higher elevations
- diversity of breeding bird species
- highest elevations were unglaciated (Sections 1, 12, 13, and 36 in 9-1-W5, and Section 1 in 10-1-W5)
- key Mule Deer and Elk habitat
- nesting Ferruginous Hawks (a vulnerable species) in Section NW11 in 8-1-W5
- Hammond Ducks Unlimited wetland project
- extensive areas of lightly grazed fescue grassland
- Beaver dam complexes along major valleys
- includes some small patches of cultivation and logging
- highest elevations in the northwestern portion were unglaciated
- rare plants including Carolina whitlow-wort (*Draba reptans*) and Geyer's onion (*Allium geyeri*)
- diversity of breeding bird species
- several pairs of nesting Prairie Falcons
- uncommon birds including Cooper's Hawk and Cassin's Finch
- Yellow-bellied Marmots, an uncommon mammal, in sandstone outcrops
- several Sharp-tailed Grouse dancing grounds
- includes the internationally significant archeological site at Head-Smashed-In World Heritage Site

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a variety of native plants and wildlife
- limited grazing and maintenance of the Beaver activity will maintain wetland diversity along streams
- cultivation and logging can eliminate many native plants and animals

References:

- Fish and Wildlife key area maps
- 1986 and 1988 field notes
- Jaques (1979), Alberta Ecological Survey (1977) and Wallis (1980) for biophysical features
- H. Pinel (personal communication) for Carolina whitlow-wort
- Shetsen (1987) and Stalker (1958, 1962) for geology

ESA: PEACE RIVER; FOOTHILLS

Name: Pouce Coupe River

Area (ha): 21330

Location:

- Twp. 82 - Rge. 13 - W6
- Pouce Coupe River valley

NTS Map Sheet: 84D, 83M

Municipality: MD of Saddle Hills

Natural Subregions: Dry Mixedwood; Lower Foothills

Significance: Provincial

- one of the most diverse stream valleys in the Foothills and Dry Mixedwood (Peace River section)

Description:

- key Moose habitat
- critical terrestrial furbearer habitat
- Trumpeter Swan nesting sites
- diversity of riparian plant communities and fluvial landforms
- Northern Pike fishery
- residual grasslands on slopes
- canyon features with high topographic diversity
- spawning habitat for fish and Goldeye rearing

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- D. Hervieux, pers. comm
- Boag (1993)



ESA: BOREAL

Name: Preston Lake

Area (ha): 491

Location:

- Twp. 73 - Rge. 13 - W6
- Preston Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive Boreal Forest wetlands

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- key waterfowl production, staging and moulting habitat
- supports Northern Pike

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL; POSTON

Name: Primrose Lake South Basin

Area (ha): 2627

Location:

- Twp. 67 - Rge. 1 - W4
- Primrose Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant American White Pelican breeding habitat

Description:

- colonies of the following are present: American White Pelicans, Double-crested Cormorants, Great Blue Herons, Ring-billed Gulls, Herring Gulls, California Gulls and Common Terns
- Bald Eagle and Osprey nesting sites have been observed
- extensive populations of Beaver, Muskrat, River Otter and Mink
- the lake is commercially fished year-round
- fish species include Walleye, Northern Pike, Cisco, Burbot, Lake Whitefish, Lake Trout, Northern Pike, Yellow Perch and suckers
- excellent waterfowl staging lake
- includes historical sites
- located within the Cold Lake Air Weapons Range

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files

ESA: TABER

Name: Purple Springs Dunes

Area (ha): 8423

Location:

- Twp. 10 and 11 - Rge. 13 to 15 - W4
- dunes north of Purple Springs and Grassy Lake

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- contains significant populations of several sand dune plants which are considered rare in Alberta
- active sand blow-outs are rare in the mixed grasslands
- the populations of Alberta red-listed Great Plains Toads found here are among the highest in Alberta
- Plains Spadefoots are locally distributed in Alberta
- major Sharp-tailed Grouse habitats are very localized in Alberta

Description:

- native mixed grassland and sagebrush on stabilized sand dune terrain with some active blowouts
- several rare plant species including *Abronia micrantha* (sand verbena - a COSEWIC threatened plant species), *Lupinus pusillus* (low lupine), *Franseria acanthicarpa* (bur-sage), and *Chenopodium subglabrum* (smooth goosefoot - a COSEWIC vulnerable plant species))
- breeding habitat for Upland Sandpiper, Lark Bunting, Grasshopper Sparrow and Brewer's Sparrow (uncommon birds)
- several Sharp-tailed Grouse dancing grounds
- key White-tailed Deer and Pronghorn habitat, especially in eastern portion
- Mule Deer habitat
- feeding area for rare birds of prey which nest along the Oldman River
- several wetlands and marshes associated with irrigation developments
- major breeding populations of Great Plains Toads (an Alberta red-listed species) in western half
- Plains Spadefoots in several ponds in southwestern portion
- Black-crowned Night Heron, Great Blue Heron and American White Pelican feeding area on large wetland at north end
- waterfowl production for diving and puddle ducks
- some shorebird nesting and migration

Management Considerations:

- active sand is essential to the survival of the rare plants
- heavy grazing may be detrimental to some rare plants and, in spring, to breeding Great Plains Toads
- clear, shallow water is required by Great Plains Toads for breeding
- cultivation eliminates many native plants and animals
- extensive sagebrush is important for Brewer's Sparrow and Lark Bunting populations

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Cottonwood Consultants (1986a) for Great Plains Toad status
- Westgate (1965) and Shetsen (1987) for surficial geology
- Clark (1984) for Sharp-tailed Grouse

ESA: BOREAL

Name: Puskwaskau Lake

Area (ha): 882

Location:

- Twp. 72 - Rge. 24 - W5
- Puskwaskau Lake

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity observed in 1995
- 1996 field observation recorded 4 adult swans and an active American White Pelican colony
- vast patches of emergent vegetation provide excellent waterfowl production capability
- retains some historical native resource sites
- a small Northern Pike sport fishery occurs on the lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Puskwaskau River

Area (ha): 5411

Location:

- Twp. 74 - Rge. 25 - W5
- Puskwaskau River valley and associated wetlands

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood; Dry Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity noted in 1996
- important travel corridor for Moose, White-tailed Deer and Mule Deer
- lower reaches provide important spring spawning habitat for Northern Pike
- Puskwaskau River mouth provides an important sport fishery habitat

Management Considerations:

- resource developments should take place in a manner consistent with maintaining the Puskwaskau River Northern Pike fishery and ensuring prevention of negative impacts from poor water quality or high sediment loads in tributary streams

References:

- 1996 field notes

ESA: FOOTHILLS

Name: Ram River

Area (ha): 9334

Location:

- Twp. 37 - Rge. 13 - W5
- valley of Ram River

NTS Map Sheet: 83B

Municipality: MD of Clearwater

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- one of the most diverse Foothills streams in Alberta

Description:

- key ungulate habitat (Bighorn Sheep, Elk and Mule Deer)
- important movement corridor
- includes Ram Falls, a unique landform feature
- high fish species diversity (including Bull Trout); sport fishery

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Rayner (1984)
- Wildlife key area maps
- Fisheries inventory maps

ESA: BOREAL

Name: Raspberry Lake

Area (ha): 601

Location:

- Twp. 63 - Rge. 19 - W5
- Raspberry Lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swans (blue-listed species in Alberta) nest on lake
- good potential fisheries habitat
- abundant emergent vegetation
- Beaver activity observed
- surrounding uplands consist of mixedwood forest

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Lamb 1996 pers. comm
- 1996 field notes

ESA: PEACE RIVER; POSTON

Name: Rat Lake

Area (ha): 355

Location:

- Twp. 78 - Rge. 20 - W5
- Rat Lake

NTS Map Sheet: 83N

Municipality: MD of Smoky River

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant for staging ducks

Description:

- key waterfowl moulting and staging
- regionally significant for staging ducks

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data



ESA: BOREAL

Name: Raup Lake Salt Plains

Area (ha): 8711

Location:

- Twp. 123 - Rge. 12 - W4
- salt plains in eastern part of Wood Buffalo National Park

NTS Map Sheet: 74M

Municipality: Municipality of Wood Buffalo

Natural Subregions: Peace River Lowlands, Central Mixedwood

Significance: National

- located within Wood Buffalo National Park
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) breeding habitat

Description:

- extremely saline soils that are dominated by halophytes and contain many vegetation types and plant species otherwise restricted to grasslands in southern Alberta
- salt plains are associated with the presence of two reported salt springs
- extensive flocks of migrating geese, swans and ducks
- never cultivated
- no human impact

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)
- Fairbarns (1990)
- 1996 field notes

ESA: RED DEER; CLEARWATER

Name: Raven River

Area (ha): 4497

Location:

- Twp. 35 to 37 - Rge. 4 to 7 - W5
- Raven River and North Raven River

NTS Map Sheet: 83B

Municipality: County of Red Deer; MD of Clearwater

Natural Subregions: Dry Mixedwood

Significance: Provincial

- a provincially-renowned trout fishery

Description:

- clear spring-fed stream and adjacent aspen, spruce and pine woodland on uplands; some areas with clearing to edge of stream
- spawning, rearing and overwintering areas for a variety of fish
- Brown Trout, Rainbow Trout, Northern Pike, Mountain Whitefish, Walleye, Eastern Brook Trout, Cutthroat Trout, Goldeye, and Mooneye fishery
- spawning, rearing and overwintering areas for Brown Trout, Rainbow Trout, Northern Pike, Mountain Whitefish and Burbot
- key Moose and deer habitat
- includes some of Alberta's larger springs, one of which is now used for a fish hatchery

Management Considerations:

- additional clearing will further reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for wildlife and fish; fencing of streams from cattle use protects fish habitat

References:

- Fish and Wildlife key area maps
- 1989 field notes
- Borneuf (1983) for springs

ESA: BOREAL

Name: Ray Lake

Area (ha): 246

Location:

- Twp. 74 - Rge. 13 - W6
- Ray Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: MODEL FOREST

Name: Red Cap

Area (ha): 14792

Location:

- Twp. 45-46 - Rge. 21-23 - W5
- Nikanassin Range including Red Cap and Cadomin Mountains; upper portion of Mackenzie Creek

NTS Map Sheet: 83C

Municipality: MD of Yellowhead

Natural Subregions: Alpine and Subalpine

Significance: National

- part of a nationally significant extensive Alpine-Subalpine habitat complex extending to the Cardinal River Headwaters

Description:

- extensive dry Alpine slopes
- Subalpine spruce-fir and lodgepole pine forest
- numerous creeks
- shrub fens dominated by willow and dwarf birch
- key habitat for Bighorn Sheep
- part of a buffer between protected lands to the west (Jasper National Park) and multiple use lands to the east

Management Considerations:

- Alpine tundra is vulnerable to disturbance
- ungulates are sensitive to human activities on critical winter ranges
- current prohibitions on motorized recreational access should be maintained on all Zone 1 and 2 lands
- wildlife and erosion problems associated with motorized recreational use should be monitored and, if warranted by declining wildlife or expanding erosion problems, there should be full closure of all lands to motorized use including designated access corridors

References:

- Alberta Forestry, Lands and Wildlife (1990) for zoning
- Alberta Forestry, Lands and Wildlife (1990) for Bighorn Sheep
- aerial photograph interpretation for habitat diversity

ESA: PARKLAND; POSTON

Name: Red Deer Lake

Area (ha): 2956

Location:

- Twp. 43 - Rge. 21 - W4
- Red Deer Lake

NTS Map Sheet: 83A

Municipality: County of Camrose

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging area

Description:

- large lake basin
- significant staging lake for waterfowl
- water levels low during aerial survey
- saline shore in narrow portion of lake
- the narrow portion of lake significant shorebird habitat
- fish species include Walleye, trout and Sauger

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Sweetgrass Consultants (1988)
- field notes (1995)
- Alberta Guide to Sport Fisheries

ESA: ACADIA; LOWER RED DEER RIVER

Name: Red Deer River-Alkali Creek/Dune Point

Area (ha): 5634

Location:

- Twp. 22 to 23 - Rge. 3 to 4 - W4
- valley of the Red Deer River from Alkali Creek to Dune Point

NTS Map Sheet: 72L

Municipality: MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- concentration of features; one of the most diverse river valley systems in Alberta
- provincially significant populations of rare plants such as annual skeletonweed, box elder, bur sage, and prickly milk vetch
- one of few areas of gravelly dune blowouts in Alberta
- most northerly population of Ord's Kangaroo Rats in natural grassland habitat in Alberta

Description:

- diverse coulee woodlands, shrubbery, grasslands, rock outcrops, eroding slopes, active sand dunes and diverse riparian habitats
- nesting area for rare birds, including Prairie Falcon, Golden Eagle, and the COSEWIC endangered Loggerhead Shrike
- rare sand dune plants including annual skeletonweed (*Lygodesmia rostrata*), bur sage (*Franseria acanthicarpa*), low milk vetch (*Astragalus lotiflorus*), nodding umbrella-plant (*Eriogonum cernuum*), annual lupine (*Lupinus pusillus*), shrubby evening-primrose (*Oenothera serrulata*), prickly milk vetch (*Astragalus kentrophyta*)
- variety of breeding birds
- extensive gravelly sand blowouts
- important Sharp-tailed Grouse habitat; contains a dancing ground
- habitat and denning sites for Plains and Wandering Garter Snakes, Prairie Rattlesnake, Bull Snake and Plains Hognose Snake, an Alberta blue-listed species
- key Mule Deer and Pronghorn habitat
- locally important for breeding geese
- habitat for Leopard Frog, a potentially threatened species in Alberta

Management Considerations:

- intensive cattle grazing can significantly reduce populations of rare plants; winter grazing appears to be preferable for maintaining rare plants and populations of Ord's Kangaroo Rats in sand dune areas
- birds of prey such as the Golden Eagle are sensitive to human intrusion during certain portions of the nesting season
- maintenance of adjacent native grasslands and associated prey populations will ensure the continued survival of rare birds of prey
- groundwater withdrawals could negatively affect spring flows
- hibernacula are critical to the survival of snakes; disturbance can lead to significant population losses

References:

- 1990 and 1991 field notes
- Wallis (1977); Wallis and Wershler (1988)
- Fish and Wildlife key area maps
- Poston et al (1990)

ESA: ACADIA; LOWER RED DEER RIVER

Name: Red Deer River-Bindloss/Empress Terraces

Area (ha): 9881

Location:

- Twp. 22 and 23 - Rge. 1 to 3 - W4
- Red Deer River terraces and floodplain from Dune Point to the Saskatchewan boundary

NTS Map Sheet: 72L

Municipality: MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: National

- some of the most extensive and diverse plains cottonwood ecosystems in Canada
- one of the most important breeding areas for COSEWIC endangered Loggerhead Shrikes in Canada
- Sage Thrashers are extremely rare in Canada

Description:

- extensive river valley habitats with open water, cutbanks, riparian shrubbery and cottonwood forests, channel wetlands, grasslands, sand dunes, and sagebrush and alkali flats
- massive river terraces with complex geomorphology
- diverse breeding bird populations
- important nesting area for Loggerhead Shrikes, a COSEWIC endangered species
- potential nesting area for rare Sage Thrashers, a COSEWIC endangered species
- key Mule Deer, White-tailed Deer and Pronghorn habitat
- important Sharp-tailed Grouse habitat and dancing grounds
- active sand dunes with sand verbenas (*Abronia micrantha*), a COSEWIC threatened plant species, and rare plants such as annual skeletonweed (*Lygodesmia rostrata*), annual lupine (*Lupinus pusillus*), bur sage (*Franseria acanthicarpa*), lavauxia (*Oenothera flava*), and shrubby evening-primrose (*Oenothera serrulata*)
- habitat for Plains Hognose Snakes, an Alberta blue-listed species
- alkali wetlands and springs with rare or uncommon plant species, including few-flowered aster (*Aster pauciflorus*), chaffweed (*Centunculus minimus*), and paper birch (*Betula papyrifera*)
- locally important for staging and breeding geese

Management Considerations:

- clearing and cultivation reduces the suitability for a wide variety of native plants and animals
- stabilization of sand dunes eliminates rare plants
- heavy grazing may be detrimental to some native plants and animals in riparian and spring ecosystems
- alterations in stream flow affect the reproduction of cottonwood forests

References:

- 1990 and 1991 field notes
- Wallis (1977)
- Mike O'Shea (personal communication) regarding Sage Thrasher
- W. Smith, unpublished data, for status of Loggerhead Shrike
- Fish and Wildlife key area maps
- Bradley and Smith (1986), Smith and Flake (1981) and Bradley (1988) for impacts of altered stream flow and grazing on riparian systems
- McPherson (1968) for discussion of river terrace geomorphology
- Poston et al (1990)

ESA: NEWELL; LOWER RED DEER RIVER

Name: Red Deer River-Finnegan/Steveville Terraces

Area (ha): 19516

Location:

- Twp. 22 to 25 - Rge. 12 to 16 - W4
- valley of the Red Deer River from Finnegan to Steveville; includes valley of Matzhiwin Creek

NTS Map Sheet: 72L

Municipality: County of Newell

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- some of the most extensive riparian cottonwood and least disturbed valley spring systems in Alberta
- only one of two known locations in Alberta for porcupine sedge (*Carex hystricina*)

Description:

- extensive cottonwood, tall shrub, and low shrub riparian habitats
- numerous wooded spring ecosystems
- diverse breeding bird habitat
- key Mule and White-tailed Deer habitat
- key Pronghorn habitat between Douglas and Matzhiwin Creeks
- active Great Blue Heron colony
- regionally rare or uncommon birds including Golden Eagle, Pileated Woodpecker, the COSEWIC endangered Burrowing Owl, Rose-breasted Grosbeak, and Cooper's Hawk
- rare or uncommon spring plants including porcupine sedge (*Carex hystricina*), knot-sheath sedge (*Carex retrorsa*), brook grass (*Catabrosa aquatica*), cut-leaved water horehound (*Lycopus americanus*), devil's beggar-ticks (*Bidens frondosa*), little-seed rice-grass (*Oryzopsis micrantha*), and western wood lily (*Lilium philadelphicum*)
- uncommon sand dune plants including annual lupine (*Lupinus pusillus*)
- locally important for breeding geese
- habitat for a variety of fish including Mooneye, Walleye, Northern Pike, Goldeye, Sauger and White Sucker; spawning at the Mouth of Matzhiwin Creek
- small portion of mixed grass upland in the vicinity of Highway 36 and the mouth of Bullpound Creek

Management Considerations:

- altered stream flow affects the reproduction of cottonwood forests
- heavy grazing reduces suitability for a variety of wildlife and affects cottonwood regeneration
- cattle grazing could degrade spring ecosystems
- clearing and cultivation eliminate habitat diversity
- Great Blue Herons are sensitive to human presence during the nesting season
- a variety of grazing regimes on the uplands will keep the area attractive for a variety of grassland plants and animals

References:

- Wallis (1977), Wells and Bentz (1990), Wallis and Wershler (1988) and Poston et al (1990)
- Brechtel (1981) for Great Blue Herons
- Fish and Wildlife key area maps
- Wallis (1980 and 1987) and Cottonwood Consultants (1983) for riparian description and significance
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- 1991 field notes



ESA: LOWER RED DEER RIVER

Name: Red Deer River-Jenner

Area (ha): 8641

Location:

- Twp. 21 to 22 - Rge. 9 to 10 - W4
- Red Deer River Valley north of Jenner

NTS Map Sheet: 72L

Municipality: Special Area 2; Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- one of the most diverse and spectacular sections of the Red Deer River in Alberta
- an extension of the Dinosaur ESA; has greater disturbance and less extent and diversity

Description:

- rugged badlands and diverse cottonwood, tall shrub, and low shrub riparian habitats
- variety of breeding birds
- key Mule and White-tailed Deer habitat
- nesting area for rare birds of prey including Ferruginous Hawk, Golden Eagle and Prairie Falcon
- locally important for breeding geese

Management Considerations:

- cultivation reduces the productivity of the riparian habitats for native birds and mammals
- some birds of prey (e.g. Golden Eagles) are sensitive to human presence during the nesting season

References:

- Wallis (1977) and Wells and Bentz (1990)
- Poston et al (1990)
- Fish and Wildlife key area maps
- 1991 field notes

ESA: FORTY MILE

Name: Red Rock Coulee

Area (ha): 3791

Location:

- Twp. 8 - Rge. 7 - W4
- Red Rock Coulee and Bullshead Creek south of Seven Persons

NTS Map Sheet: 72E

Municipality: County of Forty Mile

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: Provincial

- the most significant aggregation of large concretions in Alberta

Description:

- badlands, mixed grassland and spring-fed wooded coulee
- includes Red Rock Coulee Natural Area
- spectacular sandstone concretions which have been eroded out of surrounding softer bedrock
- key deer habitat
- Prairie Rattlesnake hibernacula

Management Considerations:

- clearing and cultivation reduce the significance of these habitats for many grassland plants and animals
- heavy grazing in coulee woodlands and springs can reduce rare plants in these habitats

References:

- Fish and Wildlife key area maps
- Natural and Protected Areas Program files
- 1991 field notes

ESA: BOREAL

Name: Redwillow River

Area (ha): 920

Location:

- Twp. 70 - Rge. 13 - W6
- Redwillow River, south of Beaverlodge

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of few Grizzly Bear ranges in the Mixedwood Boreal Forest of Alberta

Description:

- ungulate migration and winter range; critical Moose habitat
- fish species include Arctic Grayling, Bull Trout (spawning) and Northern Pike
- high bird diversity
- includes dinosaur and hadrosaur paleontology sites
- mineral licks occur
- contains Redwillow Falls Natural Area which has 1 m high waterfalls, a Beaver-dammed oxbow lake and small stands of mixedwood forest
- located within a Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) range

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Natural Resources Service files
- Patriquin (1993)
- Walty (1996) pers. comm

ESA: BOREAL

Name: Redwillow River Grizzly Range

Area (ha): 18656

Location:

- Twp. 70 - Rge. 13 - W6
- near Redwillow River, south of Beaverlodge

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of few Grizzly Bear ranges in the Mixedwood Boreal Forest of Alberta

Description:

- prime Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) range
- contains mineral licks

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Natural Resources Service files

ESA: DRY MIXEDWOOD; POSTON

Name: Reed Lake

Area (ha): 1567

Location:

- Twp. 61 - Rge. 12 - W4
- Reed Lake

NTS Map Sheet: 83I

Municipality: County of Smoky Lake

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant for breeding Eared Grebes

Description:

- located on the edge of White Fish Lake Indian Reserve
- Osprey nesting site
- irregular shoreline and island habitat provide excellent habitat for colonial nesting birds
- waterfowl production lake
- managed fishery
- fish species include Northern Pike, Lake Whitefish, Yellow Perch, and suckers

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Fishery inventory maps
- Wildlife key area maps (1995)

ESA: PARKLAND

Name: Reflex Lake

Area (ha): 566

Location:

- Twp. 42 - Rge. 1 - W4
- Reflex Lake

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: International

- one of the densest breeding populations of Piping Plovers (a COSEWIC endangered species in Canada and red-listed species in Alberta) in the world

Description:

- diverse kame moraine, sandy plain and sand dune habitat
- rare plants
- diversity of breeding and migratory birds
- alkali lake located north of Dillberry Lake
- nationally significant shorebird migration area

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Byersbergen (pers. comm. 1995)

ESA: DRY MIXEDWOOD; POSTON

Name: Reita Lake

Area (ha): 1939

Location:

- Twp. 59 - Rge. 3 - W4
- Reita Lake

NTS Map Sheet: 73L

Municipality: MD of Bonnyville

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant for breeding Western Grebe

Description:

- lake located south of Cold Lake
- water levels low during aerial survey
- significant staging and production lake for waterfowl
- Western Grebes and gull colony noted
- some waterfowl observed on lake during aerial survey
- fen/bog wetlands in upland
- Moose habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Fisheries Resources Maps
- field notes (1995)

ESA: LOWER RED DEER RIVER

Name: Remount

Area (ha): 27776

Location:

- Twp. 22 - Rge. 3 - W4
- southwest of Bindloss
- includes Remount Community Pasture

NTS Map Sheet: 72L

Municipality: Special Area 2

Natural Subregions: Dry Mixedgrass

Significance: National

- part of one of the largest continuous blocks of native grassland in Canada

Description:

- extensive mixed grassland habitats and ephemeral wetlands
- key Pronghorn habitat
- rare birds including Prairie Falcon, Golden Eagle, and the COSEWIC vulnerable Ferruginous Hawk and endangered Loggerhead Shrike and Burrowing Owl
- sand plain habitats for Plains Hognose Snake, an Alberta blue-listed species
- unit continues south to Suffield Military Reserve boundary

Management Considerations:

- a diversity of grazing regimes will maintain a variety of native plants and animals typical of mixed grasslands
- cultivation reduces the productivity of the grasslands for native birds and mammals
- maintenance of ground squirrel numbers will keep the area attractive for several birds of prey

References:

- Fish and Wildlife key area maps
- 1991 field notes
- Wallis (1977) and Wallis and Wershler (1988)



ESA: PEACE RIVER

Name: Representative Area #84

Area (ha): 22563

Location:

- Twp. 93 - Rge. 19 - W5
- uplands along east side of Peace River

NTS Map Sheet: 84F

Municipality: MD of East Peace

Natural Subregions: Dry Mixedwood

Significance: Provincial

- excellent representative of the Boreal Dry Mixedwood Natural Subregion

Description:

- non-sandy, aspen dominated communities on lacustrine or lacustrine-till deposits
- soils are moderately calcareous and weakly saline with predominantly silty clay and clay textures
- major soil groups include: solodic gray luvisols, orthic humic gleysols and organics

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Scheelar and Odynsky (1968)

ESA: PEACE RIVER

Name: Representative Area #89

Area (ha): 16857

Location:

- Twp. 83 - Rge. 7 - W6
- uplands along south side of Peace River near Dunvegan

NTS Map Sheet: 84D

Municipality: MD of Saddle Hills

Natural Subregions: Dry Mixedwood; Peace River Parkland

Significance: Provincial

- excellent representative of the Boreal Dry Mixedwood Natural Subregion

Description:

- non-sandy upland site
- aspen, aspen-white spruce and white spruce communities
- soils, predominantly dark gray luvisols, dark gray solods and orthic gray luvisols, are developed on lacustrine or lacustro-till deposits
- soils are moderately calcareous and saline with clay loam to clay and occasionally silty clay loam textures

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Reeder and Odymsky (1965)

ESA: PAINTEARTH; PARKLAND; GRASSLAND

Name: Ribstone Creek-Camp Wainwright

Area (ha): 5397

Location:

- Twp. 42 - Rge. 6 - W4
- Ribstone Creek valley on east side of Camp Wainwright

NTS Map Sheet: 73D

Municipality: MD of Provost; MD of Wainwright

Natural Subregions: Central Parkland

Significance: Provincial

- one of the most diverse and intact parkland streams in Alberta

Description:

- variety of streamside vegetation from saline seepage to extensive willow poplar stands
- diverse, undisturbed riparian communities
- key White-tailed Deer habitat
- presence of Northern Pike
- agricultural clearing has impacted portions of the valley habitat
- waterfowl staging area
- diverse breeding bird habitats

Management Considerations:

- clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife

References:

- field notes (1995)
- Fish inventory maps
- Alberta Wilderness Association (1990)
- 1988 field notes
- Fish and Wildlife key area maps

ESA: LLOYDMINSTER; PARKLAND

Name: Ribstone Creek-Edgerton

Area (ha): 1776

Location:

- Twp. 44 - Rge. 3 - W4
- Ribstone Creek uplands near Edgerton, Alberta

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: Provincial

- one of the most diverse complexes of sand plains, active dunes, calcareous fens and productive riparian habitats in Alberta

Description:

- remnant Aspen Parkland on sand plain uplands
- important deer habitat
- diverse breeding bird communities
- part of a larger provincially significant complex that extends south out of the study area
- additional clearing is ongoing in the vicinity of this area
- habitat for Ferruginous Hawk, a vulnerable species

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife

References:

- 1995 field notes

ESA: PAINTEARTH; PARKLAND; GRASSLAND

Name: Ribstone Creek-Nose Hill

Area (ha): 4120

Location:

- Twp. 37 - Rge. 9 - W4
- Ribstone Creek valley near Nose Hill

NTS Map Sheet: 73D

Municipality: Special Area 4; County of Paintearth; MD of Provost

Natural Subregions: Northern Fescue

Significance: Provincial

- one of the most diverse and intact northern fescue streams in Alberta

Description:

- variety of streamside vegetation from saline seepage to extensive willow poplar stands
- small sagebrush areas in western portion
- key White-tailed Deer habitat
- presence of Northern Pike
- agricultural clearing has impacted portions of the valley habitat
- primarily diverse, undisturbed riparian communities
- waterfowl staging area
- diverse breeding bird habitats
- sandy ground moraine on upland in the eastern part of the area

Management Considerations:

- clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife

References:

- field notes (1995)
- Fish inventory maps
- Alberta Wilderness Association (1990)
- 1988 field notes
- Fish and Wildlife key area maps

ESA: LLOYDMINSTER; PARKLAND; POSTON

Name: Ribstone Lake

Area (ha): 726

Location:

- Twp. 44 - Rge. 5 - W4
- Ribstone Lake southwest of Heath, Alberta

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: Provincial

- one of the most productive wetlands for staging ducks in the Aspen Parkland of Alberta

Description:

- large saline wetland
- productive shorebird and waterfowl habitat
- key staging and moulting habitat for ducks

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterfowl and shorebirds

References:

- Grant Gunderson (pers. comm.) for waterfowl
- 1995 field notes

ESA: BOREAL; POSTON

Name: Rich Lake

Area (ha): 1084

Location:

- Twp. 64 - Rge. 11 - W4
- Rich Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant Eared Grebe nesting habitat

Description:

- large Eared Grebe colony
- high waterfowl production lake
- the mouths of inlet and outlet tributaries to Rich Lake provide important waterfowl production and moulting habitat
- excellent shorebird habitat
- wide band of emergent vegetation along shoreline
- minor sport fishery supported by Northern Pike (only present in the summer) and Yellow Perch

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Longmore et al. (1982)
- 1996 field notes

ESA: BOREAL

Name: Richardson River Active Sand Dunes

Area (ha): 685

Location:

- Twp. 107 - Rge. 8 - W4
- dune field in the vicinity of the Richardson River

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: National

- part of one of the most extensive and representative sand landscapes in Canada

Description:

- represents one of Alberta's largest active sand dunes

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- sand dunes are particularly sensitive to motorized vehicle use

References:

- 1996 field notes
- Fairbarns (1979 a and b)
- Alberta Recreation and Parks (1980)
- David (1977)
- Landals (1978)
- Raup and Argus (1982)
- Bayrock (1972b)



ESA: CANADIAN SHIELD; BOREAL

Name: Richardson River Sand Hills

Area (ha): 82139

Location:

- Twp. 106 - Rge. 8 - W4
- dune field in the vicinity of the Richardson and Maybelle Rivers
- includes the Athabasca Dunes Ecological Reserve

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood, Peace River Lowlands; Athabasca Plain

Significance: National

- the largest single uninterrupted sand dune complex in Canada
- paleodunes of this type, size and development are not recorded elsewhere in the scientific literature

Description:

- fish hook, parabolic and V-shaped dunes
- longitudinal ridges and parabolic paleodunes aligned with previous prevailing winds
- large actively migrating dune fields
- jack pine-lichen woodland with deciduous aspen and paper birch in depressions
- the best paleodunes are in the southwestern portion between the Athabasca and Richardson Rivers
- provincially rare plant species including stemless lady's-slipper (*Cypripedium acaule*) and pitcher plant (*Sarracenia purpurea*), horned bladderwort (*Utricularia cornuta*), hoary tansy (*Tanacetum huronense*), sand chickweed (*Stellaria arenicola*), pond lily (*Nymphaea tetragona*), linear-leaved sundew (*Drosera linearis*), one-flowered water-horehound (*Lycopus uniflorus*)
- although mapped as boreal forest, it is more closely aligned with other Athabasca Plain features

Management Considerations:

- sandy habitats are relatively fragile and are particularly sensitive to motorized vehicle use
- maintenance of natural habitats will support the greatest diversity of native species

References:

- Fairbarns (1979 a and b)
- Alberta Recreation and Parks (1980)
- David (1977)
- Landals (1978)
- Raup and Argus (1982)
- Bayrock (1972b)
- Vitt (1992)
- Jaques (1987)
- Mulira (1986)
- 1996 field notes

ESA: CANADIAN SHIELD

Name: Richardson Tower Lakes (also called Archer-Bowen-Brander Lakes)

Area (ha): 6159

Location:

- Twp. 103 to 109 - Rge. 1 to 5 - W4
- lakes and uplands between Archer and Brander Lakes

NTS Map Sheet: 74L

Municipality: MD of Big Lakes

Natural Subregions: Athabasca Plain

Significance: Provincial

- some of the best developed alluvial floodplain deposits and associated habitats within the Athabasca Plain of Alberta are found along the Old Fort River
- scenically spectacular, particularly in the kame area northwest of Bowen Lake

Description:

- rolling kames, esker and numerous small kettle lakes
- classic ice-contact and glaciofluvial terrain features
- extensive jack pine forests
- high recreation capability, especially in the vicinity of the lakes
- with the possible exception of the Old Fort River floodplain, most important for objectives other than preservation

Management Considerations:

- sandy habitats are relatively fragile

References:

- Landals (1978)
- Alberta Recreation and Parks (1980)
- Bayrock (1972b)
- Vitt (1992)
- Renewable Resources Consulting Services (n.d.)

ESA: PINCHER CREEK

Name: Rock-Cow Creek Wetlands

Area (ha): 3535

Location:

- Twp. 8 - Rge. 3 - W5
- 16 km N of Burmis

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane; Subalpine

Significance: Provincial

- one of the most diverse willow, spring and Beaver pond complexes in the Montane of Alberta

Description:

- extensive Beaver pond and wetland complex along Rock Creek and Cow Creek
- diverse breeding bird habitat
- waterfowl production on larger ponds
- key Moose habitat
- some fish production

Management Considerations:

- heavy cattle grazing reduces the suitability of these habitats for several wildlife species
- clearing and cultivation eliminate many native plants and animals
- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries

References:

- 1986 field notes
- Fish and Wildlife key area maps
- C. Bradley, Trout Unlimited (personal communication) for fish

ESA: POSTON

Name: Ronald Lake

Area (ha): 326

Location:

- Twp. 103 - Rge. 10 - W4
- Ronald Lake

NTS Map Sheet: 74E

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant staging duck habitat

Description:

- small boreal forest lake
- productive for a variety of waterfowl

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: CYPRESS

Name: Ross Creek

Area (ha): 32578

Location:

- Twp. 10 to 12 - Rge. 1 to 5 - W4
- Ross Creek drainage and associated uplands east of Medicine Hat

NTS Map Sheet: 72E, 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: National

- the largest herds of wintering Pronghorn in Canada

Description:

- extensive badlands, riparian habitats, ephemeral wetlands and grasslands
- key Mule Deer, White-tailed Deer and Pronghorn habitat
- Great Blue Heron colony
- former Sage Grouse nesting area
- diversity of breeding birds
- Leopard Frog breeding habitat
- nesting area for Cooper's Hawks and Baird's Sparrows (a yellow A-listed species in Alberta) and rare Golden Eagles
- discontinuous unit with major disturbances including the Trans-Canada Highway and extensive cultivation of sagebrush flats

Management Considerations:

- clearing and cultivation reduces the suitability of these habitats for a variety of wildlife species
- Great Blue Herons are sensitive to human intrusion around colonies during the nesting season

References:

- Poston et al. (1990), Brechtel (1981) and Kemp (1983)
- Fish and Wildlife key area maps
- 1991 field notes
- D. Dickinson (1991 letter)

ESA: CARDSTON

Name: Ross Lake Unglaciaded

Area (ha): 1119

Location:

- Twp. 1 and 2 - Rge. 22 and 23 - W4
- 2 km south of Ross Lake on the Milk River Ridge

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: National

- the Milk River Ridge contains one of three unglaciated areas on the Plains of Canada
- the Ross Lake area has the largest remaining area of uncultivated, unglaciated foothills grassland area on the Milk River Ridge
- numerous rare plants

Description:

- unglaciated plateau of the Milk River Ridge, north of the Milk River
- numerous rare or disjunct plants including tufted hymenopappus (*Hymenopappus filifolius*), the COSEWIC vulnerable hare-footed locoweed (*Oxytropis lagopus*), gray hawksbeard (*Crepis intermedia*), umber pussy-toes (*Antennaria umbrinella*), Raynolds' sedge (*Carex raynoldsii*), Colorado rush (*Juncus confusus*) and American thoroughwax (*Bupleurum americanum*)
- disjunct populations of clouded Parnassian butterflies (*Parnassius phoebus*)
- rare birds (Baird's Sparrow)
- lush lightly grazed and unglaciated foothills grassland on the Ross Lake Community Pasture

Management Considerations:

- heavy grazing or cultivation would eliminate several rare plants
- gravel operations along the plateau rim can have significant local impacts on rare plant communities

References:

- 1986 field notes
- Shetsen (1980) and Stalker (1963b) for glacial geology
- N. Kondla (personal communication) for butterflies

ESA: STETTLER

Name: Rumsey North

Area (ha): 11481

Location:

- Twp. 34 to 36 - Rge. 19 to 20 - W4
- 5 km E of Big Valley, N of Highway 589

NTS Map Sheet: 83A

Municipality: County of Stettler

Natural Subregions: Central Parkland; Northern Fescue

Significance: Provincial

- extensive tracts of aspen parkland are rare in Alberta; somewhat more fragmented than more significant areas such as Rumsey South

Description:

- native parkland with patches of cultivation
- aspen woodland, fescue grassland and a variety of shrubbery and wetlands
- productive deer habitat
- classic moraine plateaux (flat-topped glacial hills)
- waterfowl production
- much of the grassland is heavily grazed

Management Considerations:

- additional clearing, drainage and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- heavy grazing eliminates uncommon fescue grassland species of plants and animals

References:

- 1988 field notes
- Fish and Wildlife files

ESA: STETTLER; STARLAND

Name: Rumsey South

Area (ha): 25852

Location:

- Twp. 32 to 34 - Rge. 18 to 20 - W4
- 10 km E of Scollard, S of Highway 589

NTS Map Sheet: 82P

Municipality: MD of Starland; County of Stettler

Natural Subregions: Northern Fescue; Central Parkland

Significance: International

- part of the largest remaining block of non-sandy aspen parkland in the world
- elsewhere, this habitat has largely been converted to cropland

Description:

- relatively undisturbed aspen woodland, lush fescue grassland and a variety of shrubbery and wetlands
- waterfowl production
- eskers
- classic moraine plateaux, mesa-like geomorphic features
- provincially rare plant, crowfoot violet (*Viola pedatifida*)
- regionally uncommon birds including Baird's Sparrow and Upland Sandpiper
- Cooper's Hawk, a rare bird species in Canada
- productive deer habitat
- productive deer habitat
- numerous Sharp-tailed Grouse dancing grounds
- includes some small patches of cultivation

Management Considerations:

- clearing, drainage and cultivation would reduce the attractiveness of the area for a variety of wildlife and would destroy the area's wildland character
- many parkland/fescue grassland species are not well-adapted to heavy grazing pressure
- light grazing or infrequent mowing help maintain the most significant plants and animals of this ecosystem
- prescribed burning may enhance the growth of some rare plant species and discourage the encroachment of aspen and shrubbery

References:

- Bradley and Bradley (1977) and Wallis (1977)
- Fish and Wildlife key area maps
- Fehr (1982) and Cottonwood Consultants (1986b)



ESA: BOREAL

Name: Russell Lake

Area (ha): 3465

Location:

- Twp. 93 - Rge. 12 - W5
- Russell Lake

NTS Map Sheet: 84G

Municipality: MD of Opportunity

Natural Subregions: Boreal Highlands

Significance: Provincial

- one of the most productive wetlands in the Boreal Highlands of Alberta

Description:

- includes part of Russell Creek
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Bald Eagle nesting site
- adjacent uplands support Great Grey Owl
- good waterfowl production site
- abundant Common Loons and Red-necked Grebes
- fish species supported include Northern Pike, Yellow Perch and Burbot
- lakeshore reservation implemented for forest management purposes within the Daishowa-Marubeni FMA
- surrounding area extremely rich in wildlife production potential
- Moose utilize creek and lake riparian areas which provide critical habitat components
- Beaver is a 'keystone' species in the area i.e. it has a significant impact on the development of the aquatic and riparian ecosystems

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Poston et al. (1990)
- Walty (1996) pers. comm

ESA: CYPRESS; FORTY MILE

Name: Sage Creek

Area (ha): 140220

Location:

- Twp. 1 to 5 - Rge. 1 to 6 - W4
- extensive mixed grassland area centered on Sage Creek

NTS Map Sheet: 72E

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: National

- western extremity of part of the largest block of mixed grassland left in Canada
- concentration of provincially and nationally rare species

Description:

- extensive mixed grassland and ephemeral saline wetlands
- minor badlands and tall shrub riparian habitats along streams
- rare plants including awned mousetail (*Myosurus aristatus*), Pursh's milk-vetch (*Astragalus purshii*), bushy cinquefoil (*Potentilla paradoxa*), wedgescale orache (*Atriplex truncata*), bahia (*Bahia oppositifolia*), flowering quillwort (*Lilaea scilloides*), woolly-heads (*Psilocarphus elatior*), plains boisduvalia (*Boisduvalia glabella*), western hawksbeard (*Crepis occidentalis*), and runcinate-leaved rush-pink (*Stephanomeria runcinata*); the last five species are considered rare in Canada
- rare, uncommon, threatened, vulnerable or endangered fauna including Bobolink, Mountain Plover, Baird's Sparrow, Ferruginous Hawk, Burrowing Owl, Loggerhead Shrike and Swift Fox
- several Sage Grouse and Sharp-tailed Grouse dancing grounds
- key Pronghorn and Mule Deer habitat
- important Swift Fox habitat; includes several release sites
- productive wetlands in wetter years; includes Milk River (Wild Horse) Lake
- large esker ridge

Management Considerations:

- cultivation reduces the suitability of grasslands to support a variety of native species
- a variety of grazing regimes from heavy to ungrazed is required to maintain the full variety of Mixedgrass species, e.g. Mountain Plovers require extremely heavily grazed range while Baird's Sparrows prefer pastures which have been idled for numerous years
- grouse can be disturbed by human activity in the vicinity of the dancing grounds
- intensive oil development impacts wildlife populations

References:

- Coupland (1973)
- Scott-Brown et al. (1986) for Swift Fox
- McCulley (1983a) for impacts of petroleum development on Sage Grouse
- Fish and Wildlife key area maps
- Natural and Protected Area Program files
- 1991 field notes

ESA: BOREAL

Name: Salt River

Area (ha): 11098

Location:

- Twp. 125 - Rge. 12 - W4
- Salt River at edge of Wood Buffalo National Park

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo; MD of Big Lakes

Natural Subregions: Peace River Lowlands; Central Mixedwood

Significance: Provincial

- provincially unique river fed by salt springs
- hydrologically significant for the existence of the adjacent salt plains

Description:

- numerous flocks of waterfowl observed staging along floodplains
- contains a natural spring
- hydrologically significant for the existence of the adjacent salt plains
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) nesting and foraging habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)
- 1996 field notes

ESA: BOREAL

Name: Salt River Salt Plains

Area (ha): 7364

Location:

- Twp. 123 - Rge. 11 - W4
- salt plains along the Salt River, Wood Buffalo National Park

NTS Map Sheet: 74M

Municipality: Municipality of Wood Buffalo

Natural Subregions: Peace River Lowlands; Central Mixedwood

Significance: National

- located within Wood Buffalo National Park

Description:

- extremely saline soils that are dominated by halophytes and contain many vegetation types and plant species otherwise restricted to grasslands in southern Alberta
- extensive salt plains associated with salt springs
- iron-depositing springs have also been recorded
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) breeding habitat
- never cultivated
- no human impact

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d
- Borneuf (1983)
- Fairbarns (1990)
- 1996 field notes

ESA: PARKLAND; POSTON

Name: Samson Lake

Area (ha): 2355

Location:

- Twp. 43 - Rge. 23 - W4
- Samson Lake and associated upland

NTS Map Sheet: 83A

Municipality: County of Wetaskiwin

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging area

Description:

- located along Battle River bordering the Samson Indian Reserve
- significant production lake for waterfowl
- some emergent vegetation around perimeter of lake
- salt flats along shoreline providing shorebird habitat
- numerous shorebirds observed during aerial survey
- Ducks Unlimited restoration project on lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Ducks Unlimited
- Wildlife key area maps
- Sweetgrass Consultants (1988)
- field notes (1995)

ESA: BOREAL

Name: Sand River

Area (ha): 20501

Location:

- Twp. 65 - Rge. 8 - W4
- Sand River valley
- located within the Cold Lake Air Weapons Range

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most intact and diverse river valleys in the Boreal Forest of Alberta

Description:

- wide river valley with aspen dominated slopes
- important River Otter habitat
- important ungulate wintering habitat
- river valley serves as a movement corridor for ungulates
- old growth sections along riparian zone
- hydrologically important
- supports a small Caribou (COSEWIC vulnerable species) population
- river extends from the Central Boreal Mixedwood Subregion south to the Beaver River
- significant White-tailed Deer habitat in the south and significant Moose habitat in the north
- fisheries resources include Northern Pike, Walleye and suckers
- significant spawning, rearing and overwintering river for these fish species

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- Boyacioglu (1974)
- Boyacioglu (1977)
- Mitchell and Prepas (1990)
- Strong (1978)
- 1996 field notes

ESA: CALGARY

Name: Sarcee (Tsuu Tina) Reserve

Area (ha): 6647

Location:

- Twp. 23- Rge. 2 - W5
- southwest of Calgary

NTS Map Sheet: 82J and 82O

Municipality: MD of Rocky View

Natural Subregions: Foothills Parkland

Significance: Provincial

- one of the largest relatively intact parcels of Foothills Parkland in Alberta

Description:

- major wetland complex in the vicinity of the headwaters of Priddis Creek
- contains a relatively undisturbed section of the Fish Creek valley, upstream of Fish Creek Provincial Park and downstream of Priddis
- contains significant portions of the Elbow River valley, upstream of Calgary

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Lamoureux & Associates (1983)

ESA: PEACE RIVER; POSTON

Name: Saskatoon Lake

Area (ha): 1583

Location:

- Twp. 72 - Rge. 8 - W6
- Saskatoon Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging habitat
- one of the best upland examples of Peace River Parkland in Alberta

Description:

- contains Saskatoon and Little lakes and Queen Elizabeth Provincial Park
- Saskatoon and Little lakes are key waterfowl moulting and staging habitat, regionally important for staging ducks and both have nesting Trumpeter Swans (a blue listed species in Alberta)
- Saskatoon Lake is priority duck staging habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data
- Nietfeld et. al. (1985)



ESA: BOREAL

Name: Sawn Lake

Area (ha): 1806

Location:

- Twp. 92 - Rge. 12 - W5
- Sawn Lake

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Boreal Highlands

Significance: Provincial

- one of the most productive lakes for fisheries and waterfowl in the Boreal Highlands of Alberta

Description:

- good waterfowl habitat
- abundant Common Loons and Red-necked Grebes
- island supports an American White Pelican colony, observed in 1996 field survey
- Bald Eagle nesting sites also noted
- fish species supported include Lake Whitefish, Northern Pike and Yellow Perch
- important sport fishery
- good potential for a trophy lake nomination
- historically stocked with Brown Trout
- shoreline protected for forest management

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Downing et al. (1987)
- Walty (1996) pers. comm
- 1996 field notes

ESA: LETHBRIDGE

Name: Scabby Butte

Area (ha): 151

Location:

- Twp. 11 - Rge. 22 - W4
- 5 km NE of Nobleford

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass

Significance: International

- type locality for *Pachyrhinosaurus* dinosaur fossil
- numerous other types of fossils have been collected here, including other dinosaurs, mosasaurs, crocodiles, turtles, mammals, fishes and lower vertebrates

Description:

- exposed sandstone and shale bedrock of the St. Mary River formation on small hill; eroded into badland formations

Management Considerations:

- dumping of refuse obscures the bedrock exposures

References:

- Langston (1975) and Weerasinghe (1979)
- 1986 field notes

ESA: EASTERN BOREAL

Name: Schultz's Bog Diversity Area

Area (ha): 80247

Location:

- Twp. 88 - Rge. 18 - W4
- Thickwood Hills, north side of Athabasca River

NTS Map Sheet: 84A

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse wetland complexes in the Central Mixedwood

Description:

- important Caribou habitat
- diverse peatland wetland vegetation community (palsa bog and patterned fen)
- high landform diversity

Management Considerations:

- maintenance of unfragmented native vegetation is critical for Caribou

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: Seibert Lake

Area (ha): 3558

Location:

- Twp. 66 - Rge. 9 - W4
- Seibert Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of few commercial fishing lakes in the boreal forest of Alberta

Description:

- important sport, trophy and commercial/domestic fishing
- important fish species: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot
- Osprey nesting area

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: FOOTHILLS; CALGARY

Name: Sheep River

Area (ha): 6849

Location:

- Twp. 19 - Rge. 3 - W5
- valley of the Sheep River

NTS Map Sheet: 82J

Municipality: MD of Foothills; Kananaskis ID

Natural Subregions: Lower Foothills; Foothills Parkland

Significance: Provincial

- one of the most diverse stream valleys in the Foothills region

Description:

- high landform diversity
- high wildlife diversity
- key ungulate habitat (Mule Deer) and movement corridor
- lower Sheep River is critical White-tailed Deer habitat and portion above Turner Valley supports a significant Mule Deer population
- includes the Sheep River Wildlife Sanctuary, a critical Bighorn Sheep winter range
- critical Rainbow Trout spawning habitat; Bull Trout, Cutthroat Trout, Brook Trout and Mountain Whitefish also present; sport fishery
- critical Cougar habitat
- highly diverse vegetation communities
- major Rainbow Trout spawning area
- spectacular natural river valley and river gorge scenery in the region
- great diversity of vegetation, including mature White Spruce of outstanding size
- extensive riverine forests of balsam poplar in natural state between Black Diamond and Okotoks
- Great Blue Heron colony near Black Diamond

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Lamoureux & Associates (1983)
- Fisheries inventory maps

ESA: DAVID THOMPSON CORRIDOR; FOOTHILLS

Name: Shunda Creek

Area (ha): 10978

Location:

- Twp. 40 to 41 - Rge. 13, 14, 15 and 16 - W5M
- generally along Shunda Creek between Goldeye Lake and junction with the North Saskatchewan River; includes main tributary streams, a portion of Coliseum Mountain and a portion of the Brazeau Rge

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Upper Foothills; Subalpine

Significance: Provincial

- a provincially significant concentration of calcareous spring wetlands and associated important fish habitats

Description:

- coniferous and mixed wood forest and numerous spring-fed boreal fens, swamps and lakes
- Beaver dam complexes and mature white spruce forest along Shunda Creek
- riverine swamps with diverse breeding bird populations, especially west of Harlech
- Common Loons nesting on lakes and ponds
- glacially stream-lined terrain through most of western portion
- small area of aeolian sand just north of Nordegg
- Eastern Brook Trout and Brown Trout spawning and overwintering along Shunda Creek and tributary of Shunda Creek
- critical wildlife habitats for Elk (summer and winter) and Bighorn Sheep
- regionally uncommon birds -- Swamp Sparrow and Red-necked Grebe
- traditional Osprey nesting area at Goldeye Lake
- rare or uncommon plants including Parry's sedge (*Carex parryana*) and provincially rare plants such as Greenland primrose (*Primula egaliksensis*)
- key terrestrial bird habitat
- high wildlife diversity

Management Considerations:

- power boats can affect the nesting success of Common Loons
- clearing and drainage, including that on adjacent lands, reduces the habitat diversity for breeding birds
- developments (e.g. roads, seismic) in the watershed, even those outside the study area, can disrupt natural drainage patterns and adversely impact important fish, plant and animal habitats
- additional roads or uncontrolled motor vehicle access created through petroleum development, clearing or logging may have adverse impacts on wildlife populations

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Nordegg-Red Deer River Sub-regional Integrated Plan
- Bayrock and Reimchen (1980) for surficial geology
- Don Anderson (personal communication) for fish, Osprey and springs

ESA: BOREAL

Name: Side Lake

Area (ha): 499

Location:

- Twp. 68 - Rge. 26 - W5
- Side Lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swans (blue-listed species in Alberta) nesting area
- adult Trumpeter Swans observed in 1996 field survey
- supports a Bald Eagle nesting site
- surrounding uplands consist mostly of birch and aspen with limited white spruce stands
- Yellow Perch and a number of other unidentified species occur within the lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Nelson (1994)
- 1996 field notes

ESA: PAINTEARTH; POSTON

Name: Silver Heights (wetlands only)

Area (ha): 11986

Location:

- Twp. 38 to 39 - Rge. 9 to 10 - W4
- discontinuous uplands and wetlands in the Silver Heights district

NTS Map Sheet: 73D

Municipality: County of Paintearth

Natural Subregions: Central Parkland; Northern Fescue

Significance: National

- Poston lists as nationally significant duck breeding habitat

Description:

- discontinuous wetlands and parkland in a matrix of cultivation
- includes some sandy phase parkland on rolling hummocky moraine
- variety of wetlands including alkali ponds and extensive bulrush marsh
- uncommon plants including silver-leaf psoralea (*Psoralea argophylla*)
- Baird's Sparrow, an uncommon and local bird species, in dry, grassy wetland bottoms
- significant waterfowl production in wet years; the most productive wetlands are in the Montambeault-Genest-Boutets Lakes corridor

Management Considerations:

- additional drainage, clearing and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- maintenance of native vegetation cover around shorelines will be beneficial for waterfowl production

References:

- 1988 field notes



ESA: BOREAL

Name: Simonette River

Area (ha): 59799

Location:

- Twp. 67 - Rge. 25 - W5
- Simonette River valley

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood; Lower and Upper Foothills; Dry Mixedwood

Significance: Provincial

- one of few key Grizzly Bear habitats in the Foothills and Boreal Forest of Alberta
- one of the more diverse and intact Foothills/Boreal Forest river valleys in Alberta

Description:

- lies in a U-shaped valley with numerous terraces and floodplains
- Trumpeter Swan (blue-listed species in Alberta) breeding activity observed in 1995
- fish species include Northern Pike, Goldeye and Walleye
- key Mountain Whitefish, Bull Trout and Arctic Grayling fishery
- also contains the rare Largescale Sucker whose distribution is limited to the Peace River drainage system
- key Moose and Elk range
- key Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) habitat in upper reaches
- high diversity of fluvial landforms and riparian plant communities
- site contains two permanent springs (one of which deposits iron) and a mineral lick
- high potential for the discovery of prehistoric and historic archeological sites

Management Considerations:

- management objective is to ensure the retention of recreational and aesthetic values by encouraging uses consistent with the existing character of the river supporting significant fisheries and wildlife populations and preventing problems in riparian areas
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Natural Resources Service files
- Borneuf (1983)
- Nelson and Paetz (1992)
- Ojamaa (1978)
- Walty (1996) pers. comm
- 1996 field notes

ESA: PEACE RIVER; POSTON

Name: Sinclair (Brainard) Lake

Area (ha): 588

Location:

- Twp. 74 - Rge. 12 - W6
- Sinclair Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant for staging ducks

Description:

- key waterfowl moulting and staging
- nationally important for staging ducks
- Trumpeter Swan breeding (a blue listed species in Alberta)
- sport fishery of Northern Pike

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- NAWMP, unpubl. data

ESA: BOREAL

Name: Slave River

Area (ha): 62097

Location:

- Twp. 121 - Rge. 9 - W4
- Slave River floodplain

NTS Map Sheet: 74M

Municipality: Municipality of Wood Buffalo; MD of Big Lakes

Natural Subregions: Peace River Lowlands; Central Mixedwood

Significance: National

- major interprovincial waterway

Description:

- located along the eastern boundary of Wood Buffalo National Park
- supports numerous breeding American White Pelican colonies primarily in the Slave River Rapids vicinity
- the area provides exceptional Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) nesting and foraging habitat
- key ungulate habitat
- key fisheries habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- has been proposed for hydroelectric development

References:

- Alberta Environmental Protection n.d
- Alberta Natural Resources Service files
- 1996 field notes

ESA: CANADIAN SHIELD

Name: Slave River Rapids

Area (ha): 24188

Location:

- Twp. 125 to 126 - Rge. 10 to 11 - W4
- several sets of rapids (Cassette, Pelican and Mountain Rapids) on the Slave River

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland outlier in Peace River Lowlands

Significance: National

- major interprovincial waterway
- northernmost nesting colony of American White Pelicans in North America, a rare nesting species in Alberta and very sensitive to disturbance

Description:

- large river with numerous islands and islets and five sets of spectacular rapids
- the largest and most spectacular set of river rapids in Alberta
- diverse vegetation on islands (treed and barren)
- channel bars, granitic shoals and barren granitic knobs; treed whaleback ridges
- old growth spruce riparian woodlands and lush moss, lichen and fern communities
- candidate Heritage River
- high sport fishing potential
- only locality of Arctic Lamprey in Alberta
- historically significant
- has been used for river rafting

Management Considerations:

- has been proposed for hydroelectric dam development

References:

- Alberta Recreation and Parks (1980)
- Griffiths (1982)
- Alberta Environment (1982)
- Nelson and Paetz (1992)

ESA: DRY MIXEDWOOD; POSTON

Name: Smoky Lake

Area (ha): 2487

Location:

- Twp. 60 - Rge. 18 - W4
- Smoky Lake

NTS Map Sheet: 83I

Municipality: County of Smoky Lake

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant for staging ducks
- decreasing water levels have impacted habitat and reduced significance during drought years

Description:

- lake located just outside the town of Smoky Lake
- significant waterfowl staging and production lake
- ducks and geese observed on lake during waterfowl survey
- shorebirds observed on lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of water birds

References:

- Mitchell and Prepas (1990)
- Wildlife key area maps
- Pryor (pers. comm. 1995)
- field notes (1995)

ESA: BOREAL; PEACE RIVER

Name: Smoky River

Area (ha): 54049

Location:

- Twp. 74 - Rge. 2- W6
- Smoky River valley

NTS Map Sheet: 83M, 83N

Municipality: MD of Greenview; MD of Smoky River; MD of Birch Hills

Natural Subregions: Dry Mixedwood; Central Mixedwood; Peace River Parkland

Significance: Provincial

- one of few key Grizzly Bear ranges in the Boreal Forest of Alberta
- one of the more diverse and intact river valleys in the Dry Mixedwood Boreal Forest of Alberta

Description:

- a major river in the Peace River drainage system
- river valley consists of wide, open floodplains
- significant staging habitat and important breeding habitat for geese
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Arctic Grayling, Walleye, Mountain Whitefish, Bull Trout and Yellow Perch fishery
- contains the rare fish, Redside Shiner (distribution limited to the Peace River drainage system)
- ungulate winter range, including key Moose and Elk range
- southern part is prime Grizzly Bear (Alberta blue-listed, COSEWIC vulnerable species) habitat
- high diversity of fluvial landforms and riparian plant communities
- mineral lick sites
- adjacent uplands comprise a mosaic of coniferous, deciduous and mixedwood forest
- NAWMP high priority vertebrate habitat
- contains the rare fish Redside Shiner (distribution is limited to the Peace River drainage system)
- mature stands of balsam poplar and large stands of Indian pipe
- contains part of the Smoky River Sand Hills
- popular hunting and fishing area
- community interest site

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- A. Raniseth, M. Raniseth, J. Kerr and J. Smith, pers. comm
- Alberta Energy and Natural Resources (1984)
- Alberta Natural Resources Service files
- Poston et al. (1990)
- Walty (1996) pers. comm
- 1996 field notes
- Wildlife key area maps
- Fisheries inventory maps
- J. Snyder, pers. comm
- D. Moyles, pers. comm
- D. Hervieux, pers. comm
- Graham et. al. (1995)
- D. Walty, pers. comm
- Patriquin (1993)
- Nelson and Paetz (1992)

ESA: BOREAL; POSTON

Name: Snipe Lake

Area (ha): 4935

Location:

- Twp. 71 - Rge. 19 - W5
- Snipe Lake

NTS Map Sheet: 83N

Municipality: MD of Opportunity; MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- Ducks Unlimited Canada(1996) and Poston et al. (1990) regard this lake to be a key staging (primarily for ducks) and moulting wetland
- extensive communities of emergent vegetation appear capable of supporting high waterfowl productivity
- contains Lake Whitefish, Northern Pike, Yellow Perch, Longnose Suckers, and White Suckers
- Walleye have recently been introduced
- high value for the local sport and commercial fishery
- upland provides excellent Moose habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Forestry, Lands and Wildlife (1994)
- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes

ESA: MODEL FOREST; FOOTHILLS

Name: Solomon-Ice Water-Paradise Creeks

Area (ha): 9123

Location:

- Twp. 51-52 - Rge. 27 - W5 and Rge. 1 - W6
- foothill ridges and valleys west of William A. Switzer Provincial Park
- includes valleys of Paradise, Solomon, Ice Water, Levi, West Fork and Jarvis Creeks, and unnamed creeks

NTS Map Sheet: 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills; Subalpine

Significance: Provincial

- one of the most diverse Upper Foothills habitat complexes in Alberta
- one of three known locations for Pygmy Whitefish in Alberta

Description:

- wide range of Upper Foothills vegetation from dense coniferous, mixed and aspen woods to tall shrub communities, grassy slopes and wet meadows
- springs
- pitted outwash deposits
- critical Elk and Moose habitats
- habitat for Pygmy Whitefish, a rare species in Alberta
- part of a buffer between legislated protected areas to the west and multiple use lands to the east

Management Considerations:

- ungulates are sensitive to human activities on critical winter ranges
- permanent facilities and transportation corridors could negatively impact several wildlife species
- the full variety of habitats should be protected

References:

- Alberta Government (1984) for zoning
- Edson Fish and Wildlife (K. Smith, personal communication) for Elk
- Nelson and Paetz (1992) for Pygmy Whitefish
- aerial photograph interpretation for habitat diversity



ESA: GRASSLAND

Name: Sounding Creek Native Prairie

Area (ha): 35651

Location:

- Twp. 30 - Rge. 5 - W4
- native grasslands along Sounding Creek south of Consort

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- extensive block of dry mixed grassland with associated terrestrial bird species
- there are relatively few areas of extensive grassland in Alberta

Description:

- some shrub cover in poorly drained areas
- some cultivation encroachment into site
- key Mule and White-tailed Deer habitat
- high potential for rare avian species although none reported for area

Management Considerations:

- cultivation eliminates many native species

References:

- Bjorge (pers. comm. 1995)
- field notes (1995)
- Wildlife key area maps

ESA: PARKLAND; GRASSLAND

Name: Sounding Dunes

Area (ha): 57474

Location:

- Twp. 38 - Rge. 5 - W4
- sand plain and dunes north of Sounding Lake

NTS Map Sheet: 73D

Municipality: MD of Provost; Special Area 4

Natural Subregions: Central Parkland; Northern Fescue

Significance: National

- numerous small alkali lakes which provide breeding habitat for Piping Plovers, a COSEWIC endangered species in Canada and a red-listed species in Alberta

Description:

- includes the upper part of the south side of the Neutral Hills where there is some evidence of prominent ice-thrust ridges
- Sharp-tailed Grouse dancing grounds (a yellow A-listed species in Alberta)
- diversity of vegetation communities
- dune and eolian/wetland complexes
- key ungulate habitat
- the majority of site within the Central Parkland Natural Region with a small portion in the Northern Fescue Natural Subregion
- rough fescue-porcupine grass interspersed with aspen groves
- the diversity of vegetation communities supports a number of terrestrial birds

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Alberta Wilderness Association (1990)
- Hofman (1991)
- Hofman (pers. comm. 1995)
- Mulira (1986)
- Wildlife key area map
- Natural and Protected Area Files

ESA: PARKLAND; GRASSLAND

Name: Sounding Lake

Area (ha): 5333

Location:

- Twp. 37 - Rge. 4 to 5 - W4
- Sounding Lake

NTS Map Sheet: 73D

Municipality: MD of Provost; Special Area 4

Natural Subregions: Central Parkland; Northern Fescue

Significance: National

- Piping Plover breeding area, a COSEWIC endangered species in Canada and a red-listed species in Alberta
- one of the most productive shorebird staging lakes in Canada
- productivity reduced in drought years when the lake dries up

Description:

- the majority of this site is within the Central Parkland Natural Subregion
- a small portion within the Northern Fescue
- important shorebird staging area
- waterfowl staging and production lake
- lake dry during aerial survey however, may become useable waterfowl lake when lake levels increase
- upland habitat significant Mule and White-tailed Deer habitat
- key White-tailed and Mule Deer in upland habitat
- only known location for round-leaf monkeyflower (*Mimulus glabratus*) in Alberta

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Hofman (1991)
- Alberta Wilderness Association (1990)
- Mitchell and Prepas (1990)
- Hofman (pers. comm. 1995)
- Protected and Natural Area Files
- Wildlife key area maps

ESA: PEACE RIVER; FOOTHILLS

Name: South Notikewin/Deadwood Caribou Range

Area (ha): 75536

Location:

- Twp. 89 - Rge. 23 - W5
- South Notikewin and Deadwood River areas

NTS Map Sheet: 84C, 84D

Municipality: MD of Northern Lights

Natural Subregions: Dry Mixedwood; Lower Foothills

Significance: Provincial

- one of the more diverse areas in the Dry Mixedwood and Lower Foothills of Alberta

Description:

- critical Woodland Caribou (Alberta blue-listed species) range
- high plant community diversity
- old-growth mixed wood and coniferous forest, fen/bog complex and willow wetlands
- contains Deadwood Lake, key waterfowl staging and moulting
- gray wolf habitat

Management Considerations:

- maintenance of unfragmented natural habitats is critical for Caribou

References:

- Poston et al. (1990)
- Quinn (1989)
- D. Moyles, pers. comm
- NAWMP, unpubl. data
- 1994 field notes
- Alberta Fish and Wildlife (1994)

ESA: CYPRESS; ACADIA

Name: South Saskatchewan Canyon

Area (ha): 14037

Location:

- Twp. 15 to 21 - Rge. 1 to 5 - W4
- South Saskatchewan River valley north of Old Channel Lake to the Alberta-Saskatchewan border

NTS Map Sheet: 72L

Municipality: MD of Cypress; MD of Acadia

Natural Subregions: Dry Mixedgrass

Significance: National

- one of the premiere wild river sections in the Grassland Region of Canada; adjacent to one of the largest remaining blocks of native grassland in Canada
- concentration of significant features

Description:

- spectacular canyon of the South Saskatchewan River
- eroding cutbanks, slump blocks and rugged badlands
- diverse coulee shrubbery and locally extensive riparian habitat
- extensive springs, including areas which are lightly or ungrazed
- nesting area for rare birds of prey including Prairie Falcons, Ferruginous Hawk, and Golden Eagles
- feeding area for American White Pelicans
- key Mule Deer and Pronghorn habitat
- locally important breeding area and provincially important staging area for Canada Geese
- large snake hibernacula (overwintering areas)
- Short-horned Lizard habitat along valley rims
- rare or uncommon plants including few-flowered aster (*Aster pauciflorus*), little seed rice-grass (*Oryzopsis micrantha*), pellitory (*Parietaria pensylvanica*), bushy cinquefoil (*Potentilla paradoxa*), clammyweed (*Polanisia dodecandra*), Carolina whitlow-grass (*Draba reptans*), smooth sweet-cicely (*Osmorhiza longistylis*), devil's beggar-ticks (*Bidens frondosa*), wedge grass (*Sphenopholis obtusata*) and the nationally rare runcinate-leaved rush-pink (*Stephanomeria runcinata*), nodding umbrella-plant (*Eriogonum cernuum*), and western hawksbeard (*Crepis occidentalis*)
- deep river pools which are important to Lake Sturgeon

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- heavy grazing can severely impact significant species in springs
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- Poston et al. (1990), Coupland (1973), and Cottonwood Consultants (1987a)
- Cottonwood Consultants (1987b) for snake hibernacula
- 1991 field notes
- Fish and Wildlife key area maps

ESA: CYPRESS

Name: South Saskatchewan River-Medicine Hat North

Area (ha): 14987

Location:

- Twp. 13 to 16 - Rge. 4 to 5 - W4
- South Saskatchewan River valley north of Medicine Hat

NTS Map Sheet: 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: National

- part of the most intact and wild river reaches in the Grasslands of Canada
- the largest and highest density of hibernacula (overwintering areas) for large snakes in Alberta, possibly in Canada

Description:

- scenic valley of the South Saskatchewan River
- eroding cutbanks, springs, massive slump blocks and badlands
- diverse coulee shrubbery
- nesting area for rare or vulnerable birds of prey including Prairie Falcons, Ferruginous Hawks, Cooper's Hawks and Golden Eagles
- feeding area for American White Pelicans
- key Mule Deer and Pronghorn habitat
- locally important breeding area for Canada Geese
- numerous large snake hibernacula (overwintering areas)
- important area for fossil Pleistocene vertebrates

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- Poston et al. (1990)
- Cottonwood Consultants (1987b) for snake hibernacula
- 1991 field notes
- Fish and Wildlife key area maps

ESA: FORTY MILE; CYPRESS

Name: South Saskatchewan River-Medicine Hat West

Area (ha): 27650

Location:

- Twp. 11 to 13 - Rge. 6 to 13 - W4
- South Saskatchewan River valley west of Medicine Hat

NTS Map Sheet: 72E, 72L

Municipality: County of Forty Mile; MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- one of the most productive bird of prey nesting areas in Alberta
- major snake hibernacula and rugged badlands are localized in Alberta

Description:

- rugged, deep valley of the South Saskatchewan River
- eroding cutbanks, slump blocks and badlands
- diverse coulee shrubbery
- nesting area for rare birds of prey including Prairie Falcons, Ferruginous Hawks and Golden Eagles
- feeding area for American White Pelicans
- Short-horned Lizard habitat along valley rims
- some native mixed grassland on adjacent uplands
- key Mule Deer and Pronghorn habitat
- major snake hibernacula (overwintering areas)
- deep river pools which are important to Lake Sturgeon
- locally important breeding area for Canada Geese

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- maintaining adjacent upland grasslands in native species provides feeding habitat for birds of prey
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- 1991 field notes
- P. Olechowski (pers. comm.) for Sturgeon
- Fish and Wildlife key area maps
- Poston et al. (1990)
- Cottonwood Consultants (1987b) for snake hibernacula

ESA: EASTERN BOREAL; BOREAL

Name: South Wabasca Lake

Area (ha): 9704

Location:

- Twp. 80 - Rge. 25 - W4
- South Wabasca Lake

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- an important commercial fishery in the boreal forest

Description:

- important sport and commercial/domestic fishing
- excellent waterfowl breeding, staging and moulting habitat
- important for sport, commercial and domestic fisheries
- important fish species: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot
- the lake contains Lake Whitefish, Northern Pike, Cisco, Walleye and Yellow Perch
- Drowned Horse Creek provides an important Walleye spawning tributary
- surrounding uplands provide critical Moose habitat

Management Considerations:

- maintenance of natural cover on the uplands will help protect the watershed and keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Westworth and Associates Ltd (1990)
- Walty (1996) pers. comm



ESA: BOREAL

Name: Spencer Lake

Area (ha): 2239

Location:

- Twp. 67 - Rge. 9 - W4
- Spencer Lake
- located within the Cold Lake Air Weapons Range

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most productive fisheries in the Boreal Forest of Alberta

Description:

- supports American White Pelicans and numerous waterfowl flocks
- good waterfowl production site
- important commercial, domestic and sport fishing lake
- important fish migration route, spawning, overwintering, feeding and rearing lake
- fish species include Lake Whitefish, Northern Pike, Longnose and White Suckers, Walleye and Yellow Perch
- hydrologically important lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Westworth & Associates Ltd. (1990)
- Westworth & Associates Ltd. et al. (1994)
- Longmore et al. (1982)
- Spencer Environmental Management Services Ltd. (1989)
- Wallis et al. (1994)
- 1996 field notes

ESA: BOREAL

Name: Square Lake

Area (ha): 3415

Location:

- Twp. 116 - Rge. 15 - W4
- Square Lake, Wood Buffalo National Park

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood

Significance: National

- part of the nationally significant Sweetgrass Bison Range

Description:

- key Bison habitat
- native historical site

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Stolley 1996 pers. comm

ESA: POSTON

Name: Stebbing Lake

Area (ha): 450

Location:

- Twp. 62 - Rge. 7 - W4
- Stebbing Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Eared Grebe breeding habitat

Description:

- small boreal forest lake
- productive waterfowl area

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Steele Lake

Area (ha): 2834

Location:

- Twp. 65 - Rge. 26 - W4
- Steele Lake

NTS Map Sheet: 83I

Municipality: MD of Lesser Slave River

Natural Subregions: Central Mixedwood

Significance: Provincial

- Steele Lake is located within Cross Lake Provincial Park
- representative Central Mixedwood site

Description:

- lake lies within hummocky peat bogs where the vegetation is typically black spruce, tamarack and Sphagnum moss
- upland is comprised of black spruce to the east and mixedwood to the west
- supports a popular year-round fishery for Northern Pike, Yellow Perch and Burbot which are native to the lake
- no commercial or domestic fisheries present
- good waterfowl production area due to grassy, vegetated shoreline
- surrounding areas provide good Moose habitat
- 43 plant communities have been identified within the Cross Lake Provincial Park
- significant songbird habitat
- representative of adjacent boreal stands
- balsam fir in aspen mixedwoods

Management Considerations:

- drainage alterations can have profound influences on fen wetlands
- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Mitchell and Prepas (1990)
- 1996 field notes

ESA: CARDSTON; POSTON

Name: St. Mary Reservoir

Area (ha): 4578

Location:

- Twp. 4 and 5 - Rge. 24 and 25 - W4
- 5 km W of Spring Coulee

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: National

- Poston lists as nationally significant California Gull breeding habitat

Description:

- large reservoir on the St. Mary River
- waterfowl staging and production area
- Double-crested Cormorant colony
- particularly noteworthy for production is a slough on the south side of the reservoir in Sections 22 and 23 - Twp. 4 - Rge. 24 - W4
- Poston lists as provincially significant goose and Ring-billed Gull breeding habitat

Management Considerations:

- relative stability in water levels would enhance the waterfowl production

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Clark (1982) for Double-crested Cormorant data

ESA: CARDSTON

Name: St. Mary Type Section

Area (ha): 107

Location:

- Section 23 - Twp. 6 - Rge. 23 - W4
- east bank of St. Mary River, 10 km west of Welling

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Mixedgrass

Significance: International

- geological type localities are unique and form the basis upon which further geological investigations proceed

Description:

- type locality of Upper Cretaceous rocks of the Blood Reserve Formation

Management Considerations:

- relatively undisturbed sections are important for future study

References:

- Barendregt (n.d.-a) and Russell and Landes (1940)

ESA: LETHBRIDGE; WARNER; POSTON

Name: Stirling Lake

Area (ha): 1266

Location:

- Twp. 6 and 7 - Rge. 19 and 20 - W4
- 1 km NW of Stirling

NTS Map Sheet: 82H

Municipality: County of Warner; County of Lethbridge

Natural Subregions: Mixedgrass

Significance: Provincial

- Poston lists as provincially significant Ring-billed Gull breeding colony

Description:

- large slightly alkaline wetland
- waterfowl staging and production area
- nesting colony of Black-crowned Night Herons
- a very productive wetland for a variety of marsh birds which are local in the region; some which are rare in Canada
- nesting record of Black-necked Stilt (rare in Canada)
- Ducks Unlimited wetland project

Management Considerations:

- alterations in drainage patterns have resulted in dessication of these productive wetland habitats in previous years

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Ducks Unlimited (n.d.)

ESA: BOREAL

Name: Stony Creek Moose and Grizzly Range

Area (ha): 16753

Location:

- Twp. 67 - Rge. 8 - W6
- Stony Creek south of Beaverlodge

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of few Grizzly Bear Ranges in the Boreal Forest of Alberta

Description:

- key Moose and Grizzly Bear (blue-listed species in Alberta, COSEWIC vulnerable species) habitat
- contains mineral licks
- diverse old growth forest

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Alberta Energy and Natural Resources (1984)
- Alberta Natural Resources Service files
- 1996 field notes



ESA: CANADIAN SHIELD

Name: Stony Islands

Area (ha): 613

Location:

- Twp. 122 - Rge. 9 - W4
- Stony Islands in the Slave River

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland outlier in Peace River Lowlands

Significance: Provincial

- possibly the best example of the Paleozoic/Precambrian Unconformity in Alberta

Description:

- exposed area of Paleozoic Devonian limestone lying on top of Precambrian rocks

Management Considerations:

- maintenance of natural valley habitats will support a variety of wildlife; proposals have been made to flood the area for hydroelectric development

References:

- Godfrey (1986)

ESA: BOREAL; POSTON

Name: Sturgeon Lake

Area (ha): 6765

Location:

- Twp. 70 - Rge. 23 - W5
- Sturgeon Lake

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- Sturgeon Lake, Young's Point Provincial Park and Williamson Provincial Park
- aspen-white spruce dominant upland with scattered stands of birch
- very diverse
- breeding Trumpeter Swan (blue-listed species in Alberta) colony reported
- Black Tern colony
- the west bay provides extremely productive waterfowl habitat (duck and goose staging)
- American White Pelicans, gulls and terns were noticed on a south shore peninsula
- hydrologically significant
- 14 species of rare plants are found within the park)
- Moose, White-tailed Deer, Black Bear, Beaver and Muskrat utilize this site for its highly rated habitat
- Bald Eagles have been reported utilizing the lake for fishing
- Sturgeon Lake supports Lake Whitefish, Northern Pike, Walleye, Yellow Perch, Burbot, Longnose Sucker and White Sucker
- Lake Whitefish and Walleye spawn in the lake
- highly valued lake for both sport and commercial fisheries
- light recreational use
- historical native resource along Sturgeon Lake shoreline

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Mitchell and Prepas (1990)
- Walty (1996) pers. comm
- 1996 field notes

ESA: CYPRESS

Name: Suffield

Area (ha): 173021

Location:

- Twp. 15 to 20 - Rge. 3 to 9 - W4
- Suffield Military Reserve north of Medicine Hat

NTS Map Sheet: 72L

Municipality: MD of Cypress

Natural Subregions: Dry Mixedgrass

Significance: National

- one of the largest and most diverse blocks of mixed grassland and sand dunes remaining in Canada

Description:

- extensive mixed grassland in the western half and sand dunes in the eastern half
- strongly rolling to flat topography
- large intermittent saline lakes and springs
- rare, uncommon and endangered animals including Ord's Kangaroo Rat, Loggerhead Shrike, Burrowing Owl, Ferruginous Hawk, Golden Eagle, Prairie Falcon, Plains Hognose Snake, Baird's Sparrow
- key Pronghorn and Mule Deer habitat
- numerous Sharp-tailed Grouse dancing grounds
- some waterfowl production and staging
- rare plants including annual skeletonweed (*Lygodesmia rostrata*), salt-marsh sand-spurry (*Spergularia marina*), silver-leaf psoralea (*Psoralea argophylla*) and the nationally rare prickly milk-vetch (*Astragalus kentrophyta*)
- significant terrain damage in localized areas related to military training activity but the eastern portion remains out-of-bounds to military activity
- extensive natural gas development in several portions
- difficult to assess; boundaries based on aerial photograph interpretation and localized field reconnaissance in the 1980s

Management Considerations:

- a variety of grazing regimes from heavy to ungrazed is required to maintain the full variety of Mixed Grassland species, e.g. McCown's Longspurs require extremely heavily grazed range while Baird's Sparrows prefer pastures which have been idled for numerous years
- active sand blowouts are essential to the long-term survival of most of the rare plants
- active dunes have been stabilizing in recent decades
- petroleum access roads could have severe effects on Alberta blue-listed species such as the Plains Hognose Snake

References:

- Wallis and Wershler (1988) and David (1977) for sand hills
- Coupland (1973), Johnston (1977), Cameron (1974) and Canadian Wildlife Service (1972)
- Fish and Wildlife key area maps
- 1988 field notes

ESA: PAINTEARTH; GRASSLAND; STETTLER; STARLAND; POSTON

Name: Sullivan Lake

Area (ha): 28035

Location:

- Twp. 35 to 37 - Rge. 14 to 16 - W4
- Sullivan Lake and associated grasslands and badlands in the Sullivan Lake drainage basin

NTS Map Sheet: 72M, 73D, 82P, 83A

Municipality: County of Paintearth; County of Stettler; MD of Starland; Special Area 2

Natural Subregions: Northern Fescue

Significance: National

- Poston lists as nationally significant goose staging area

Description:

- native grasslands and badlands adjacent large alkali lake
- significant waterfowl (especially goose) staging and production habitat, especially in wet years
- large flocks of geese and ducks staging on lake during aerial survey
- Ring-billed Gull colony observed during aerial survey
- Poston lists as provincially significant duck production habitat
- contains one of the largest blocks of native solonchic mixed grassland in the region
- nesting area for Ferruginous Hawk, a COSEWIC vulnerable species, and probably Prairie Falcon
- extensive alkali mud shore, periodically good shorebird staging habitat
- key Mule Deer habitat
- Sharp-tailed Grouse dancing ground
- some minor inclusions of cultivated land

Management Considerations:

- drainage, clearing and cultivation will further reduce the attractiveness of the area for a variety of wildlife
- maintenance of uncultivated shorelines will keep the area attractive for a variety of nesting and migrating waterfowl
- maintenance of native vegetation cover on the uplands would provide feeding areas for birds of prey

References:

- 1988 field notes
- Fish and Wildlife key area maps
- Canadian Wildlife Service (1979) for waterfowl
- Calgary Field Naturalists (personal communication) for shorebirds
- Wallis (1989)
- Wildlife key area maps
- field notes (1995)

ESA: PARKLAND

Name: Sunken Lake

Area (ha): 415

Location:

- Twp. 39 - Rge. 6 - W4
- Sunken Lake

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: Provincial

- one of the most productive shorebird staging areas in Alberta

Description:

- significant shorebird staging lake
- key Mule and White-tailed Deer habitat
- small saline lake located north of Sounding Lake
- significant shorebird staging lake
- evidence of Piping Plover (a COSEWIC endangered species in Canada and a red-listed species in Alberta) feeding or staging on lake
- key Mule and White-tailed Deer habitat in upland

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Hofman (1991)
- Alberta Wilderness Association (1990)

ESA: BOREAL

Name: Swan Hills Plateau Remnant

Area (ha): 5550

Location:

- Twp. 66 - Rge. 12 - W5
- escarpment and adjacent plateau of southern Swan Hills

NTS Map Sheet: 83J, 83K

Municipality: MD of Opportunity; MD of Greenview

Natural Subregions: Upper Foothills

Significance: Provincial

- example of a unique landscape in the province

Description:

- Paskapoo Formation bedrock is capped by a discontinuous veneer (up to 5 meters thick) of later Tertiary fluvial origin quartzite gravel which originated as erosional products from the young Rocky Mountains
- portions of the area may have escaped glaciation or were covered by only a thin layer of glacial ice
- mature (100 to 150 years) coniferous forest dominated by tree layers composed of balsam and subalpine fir hybrids, white and engelmann spruce hybrids and lodgepole pine
- Bradley and Fairbarns (1984) identified 33 plant species in the Goose Mountain area to the west that are typically confined to the foothills and mountains in Alberta, and 16 species that are rare or uncommon in Alberta
- area includes a number of unique seepage and wetland communities with a number of rare or uncommon species more typical of subalpine or foothills terrain
- flat-topped erosional remnant capped by Tertiary cobbles and thin till
- disjunct occurrence of a modified subalpine ecosystem

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Bradley and Fairbarns (1984)
- Bentz et al. (1993)
- 1993 field notes
- Achuff and LaRoi (1977)
- Bentz and Saxena (1994)

ESA: BOREAL

Name: Sweetgrass Bison Range

Area (ha): 59019

Location:

- Twp. 116 - Rge. 15 - W4
- southeastern part of Wood Buffalo National Park

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Peace River Lowlands

Significance: National

- Wood Buffalo National Park

Description:

- this herd uses the Peace-Athabasca Delta almost exclusively, but also utilizes range that overlaps with the Garden River and Pine Lake herds
- one of the last large free ranging herds of Bison in North America
- Peregrine Falcon (red-listed species in Alberta, COSEWIC endangered species) nesting habitat

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Environmental Protection n.d

ESA: TABER; POSTON

Name: Taber Lake

Area (ha): 561

Location:

- Sections 2 to 4 and 9 to 11 - Twp. 10 - Rge. 16 - W4
- 2 km east of Taber

NTS Map Sheet: 82H

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose breeding habitat

Description:

- reservoir with extensive marsh
- includes adjacent native mixed grassland
- waterfowl staging and production area, mainly for puddle ducks but also for Eared Grebes

Management Considerations:

- maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- relative stability in water levels will allow the marsh system to develop

References:

- 1987 field notes
- Fish and Wildlife key area maps



ESA: PINCHER CREEK

Name: Todd Creek Ridge

Area (ha): 6796

Location:

- Twp. 9 and 10 - Rge. 2 and 3 - W5
- just east of Forest Reserve boundary south of Highway 517

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane; Foothills Fescue

Significance: Provincial

- few areas of lightly grazed, diverse montane ridges occur in Alberta

Description:

- lightly grazed montane grassland, aspen woodland, Douglas fir forest and limber pine ridges
- sandstone rock outcrops, eroded into intriguing shapes
- key Elk habitat at higher elevations
- key Mule Deer habitat at lower elevations
- moderate potential for rare plants

Management Considerations:

- heavy cattle grazing reduces the suitability of these habitats for many native plants and animals

References:

- Fish and Wildlife key area maps
- 1986 field notes

ESA: KNEEHILL; STETTLER; STARLAND; RED DEER

Name: Tolman Badlands

Area (ha): 29879

Location:

- Twp. 30 to 35 - Rge. 21 to 22 - W4
- valley of Red Deer River and tributary coulees from McKenzie Crossing south to Horsethief Canyon
- includes Big Valley coulee

NTS Map Sheet: 82P, 83A

Municipality: MD of Starland; County of Stettler; County of Red Deer; MD of Kneehill

Natural Subregions: Central Parkland; Northern Fescue

Significance: Provincial

- part of the deepest and most spectacular canyon in the Aspen Parkland/Fescue Grassland of Alberta
- some of the most diverse valley and productive bird of prey habitats in Alberta

Description:

- diverse valley habitats from springs, badlands, grasslands, sagebrush flats and shrubbery to aspen woodland, dense white spruce forests and riparian poplar woods
- includes small remnants of adjacent upland parkland and grassland
- diversity of breeding birds
- rare or uncommon birds: Black-and-White Warbler, Brewer's Sparrow, Pileated Woodpecker and Loggerhead Shrike, the latter a COSEWIC endangered species in Canada
- prime nesting habitat for rare birds of prey including: Prairie Falcon (rare in the region), Turkey Vulture (local in Alberta), Merlin and Ferruginous Hawk (COSEWIC vulnerable species)
- key Mule Deer and White-tailed Deer habitat
- regionally uncommon plants: white birch (*Betula papyrifera*) and blue columbine (*Aquilegia brevistyla*)
- significant bedrock exposures
- small patches of clearing and cultivation
- priority habitat for duck staging, goose production and non-game migratory birds
- includes Big Valley Natural Area
- diversity of native plants and breeding birds with representative parkland, grassland and boreal forest species, several of which are uncommon or rare in the region
- historical Peregrine Falcon nesting area
- important fish habitat including a spawning, rearing and overwintering area upstream of Tolman Bridge for Northern Pike, Walleye, Goldeye, Eastern Brook Trout, Brown Trout, Mooneye, Rainbow Trout, Sauger and Sucker

Management Considerations:

- clearing and cultivation reduce the suitability of these areas for a variety of wildlife
- maintenance of native vegetation cover on the uplands provides feeding areas for birds of prey
- heavy grazing in valleys reduces their attractiveness for a variety of plants and animals
- some birds of prey (e.g. Golden Eagle) are sensitive to human intrusion at critical stages of nesting

References:

- |                                    |   |
|------------------------------------|---|
| - Kondla and Smith (1972)          | - Irish (1967d)                             |
| - Fish and Wildlife key area maps  | - Allan and Sanderson (1945)                |
| - Wallis (1977)                    | - 1988 and 1989 field notes                 |
| - Poston et al (1990)              | - Natural and Protected Areas Program files |
| - Canadian Wildlife Service (1979) |   |

ESA: FOOTHILLS

Name: Tony Creek

Area (ha): 13283

Location:

- Twp. 62 - Rge. 22 - W5
- Tony Creek

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Lower and Upper Foothills

Significance: Provincial

- one of a handful of key Grizzly Bear ranges in the Foothills of Alberta

Description:

- diversity of wildlife and habitats
- key Moose, Mule Deer, White-tailed Deer and Grizzly Bear habitat
- diverse riparian and upland forest communities
- Mountain Whitefish and Arctic Grayling fishery

Management Considerations:

- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Wildlife key area maps
- Fisheries inventory maps
- Nelson (1994)

ESA: EASTERN BOREAL

Name: Touchwood Lake

Area (ha): 5374

Location:

- Twp. 67 - Rge. 9 - W4
- Touchwood Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- an important commercial fishery in the boreal forest

Description:

- important sport and commercial/domestic fishing, including Lake Trout
- hydrologically important lake
- provincially significant Common Loon rafting area

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: VULCAN; POSTON

Name: Travers Reservoir

Area (ha): 14000

Location:

- Twp. 14 and 15 - Rge. 20 to 23 - W4
- Travers Reservoir and Little Bow River valley

NTS Map Sheet: 82I

Municipality: County of Vulcan

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: National

- Poston lists as nationally significant for staging geese

Description:

- large reservoir, adjacent native mixed grasslands, badlands and eroding coulees
- section of Little Bow River valley
- major waterfowl staging and production area
- American White Pelicans feed on this reservoir
- key Mule Deer habitat
- key White-tailed Deer habitat along Little Bow River valley
- extensive nesting area for rare birds of prey including Golden Eagles, Ferruginous Hawks (COSEWIC vulnerable species) and Prairie Falcons; highest density in western portion
- historical Peregrine Falcon nesting area along north shore of western arm
- rare plant *Astragalus lotiflorus* (low milk vetch) in Section NW19 - Twp. 14 - Rge. 20 - W4

Management Considerations:

- some birds of prey (e.g. Golden Eagles) are intolerant of human disturbance during the nesting season
- maintenance of natural habitats around the reservoir will keep the area attractive to a variety of bird life, including birds of prey
- relative stability in the water levels will enhance the area for waterfowl production

References:

- 1987 field notes
- Fish and Wildlife key area maps
- Harold Pinel (personal communication) for birds of prey and waterfowl
- Wayne Smith (personal communication) regarding waterfowl
- Irish (1967b) for bedrock geology

ESA: EASTERN BOREAL

Name: Trout River Delta

Area (ha): 30019

Location:

- Twp. 84 - Rge. 3 - W5
- Trout River area

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood; Boreal Highlands

Significance: Provincial

- one of the most diverse areas in the Central Mixedwood of Alberta

Description:

- high landform diversity (subglacial delta, esker-dune complexes)
- high wildlife diversity
- high vegetation diversity

Management Considerations:

- maintenance of natural vegetation cover will support a wide variety of boreal forest species

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Tufa-Unusual Wetland Feature

Area (ha): 258

Location:

- Twp. 66 - Rge. 21 - W5
- just east of Little Smoky River near junction with Iosegun River

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the better developed tufa spring systems in Alberta

Description:

- area with tufa deposits containing spongy, porous rock which forms a thin surficial deposit of calcium carbonate materials around a spring or a seep
- these areas often contain unusual plant and faunal species as well as being highly productive

Management Considerations:

- these areas are sensitive to surficial and groundwater disturbance

References:

- MacDonald (1982)
- Nelson (1994)

ESA: LETHBRIDGE

Name: Turin Dunes

Area (ha): 514

Location:

- 9 km S of Turin
- Sections 4 & 5 - Twp. 11 - Rge. 19 - W4

NTS Map Sheet: 82H

Municipality: County of Lethbridge

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: National

- *Chenopodium subglabrum* is rare in Canada and this area contains one of the largest known populations
- active sand blow-outs are rare in the mixed grasslands of Canada

Description:

- native mixed grassland on sand dune terrain with active blowouts
- several rare plant species including *Polanisia dodecandra* (clammyweed), *Astragalus lotiflorus* (low milk vetch), *Lupinus pusillus* (low annual lupine), *Androsace occidentalis* (western pygmyflower), and *Chenopodium subglabrum* (smooth goosefoot - a COSEWIC vulnerable plant species)
- breeding habitat for Grasshopper Sparrows (uncommon bird)

Management Considerations:

- active sand blowouts are essential to the long-term survival of most of the rare plants
- heavy grazing may be detrimental to some rare plant species

References:

- 1986 field notes
- Stalker (1963b) for surficial geology



ESA: BOREAL

Name: Twin Lakes

Area (ha): 229

Location:

- Twp. 69 - Rge. 11 - W6
- Twin Lakes

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swan observed in 1996 field survey
- key waterfowl moulting and staging site
- sport fishery
- stocked with Rainbow Trout

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- 1996 field notes

ESA: WARNER; CARDSTON

Name: Twin River Ash

Area (ha): 25

Location:

- NW7 - Twp. 1 - Rge. 19 - W4
- west bank of South Milk River, Twin River Grazing Reserve

NTS Map Sheet: 82H

Municipality: County of Warner

Natural Subregions: Mixedgrass

Significance: Provincial

- Alberta's thickest known deposit of Mazama ash

Description:

- one metre thick deposit of Mazama ash (Twin River Ash)

Management Considerations:

- relatively undisturbed sections are important for future study

References:

- Rene Barendregt (personal communication) for ash deposit

ESA: WARNER; CARDSTON

Name: Twin River Valley

Area (ha): 27052

Location:

- Twp. 1 and 2 - Rge. 17 to 20 - W4
- North Milk River and South Milk River valleys and adjacent uplands from their junction upstream to Lonely Valley Creek; Milk River valley and adjacent uplands downstream into Rge. 17

NTS Map Sheet: 82H

Municipality: County of Warner, MD of Cardston

Natural Subregions: Mixedgrass

Significance: Provincial

- areas of nesting bird of prey concentrations are rare in Alberta
- prickly milk vetch and tufted hymenopappus are rare in Alberta
- Finescale Dace are very local in Alberta
- in Alberta, Mottled Sculpins are known only from the upper St. Mary River and Milk River
- areas of nesting bird of prey concentrations are rare in Alberta
- concentration of rare and uncommon plants, animals and fish

Description:

- valleys of the North and South Milk Rivers
- adjacent uplands are mixed grassland transitional to foothills grassland
- incised portions have dense nesting bird of prey populations including Ferruginous Hawks (COSEWIC vulnerable species), Golden Eagles and Prairie Falcons
- upland grasslands provide hunting area for birds of prey
- key Pronghorn habitat in northern portion
- Yellow-bellied Marmot (uncommon mammal)
- rare plants including prickly milk vetch (*Astragalus kentrophyta*), tufted hymenopappus (*Hymenopappus filifolius*), and Carolina whitlow-grass (*Draba reptans*)
- rare fish, including Mottled Sculpin, Stonecat and Finescale Dace
- unusual artesian source wetland with sandy shore in Section 30 - Twp. 2 - Rge. 18 - W4
- erratics of the McNeill Erratics Train
- minor areas of diverse shrubbery and badland terrain along the North Milk River

Management Considerations:

- some birds of prey (Golden Eagles) are intolerant of human disturbance during the nesting season
- maintenance of extensive areas of native grasslands provides a needed hunting area for many birds of prey

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Barendregt (n.d.-b) for glacial erratics
- Paetz and Nelson (1970) and Clayton and Ash (1980) for fish

ESA: BOREAL

Name: Two Lakes

Area (ha): 84

Location:

- Twp. 73 - Rge. 25 - W5
- Two Lakes

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Boreal Forest of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding activity noted in 1995
- two adult Trumpeter Swans observed in 1996
- excellent waterfowl capability

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: WARNER; POSTON

Name: Tyrell-Rush Lakes

Area (ha): 2098

Location:

- Twp. 5 - Rge. 17 and 18 - W4
- 11 km NNW of Warner

NTS Map Sheet: 82H

Municipality: County of Warner

Natural Subregions: Mixedgrass; Dry Mixedgrass

Significance: Provincial

- Poston lists as provincially significant goose staging habitat

Description:

- alkaline lakes and marshes
- Ducks Unlimited wetland project
- major waterfowl production and staging area
- some adjacent native grassland

Management Considerations:

- relative stability in the water levels and maintenance of natural habitat in surrounding lands will keep productivity of these wetlands high

References:

- 1986 field notes
- Fish and Wildlife key area maps

ESA: PARKLAND

Name: Unnamed Lake (South of Sunken Lake)

Area (ha): 188

Location:

- Twp. 39 - Rge. 5 - W4
- Unnamed lake south of Sunken Lake

NTS Map Sheet: 73D

Municipality: MD of Provost

Natural Subregions: Central Parkland

Significance: National

- breeding habitat for Piping Plover (a COSEWIC endangered species in Canada and red-listed species in Alberta)

Description:

- small lake
- ephemeral alkaline wetland
- some wet meadow
- shorebird staging and production lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Goossen (in prep)
- Morrison et al. (1995)
- Alberta Wilderness Association (1990)
- Hofman (1991)

ESA: BOREAL

Name: Unnamed Lake (T106 R05 S05 W6)

Area (ha): 128

Location:

- Twp. 106 - Rge. 5 - W6
- unnamed lake

NTS Map Sheet: 84L

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the most productive wetlands in the Wetland Mixedwood of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- abundant emergent vegetation
- lies within a Bison protected area

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Reynolds (1996) pers. comm
- 1996 field notes

ESA: BOREAL

Name: Unnamed Lake (T121 R19 S32 W4)

Area (ha): 1910

Location:

- Twp. 121 - Rge. 19 - W4
- unnamed lake

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the more productive Boreal Forest Lakes in Alberta

Description:

- Pelicans observed utilizing the lake during 1996 field survey
- good waterfowl habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- 1996 field notes



ESA: BOREAL

Name: Unnamed Lake (T67 R01 S10 W6)

Area (ha): 60

Location:

- Twp. 67 - Rge. 1 - W6
- unnamed lake

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swan nesting observed in 1996

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Geowest (1997, in prep.)

ESA: BOREAL

Name: Unnamed Lake (T67 R26 S03 W5)

Area (ha): 291

Location:

- Twp. 67 - Rge. 26 - W5
- unnamed lake

NTS Map Sheet: 83K

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) breeding site
- Trumpeter Swans observed in 1996 field survey
- adjacent uplands consist of mixedwood stands

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Unnamed Lake Complex (T71 R12 S07 W6)

Area (ha): 349

Location:

- Twp. 71 - Rge. 12 - W6
- unnamed lake complex

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- three lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- good potential waterfowl habitat
- surrounding area provides habitat for upland and migratory birds, Moose and Elk, deer and furbearers

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Unnamed Lake Complex (T71 R12 S29 W6)

Area (ha): 160

Location:

- Twp. 71 - Rge. 12 - W6
- unnamed lake complex

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- two lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- adjacent uplands provide good habitat for migratory birds, ungulates and furbearers

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files

ESA: BOREAL

Name: Unnamed Lake Complex (T72 R13 S33 W6)

Area (ha): 147

Location:

- Twp. 72 - Rge. 13 - W6
- unnamed lake complex

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- two lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- potential waterfowl habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Unnamed Lakes (T68 R11 S27 W6)

Area (ha): 277

Location:

- Twp. 68 - Rge. 11 - W6
- unnamed lakes

NTS Map Sheet: 83L

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- two lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- abundant emergent deadwood around perimeter of lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: BOREAL

Name: Unnamed Lakes (T71 R24 S32 W5)

Area (ha): 289

Location:

- Twp. 71 - Rge. 24 - W5
- unnamed lakes

NTS Map Sheet: 83N

Municipality: MD of Greenview

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- three small lakes
- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swan (blue-listed species in Alberta) breeding activity observed in both 1995 and 1996
- excellent waterfowl production capability
- no fisheries value

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: DAVID THOMPSON CORRIDOR; FOOTHILLS

Name: Upper North Saskatchewan River

Area (ha): 13828

Location:

- Twp. 39 - Rge. 15 - W5M
- North Saskatchewan River valley downstream of Bighorn Reservoir

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Upper Foothills; Lower Foothills

Significance: National

- intact interprovincial waterway

Description:

- isolated patches of montane grassland and limber pine
- calcareous wetlands including large, permanent, cold spring in LSD 4, Section 15 - Twp. 35 - Rge. 19 - W5M and "blue holes" along river
- braided stream
- Elk habitat
- potential for rare and uncommon plants
- good views of Main Ranges Thrust and the Main Range/Front Range boundary
- key winter ungulate range and movement corridor
- high wildlife species diversity
- high fish species diversity (including Bull Trout) and sport fishery
- diverse valley vegetation communities

Management Considerations:

- grazing by domestic animals has negative impacts on montane and calcareous spring habitats
- additional roads or uncontrolled motor vehicle access created through clearing or logging may have adverse impacts on wildlife populations

References:

- 1988 field notes
- Wildlife key area maps
- Rayner and Dutchak (1984)
- Fisheries inventory maps
- Jones and Workum (1978) for geology



ESA: MODEL FOREST

Name: Upper Pinto Creek

Area (ha): 9802

Location:

- Twp. 53-55 - Rge. 26 - W5 - Rge. 1 - W6
- upper Pinto Creek drainage north of the Wildhay River and east of Highway 40; includes Pinto Creek and several Unnamed creeks

NTS Map Sheet: 83E, 83F

Municipality: MD of Yellowhead

Natural Subregions: Upper Foothills

Significance: Provincial

- one of the largest and most diverse patterned wetland complexes in the Upper Foothills of Alberta

Description:

- diverse Upper Foothills coniferous woodland-wetland complex
- wooded uplands interspersed with creek valleys and extensive high elevation fens
- well-developed patterned wetlands, springs, meadows, and slope fens
- habitat for Bull Trout and Great Gray Owl

Management Considerations:

- developments (e.g. roads, seismic trails) can disrupt natural drainage patterns and adversely impact plant and animal habitats
- any stream crossings should be constructed in a manner that minimizes siltation

References:

- Alberta Government (1984) for zoning
- Vitt (1992) for wetlands
- Edson Fish and Wildlife (R. Hawryluk, personal communication) for Bull Trout

ESA: FOOTHILLS

Name: Upper Red Deer River

Area (ha): 4700

Location:

- Twp. 31 - Rge. 10 - W5
- valley of the Red Deer River

NTS Map Sheet: 82O

Municipality: MD of Clearwater

Natural Subregions: Upper and Lower Foothills

Significance: Provincial

- one of the most diverse river valleys in the Foothills of Alberta

Description:

- key winter ungulate habitat and travel corridor
- high wildlife species diversity
- sport fishery (including Bull Trout, Brook Trout and Mountain Whitefish)
- important migration corridor for Mountain Whitefish
- diverse shrubland and riparian plant communities
- important recreational watercourse
- Critical Wildlife Zone

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Bentz and Karpuk (1990)
- Fisheries inventory maps

ESA: CARDSTON

Name: Upper St. Mary River

Area (ha): 4181

Location:

- Twp. 1 - Rge. 25- W4
- St. Mary River from Highway 5 upstream to the Coal Canyon area

NTS Map Sheet: 82H

Municipality: MD of Cardston

Natural Subregions: Foothills Fescue

Significance: Provincial

- extensive narrow-leaved cottonwood habitats are local in Alberta
- Great Blue Heron colonies are local in Alberta
- ungrazed riparian woodlands are rare in Alberta; riparian habitats are some of the most threatened ecosystems in arid and semi-arid regions of the world
- one of the better sections of Pleistocene geology in Alberta
- in Alberta, Mottled Sculpins are known only from the upper St. Mary River and Milk River

Description:

- extensive riparian narrow-leaved cottonwood and shrubbery
- diverse breeding bird populations
- ungrazed woodland at Woolford Provincial Park, including rare plants such as Douglas hawthorn (*Crataegus douglasii*)
- key White-tailed Deer habitat
- Great Blue Heron colony in Section 5 - Twp. 3 - Rge. 24 - W4
- impressive canyon and rock outcrops in Coal Canyon area
- good section of Pleistocene deposits in Section 16 - Twp. 1 - Rge. 25 - W4
- rare fish including Mottled Sculpin

Management Considerations:

- heavy grazing reduces the suitability of these habitats for a wide variety of wildlife and affects the regeneration of cottonwoods
- altered stream flow affects the reproduction of cottonwood forests
- clearing and cultivation eliminate habitat diversity
- Great Blue Herons are sensitive to human presence during the nesting season

References:

- 1986 field notes
- Wallis (1980) for description of Woolford Provincial Park and riparian woodlands in general
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- Paetz and Nelson (1970) for fish
- Fish and Wildlife key area maps
- Clark (1982) for Great Blue Heron data
- Horberg (1954) for Pleistocene geology

ESA: EASTERN BOREAL

Name: Upper Wabasca River

Area (ha): 31295

Location:

- Twp. 88 -- Rge. 23 - W4
- valley of the Wabasca River

NTS Map Sheet: 84A, 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse river valleys in the Boreal Forest of Alberta

Description:

- important sport and commercial fishery
- important fish species: Walleye, Arctic Grayling, Northern Pike and Goldeye
- important Moose habitat
- hydrologically important river

Management Considerations:

- maintenance of natural vegetation cover will support a variety of boreal forest species

References:

- Westworth & Associates (1990)

ESA: BOREAL; POSTON

Name: Utikuma Lake

Area (ha): 33002

Location:

- Twp. 79 - Rge. 9 - W5
- Utikuma Lake

NTS Map Sheet: 83O

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant duck staging and moulting habitat

Description:

- supports active California Gull, Common Tern, Western Grebe, American White Pelican, Double-crested Cormorant and Forster's Tern colonies
- three main islands support non-breeding colonies of White Pelican, Double-crested Cormorant and Great Blue Heron
- key waterfowl production, staging and moulting lake
- important for commercial, domestic and sport fisheries, though sport fishing is restricted to protect spawning whitefish
- 8 fish species have been reported including Walleye, Northern Pike, Yellow Perch, Burbot and Lake Whitefish
- east side of the lake consists of a Sphagnum dominated basin bog with an adjacent forested horizontal fen
- upland to the east also utilized by Woodland Caribou (blue-listed species in Alberta, COSEWIC vulnerable species)

Management Considerations:

- lake is used extensively by local natives

References:

- Alberta Natural Resources Service files
- Mitchell and Prepas (1990)
- Nicholson (1991)
- Walty (1996) pers. comm
- 1996 field notes

ESA: BOREAL; POSTON

Name: Utikumasis Lake

Area (ha): 1748

Location:

- Twp. 80 - Rge. 11 - W5
- Utikumasis Lake

NTS Map Sheet: 83O

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- key waterfowl production, staging and moulting wetlands (primarily for ducks)
- American White Pelicans have been observed
- fish species include Lake Whitefish, Northern Pike, Walleye, Yellow Perch, Cisco and Burbot
- highly valued fish habitat for domestic and sport fishery
- lots of emergent vegetation
- surrounding upland areas provide good Moose habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes

ESA: PEACE RIVER; POSTON

Name: Valhalla Lake

Area (ha): 438

Location:

- Twp. 74 - Rge. 10 - W6
- Valhalla Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- key waterfowl moulting and staging
- nationally important for staging ducks
- breeding Trumpeter Swans (Alberta blue-listed species)

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- NAWMP, unpubl. data

ESA: WARNER

Name: Verdigris Coulee

Area (ha): 7925

Location:

- Twp. 3 and 4 - Rge. 17, 18 and 19 - W4
- valley of Verdigris Coulee from Weston Lake to the Milk River valley

NTS Map Sheet: 72E

Municipality: County of Warner

Natural Subregions: Dry Mixedgrass

Significance: International

- concentration of significant geological, paleontological, plant and wildlife features
- contains the type localities for numerous fossils; access to information on fossil locations is restricted

Description:

- classic glacial spillway
- diverse badland, moist meadow, grassland, shrub and open water habitats
- key Mule Deer habitat
- rare plants including Moquin's sea-blite (*Suaeda moquini*), which is rare in Canada
- nesting birds of prey, including the threatened Ferruginous Hawk
- major waterfowl staging and production areas in Weston and Verdigris Lakes, and Unnamed lake just north of Highway 501
- Ducks Unlimited project on Weston Lake
- lakes used by American White Pelicans
- major fossil finds have been made in Verdigris Coulee

Management Considerations:

- relative stability in the water levels and maintenance of adjacent natural habitats will keep the area attractive for a variety of migratory and nesting waterfowl
- heavy grazing will reduce the suitability of the area for deer

References:

- 1986 field notes
- Fish and Wildlife key area maps
- Beaty (1975) for spillway description
- Weerasinghe (1979) and Fox (1980 and 1984) for fossils



ESA: PARKLAND

Name: Vermilion Lake - Vermilion Provincial Park

Area (ha): 824

Location:

- Twp. 49 to 50 - Rge. 7 - W4
- Vermilion Provincial Park

NTS Map Sheet: 73E

Municipality: County of Vermilion River

Natural Subregions: Central Parkland

Significance: Provincial

- one of the more productive wetlands in the Parkland of Alberta

Description:

- excellent condition spring and wetland habitats
- productive wetlands for waterfowl and marsh birds
- several Ducks Unlimited projects
- important Northern Pike and Yellow Perch fishery

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife

References:

- Luck (1982)
- 1995 field notes
- Poston et al. (1990)
- Alberta Fish and Wildlife key area maps

ESA: PARKLAND; POSTON

Name: Vermilion Lakes

Area (ha): 3770

Location:

- Twp. 54 - Rge. 11 to 13 - W4
- Vermilion Lakes along the Vermilion River

NTS Map Sheet: 73E

Municipality: County of Two Hills

Natural Subregions: Dry Mixedwood

Significance: National

- Poston lists as nationally significant duck staging habitat

Description:

- diverse breeding bird communities
- productive wetlands for waterfowl and marsh birds
- several Ducks Unlimited projects

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife

References:

- Alberta Fish and Wildlife key area maps

ESA: DRY MIXEDWOOD

Name: Wabamun Lake

Area (ha): 11394

Location:

- Twp. 52 - Rge. 4 - W5
- Wabamun Lake

NTS Map Sheet: 83G

Municipality: County of Parkland

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more significant staging and production lakes for waterfowl in Alberta

Description:

- large flocks of ducks and geese observed during aerial survey
- fisheries resources include Lake Whitefish, Northern Pike, Walleye, Yellow Perch, and Sauger
- overwintering, rearing and spawning habitat
- fisheries is managed at Wabamun Lake
- important sport fishery
- good upland habitat although impacted by cottage development and coal mining activity

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Wildlife key area maps
- Fishery inventory maps
- field notes (1995)

ESA: PEACE RIVER

Name: Wabasca Bison Range

Area (ha): 15248

Location:

- Twp. 107 - Rge. 8 - W5
- near junction of Wabasca and Peace Rivers

NTS Map Sheet: 84J

Municipality: MD of Mackenzie

Natural Subregions: Dry Mixedwood; Central Mixedwood

Significance: National

- one of Canada's few free-ranging Bison herds outside of Wood Buffalo National Park

Description:

- because of its isolation from park herds it could be disease free (Wood Bison are designated provincially endangered by the Alberta Wildlife Act and nationally threatened by COSEWIC)
- the status and distribution of these animals are poorly known
- high landform diversity

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- D. Moyles, pers. comm
- A. Doepel, pers. comm

ESA: PEACE RIVER

Name: Wabasca River

Area (ha): 74805

Location:

- Twp. 107 - Rge. 9 - W5
- Wabasca River valley

NTS Map Sheet: 84A, 84B, 84G, 84J

Municipality: MD of Mackenzie; MD of Opportunity

Natural Subregions: Dry Mixedwood; Central Mixedwood; Boreal Highlands

Significance: Provincial

- some of the best ungulate habitat in the Peace River portion of Alberta's Dry Mixedwood
- one of the longest and most intact and diverse streams in the Boreal Forest of Alberta

Description:

- key Moose range
- spawning and rearing habitat for a variety of fish
- key fish species include Arctic Grayling, Northern Pike, Goldeye, Walleye, Yellow Perch, Cisco, Longnose Sucker and White Sucker
- important for the maintenance of sport and commercial fisheries
- critical terrestrial furbearer habitat
- diverse valley landforms
- includes Burning Sulphur/Muddy River Natural Area which protects a natural sulphur spring and its associated features

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Boag (1993)
- D. Moyles, pers. comm
- Graham et al. (1995)
- Alberta Forestry, Lands and Wildlife (1990)
- Alberta Natural Resources Service files
- Westworth and Associates Ltd. (1990)

ESA: EASTERN BOREAL

Name: Wabasca River (Canyon)

Area (ha): 29774

Location:

- Twp. 92 - Rge. 4 - W5
- valley of the Wabasca River

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the most diverse river valleys in the Boreal Forest of Alberta

Description:

- important sportfishery
- important fish species: Walleye, Arctic Grayling, Northern Pike and Goldeye
- high landform diversity (deeply incised scenic river bedrock outcrops)
- diverse riparian vegetation
- important Moose habitat

Management Considerations:

- maintenance of natural vegetation cover will support a wide variety of boreal wildlife

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: Wabasca River - Wabasca Lake

Area (ha): 3584

Location:

- Twp. - Rge. - W4
- Wabasca River adjacent Wabasca Lakes

NTS Map Sheet: 83P

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- part of a provincially significant lake and river system in the Boreal Forest of Alberta

Description:

- important sport and commercial fishery
- important fish species: Walleye, Arctic Grayling, Northern Pike and Goldeye
- important Moose habitat
- hydrologically important river
- extensive wetlands

Management Considerations:

- maintenance of natural vegetation cover will support a variety of boreal forest species

References:

- Westworth & Associates (1990)

ESA: BOREAL

Name: Wadlin Lake

Area (ha): 2454

Location:

- Twp. 101 - Rge. 10 - W5
- Wadlin Lake

NTS Map Sheet: 84G

Municipality: MD of Mackenzie

Natural Subregions: Boreal Highlands

Significance: Provincial

- one of the few productive lakes in the Boreal Highlands of Alberta

Description:

- one of a limited number of sites found within the Boreal Highlands
- American White Pelicans and Bald Eagles observed
- gulls and terns also present
- excellent waterfowl staging lake
- fish species supported include Lake Whitefish, Northern Pike and Yellow Perch
- Walleye have been introduced into this lake

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Wilderness Association (1990)
- Alberta Natural Resources Service files
- Walty (1996) pers. comm
- 1996 field notes



ESA: PARKLAND

Name: Wagner Natural Area

Area (ha): 752

Location:

- Twp. 53 - Rge. 27 - W4
- west of Edmonton

NTS Map Sheet: 83H

Municipality: County of Parkland

Natural Subregions: Central Parkland

Significance: Provincial

- one of a handful of calcareous spruce wetlands in Alberta

Description:

- includes Natural Area and adjacent upland
- significant wetland community types including an extremely rich fen complex
- critical White-tailed Deer and Moose habitat
- significant habitat for terrestrial breeding birds
- vegetation includes aspen mixedwood, white spruce, and black spruce
- large interpretive center associated with Natural Area

Management Considerations:

- alterations in surrounding land use that affects drainage patterns could negatively impact the wetlands

References:

- Natural and Protected Area Files
- Wildlife key area maps

ESA: LLOYDMINSTER; PARKLAND

Name: Wainwright Base

Area (ha): 53406

Location:

- Twp. 42 to 45 - Rge. 5 to 9 - W4
- Camp Wainwright Military Reserve and immediately adjacent lands near Wainwright, Alberta
- includes Camp Wainwright ESA

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: National

- one of the most extensive sand plain, river valley, calcareous fen and wetland complexes in the Aspen Parkland of Canada

Description:

- large area with creeks, springs and small lakes
- extensive sand plain and sand dunes
- active blowouts with rare plants
- diverse habitat of aspen, grassland, and wetlands
- productive sand plain wetlands
- diverse breeding bird communities
- key deer habitat
- includes patches of range improvement; additional clearing is ongoing in the area
- relatively undisturbed, especially to the south and east
- numerous Sharp-tailed Grouse dancing grounds (a yellow A-listed species in Alberta)
- waterfowl nesting and staging area, particularly dabbling ducks

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife
- military training access fragments habitats

References:

- Alberta Fish and Wildlife key area maps
- 1995 field notes
- Illnicki (pers. comm. 1995)
- field notes (1995)

ESA: PARKLAND

Name: Wainwright Dunes Ecological Reserve

Area (ha): 3178

Location:

- Twp. 41 - Rge. 5 - W4
- located south of Wainwright Military Base

NTS Map Sheet: 73D

Municipality: MD of Wainwright

Natural Subregions: Central Parkland

Significance: Provincial

- provincial Ecological Reserve

Description:

- high landform diversity including hummocky moraine, kames and eolian/wetland complexes (inter-dune fen complex, patterned fens)
- Sharp-tailed Grouse (a yellow A-listed species in Alberta) dancing grounds in upland
- key Mule and White-tailed Deer habitat
- rare plant species including *Gentiana aquatica* and *Ruppia occidentalis*
- significant staging of waterfowl (David Lake)
- relatively undisturbed
- good representative of the Central Parkland Natural Subregion
- aspen groves are interspersed with grassland, eolian landforms and associated vegetation
- variety of wetland types
- high diversity of breeding birds
- classified as an Ecological Reserve

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Bradley and Bradley (1977)
- Alberta Parks and Recreation File Notes
- Wildlife key area maps
- field notes

ESA: DRY MIXEDWOOD; POSTON

Name: Wakomao Lake

Area (ha): 809

Location:

- Twp. 60 - Rge. 24 - W4
- Wakomao Lake

NTS Map Sheet: 83I

Municipality: MD of Westlock

Natural Subregions: Dry Mixedwood

Significance: Provincial

- Poston lists as provincially significant Great Blue Heron breeding habitat

Description:

- part of the Redwater River drainage basin
- significant waterfowl production and staging lake
- excellent emergent vegetation cover
- Great Blue Heron nesting colony
- Northern Pike present within basin
- includes a small island within the lake that is an established natural area known as Halfway Lake Natural Area

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- Fisheries inventory maps
- Natural and Protected Areas Files

ESA: FOOTHILLS

Name: Wapiabi Creek

Area (ha): 8184

Location:

- Twp. 41 - Rge. 17 - W5
- valley of Wapiabi Creek

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Upper Foothills; Subalpine

Significance: Provincial

- one of the most diverse and undisturbed areas in the Foothills of Alberta

Description:

- critical Elk habitat and movement corridor
- key Moose and Mule Deer range
- spawning, rearing and overwintering habitat for Bull Trout, Brook Trout and Mountain Whitefish; sport fishery
- key Wolf and Grizzly Bear habitat
- extensive valley bottom riparian shrubland in upper reaches

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife
- Grizzly Bear are particularly sensitive to habitat fragmentation

References:

- Fisheries inventory maps
- Rayner and Dutchak (1984)

ESA: BOREAL

Name: Wapiti River

Area (ha): 9435

Location:

- Twp. 68 - Rge. 11 - W6
- Wapiti River valley

NTS Map Sheet: 83L

Municipality: MD of Greenview, County of Grande Prairie

Natural Subregions: Central Mixedwood; Lower Foothills

Significance: Provincial

- one of the more diverse and productive river valleys in the Boreal Forest of Alberta

Description:

- ungulate winter range and movement corridor
- Moose and Elk range
- diverse vegetation and wildlife
- gartersnakes are common along the river banks
- Wapiti Gardens has a high diversity of passerine birds such as hummingbirds and warblers
- popular sport fishery of Walleye, Northern Pike, Burbot, Mountain Whitefish, Longnose Sucker, Arctic Grayling and Bull Trout
- contains rare fish species, Largescale Sucker and Redside Shiner (distribution is limited to the Peace River drainage system)
- site also consists of a mineral lick and a natural spring
- high landform diversity
- river has numerous gravel bars and a deep channel

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Energy and Natural Resources (1984)
- Alberta Natural Resources Service files
- Borneuf (1983)
- Nelson and Paetz (1992)
- Walty (1996) pers. comm
- 1996 field notes

ESA: PARKLAND; POSTON

Name: Watt Lake

Area (ha): 2660

Location:

- Twp. 54 - Rge. 13 - W4
- Watt Lake

NTS Map Sheet: 73E

Municipality: County of Two Hills

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck staging habitat

Description:

- significant waterfowl production and staging lake
- includes Bens Lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)

ESA: CANADIAN SHIELD

Name: Waugh Lake

Area (ha): 3844

Location:

- Twp. 124 to 125 - Rge. 1 - W4
- uplands in vicinity of Waugh Lake

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- the only occurrence of these rock types in Alberta

Description:

- area of low grade metavolcanic and metasedimentary bedrock in the Waugh Lake depositional basin
- an amphibolite stock on the southeast shore of Waugh Lake may represent the remnants of the source of the Waugh Lake metavolcanic deposits
- no field work has been undertaken to determine the biological significance of these geological structures
- some interesting topographic features were noted from an aerial survey (e.g. deep chasm with late snow bed areas)
- adjoins Andrew Lake unit

Management Considerations:

- no field studies on the biology of these formations have been undertaken

References:

- Bradley (1978), Godfrey (1986), Wallis and Wershler (1984)



ESA: PARKLAND; POSTON

Name: Wavy Lake

Area (ha): 1910

Location:

- Twp. 45 - Rge. 15 - W4
- Wavy Lake

NTS Map Sheet: 83A

Municipality: County of Flagstaff

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant duck staging and breeding habitat

Description:

- significant waterfowl production and staging lake
- Ducks Unlimited restoration project on lake

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Ducks Unlimited
- Wildlife key area maps
- field notes (1995)

ESA: EASTERN BOREAL; POSTON

Name: Weaver Lake

Area (ha): 1566

Location:

- Twp. 80 -- Rge. 1 - W5
- Weaver Lake

NTS Map Sheet: 84B

Municipality: MD of Opportunity

Natural Subregions: Central Mixedwood

Significance: Provincial

- listed by Poston as provincially significant staging duck habitat

Description:

- small boreal forest lake

Management Considerations:

- maintenance of natural shorelines will attract a variety of water birds

References:

- Westworth & Associates (1990)

ESA: BOW CORRIDOR

Name: West Bow Flats

Area (ha): 1658

Location:

- Twp. 24 - Rge. 9 to 10 - W5
- Bow River floodplain between Highways 1 and 1A from Canmore interchange east to Lac des Arcs

NTS Map Sheet: 82O

Municipality: MD of Bighorn

Natural Subregions: Montane; Subalpine

Significance: Provincial

- one of few diverse and productive inter-mountain floodplain-wetland complexes in Alberta
- one of the most significant Brown Trout spawning areas in Alberta

Description:

- relatively inaccessible and undisturbed floodplain habitats
- braided streams, willow swamps and white spruce and balsam poplar woodland
- calcareous springs
- important Brook and Brown Trout spawning areas
- productive for a diversity of breeding birds
- regionally uncommon nesting bird species such as Fox Sparrow, Willow Flycatcher and Osprey
- spring and fall waterfowl staging habitat at Lac des Arcs
- breeding ponds for Long-toed Salamander, a rare amphibian in Alberta
- may be seasonally important for Elk

Management Considerations:

- these floodplain habitats should be considered unsuitable for most types of developments; only dispersed, non-motorized, pedestrian-based recreation is considered suitable
- a portion of this area has been designated a Natural Area

References:

- Alberta Natural and Protected Areas Program files
- Alberta Fish and Wildlife files
- Cottonwood Consultants (1990)
- 1990 field notes
- Beak Associates Consulting Ltd. (1986)

ESA: PINCHER CREEK; MONTANE

Name: Whaleback

Area (ha): 28030

Location:

- Twp. 10 - Rge. 3 - W5
- 25 km N of Lundbreck

NTS Map Sheet: 82G

Municipality: MD of Pincher Creek

Natural Subregions: Montane; Foothills Fescue

Significance: National

- concentration of significant features
- part of the most extensive and diverse montane ridge system in Canada

Description:

- southern tip of the spectacular Whaleback Ridge system
- diverse breeding bird habitats including rock outcrops, riparian poplar and willow shrubbery, grassland terraces, montane limber pine and Douglas fir, moist meadows, Beaver ponds and saline seepage areas
- mixing zone for mixed grassland and foothills plants and animals
- superior trout stream
- rare plants, including dwarf fleabane (*Erigeron radicans*) and crested beard-tongue (*Penstemon eriantherus*)
- Prairie Falcon and Golden Eagle nesting sites
- key Mule Deer habitat
- key Moose habitat along the Oldman River
- at the edge of one of the best Elk wintering ranges in Alberta
- well-preserved examples of abandoned stream terraces
- large glacial erratics
- excellent geological sections along the Oldman River

Management Considerations:

- heavy grazing reduces the suitability of these sites for a variety of native plants and animals
- stream pollution from subsurface or surface sources and erosion and siltation can have significant impacts on fisheries

References:

- Fish and Wildlife key area maps
- 1986 field notes
- Wallis (1980) and Cottonwood Consultants (1983)
- Douglas (1950), Beaty (1975), and Shawa (1975) for geology
- Longmore and Stenton (1981) and C. Bradley, Trout Unlimited (personal communication) for fish

ESA: DRY MIXEDWOOD

Name: White Earth Natural Area

Area (ha): 2338

Location:

- Twp. 62 - Rge. 62 - W4
- valley south of Long Lake

NTS Map Sheet: 83I

Municipality: County of Thornhill

Natural Subregions: Dry Mixedwood

Significance: Provincial

- this is the only occurrence of valley glacier deposits on the Western Plains

Description:

- unique geological setting
- aspen-balsam poplar community type with diverse understory
- one of the most productive Moose habitats in the region
- area also supports Black Bears, wolves, coyotes, White-tailed Deer, small furbearers, and song birds
- large undisturbed area due to limited access into site

Management Considerations:

- maintenance of natural habitats will support a variety of wildlife

References:

- Mitchell and Prepas (1990)
- Landlis (pers. comm. 1995)
- Wildlife key area maps
- Natural and Protected Area Files

ESA: DAVID THOMPSON CORRIDOR; MONTANE

Name: White Goat Lakes

Area (ha): 203

Location:

- Twp. 37 - Rge. 18 - W5M
- west and north of Cline River resort

NTS Map Sheet: 83C

Municipality: MD of Clearwater

Natural Subregions: Montane

Significance: Provincial

- one of the most diverse and productive calcareous wetlands in Alberta

Description:

- extensive calcareous wetlands, springs, meadows and open water
- calcareous tufa deposits in White Goat Lakes
- uncommon plants including dwarf Canadian primrose (*Primula mistassinica*) and (*Salix calcicola*)

Management Considerations:

- disruption of groundwater flow or use by grazing animals can have negative impacts on the spring ecosystems

References:

- 1988 field notes

## ESA: MODEL FOREST

Name: Whitehorse Creek

Area (ha): 8910

Location:

- Twp. 46 to 47 - Rge. 23 to 25 - W5
- valleys of Whitehorse Creek and unnamed tributaries and Harlequin Creek (including headwaters of these streams); Nikanassin and Miette Ranges; Front Range Mountains: Gregg, Luscar and Leyland

NTS Map Sheet: 83C

Municipality: MD of Yellowhead

Natural Subregions: Alpine and Subalpine

Significance: National

- part of a nationally significant extensive Alpine-Subalpine habitat complex extending to the Cardinal River Headwaters and Red Cap

Description:

- extensive and diverse Alpine-high Subalpine with meadows, spruce-fir and lodgepole pine forests, and willow-dwarf birch shrubbery
- provincially unique vegetated rock glacier
- patterned ground, waterfalls, and springs
- Cadomin Cave has interesting cave features: it is habitat for swarming and hibernating bats of three species
- key habitat for Bighorn Sheep, Elk and Mountain Goat
- key fish habitat, including Bull Trout (being considered for COSEWIC listing)
- rare, uncommon and disjunct plants
- part of a buffer between Jasper National Park to the west and multiple use lands to the east

Management Considerations:

- Alpine tundra is vulnerable to disturbance
- ungulates are sensitive to human activities on critical winter ranges
- prohibitions on motorized recreation use should be implemented on all Zone 1 and 2 areas in the Whitehorse Creek basin
- public access to Cadomin Cave should be restricted during bat swarming and hibernation periods from August 10 to April 30

References:

- Alberta Forestry, Lands and Wildlife (1990) for zoning
- Salt (1985a), Alberta Energy and Natural Resources, Fish and Wildlife Division (1986) for bats
- Borneuf (1983) for springs
- Alberta Forestry, Lands and Wildlife (1990) for ungulates and fish

ESA: FOOTHILLS

Name: Whitemud River Diversity Area

Area (ha): 41562

Location:

- Twp. 89 - Rge. 4 - W6
- vicinity of Whitemud River

NTS Map Sheet: 84D

Municipality: MD of Clear Hills

Natural Subregions: Lower Foothills

Significance: Provincial

- one of the most diverse areas of Lower Foothills in Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting
- critical Woodland Caribou habitat
- high plant community diversity and old-growth forest

Management Considerations:

- maintenance of unfragmented natural cover is critical for Caribou

References:

- Alberta Fish and Wildlife (1994)
- 1994 field notes



ESA: POSTON

Name: Whitford-Rush Lakes

Area (ha): 1745

Location:

- Twp. 56 - Rge. 16 - W4
- Whitford-Rush Lakes

NTS Map Sheet: 83H

Municipality: County of Lamont

Natural Subregions: Central Parkland

Significance: National

- Poston lists as nationally significant staging duck habitat

Description:

- Poston lists as provincially significant Black-crowned Night Heron breeding habitat

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Poston et al. (1990)

ESA: BOREAL

Name: Whooping Crane Nesting Habitat

Area (ha): 14365

Location:

- Twp. 126 - Rge. 18 - W4
- near Northwest Territories border, Wood Buffalo National Park

NTS Map Sheet: 84P

Municipality: Municipality of Wood Buffalo

Natural Subregions: Central Mixedwood; Wetland Mixedwood

Significance: International

- supports one of the last known Whooping Crane (red-listed species in Alberta, COSEWIC endangered species) nesting habitats left in the world

Description:

- Peregrine Falcon (red-listed in Alberta, COSEWIC endangered species) nesting habitat
- two whooping cranes and nine swans observed during 1996 field surveys

Management Considerations:

- drainage alterations can have profound influences on fen wetlands
- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Environmental Protection n.d
- Poston et al. (1990)
- 1996 field notes

ESA: LOWER RED DEER RIVER; STARLAND

Name: Willow Creek

Area (ha): 8887

Location:

- Twp. 27 to 29 - Rge. 17 to 18 - W4
- valleys of Willow Creek, its tributaries and adjacent uplands

NTS Map Sheet: 82P

Municipality: MD of Starland

Natural Subregions: Northern Fescue

Significance: Provincial

- northern mixed grasslands are the best examples of their type in Alberta

Description:

- steep walled coulees and upland northern mixed grassland, some of which is in excellent condition -- transitional to Northern Fescue Grassland
- diverse coulee vegetation including badlands, alkali springs, aspen woodland and tall and low shrubbery
- diverse breeding bird habitats
- nesting habitat for rare birds of prey including Prairie Falcon and Ferruginous Hawk, a COSEWIC vulnerable species in Canada
- key Mule Deer and White-tailed Deer habitat
- unit extends eastward into MD of Starland and Special Areas
- diversity of grazing regimes from light to heavy

Management Considerations:

- maintenance of a variety of grazing regimes from light to heavy will ensure the survival of a diverse assortment of native plants and animals
- maintenance of upland native grasslands will provide feeding areas for birds of prey
- heavy grazing in valleys reduces their attractiveness for a variety of plants and animals

References:

- Fish and Wildlife key area maps
- 1991 field notes
- Wallis and Wershler (1985)

ESA: RED DEER; POSTON

Name: Willow Lake

Area (ha): 2830

Location:

- Twp. 35 to 36 - Rge. 23 to 24 - W4
- discontinuous wetlands and aspen parkland 15 km southeast of Pine Lake

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant duck breeding habitat
- productive wetlands are important elements of the Parkland Region

Description:

- open water, sedge, cattail and bulrush marsh
- woodlands and extensive willow and swamp birch shrubbery along wetland edges
- diversity of breeding birds
- two Great Blue Heron nesting areas
- important for marshbirds and for production and staging of waterfowl, including diving ducks, grebes and Canada Geese
- remnant patches of aspen parkland in a mostly cultivated landscape
- key White-tailed Deer habitat

Management Considerations:

- Great Blue Herons are sensitive to human disturbance during the nesting season
- heavy grazing reduces the suitability of these habitats for a variety of wildlife and uncommon plants
- additional clearing and cultivation will reduce the attractiveness of the area for wildlife

References:

- Fish and Wildlife key area maps
- 1989 field notes

ESA: PEACE RIVER; POSTON

Name: Winagami Lake/South Heart River

Area (ha): 17437

Location:

- Twp. 77 - Rge. 18 - W5
- Winagami Lake and adjacent portions of the South Heart River

NTS Map Sheet: 83N

Municipality: MD of Opportunity

Natural Subregions: Dry Mixedwood; Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant duck staging and moulting habitat

Description:

- contains Winagami Lake, South Heart River and Winagami Provincial Park
- Winagami Lake provides key waterfowl moulting and staging habitat, regionally significant for staging ducks and locally significant geese staging habitat
- Western Grebe colony is present on the west end of the lake
- the lake supports a commercial fishery of Lake whitefish and Northern Pike
- popular sport fishing lake for Northern Pike, Walleye, Yellow Perch and Lake whitefish
- South Heart River provides a movement corridor for wildlife
- South Heart River dam area has a Great Blue Heron colony and provides foraging habitat for American White Pelicans
- Bald Eagles nest near the dams
- Winagami Provincial Park has high bird diversity and Bald Eagles nest there
- the park is a popular wildlife viewing site

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- C. Scotland, pers. comm
- Nietfeld et. al. (1985)
- D. Moyles, pers. comm
- L. Faulkner and B. Himer, pers. comm
- D. Walty, pers. comm
- Graham et. al. (1995)
- NAWMP, unpubl. data
- Semenchuk (1992)
- Natural Resources Service, unpubl. data
- Anon. (1996)

ESA: CALGARY; BOW CORRIDOR; CANMORE

Name: Wind Valley

Area (ha): 863

Location:

- Twp. 24- Rge. 10 - W5
- includes all of Wind Ridge and the valleys of Pigeon, West Wind, Wind and South Wind Creeks
- extends northwest to include lower Stewart Creek and lower Fall Creek

NTS Map Sheet: 82O

Municipality: MD of Bighorn

Natural Subregions: Alpine, Montane, Subalpine

Significance: International

- considered by some to be one of the most significant Bighorn Sheep wintering areas in the Canadian Rockies and one of the largest of the remaining Bighorn Sheep populations in North America

Description:

- extensive Montane and Subalpine coniferous forest and open Alpine meadows
- an exceptionally fertile and diverse area which is rich in species of animals and plants
- confluence of several critical multi-species wildlife movement corridors between Banff, the Bow Valley and the north, and Kananaskis Country and the south
- old growth stands of Douglas fir and subalpine fir
- old growth white spruce forest on north facing slope in Stewart-Fall Creek area
- high quality habitat for Sheep, Elk, Mule Deer, White-tailed Deer and, to a lesser extent, Moose
- calving area for Elk along West Wind Creek and, possibly, the lower slopes of Wind Ridge
- critical Elk summer and winter range and Bighorn Sheep winter range on Wind Ridge
- population of high quality Bighorn Sheep (i.e. large body size, relatively free of disease and parasites)
- diversity of ungulates support an exceptionally high diversity of large carnivores such as Grizzly Bear, Wolverine (both species listed as vulnerable by COSEWIC), Wolf, Coyote, Cougar, and Black Bear
- presence of the largest known fen in Kananaskis Country
- critical spring and summer habitat for Grizzly and Black Bear
- considered to have the greatest diversity of large mammals within one hour's drive of a major urban area in Canada

Management Considerations:

- Elk habitat in the Canmore Corridor has been fragmented into smaller areas through human developments; additional development in the Wind Ridge or Wind Valley areas would cause further habitat destruction and would likely impact on calving areas and impair movements between important wintering and summering areas and lead to further population declines
- a long-term area Management plan needs to be developed, based on scientific data and public input
- worthy of legislated protected status and no further development
- road kills of Elk occur on movement corridors across the Trans-Canada Highway
- helicopter overflights should be restricted/eliminated to avoid wildlife disturbance
- seasonal trail closures to recreation use may also be necessary to protect wildlife
- Grizzly Bear and other large carnivores are very sensitive to human activity; all forms of human activity during active seasons reduces habitat effectiveness and may increase mortality

continued on next page

Name: Wind Valley (continued)

References:

- Cottonwood Consultants (1990) and Sweetgrass Consultants Ltd. (1991) for general overview
- J.R. Salt and Associates (1990) and Herrero (1992) for large mammals
- Natural Resources Conservation Board (1992) for large carnivores and Pigeon Creek
- Alberta Natural and Protected Areas Program files
- Alberta Fish and Wildlife files and key area maps
- Geist (1992) for Bighorn Sheep
- Alberta Forestry, Lands and Wildlife (1992)
- Alberta Fish and Wildlife (1989)
- Ashton et al. (1994) for Ecological Reserve proposal
- Environmentally Significant Areas Subcommittee (1993)
- interviews with Environmentally Significant Areas Subcommittee
- 1994 field study notes

ESA: BOREAL

Name: Windsor Creek

Area (ha): 509

Location:

- Twp. 71 - Rge. 13 - W6
- Windsor Creek valley

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive stream influenced wetlands in Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- lots of Beaver activity observed
- high amounts of emergent deadwood

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species

References:

- Alberta Natural Resources Service files
- 1996 field notes



ESA: EASTERN BOREAL

Name: Winefred Lake

Area (ha): 12338

Location:

- Twp. 75 -- Rge. 4 - W4
- Winefred Lake

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- trophy fish lake

Description:

- important fish species: Walleye, Lake Whitefish, Cisco, Northern Pike, Yellow Perch and Burbot
- Bald Eagle nesting area
- moulting and staging waterfowl
- Double-crested Cormorant and Great Blue Heron nesting

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: EASTERN BOREAL

Name: Winefred/Grist Watershed

Area (ha): 77192

Location:

- Twp. 74 -- Rge. 4 - W4
- Winefred/Grist Lake area

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- trophy fish lake

Description:

- important sport and trophy fishing, including Lake Trout
- important furbearer (River Otter) production
- River Otters, Double-crested Cormorants, Great Blue Herons and Bald Eagles present

Management Considerations:

- maintenance of natural cover on the uplands will protect the watershed

References:

- Westworth & Associates (1990)

ESA: CALGARY

Name: Wintering Hills

Area (ha): 10993

Location:

- Twp. 18- Rge. 26 - W4
- Wintering Hills upland south of Drumheller

NTS Map Sheet: 82P

Municipality: County of Wheatland

Natural Subregions: Northern Fescue; Mixedgrass

Significance: Provincial

- remnant Tertiary gravel cap; geological feature that is rare in Alberta

Description:

- disjunct aspen communities
- important prehistoric sites?
- fossil vertebrate site in Cretaceous Edmonton Formation, where the rare carnivorous dinosaur, *Dromaeosaurus*, was unearthed
- hills rise about 120m above the surrounding plain
- critical White-tailed Deer habitat in disjunct aspen woodland

Management Considerations:

- maintenance of natural cover will support a variety of woodland and grassland species

References:

- Lamoureux & Associates (1983)

ESA: TABER

Name: Wolf Island Dunes

Area (ha): 1686

Location:

- Twp. 12 - Rge. 14 and 15 - W4
- 8 km north of Wolf Island

NTS Map Sheet: 72L

Municipality: MD of Taber

Natural Subregions: Dry Mixedgrass

Significance: Provincial

- contains one of a handful of significant *Abronia micrantha* populations in Alberta
- active sand blow-outs are rare in the mixed grasslands

Description:

- native mixed grassland on sand dune terrain with active blowouts
- several rare plant species including *Lupinus pusillus* (low annual lupine), *Abronia micrantha* (sand verbenia - a COSEWIC threatened plant species), and *Franseria acanthicarpa* (bur-sage)
- breeding habitat for Grasshopper Sparrow and Brewer's Sparrow (uncommon birds)
- nesting Burrowing Owls (a COSEWIC endangered species)

Management Considerations:

- active sand blowouts are essential to the long-term survival of most of the rare plants
- heavy grazing may be detrimental to some rare plant species
- cultivation eliminates many native plants and animals

References:

- 1987 field notes
- Westgate (1965) and Shetsen (1987) for surficial geology

ESA: BOREAL; POSTON

Name: Wolf Lake

Area (ha): 4697

Location:

- Twp. 66 - Rge. 7 - W4
- Wolf Lake

NTS Map Sheet: 73L

Municipality: MD of Big Lakes

Natural Subregions: Central Mixedwood

Significance: Provincial

- Poston lists as provincially significant Western Grebe nesting habitat

Description:

- site includes Wolf Lake, Lost Magician Lake and Sapphire Lake
- supports Western Grebe, Great Blue Heron and Common Tern colonies
- Osprey also noted
- all lakes support populations of Northern Pike, Lake Whitefish, Walleye, Cisco, Burbot, suckers and Yellow Perch
- commercial, domestic and sport fisheries

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- Longmore et al. (1982)
- Mitchell and Prepas (1990)
- 1996 field notes

ESA: PEACE RIVER

Name: Wolfe Lake

Area (ha): 212

Location:

- Twp. 74 - Rge. 8 - W6
- Wolfe Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Dry Mixedwood

Significance: Provincial

- one of the more productive Dry Mixedwood wetlands in Alberta

Description:

- important area for nesting Trumpeter Swans (Alberta blue-listed species)
- key waterfowl moulting and staging

Management Considerations:

- maintenance of natural cover on the shorelines will keep the area attractive for a variety of water birds

References:

- Poston et al. (1990)
- D. Moyles, pers. comm
- NAWMP, unpubl. data

ESA: RED DEER; POSTON

Name: Wood Lake

Area (ha): 280

Location:

- Twp. 37 - Rge. 22 - W4
- Wood Lake and adjacent aspen parkland east of Delburne

NTS Map Sheet: 83A

Municipality: County of Red Deer

Natural Subregions: Central Parkland

Significance: Provincial

- Poston lists as provincially significant Eared Grebe and duck breeding habitat

Description:

- shallow lake and remnant aspen parkland
- contains some areas of fescue grassland
- key White-tailed Deer habitat
- some waterfowl production
- clearing continues to reduce the remaining natural habitat

Management Considerations:

- additional clearing and cultivation will reduce the attractiveness of the area for a variety of wildlife
- heavy grazing reduces the suitability of these habitats for native plants and wildlife

References:

- Fish and Wildlife key area maps
- Wallis (1977)
- 1989 field notes

ESA: PARKLAND; POSTON

Name: Wood Lake

Area (ha): 148

Location:

- Twp. 71 - Rge. 5 - W6
- Wood Lake, near Grande Prairie

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Peace River Parkland

Significance: Provincial

- Poston lists as provincially significant Red-necked Grebe nesting habitat

Description:

- Trumpeter Swan nesting lake, a blue-listed species in Alberta
- waterfowl habitat

Management Considerations:

- maintenance of natural shoreline habitats will support a variety of wildlife

References:

- Wildlife key area maps
- field notes (1995)



ESA: CANADIAN SHIELD

Name: Woodman-Alexander Lakes

Area (ha): 13838

Location:

- Twp. 120 to 123 - Rge. 3 to 4 - W4
- Woodman, Alexander Lakes and surrounding uplands and connecting stream channels

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland

Significance: Provincial

- one of the most diverse wetland-stream complexes in the Kazan Upland in Alberta

Description:

- small lakes with marsh development
- jack pine lichen forest and aspen woodland
- bedrock outcrops
- extensive sand dune vegetation
- some lakes have been classified as eutrophic
- regionally significant waterfowl staging area
- moderate sport fishing potential
- seepage area south of Woodman lake with regionally rare plants

Management Considerations:

- sandy habitats are relatively fragile

References:

- Rhude (1977)
- Renewable Resources Consulting Services (n.d.)
- Wallis and Wershler (1984)
- Vitt (1992)
- Godfrey (1979, 1986)

ESA: WARNER

Name: Writing-on-Stone

Area (ha): 9255

Location:

- Twp. 1 and 2 - Rge. 12, 13 and 14 - W4
- Milk River valley and associated coulees and uplands in the vicinity of Writing-on-Stone Provincial Park, upstream to Verdigris Coulee

NTS Map Sheet:: 72E

Municipality: County of Warner

Natural Subregions: Dry Mixedgrass; Mixedgrass

Significance: International

- some of the most diverse habitats and landscapes in the mixed grasslands of North America
- concentration of significant features
- geological type localities are unique and form the basis for further geological investigations
- ungrazed habitats in the mixed grassland region of North America are rare
- high concentration of rare plants, wildlife and fish, including threatened or endangered species
- clear flowing streams are rare in the mixed grassland region of North America
- internationally significant archeological resources complement the natural features

Description:

- diverse and productive riparian plains cottonwood, low and tall shrubbery, Beaver ponds, moist alkaline meadows, clear streams, rock outcrops and grasslands
- ungrazed mixed grassland, coulee and riparian habitats in Writing-on-Stone Provincial Park
- massive sandstone outcrops and intriguing rock formations
- high density of nesting birds of prey including Prairie Falcons, Golden Eagles and Ferruginous Hawks (a vulnerable species)
- historic nesting area for Peregrine Falcons (a COSEWIC endangered species)
- rare or uncommon mammals, including Yellow-bellied Marmot and Bobcat
- diverse populations and high numbers of breeding and migrating birds
- rare or uncommon butterflies
- key Mule Deer and White-tailed Deer habitat
- Prairie Rattlesnake and Bull Snake hibernacula (overwintering areas)
- Short-horned Lizards along coulee rims (COSEWIC vulnerable species)
- rare plants, including nodding umbrella plant (*Eriogonum cernuum*), American pellitory (*Parietaria pensylvanica*), little-seeded rice grass (*Oryzopsis micrantha*), green milkweed (*Asclepias viridiflora*), Moquin's sea-blite (*Suaeda moquinii*), prickly milk-vetch *Astragalus kentrophyta*, low milk-vetch (*Astragalus lotiflorus*), western hawksbeard (*Crepis occidentalis*), tufted hymenopappus (*Hymenopappus filifolius*), red three-awn (*Aristida longiseta*), downy paintbrush (*Castilleja sessiliflora*); several of these are rare in Canada
- sandy outwash plain on upland north of the river
- type section for Upper Cretaceous rocks of the Lower Milk River Formation in Police Coulee in Section 35 - Twp. 1 - Rge. 13 - W4
- rare fish including Brassy Minnow, Silvery Minnow, Finescale Dace and Stonecat

continued on next page

Name: Writing-on-Stone (continued)

Management Considerations:

- altered stream flow affects the reproduction of cottonwood forests
- heavy grazing reduces the suitability of these habitats for a variety of plants and wildlife and affects the regeneration of cottonwoods
- cattle usage and developments along creeks could reduce water quality and destroy spawning grounds for rare fish like the Silvery Minnow
- clearing and cultivation eliminate habitat diversity
- hibernacula are critical to the survival of several snakes; disturbance can lead to significant population losses

References:

- 1986 field program
- Fish and Wildlife key area maps
- Willock (1968), McAllister (1970), Paetz and Nelson (1970) and Clayton and Ash (1980) for fish
- Wershler (1976) and Campbell (1981) for natural history overview
- Barendregt (n.d.-a), Russell and Landes (1940), Westgate (1968) and Beaty (1975) for geology
- Wallis (1980 and 1987) and Cottonwood Consultants (1983) for riparian description and significance
- Bradley and Smith (1986) and Smith and Flake (1981) for impacts of altered stream flow and grazing on cottonwood systems
- Pinel and Kondla (1985) for butterflies

ESA: CANADIAN SHIELD

Name: Wylie Lake

Area (ha): 38307

Location:

- Twp. 117 to 119 - Rge. 1 to 3 - W4
- Wylie, Florence, Burstall, Bryant and Winnifred Lakes and surrounding uplands

NTS Map Sheet: 74M

Municipality: MD of Big Lakes

Natural Subregions: Kazan Upland; Athabasca Plain

Significance: Provincial

- one of the most representative areas of bedrock dominated uplands and lakes in the Kazan Upland in Alberta
- most northerly populations of provincially rare Northern Leopard Frogs in Alberta

Description:

- gently undulating area with a series of shallow and deep interconnecting lakes
- impressive cliffs and bedrock outcrops
- rocky islands
- disjunct and rare plants including oak fern (*Gymnocarpium jessoense*), lens-fruited sedge (*Carex lenticularis*)
- most northerly populations of provincially rare Northern Leopard Frogs in Alberta
- uncommon, sensitive and colonial nesting birds (e.g. Bald Eagle, Common Tern)

Management Considerations:

- maintenance of natural vegetation will continue to support a variety of Shield species

References:

- Bradley (1978)
- Turner (1966)
- Vitt (1992)
- Alberta Recreation and Parks (1980)
- Rhude (1977)
- Godfrey (1979, 1986)
- Wallis and Wershler (1984)
- Renewable Resources Consulting Services (n.d.)

ESA: MONTANE

Name: Ya-Ha-Tinda

Area (ha): 2477

Location:

- Twp. 32 - Rge. 12 - W5
- Ya-Ha-Tinda Ranch on the Upper Red Deer River

NTS Map Sheet: 82O

Municipality: MD of Clearwater

Natural Subregions: Montane

Significance: Provincial

- one of the two largest Elk wintering areas in Alberta

Description:

- extensive montane grassland
- Bighorn Sheep, Wolf, Grizzly Bear and Cougar habitat
- popular recreation area

Management Considerations:

- maintenance of natural habitats will support the greatest diversity of native species
- overgrazing by horses has been a problem in the past

References:

- Alberta Environmental Protection (1995)

ESA: CALGARY; BOW CORRIDOR

Name: Yamnuska

Area (ha): 1073

Location:

- Twp. 25- Rge. 8 - W5
- lower slopes of Mount Yamnuska

NTS Map Sheet: 82O

Municipality: MD of Bighorn

Natural Subregions: Montane; Subalpine; Alpine

Significance: Provincial

- one of the most diverse calcareous spring areas in Alberta
- the diversity of habitats, plants, and animals and the mixing of Cordilleran and boreal plants and animals appears to be unique in southern Alberta

Description:

- geological uniqueness and natural diversity
- noted for its diversity of flowering plants
- key Bighorn Sheep range in area
- small lakes, seepages, fens, swamps, Beaver ponds, and a mosaic of grassland, aspen, Douglas fir, white spruce, lodgepole pine woodland
- significantly large numbers of uncommon plant species such as the yellow lady-slipper and western wood-lily
- rare and uncommon bird species, including Hooded Merganser and Pileated Woodpecker
- large diversity of breeding bird species
- large diversity of flowering plant species
- mixture of boreal and Cordilleran plants and animals
- Spotted Frog and possibly Long-toed Salamander

Management Considerations:

- many of the unique features, including the wetlands and uncommon flora, are maintained by the high water table and the flow of springs and seepages; any disturbance to discharge and recharge areas will potentially threaten these features
- extensive recreation with minimal peripheral developments are activities which are compatible with the protection of the unique features in the area

References:

- Yamnuska Natural Area Study Committee (1974)
- Bow Valley Naturalists pers. comm
- Alberta Natural Areas Program files
- Cleve Wershler and Cliff Wallis personal field notes
- 1990 field notes
- Sweetgrass Consultants (1988 and 1989)

ESA: BOREAL

Name: Yoke Lake

Area (ha): 216

Location:

- Twp. 72 - Rge. 11 - W6
- Yoke Lake

NTS Map Sheet: 83M

Municipality: County of Grande Prairie

Natural Subregions: Central Mixedwood

Significance: Provincial

- one of the more productive wetlands in the Central Mixedwood of Alberta

Description:

- Trumpeter Swan (blue-listed species in Alberta) nesting site
- Trumpeter Swans observed in 1996 field survey
- good waterfowl production, staging and moulting site
- adjacent uplands primarily aspen
- surrounding area provides good migratory bird, ungulate and furbearer habitats

Management Considerations:

- maintenance of natural shorelines will keep the area attractive for a variety of waterbirds

References:

- Alberta Natural Resources Service files
- 1996 field notes

ESA: GRASSLAND

Name: Youngstown Aspen Groveland

Area (ha): 21935

Location:

- Twp. 32 - Rge. 10 - W4
- upland near Youngstown

NTS Map Sheet: 72M

Municipality: Special Area 3

Natural Subregions: Dry Mixedgrass; Northern Fescue

Significance: Provincial

- one of the most extensive tracts of native grassland in Alberta's northern Dry Mixedgrass and southern Northern Fescue grasslands

Description:

- significant aspen sand dune complex which tapers into hummocky moraine in the south
- this area forms a transition between northern fescue grassland and dry mixedgrass grassland
- a large diversity of passerines typical of both grassland and parkland
- numerous ephemeral wetlands are also located within this site
- key Mule and White-tailed Deer habitat
- Sharp-tailed Grouse dancing grounds (a yellow A-listed species in Alberta)

Management Considerations:

- maintenance of natural habitats will support a variety of grassland wildlife

References:

- field notes (1995)
- Wallis (1989)
- Wildlife key area maps



ESA: BOREAL

Name: Zama Lake Ribbed Fen

Area (ha): 9404

Location:

- Twp. 113 - Rge. 11 - W6
- wetland west of Zama Lake

NTS Map Sheet: 84L

Municipality: MD of Mackenzie

Natural Subregions: Wetland Mixedwood

Significance: Provincial

- one of the more unusual and strongly patterned fens in the Wetland Mixedwood of Alberta

Description:

- a reticulated ribbed fen, the reticulated pattern is small and disoriented suggesting permafrost
- a small peat plateau with collapse scar features also present

Management Considerations:

- drainage alterations can have profound influences on fen wetlands
- maintenance of natural habitats will support the greatest diversity of native species

References:

- Nicholson (1991)

## REFERENCES

- Achuff, P. and G.H. La Roi. 1977. *Picea-Abies* forests in the highlands of northern Alberta. *Vegetatio* 33: 127-146.
- Achuff, P. J. Godfrey and C. Wallis. 1988. A systems planning natural history framework and evaluation system for Alberta Recreation and Parks. Edmonton.
- Achuff, P.L. and C. Wallis. 1992. Natural regions and subregions of Alberta, a revised classification for protected areas management. Alberta Tourism, Parks and Recreation and Alberta Forestry, Lands and Wildlife. Edmonton.
- Agriculture Canada. 1988. Soil landscapes of Canada: Alberta. Pub. # 5237/B. Agriculture Canada, Land Resource Research Centre, Ottawa.
- Alberta Culture. 1984. Palaeontological resource sensitivity zones - map. Prepared by Historical Resources Division, Alberta Culture, Edmonton.
- Alberta Ecological Survey. 1977. Cardinal River Divide ecological reserve - a nomination. Prepared for the Government of Alberta.
- Alberta Energy and Natural Resources, Fish and Wildlife Division. 1986. Bats of Alberta, "the real story...". Produced in cooperation with Alberta Agriculture. AGDEX 684-8, Edmonton.
- Alberta Environment. 1982. Slave River hydro feasibility study. Alberta Environment, Edmonton.
- Alberta Environmental Protection. 1995. Alberta's Montane Subregion, Special Places 2000 and the significance of the Whaleback Montane. Natural Resources Service, Alberta Environmental Protection, Edmonton.
- Alberta Environmental Protection. n.d. Berland Subregional Integrated Resource Plan (Draft Plan). Publication I/46R, Alberta Environmental Protection, Edmonton.
- Alberta Fish and Wildlife. 1989. Draft, wildlife input to the Bow Corridor IRP background paper. Alberta Forestry, Lands and Wildlife, Edmonton.
- Alberta Fish and Wildlife. 1994. Operating guidelines for industrial activity in caribou ranges in northwest Alberta and 1:500,000 scale map of key moose and caribou ranges. Unpublished report, Alberta Environmental Protection, Fish and Wildlife Services, Peace River Region. Peace River.
- Alberta Forestry, Lands and Wildlife. 1990. Coal Branch Subregional Integrated Resource Plan. Edmonton.
- Alberta Forestry, Lands and Wildlife. 1992. Bow Corridor local integrated resource plan. Publication I/301, Alberta Forestry, Lands and Wildlife, Edmonton.
- Alberta Government. 1984. A policy for resource management of the Eastern Slopes -- revised 1984. Government of Alberta. Edmonton. 20 pp.
- Alberta Natural and Protected Areas. 1986. A summary of Alberta's natural areas: reserved and established. Prepared by Natural and Protected Areas, Public Lands Division, Alberta Forestry, Lands and Wildlife, Edmonton.
- Alberta Parks Services. 1994. Natural regions, subregions and natural history themes of Alberta, a classification for protected areas management. Report originally prepared by P. Achuff, 1992, revised and updated July 1994, Parks Services, Alberta Environmental Protection, Edmonton.
- Alberta Parks Services. 1995. Natural history overview and theme evaluation, Canadian Shield (Athabasca Plain and Kazan Upland). Parks Services, Alberta Environmental Protection, Edmonton.
- Alberta Recreation and Parks. 1980. An outdoor recreation plan for the northeast Alberta region. Alberta Recreation and Parks, Edmonton.
- Alberta Wilderness Association. 1976. The western Swan Hills-Alberta's forgotten wilderness. Alberta Wilderness Association and National and Provincial Parks Association of Canada, Edmonton chapter. 43 pp. + maps.
- Alberta Wilderness Association. 1985. Wilderness in Alberta: the need is now. Alberta Wilderness Association, Calgary.
- Alberta Wilderness Association. 1990. Protected Areas Map.
- Alden, W. 1932. Physiography and glacial geology of eastern Montana and adjacent areas. United States Geological Survey Professional Paper 174.

- Allan, J. and J. Sanderson. 1945. Geology of Red Deer and Rosebud sheets, Alberta. Alberta Research Council Report 13.
- Allen, D.C. 1992. Biological diversity-is variety the spice of life? Pages 60-64 in: Blouin, G. and R. Comeau (eds). Forestry on the Hill: Biodiversity and Monocultures. Special Issue #3. Canadian Forestry Association. Ottawa, Ontario.
- Allen, J. 1987. Nesting surveys on selected Great Blue Heron colonies -- central region. Alberta Fish and Wildlife, Red Deer.
- Allen, L. 1982a. Natural Areas (Provincial Site of Interest) inspection report - Battle River #8. Alberta Natural Areas Program, Edmonton.
- Allen, L. 1982b. Natural Areas (Provincial Site of Interest) inspection report - Battle River #9. Alberta Natural Areas Program, Edmonton.
- Allen, L. and P. McIsaac. 1980a. Natural Areas inspection report - Oxville. Alberta Natural Areas Program, Edmonton.
- Andersen, P. 1981. Waterfowl surveys and habitat evaluation for waterfowl on Buffalo Lake. Alberta Fish and Wildlife, Red Deer.
- Andriashek, L. 1980. Surficial geology of Wapiti Map Sheet 83L. Alberta Research Council Open File 1983-023.
- Andriashek, L. 1983. Preliminary report of the surficial geology and Quaternary stratigraphy of Edmonton. Alberta Research Council Open File 1983-020. 17 pages.
- Argus, G. and K. Pryer. 1990. Rare vascular plants in Canada, our natural heritage. Botany Division, Canadian Museum of Nature, Ottawa.
- Ashton, S., B. Benn, O. Bornemisza, L. Ciarniello, A. Ehrlich, M. Eyre, G. Greenaway, D. Hallett, G. Hegman, S. Herrero, A. McCrae, K. Oldershaw, E. Stafford and R. Wolfe. 1994. The Wind Valley: a proposal for an Ecological Reserve. Environmental Science Program, Faculty of Environmental Design, University of Calgary, Calgary.
- Austin, M.P. and C.R. Margules. 1986. Assessing representativeness. Pages 45-67 in: Usher, M.B. (ed.) Wildlife Conservation Evaluation. Chapman and Hall Ltd. London.
- Barendregt, R. 1983. Correlation of Quaternary chronologies. In "Proceedings of a symposium on correlation of Quaternary chronologies, Toronto, May, 1983. Geo Books, Norwich, England.
- Barendregt, R., no date (a). The physical setting of the southern Alberta landscape. Unpublished manuscript, University of Lethbridge, Lethbridge.
- Barendregt, R., no date (b). The McNeil Erratics Train. Unpublished manuscript.
- Barnes, R.G. 1977. Hydrogeology of the Mount Robson-Wapiti Area, Alberta. Report 76-5. Alberta Research Council. Edmonton.
- Barnes, R.G. 1978. Hydrogeology of the Brazeau-Canoe River Area, Alberta. Report 77-5. Alberta Research Council. Edmonton.
- Battle River Regional Planning Commission. 1966. Pigeon Lake: planning a recreational resource. Battle River Regional Planning Commission, Wetaskiwin.
- Battle River Regional Planning Commission. 1984. Pigeon Lake Management Plan: discussion draft. Battle River Regional Planning Commission, Wetaskiwin.
- Battle River Regional Planning Commission. 1985. Pigeon Lake Management Plan. Battle River Regional Planning Commission, Wetaskiwin.
- Bayrock, L. 1958a. Glacial geology, Alliance-Brownfield district, Alberta. Alberta Research Council Earth Sciences Report 57-2.
- Bayrock, L. 1958b. Glacial geology, Galahad-Hardisty district, Alberta. Alberta Research Council Earth Sciences Report 57-3.
- Bayrock, L. 1967. Surficial geology of the Wainwright area (east half), Alberta. Alberta Research Council Earth Sciences Report 67- 4.
- Bayrock, L. 1971. Surficial geology of the Bitumount area, Alberta. Alberta Research Council Surficial Geology Maps.
- Bayrock, L. 1972a. Surficial geology of the Edmonton mapsheet (83H). Alberta Research Council, Edmonton.
- Bayrock, L. 1972b. Surficial geology of the Fort Chipewyan area, Alberta. Alberta Research Council Surficial Geology Maps.

- Bayrock, L. 1972c. Surficial Geology of the Lake Claire map-area, Alberta. Alberta Research Council Surficial Geology Maps.
- Bayrock, L. 1972d. Surficial geology of the Peace Point and Fitzgerald map-areas, Alberta. Alberta Research Council Surficial Geology Maps.
- Bayrock, L. 1973. Surficial geology of the Edmonton map-area Alberta. Alberta Research Council Earth Sciences Report 73-2.
- Bayrock, L. 1974. Surficial geology, Waterways, Alberta. Alberta Research Council Surficial Geology Maps.
- Bayrock, L. and G. Hughes. 1962. Surficial geology of the Edmonton district, Alberta. Alberta Research Council Earth Sciences Report 62-6.
- Bayrock, L. and J. Jones. 1963. Surficial geology of the Vauxhall district, Alberta. Alberta Research Council Earth Sciences Report 63-2.
- Bayrock, L. and J. Root. 1972. Geology of the Peace-Athabasca River Delta region, Alberta. Alberta Research Council Contribution Series 761, *in* hydrologic investigations, technical appendices 1, 1973, Section N, 60 pages.
- Bayrock, L. and T. Reimchen. 1980. Surficial geology of the Alberta Foothills and Rocky Mountains. Alberta Research Council Surficial Geology Maps.
- Beak Associates Consulting Ltd. 1986. Lac des Arcs fish and waterfowl study. Improvement District #8, Alberta Municipal Affairs, Canmore.
- Beaty, C. 1975. The landscapes of southern Alberta. University of Lethbridge, Lethbridge.
- Beechey, T.J. 1989. Guidelines for the selection of protected ecological areas. Occasional Paper No. 5 Canadian Council on Ecological Areas. Ottawa. 14 pp.
- Belicek, J. 1976. Coccinellidae of western Canada and Alaska. M.Sc. thesis. University of Alberta, Edmonton. 408 pp.
- Bentz, J. and A. Saxena. 1993. Significant ecological features inventory of the Lesser Slave Lake integrated resource planning area. Prepared for Resource Information Division, Alberta Environmental Protection by Geowest Environmental Consultants Ltd. 138 pp.
- Bentz, J. and A. Saxena. 1994. Significant ecological features inventory of the Whitecourt-Swan Hills Integrated Resource Planning Area. Prepared by Geowest Environmental Consultants Ltd. for Resource Information Division, Alberta Environmental Protection, Edmonton.
- Bentz, J. and E. Karpuk. 1990. Biophysical inventory and land use evaluations of the Upper Red Deer River corridor. Alberta Forestry, Lands and Wildlife, Land Information Services Division. 50 pp.
- Bentz, J., A. Saxena and T. Normand. 1995. Environmentally significant areas inventory, Foothills Natural Region, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Land Information Division, Alberta Environmental Protection, Edmonton.
- Bentz, J., A. Saxena and R. Schultz. 1994. Biophysical Inventory of Shoreland Areas - Burnstick Lake, Alberta. Prepared for Alberta Environmental Protection by Geowest Environmental Consultants Ltd.
- Bentz, J., D. Brierley, W. Hay, S. Nelson et al. 1988. Integrated resource inventory of the Coal Branch Study Area: Physical Land Classification. Alberta Energy and Natural Resources, Edmonton.
- Bentz, J., D. Brierley, W. Hay, S. Nelson, S. Robertson, and R. Wehrhahn. 1986. Integrated resource inventory of the Coal Branch study area. Vol. 1-Ecological Land Classification and Vol. 2-Physical Land Classification. Alberta Forestry, Lands and Wildlife, Resource Evaluation and Planning Division. Edmonton.
- Bentz, J., O'Leary and A. Saxena. 1993. Ecological land classification of the Whitecourt-Swan Hills integrated resource planning area. Prepared for Resource Information Division, Alberta Environmental Protection by Geowest Environmental Protection by Geowest Environmental Consultants Ltd. 138 pp.
- Bentz, J., V. Chisholm, and A. Saxena. 1996. Environmentally significant areas inventory of the Boreal Dry Mixedwood Subregion of Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- Berg, T. and R. McPherson. 1972. Surficial geology of the Medicine Hat area, Alberta. Alberta Research Council Surficial Geology Maps.
- Biggs, W., S. Leigh-Spencer and D. Smith. 1973. An ecological survey Crimson Lake Provincial Park. Alberta Parks Planning, Edmonton.

- Bishoff, K. and R. Fyfe. 1975. Surveys of rare, potentially endangered and sensitive birds in the oil sands and adjacent areas of northwestern Alberta. Alberta Oil Sands Environmental Research Program, Edmonton.
- Boag, T.D. 1993. A general fish and riverine habitat inventory, Peace and Slave Rivers, April to June 1992. Northern River Basins Study, Northern River Basins Study Project Report No. 9. Edmonton.
- Borneuf, D. 1976. Hydrogeology of the Foremost Area, Alberta. Report 74-4, Alberta Research Council, Edmonton.
- Borneuf, D. 1983. Springs of Alberta. Earth Sciences Report 82-3, Alberta Research Council, Edmonton.
- Boyacioglu, E. 1974. Wolf Lake biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Boyacioglu, E. 1975. Fort Assiniboine biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Boyacioglu, E. 1977. Sturgeon Lake biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Boyd, M. 1977. Analysis of fur production records by individual fur-bearing species for registered trapping areas in Alberta, 1970-1975. Alberta Recreation, Parks, and Wildlife, Fish and Wildlife Division. 72 pp.
- Boydell, A., L. Bayrock and T. Reimchen. 1974. Surficial geology of the Rocky Mountain House area, Alberta. Alberta Research Council Surficial Geology Maps.
- Bradley, C. 1978. Precambrian Shield study. Part I: Information survey and bibliography. Resource Assessment and Management Section, Alberta Parks Division, Edmonton.
- Bradley, C. 1988. Modifications by dams of river regimes in North America. Paper presented to Joint Conference on Water Management, November 21-23, 1988, Lethbridge. Canadian Water Resources Association and Alberta Irrigation Projects Association.
- Bradley, C. and D. Smith. 1986. Plains cottonwood recruitment and survival on a prairie meandering river floodplain, Milk River, southern Alberta and northern Montana. Canadian Journal of Botany 64: 1433-1442.
- Bradley, C. and M. Fairbairns. 1984. Vegetation, flora and special features of the candidate Goose Mountain ecological reserve. Prepared for the Natural Areas Program, Public Lands Division, Alberta Energy and Natural Resources, Edmonton.
- Bradley, L. and C. Bradley. 1977. Aspen groveland resource assessment: Neutral Hills area. Alberta Recreation, Parks and Wildlife; Resource Assessment and Management Section. Edmonton. 63 pp.
- Braidwood, B.R. 1987. A proposed Classification, evaluation, and prioritization framework for the conservation of special natural features of interest in Alberta, Canada. M.Sc. Thesis. University of Alberta. Edmonton.
- Brechtel, S. 1981. The White Pelican, Double-crested Cormorant and Great Blue Heron in Alberta, 1980. Alberta Fish and Wildlife Report 80-005, Edmonton.
- Breitung, A. 1954. A botanical survey of the Cypress Hills. Canadian Field-Naturalist 68: 55-91.
- Brown, W. 1988. North Saskatchewan River basin wetland and riparian habitat overview. Prepared by Terrestrial and Aquatic Environmental Managers Ltd. for Alberta Environment, Planning Division, Edmonton.
- Brundtland, G.M. (ed.) 1987. Our Common Future. World Commission on Environment and Development. Oxford University Press. Toronto, Ontario. 116 pp.
- Brunton, D. 1979. Taxonomy, distribution and ecology of the cliff-brake ferns (*Pellaea*: Polypodiaceae) in Alberta. Canadian Field-Naturalist 93(3): 288-295.
- Brusnyk, L., D. Westworth, K. Egan, A. McCann, L. Knapik and C. Schreiner. 1991. Environmentally sensitive areas study: County of Leduc. Prepared by Westworth and Associates for the Edmonton Metropolitan Regional Planning Commission, Edmonton.
- Butler, J. 1983. Challenges and changing perspectives in the management of fish and wildlife resources. Agriculture and Forestry Bulletin 6 (3): 10-13.
- Cairns, J. 1983. Are single species toxicity tests alone adequate for estimating environmental hazard? Hydrobiologia 100: 47-57.

- Cameron, T. 1974. Biophysical analysis and evaluation of capability -- Suffield Block. Land Use Assignment Committee, Alberta Lands and Forests, Edmonton.
- Campbell, T. 1981. Writing-on-Stone Provincial Park biophysical resource overview and analysis. Alberta Recreation and Parks, Edmonton.
- Canadian Council on Ecological Areas. 1992. Framework for developing a nation-wide system of ecological areas, Part 1 - a strategy. Canadian Council on Ecological Areas, Ottawa. 10 pp.
- Canadian Environmental Advisory Council. 1992. A protected areas vision for Canada. Canadian Environmental Advisory Council, Ottawa. 87 pp.
- Canadian Wildlife Service. 1972. Kangaroo rats and rattlesnakes. Canadian Wildlife Service, Ottawa.
- Champion Forest Products Ltd. (n.d.). Integrated forestry-wildlife-fish resource management approach for the Champion Forest Products (Alberta) Ltd. Forest Management Area, Hinton.
- Christiansen, E. 1977. Glacial spillways in the prairies. Parks Canada Contract 77-2. Indian and Northern Affairs, Ottawa.
- Clark, J. 1982. An update of management strategies of colonial nesters in the southern region (White Pelican, Double-crested Cormorant and Great Blue Heron). Alberta Fish and Wildlife, Lethbridge.
- Clark, J. 1984. Sharp-tailed Grouse dancing ground investigations (southern region, 1984). Alberta Fish and Wildlife, Lethbridge.
- Clayton, T. and G. Ash. 1980. A fisheries overview study of the Milk River basin. Prepared for Alberta Environment by R.L. and L. Environmental Services, Edmonton.
- Clifford, H. and G. Bergstrom. 1976. The blind aquatic isopod *Salmasellus* from a cave spring in the Rocky Mountains' eastern slopes with comments on a Wisconsin refugium. Canadian Journal of Zoology 54: 2028-2032.
- Colinvaux, P. 1986. Ecology. John Wiley and Sons. New York, NY.
- Collins, G. and A. Swan. 1955. Glacial geology, St. Ann area, Alberta. Alberta Research Council Report 67.
- COSEWIC. 1996. 1996 Canadian endangered species and other wildlife at risk. Committee on the Status of Endangered Wildlife in Canada, Ottawa.
- Coté, R. 1989. Introductory remarks. Proceedings of a workshop on valuing special places and species. Dalhousie University, Halifax.
- Cottonwood Consultants. 1978. Coal Valley wildlife monitoring program-1978 study. Luscar Ltd., Edmonton.
- Cottonwood Consultants. 1983. A biophysical systems overview for ecological reserves planning in Alberta. Alberta Recreation and Parks, Edmonton.
- Cottonwood Consultants. 1986a. An overview of reptiles and amphibians in Alberta's Grassland and Parkland Natural Regions. World Wildlife Fund Canada, Toronto.
- Cottonwood Consultants. 1986b. The proposed Rumsey ecological reserve -- a biophysical overview. Alberta Recreation and Parks, Edmonton.
- Cottonwood Consultants. 1987a. The proposed Middle Sand Hills ecological reserve -- a biophysical overview. Alberta Recreation and Parks, Edmonton.
- Cottonwood Consultants. 1987b. Alberta snake hibernacula survey. World Wildlife Fund Canada, Toronto.
- Cottonwood Consultants. 1987b. Environmentally significant areas in the Oldman River Region: MD of Cardston. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1987c. Environmentally significant areas in the Oldman River Region: County of Lethbridge. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1987d. Environmentally significant areas in the Oldman River Region: MD of Pincher Creek. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1987e. Environmentally significant areas in the Oldman River Region: County of Warner. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.

- Cottonwood Consultants. 1988a. Environmentally significant areas in the Oldman River Region: MD of Taber. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1988b. Environmentally significant areas in the Oldman River Region: County of Vulcan. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1989. Environmentally significant areas in the Oldman River Region: MD of Willow Creek. Prepared by Cottonwood Consultants Ltd. for the Oldman River Regional Planning Commission, Lethbridge.
- Cottonwood Consultants. 1990. Bow/Canmore corridor environmental issues analysis. Alberta Tourism, Edmonton.
- Cottonwood Consultants. 1991a. Environmentally significant areas in the Palliser Region: MD of Acadia. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- Cottonwood Consultants. 1991b. Environmentally significant areas of the MD of Cypress. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- Cottonwood Consultants. 1991c. Environmentally significant areas of the County of Forty Mile. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- Cottonwood Consultants. 1991d. Environmentally significant areas in the Palliser Region: MD of Kneehill. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- Cottonwood Consultants. 1991e. Environmentally significant areas of the Lower Red Deer River. Prepared by Cottonwood Consultants Ltd. for Alberta Forestry, Lands and Wildlife, Edmonton.
- Cottonwood Consultants. 1991f. Environmentally significant areas of the County of Newell. Prepared by Cottonwood Consultants Ltd. for the Southeast Regional Planning Commission, Medicine Hat.
- Cottonwood Consultants. 1991g. Environmentally significant areas in the Palliser Region: MD of Starland. Prepared by Cottonwood Consultants Ltd. for the Palliser Regional Planning Commission, Hanna.
- Cottonwood Consultants. 1994. Environmentally significant areas in the Town of Canmore. Prepared by Cottonwood Consultants Ltd. for the Town of Canmore, Canmore.
- Cottonwood Consultants Ltd. 1995. Environmentally significant areas of the Lloydminster Area, Alberta and Saskatchewan. Prepared by Cottonwood Consultants Ltd. for Nature Conservancy of Canada and Husky Oil Operations, Calgary.
- Coupland, R. 1973. A theme study of natural grassland in western Canada. National and Historic Parks Branch Contracts 72-5 and 72- 91. Indian and Northern Affairs, Ottawa.
- Crack, S. and B. Danielson. 1974a. An ecological survey of Beauvais Lake Provincial Park. Alberta Parks Planning, Edmonton.
- Crack, S. and B. Danielson. 1974b. An ecological survey of Police Outpost Provincial Park. Alberta Parks Planning, Edmonton.
- Daborn, G. 1976. Occurrence of an arctic fairy shrimp *Polyartemiella hazeni* (Murdoch) 1884 (Crustacea: Anostraca) in Alberta and Yukon Territory. Canadian Journal of Zoology 54: 2026-2028.
- David, P. 1977. Sand dune occurrences of Canada. Indian Affairs, National Parks Branch Report #74-230, Ottawa.
- Dawson, G. and R. McConnell. 1895. Glacial deposits of southwestern Alberta in the vicinity of the Rocky Mountains. Bulletin of the Geological Society of America 7: 31-66.
- de Vries, B. 1966. *Iris missouriensis* in southwestern Alberta and in central and northern British Columbia. Canadian Field Naturalist 80: 158-160.
- Doberstein, A. 1978. An evaluation of migratory bird resources in the Battle River Basin, Canadian Wildlife Service, Edmonton.
- Douglas, R. 1950. Callum Creek, Langford Creek, and Gap map areas, Alberta. Geological Survey of Canada Memoir 402.
- Downing, D., D. O'Leary and R. Schultz. 1987. Integrated resource inventory - Smoky-Peace Point, 2 volumes. Alberta Forestry, Lands and Wildlife, Edmonton.

- Dumais, M. 1976. Vascular plant investigations in the region of Rocky Mountain House and Crimson Lake Provincial Park. *Edmonton Naturalist* 4(7): 165-173.
- Eagles, P. 1980. Criteria for the designation of environmentally sensitive areas. In: *Protection of Natural Areas in Ontario*. University of Toronto Press. Toronto, Ontario.
- Eagles, P. 1984. *The planning and management of environmentally sensitive areas*. Longman, London and New York.
- Ebel, R., D. Poll and B. Finkelman. 1973. *An ecological survey of Big Knife Provincial Park*. Alberta Parks, Edmonton.
- Edgar, L, G. Michalchuk, D. O'Leary and R. Schultz. 1987. *Ecological inventory and evaluation: Haig Lake study*. Alberta Energy and Natural Resources, Edmonton.
- Edmonds, E.J. and K.G. Smith. 1991. Mountain caribou calf production and survival, and calving and summer habitat use in west-central Alberta. *Wildlife Research Series No. 4*. Alberta Forestry, Lands and Wildlife; Fish and Wildlife Division. Edmonton. 17 pp.
- Edmonton Regional Planning Commission. 1974. *Regional lake perspective*. Edmonton Regional Planning Commission, Edmonton.
- Envirocon. n.d. *Dinosaur Provincial Park Resource Atlas*. Alberta Lands and Forests, Edmonton.
- Environmentally Significant Areas Subcommittee. 1993. *Preliminary inventory, Town of Canmore environmentally sensitive areas*. Environmental Advisory Review Committee, Town of Canmore.
- Fairbarns, M. 1979a. *Northeastern Alberta: a park resource assessment study, Part 1: Regional Overview*. Alberta Recreation and Parks. Edmonton.
- Fairbarns, M. 1979b. *Northeastern Alberta: a park resource assessment study, Part 2: Recreational and Preservation Recommendations*. Alberta Recreation and Parks. Edmonton.
- Fairbarns, M. 1990. *The salt meadows of northwestern Alberta: a reconnaissance biophysical inventory*. Alberta Forestry, Lands and Wildlife. Edmonton.
- Fehr, A. 1982. *The candidate Rumsey ecological reserve, a biophysical inventory*. Alberta Energy and Natural Resources, Public Lands Division, Edmonton.
- Fenton, M. and L. Andriashek. 1983. *Surficial geology Sand River, Alberta*. Alberta Research Council Map.
- Fenton, M., L. Andriashek and J. Root. 1979. *Surficial geology, Wabamun Lake, Alberta*. Alberta Research Council Surficial Geology Map.
- Ferguson, N. 1980. *Berland current regional plan study area physical land classification*. Alberta Forestry, Lands and Wildlife, Edmonton.
- Fish and Wildlife Division. 1989. *Wildlife management plan - Ministik Lake game bird sanctuary*. Prepared by Alberta Fish and Wildlife Division, St. Paul.
- Fox, R. 1980. *Picopsis pattersoni* n. gen. and sp., an unusual therian from the Upper Cretaceous of Alberta, and the classification of primitive tribosphenic mammals. *Canadian Journal of Earth Sciences* 17: 1489-1498.
- Fox, R. 1984. A primitive, "obtuse-angled" symmetrodont (Mammalia) from the Upper Cretaceous of Alberta, Canada. *Canadian Journal of Earth Sciences* 21: 1204-1207.
- Geist, V. 1992. *Commentary on the Three Sisters development and the Wind/Pigeon Valleys complex*. Presentation to the Natural Resources Conservation Board Hearing on Three Sisters Resort Development.
- Geowest Environmental Consultants. 1997 (in prep.). *Environmentally significant areas inventory of the Boreal Forest Natural Region of Alberta*. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- Godfrey, J. 1958. *Aerial photographic interpretation of Precambrian structures north of Lake Athabasca, Alberta*. Bulletin #1, Alberta Research Council, Edmonton.
- Godfrey, J. 1961. *Geology of the Andrew Lake, north district, Alberta*. Alberta Research Council Earth Sciences Report 58-3.
- Godfrey, J. 1963. *Geology of the Andrew Lake, south district, Alberta*. Alberta Research Council Earth Sciences Report 61-2.
- Godfrey, J. 1966. *Geology of the Bayonet, Ashton, Potts and Charles Lake districts, Alberta*. Alberta Research Council Earth Sciences Report 65-6.



- Godfrey, J. 1970. Geology of the Marguerite River district, Alberta. Alberta Research Council General Geology Maps.
- Godfrey, J. 1979. Geology of the Alexander-Wylie Lakes district, Alberta. Alberta Research Council Earth Sciences Report 78-1.
- Godfrey, J. 1980. Geology of the Fort Chipewyan district, Alberta. Alberta Research Council Report 78-3.
- Godfrey, J. 1984. Geology of the Ryan-Fletcher Lakes district, Alberta. Alberta Research Council Earth Sciences Report 84-2. Alberta Research Council, Edmonton.
- Godfrey, J. 1986. Geology of the Precambrian Shield in northeastern Alberta. Map EM180, Alberta Research Council, Edmonton.
- Godfrey, J. 1987. Geology of the Bocquene-Turtle Lakes district, Alberta. Alberta Research Council Earth Sciences Report 84-5. Alberta Research Council, Edmonton.
- Godfrey, J. and C. Langenberg. 1986. Geology of the Fitzgerald-Tulip Lake-Mercredi-Charles Lake district, Alberta. Alberta Research Council Earth Sciences Report 84-7. Alberta Research Council, Edmonton.
- Godfrey, J. and C. Langenberg. 1987. Geology of the Myers-Daly Lakes district, Alberta. Alberta Research Council Earth Sciences Report 84-6. Alberta Research Council, Edmonton.
- Godfrey, J. and E. Peikert. 1963. Geology of the St. Agnes Lake district, Alberta. Alberta Research Council Earth Sciences Report 62-1.
- Godfrey, J. and E. Peikert. 1964. Geology of the Colin Lake district, Alberta. Alberta Research Council Earth Sciences Report 62-2.
- Goossen, J.P. 1996 (in prep.). Atlas of Piping Plover Lakes in Alberta. Canadian Wildlife Service, Edmonton.
- Graham, L.L., K.R. Bodden and D.K. Berry. 1995. 1994 Alberta resident angling survey. Alberta Environmental Protection, Fisheries Management Division. Edmonton.
- Gravenor, C. 1956. Glacial geology of Castor district, Alberta. Alberta Research Council Earth Sciences Report 56-2.
- Gravenor, C. and L. Bayrock. 1955. Glacial geology of Coronation district. Research Council of Alberta Earth Sciences Report 55-1.
- Gravenor, C. and R. Ellwood. 1957. Glacial geology of Sedgewick district. Alberta Research Council Earth Sciences Report 57-1.
- Griffiths, D. 1982. Slave River hydroelectric project, environmental implications. Unpublished manuscript, Slave River Coalition, Fort Smith, NWT.
- Griffiths, D. 1987. A survey of wetland wildlife resources, Strathcona County, Alberta. Prepared for County of Strathcona, Sherwood Park.
- Griffiths, D. and G. Griffiths. 1987. Biophysical survey of the Coyote Lake district, Leduc County, Alberta. Alberta Forestry, Lands and Wildlife, Edmonton.
- Griffiths, D. and G. Griffiths. 1988. Greater Coyote Lake management area, significant features assessment. Alberta Forestry, Lands and Wildlife, Edmonton.
- Hage, C. 1945. Geology - Cowley. Geological Survey of Canada Map 816A.
- Harris, L.D. and R.F. Noss. 1985. Problems in categorizing the status of species: endangerment with the best intentions. In: Proceedings of the 16th Annual IUCN Technical Meeting. International Union for the Conservation of Nature and Natural Resources. Gland, Switzerland.
- Harrison, J. 1976. Evolution of a landscape: the Quaternary period in Waterton Lakes National Park. Geological Survey of Canada Miscellaneous Report 26.
- Hay, W. and D. O'Leary. 1988. Integrated resource inventory of the Wandering River study area. Alberta Forestry, Lands and Wildlife, Edmonton.
- Helliwell, D.R. 1975. The concept of waste and the conservation of nature. Environmental Conservation 2:271-273.
- Henderson, E. 1959. Surficial geology of Sturgeon Lake map-area, Alberta. Geological Survey of Canada Memoir 303.
- Herrero, S. 1992. The Wind Valley region: its importance to large mammalian carnivores and the predicted impacts of development. Prepared by BIOS Environmental Research and Planning Associates Ltd., Calgary for Canadian Parks and Wilderness Society, Alpine Club of Canada and

- Sierra Club of Alberta, Calgary. Presentation to the Natural Resources Conservation Board Hearing on Three Sisters Resort Development.
- Herrmann, K. 1993. Significant vegetation of Footner Lake Forest. Alberta Forestry, Lands and Wildlife. Edmonton.
- Hills, G.A. 1976. An integrated iterative holistic approach to ecosystem classification. In J. Thie and G. Ironsides (eds.), Ecological (biophysical) land classification in Canada, Proceedings of the 1st Meeting of the Canada Committee on Ecological (Biophysical) Land Classification, pp. 73-98.
- Hofman, D.E. 1991. The 1991 Piping Plover census in Alberta. Alberta Fish and Wildlife. Red Deer
- Höhn, E. 1972. Arctic Loon breeding in Alberta. Canadian Field-Naturalist 86: 372.
- Höhn, O. & P. Marklevitz. 1974. Noteworthy summer observations of birds in the Caribou Mountains, Alberta. Canadian Field-Naturalist 88: 77-78.
- Höhn, O. & R. Burns. 1975. A reconnaissance of the birds & mammals of the Caribou Mountains, Alberta. Blue Jay 33: 73-83.
- Höhn, O. & R. Burns. 1976. Further notes on birds & mammals of the Caribou Mountains, Alberta. Blue Jay 34: 56-58.
- Höhn, O. & R. Burns. 1976. Additional bird & mammal observations in the Caribou Mountains, Alberta. Blue Jay 34: 176-177.
- Höhn, O. & D. Weseloh. 1978. 1977 bird observations in the Caribou Mountains, Alberta. Blue Jay 36: 115.
- Horberg, L. 1952. Pleistocene drift sheets in the Lethbridge region, Alberta, Canada. Journal of Geology 60 (4): 303-330.
- Horberg, L. 1954. Rocky Mountain and continental Pleistocene deposits in the Waterton region, Alberta, Canada. Bulletin of the Geological Society of America 65: 1093-1150.
- Hummel, M. (ed.) 1989. Endangered Spaces: The Future of Canada's Wilderness. Key Porter Books. Toronto, Ontario.
- Infotech. 1989. Environmentally sensitive areas: County of Strathcona and MD of Sturgeon. Prepared by Infotech Services Land Evaluation Consultants for the Edmonton Metropolitan Regional Planning Commission, Edmonton.
- Irish, E. 1967a. Geology - Foremost. Geological Survey of Canada Map 22-1967.
- Irish, E. 1967b. Geology - Gleichen. Geological Survey of Canada Map 19-1967.
- Irish, E. 1967c. Geology - Medicine Hat. Geological Survey of Canada Map 21-1967.
- Irish, E. 1967d. Geology - Drumheller. Geological Survey of Canada Map 5-1967.
- Irish, E. 1967e. Geology - Lethbridge. Geological Survey of Canada Map 20-1967.
- Irish, E. 1967f. Geology - Oyen. Geological Survey of Canada Map 21-1966.
- Jaques, D. 1979. Biophysical classification, effects of grazing and biomass estimation using LANDSAT imagery on native fescue grasslands of southwestern Alberta. Kananaskis Center for Environmental Research, Calgary.
- Jennings, M.D. and J.P. Reganold. 1991. Hierarchy and subsidy-stress as a theoretical basis for managing environmentally sensitive areas. Landscape and Urban Planning 21: 31-45.
- Johnston, A. 1977. The Suffield Grazing Reserve. Agriculture Canada, Lethbridge.
- Johnston, S., R. Ellis and D. Westworth. 1996. Inventory of environmentally significant areas in the Boreal Dry Mixedwood Natural Subregion, Peace River Section: 1995-1996. Prepared by Westworth, Brusnyk and Associates, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- Jones, J. 1966. Geology and groundwater resources of the Peace River district, northwestern Alberta. Alberta Research Council Bulletin 16. 143 pages.
- Jones, M.V. and Associates. 1973. Environmental inventory of Entrance Provincial Park, Alberta. Prepared for Alberta Forestry. Edmonton.
- Jones, P. and R. Workum. 1978. Geological guide to the central Foothills and Rocky Mountains of Alberta. Canadian Society of Petroleum Geologists' International Conference, June, 1978. Canadian Society of Petroleum Geologists, Calgary.
- Karlstrom, E. 1985. Pre-Wisconsin paleosols on Mokowan Butte. In "CANQUA symposium on the paleoenvironmental reconstruction of the late Wisconsin deglaciation and the Holocene", August, 1985, Lethbridge. Canadian Quaternary Association, Lethbridge.

- Karr, J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. *Environmental Management* 5: 55-68.
- Kathol, C. and R. McPherson. 1975. Surficial geology of the Edmonton Area, Alberta. *Alberta Research Council Bulletin* 32.
- Kemp, G. 1983. Walsh Flats pronghorn winter range, options for protection and management. Fish and Wildlife Division, Lethbridge.
- Kemper, J. 1976. Evaluation of fish and wildlife resources -- the Cooking Lake study area: implications for waterfowl and migratory birds. In: *Cooking Lake area study Vol. 4, Ecology*. Alberta Environment, Planning Division, Edmonton.
- Kerr, D.S., E. Gasser and D.A. Young. 1988. Whitecourt newsprint mill environmental impact assessment-biophysical studies. Prepared by Environmental Management Associates for Alberta Newsprint Company.
- Kindle, E.M. 1928. The occurrence and correlation of a Devonian fauna from Peace River, Alberta. *Geological Survey, Bulletin No. 49*. Ottawa, Ontario.
- Kocaoglu, S. 1980. Brazeau-Pembina study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Kocaoglu, S. 1983. Rocky-North Saskatchewan study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Kocaoglu, S. and J. Bennett. 1983. Integrated resource inventory special Lakeland area. Alberta Forestry, Lands and Wildlife, Edmonton.
- Komex International Ltd. 1992. Cardinal River headwaters special features inventory and impact assessment. Prepared for Land Information Services Division, Alberta Forestry, Lands and Wildlife.
- Kondla, N. and H. Crawford. 1971. An ecological survey of Dinosaur Provincial Park. Alberta Parks, Edmonton.
- Kondla, N. and W. Smith. 1972. An ecological survey of Dry Island Buffalo Jump Provincial Park. Alberta Parks Planning, Edmonton.
- Kristensen, J. 1981. Great blue heron (*Ardea herodias*) colony in the Peace-Athabasca Delta, Alberta. *Canadian Field-Naturalist* 95: 95-96.
- Kuijt, J. 1982. Flora of Waterton Lakes National Park. University of Alberta Press, Edmonton.
- Kuijt, J. and G. Michener. 1985. First record of the bitterroot, *Lewisia rediviva* in Alberta. *Canadian Field-Naturalist* 99 (2): 264-266.
- Kuijt, J. and J. Trofymow. 1975. Range extensions of two rare Alberta shrubs. *Blue Jay* 33 (2): 96-98.
- Kumar, P. 1975. Snipe Lake biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Kupsch, W. O. 1962. Ice-thrust ridges in Western Canada. *Journal of Geology* 70(5): 582-594.
- Lacy, C. 1971. General summary of Ducks Unlimited records on waterfowl and wetlands of the Cooking Lake Moraine. Appendix E in *An economic analysis of the Cooking-Hastings Lake*. Prepared by EPEC Consulting Ltd. for Alberta Environment, Edmonton.
- Laframboise, M. 1986. Raptor population and nesting site survey for Dinosaur Provincial Park. Alberta Recreation and Parks.
- Lamoureux, R. G. Chow and B. Reeves. 1983. Environmentally significant areas of the Calgary region. Prepared by Lamoureux and Associates, Calgary for Calgary Regional Planning Commission, Calgary.
- Land Information Services Division. 1991. Integrated resource inventory and evaluation of Berland Study Area. Edmonton.
- Landals, M. 1978. Lake Athabasca sand dunes. Unpublished manuscript.
- Landres, P.B., J. Verner, and J.W. Thomas. 1988. Ecological uses of vertebrate indicator species: a critique. *Conservation Biology* 2: 316-328.
- Langenberg, C. and J. Godfrey. 1977. A computer based structural study of the Tulip Lake dome in the Precambrian Shield of northeastern Alberta; Program Abstracts, Geological Association of Canada Annual Meeting, Vancouver.
- Langston, W. 1975. The ceratopsian dinosaurs and associated lower vertebrates from the St. Mary River Formation at Scabby Butte, southern Alberta. *Canadian Journal of Earth Sciences* 12: 1576- 1608.

- Levinson, A. and E. Karpuk. 1980. Livingstone-Porcupine study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Loewen, V. and J. Gould. 1979b. IBP Checksheet - Battle River (148). Alberta Natural Areas Program, Edmonton.
- Longmore, L. and C. Stenton. 1981. The fish and fisheries of the South Saskatchewan River basin. Planning Division, Alberta Environment, Edmonton.
- Longmore, L.A., K. Brickley, and C.E. Stenton. 1982. The sport fishery in Alberta: Facts and figures for 1975-1980. Fisheries Management Report No. 28. Alberta Energy and Natural Resources. Fish and Wildlife Division. Edmonton.
- Luck, S. 1982. Vermilion Provincial Park resource inventory and assessment. Resource Planning Section, Alberta Parks, Edmonton.
- Lynch-Stewart, P. 1983. Land use change on wetlands in southern Canada: review and bibliography. Working Paper No. 26, Lands Directorate, Environment Canada, Ottawa.
- MacDonald, C. 1987. Kimiwan Lake bird survey. Edmonton.
- MacDonald, D. 1982. Marl resources of Alberta. Earth Sciences Report 82-1, Alberta Research Council, Edmonton.
- MacGregor, C. 1984. Kananaskis Country ecological land classification and evaluation. Alberta Forestry, Lands and Wildlife, Edmonton.
- Mackey, B.G., H.A. Nix, M.F. Hutchinson, J.P. MacMahon, and P.M. Fleming. 1988. Assessing representativeness of places for conservation reservation and heritage listing. Environmental Management 12(4): 501-514.
- MacPherson, R. 1972. Surficial geology - Medicine Hat. Map, Alberta Research Council, Edmonton.
- McAllister, D. 1970. Rare or endangered Canadian fishes. Canadian Field-Naturalist 84: 5-8.
- McCulley, K. 1983a. A review of petroleum development in critical wildlife habitat near Manyberries, Alberta. Fish and Wildlife Division, Alberta Energy and Natural Resources, Lethbridge.
- McCulley, K. 1983b. An inventory of islands in the Oldman River from Fort Macleod to the Grand Forks. Alberta Fish and Wildlife, Lethbridge.
- McPherson, H. 1968. Historical development of the lower Red Deer Valley, Alberta. Canadian Geographer 12: 227-240.
- Mitchell, P. and E. Prepas (eds.). 1990. Atlas of Alberta. University of Alberta Press. Edmonton.
- Mondor, C. 1990. The concept of representativeness in the design of protected area systems. Canadian Council on Ecological Areas Occasional Paper #10: 21-46. Canadian Council on Ecological Areas. Ottawa.
- Morrison, R.I.G., R.W. Butler, G.W. Beyersbergen, H.L. Dickson, A. Bourget, P.W. Hicklin, and J.P. Goossen, R.K. Ross, and C.L. Gratto-Trevor. 1995. Potential Western Hemisphere Shorebird Reserve Network sites for migrant shorebirds in Canada, Second Edition, 1995. Tech. Rep. Ser. No. 227. Canadian Wildlife Service. Ottawa, ON. 98 pp.
- Mortimer, Patricia R. 1978. The alpine vascular flora and vegetation of Prospect Mountain, Front Range, Rocky Mountains, Alberta. M.Sc. thesis, University of Alberta, Edmonton.
- Moss, E. 1983. Flora of Alberta, second edition, revised by J. Packer. University of Toronto Press, Toronto.
- Mowat, C. and R. Maerz. 1988. Raptor survey of Dinosaur Provincial Park, Alberta. Unpublished report, Alberta Recreation and Parks, Edmonton.
- Mulira, J. 1986. Eolian landforms of Alberta. Alberta Forestry, Lands and Wildlife Publication T/129, Edmonton.
- Munro, J. 1929. Glimpses of little-known western lakes and their bird life. Canadian Field-Naturalist 43: 181-187.
- Nagy, J.A., A.W.L. Hawley, M.W. Barrett, and J. Nolan. 1989. Population characteristics of Grizzly and Black Bears in west central Alberta. Publication AECV88-R1, Wildlife Biology Group, Alberta Environmental Centre, Vegreville. 35 pp.
- National Wetlands Policy Forum. 1988. Protecting America's wetlands: an action agenda. The Conservation Foundation. Washington, DC. 69 pp.

- Natural and Protected Areas, unpublished. File information for the Natural and Protected Areas program, Alberta Parks Service (formerly Public Lands Division, Alberta Forestry, Lands and Wildlife), Edmonton.
- Natural Areas Program. 1983. Flora of the Cardinal Divide proposed ecological reserve. Edmonton.
- Natural Resources Conservation Board. 1992. Decision report - Application #9103 - Three Sisters Golf Resorts Inc. Application to construct a recreational and tourism project in the Town of Canmore, Alberta. Natural Resources Conservation Board, Calgary.
- Nelson, J.S. and M.J. Paetz. 1992. The Fishes of Alberta, 2nd ed. The University of Alberta Press and The University of Alberta Press. Edmonton.
- Nelson, S. 1983. Ecological land classification and evaluation: Sturgeon Lake-Puskwaskau. Alberta Forestry Lands and Wildlife, Edmonton.
- Nelson, S., D. Downing, and B. Braidwood. 1989. Site selection criteria and evaluation for natural areas. Alberta Forestry, Lands and Wildlife. Land Information Services Division. Resource Information Branch. Edmonton. 46 pp.
- Nelson, S. and G. Michalchuk. 1988. Ecological land classification and evaluation: Yellowhead North. Alberta Forestry Lands and Wildlife, Edmonton.
- Nelson, S., D. O'Leary and D. Downing. 1989. Holmes Crossing proposed Natural Area, biophysical inventory. Resource Information Branch, Alberta Forestry, Lands and Wildlife, Edmonton.
- Nicholson, B. 1991. A selection of 54 peatlands chosen as a first approach to the preservation of important wetlands and peatlands in the province of Alberta. Prepared for Natural Areas Program, Alberta Energy and Natural Resources, Edmonton.
- Nietfeld, M., J. Wilk, K. Woolnough, and B. Hoskin. 1985. Wildlife habitat requirement summaries for selected wildlife species in Alberta. Fish and Wildlife Division, Alberta Energy and Natural Resources.
- Nordstrom, W. 1987. Significant feature evaluation. Alberta Recreation and Parks. Edmonton.
- Nystrom, Lee, Kobayashi and Associates. 1988. Environmental impact assessment of the proposed Whitecourt newsprint Mill. Prepared for Alberta Newsprint Company Ltd.
- Office of Technology Assessment. 1987. Technologies to maintain biological diversity. Office of Technology Assessment, U.S. Congress, Washington, D.C. 334 pp.
- O'Leary, D. 1988. Biophysical inventory of the Marshybank Ecological Reserve, Alberta. Alberta Forestry, Lands and Wildlife; Land Information Services Division. Edmonton. 38 pp.
- O'Leary, D. and D. Downing. 1986. Integrated resource inventory - Grande Prairie County west, 2 volumes. Alberta Forestry, Lands and Wildlife, Edmonton.
- O'Leary, D., D. Downing, D. Schindler and L. Boyd. 1986. Integrated resource inventory - Kimiwan-Winagami, 2 volumes. Alberta Forestry Lands and Wildlife, Edmonton.
- O'Leary, D.. 1984. Ecological land classification and evaluation, Cadotte-Little Buffalo Lake. Alberta Forestry Lands and Wildlife, Edmonton.
- Ojamaa, P. 1975. Pollhaven biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Ojamaa, P. 1976. Little Smoky biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Ojamaa, P. 1978. Cold Lake biophysical analysis and evaluation of capability. Alberta Forestry, Lands and Wildlife, Edmonton.
- Ojamaa, P. and Associates. 1986. Ram-Clearwater study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Ollerenshaw, N. and L. Hills (eds.). 1978. Field guide to rock formations of southern Alberta (stratigraphic sections guidebook). Canadian Society of Petroleum Geologists, Calgary.
- Owens, R. and T. Myres. 1972. Effects of agriculture upon populations of native passerine birds of an Alberta fescue grassland. Canadian Journal of Zoology 51: 697-713.
- Packer, J.G. and C.E. Bradley. 1984. A checklist of the rare vascular plants in Alberta. Provincial Museum of Alberta, Natural History Occasional Paper No. 54.
- Packer, John G. and Dale H. Vitt. 1974. Mountain Park: a plant refugium in the Canadian Rocky Mountains. Canadian Journal of Botany 52: 1391-1409.
- Paetz, M. and J. Nelson. 1970. The fishes of Alberta. Queen's Printer, Edmonton.

- Park, J. and K. Bennett. 1983. Integrated resource inventory - Wapiti Sand Dunes Study Area. Alberta Forestry Lands and Wildlife, Edmonton.
- Patriquin, D. and R. Ellis. 1992. Environmentally significant areas study: Municipal District of Brazeau, White Zone. Prepared by Westworth and Associates, Edmonton for Yellowhead Regional Planning Commission.
- Patriquin, D.L. 1993. An overview of priority vertebrate species and habitats in relation to NAWMP program delivery in Alberta. North American Waterfowl Management Plan. Edmonton.
- Pedocan Land Evaluation Ltd. 1992. Biophysical Inventory and land use evaluations of the Obed Lakes shoreland area. Prepared for Alberta Forestry, Lands and Wildlife, Land Information Services Division, Resource Information Branch.
- Penner, D.F. and P.S. Jalkotzy. 1982. Ecological studies of the Pinto Creek Mountain Goat population: interim report on phase 1 research, 1981. Prepared by McCourt Management Ltd for Environmental Planning, Production Dept., Gulf Canada Resources Inc.
- Peterson, E.B. and N.M. Peterson. 1991. A first approximation of principles and criteria to make Canada's protected area systems representative of the nation's ecological diversity. Canadian Environmental Advisory Council. Ottawa.
- Pigeon Lake Study Group. 1975. The Pigeon Lake study. Edmonton Metropolitan Regional Planning Commission, Edmonton.
- Pike, E. 1978. Origin of tundra butterflies in Alberta, Canada and their significance in the study of refugia of Wisconsin age. M.Sc. thesis, University of Alberta, 137 pp.
- Pinel, H. and N. Kondla. 1985. Skippers and butterflies of the Police Coulee area, Alberta. Blue Jay 43 (4): 213-223.
- Poston B., D.M. Ealey, P.S. Taylor and G.B. Keating. 1990. Priority migratory bird habitats of Canada's prairie provinces. Canadian Wildlife Service, Environment Canada. Edmonton.
- Power, T. 1985. Economic valuation of the natural environment: profaning the sacred? Pages 37-44 in "Economy and ecology - the economics of environmental protection", a symposium sponsored by the Canadian Society of Professional Biologists, February, 1985, Edmonton. Canadian Society of Professional Biologists, Edmonton.
- Price, R. 1970. Geology, Canmore (two sheets, west and east halves). Geological Survey of Canada Maps 1265A and 1266A.
- Probst, J.R. and T.R. Crow. 1991. Integrating biological diversity and forest management. Journal of Forestry (Feb): 12-17.
- Quinn, M.S. 1989. The importance of conserving biological diversity through a system of protected areas in northern Alberta. World Wildlife Fund. Edmonton.
- Raup, H. and G. Argus. 1982. The Lake Athabasca sand dunes of northern Saskatchewan and Alberta, Canada. 1. The land and vegetation. National Museums of Canada, National Museum of Natural Sciences Publications in Botany No. 12, Ottawa.
- Rayner, M. 1984. Ecological land classification and evaluation, Ram-Clearwater. Alberta Forestry Lands and Wildlife, Edmonton.
- Rayner, M. and K. Dutchak. 1984. Ecological land classification and evaluation, Chungo-Cline-Nordeg. Alberta Forestry Lands and Wildlife, Edmonton.
- Reeder, S.W. and W. Odynsky. 1965. Reconnaissance soil survey of the Cherry Point and Hines Creek area. Research Council of Alberta, Report No. 85. Edmonton.
- Reid, W.V. and K.R. Miller. 1989. Keeping options alive: the scientific basis for conserving biodiversity. World Resources Institute. Gland, Switzerland. 128 pp.
- Renewable Resources Consulting Services. no date. Northeast Alberta Regional Plan Project, Fishery Resources, Volume 1, Regional Assessment and Volume 2, Technical Appendices. Prepared for Ekistic Design Consultants Ltd., Edmonton.
- Rhude, L. 1977. Characteristics of some Canadian Shield Lakes in Alberta. Fisheries Survey Report No. 22, Alberta Fish and Wildlife Edmonton.
- Roed, M. 1970. Surficial geology, Edson, Alberta. Alberta Research Council Surficial Geology Maps.
- Russell, A.P. and A.M. Bauer. 1993. The Amphibians and Reptiles of Alberta. University of Alberta Press. Edmonton. 264 pp.

- Russell, L. and R. Landes. 1940. Geology of the southern Alberta Plains. Geological Survey of Canada Memoir 221.
- Rutter, N. 1972. Geomorphology and multiple glaciation in the area of Banff, Alberta. Geological Survey of Canada, Bulletin 206.
- Rutter, N. and E. Christiansen. 1972. Quaternary geology and geomorphology between Winnipeg and the Rocky Mountains. Excursion C-22, XXIV International Geologic Congress, Montreal.
- Salt, J.R. 1985a. Checklist of the mammals of the Cardinal Divide Region. Alberta Naturalist Vol. 15 (3).
- Salt, J.R. 1985b. Checklist of the birds of the Cardinal Divide Region. Alberta Naturalist Vol. 15 (4).
- Salt, J.R. and Associates, Consultants. 1990. Report on wapiti/ungulate survey - Wind Valley/Canmore Flats region. Unpublished report for Sweetgrass Consultants, Calgary.
- Salwasser, H. 1990. Conserving biological diversity: a perspective on scope and approaches. Forest Ecology and Management. 35: 79-90.
- Sauchyn, D. 1979. Cold Lake study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Saxena, A., V. Chisholm and J. Bentz. 1996. Environmentally significant areas inventory, Grassland and Parkland Natural Regions, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- Saxena, A., V. Chisholm and J. Bentz. 1996. Environmentally significant areas inventory, Grassland and Parkland Natural Regions, Alberta. Prepared by Geowest Environmental Consultants, Edmonton for Resource Data Division, Alberta Environmental Protection, Edmonton.
- Scheelar, M. & W. Odynsky. 1968. Soil survey of Grimshaw & Notikewin area. Alberta Soil Survey Report 25.
- Schmutz, J.K. 1994. A census of breeding burrowing owls in southern Alberta, 1994. Prepared for Alberta Environmental Protection, Natural Resources Service. Edmonton. 15 pp.
- Schultz, R. and J. Bentz. 1993. Integrated resource inventory - Lesser Slave Lake Study Area. Alberta Environmental Protection, Edmonton.
- Scott-Brown, M., S. Herrero, and C. Mamo. 1986. Monitoring of released Swift Foxes in Alberta and Saskatchewan. Contract OSG83-00213, Canadian Wildlife Service, Ottawa.
- Semenchuk, G.P., ed. 1992. The atlas of breeding birds in Alberta. Federation of Alberta Naturalists. Edmonton.
- Shaffer, M. 1985. Assessment of application of species viability theories. Office of Technical Assessment, U.S. Congress, Washington, D.C..
- Shawa, M. 1975. Guidebook to selected sedimentary environments in southwestern Alberta, Canada. Canadian Society of Professional Geologists Field Conference, 1975. Canadian Society of Professional Geologists, Calgary.
- Shetsen, I. 1980. Sand and gravel resources of the Lethbridge area. Earth Sciences Report 81-4. Alberta Research Council, Edmonton.
- Shetsen, I. 1987. Quaternary geology, southern Alberta. Alberta Research Council, Edmonton.
- Shetsen, I. 1990. Quaternary geology, central Alberta. Alberta Research Council, Edmonton.
- Simons, H.A. Ltd. 1986. Environmental impact assessment of the proposed Whitecourt pulp mill. Prepared for Millar Western Pulp Ltd.
- Smith, A. and L. Dickson. 1989. Prairie shorebird survey 1987. Canadian Wildlife Service, Edmonton.
- Smith, B. and C. Bradley. 1990a. Status report on smooth goosefoot (*Chenopodium subglabrum*), a threatened species in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa.
- Smith, B. and C. Bradley. 1990b. Status report on sand verbena (*Abronia micrantha*), a threatened species in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa.
- Smith, B. and C. Bradley. 1990c. Status report on western spiderwort (*Tradescantia occidentalis*), an endangered species in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa.
- Smith, H.C. 1993. Alberta Mammals: An Atlas and Guide. Provincial Museum of Alberta. Edmonton. 238 pp.
- Smith, R. and L. Flake. 1981. The effects of grazing on forest regeneration along a prairie river. Prairie Naturalist 1981: 41-44.
- Smith, W. and C. Wallis. 1976. Preliminary investigation of the birds of Pakowki Lake, Alberta. Blue Jay 34: 168-171.

- St.-Onge, D. 1967. Surficial geology, Iosegun Lake (east half). Geological Survey of Canada Map 15-1966.
- St.-Onge, D. 1974. The geomorphology of the Swan Hills area, Alberta. Geological Survey of Canada Paper 74-26.
- St.-Onge, D. and S. Richard. 1975. Surficial geology of Whitecourt, Alberta. Geological Survey of Canada Map 1367A.
- Stalker, A. 1956. Surficial geology, Beiseker. Geological Survey of Canada Map 55-7.
- Stalker, A. 1957. Some features of the surficial geology of the Fort Macleod region of Alberta. Pages 52-71 in "Guide book, seventh annual field conference". Alberta Society of Petroleum Geologists, Calgary.
- Stalker, A. 1957. Surficial geology, High River. Geological Survey of Canada Map 14-1957.
- Stalker, A. 1958. Surficial geology - Fort Macleod. Geological Survey of Canada Map 21-1958.
- Stalker, A. 1960. Surficial geology of the Red Deer-Stettler map-area, Alberta. Geological Survey of Canada Memoir 306.
- Stalker, A. 1961. Surficial geology - Lethbridge. Geological Survey of Canada Map 41-1962.
- Stalker, A. 1962. Surficial geology of the Fernie area. Geological Survey of Canada Map 31-1961.
- Stalker, A. 1963a. Quaternary stratigraphy in Alberta. Geological Survey of Canada Paper 62-34.
- Stalker, A. 1963b. Surficial geology of the Lethbridge area. Geological Survey of Canada Map 41-1962.
- Stalker, A. 1965. Surficial geology - Bassano. Geological Survey of Canada Map 5-1965.
- Stalker, A. 1973. Surficial geology of the Drumheller area, Alberta. Geological Survey of Canada Memoir 370.
- Stalker, A., no date. The big rock. Page 9-11 in collection of papers for Geography 3710, University of Lethbridge.
- Stelfox, H. 1981. Ecological land classification and evaluation, Red Deer-James. Alberta Forestry, Lands and Wildlife, Edmonton.
- Stelfox, J.G. and G.R. Kerr. 1962. The status of Rocky Mountain Goats in the forested regions of the Wildhay River and Pinto Creek areas in Zone 14 East of the Sixth Meridian; and Their Prospects For Future Survival.
- Strong, W. 1978. Biophysical and evaluation of capability - Lakeland Area. Alberta Forestry, Lands and Wildlife, Edmonton.
- Strong, W. 1979. Livingstone-Porcupine ecological land classification and evaluation. Alberta Forestry, Lands and Wildlife, Edmonton.
- Strong, W. 1981. Jean D'Or Prairie ecological land classification and evaluation. Alberta Forestry, Lands and Wildlife, Edmonton.
- Sweetgrass Consultants Ltd. 1988a. Environmentally significant areas of the Municipality of Crowsnest Pass. Prepared by Sweetgrass Consultants, Calgary, for Alberta, Forestry, Lands and Wildlife, Edmonton.
- Sweetgrass Consultants Ltd. 1988b. Environmentally significant areas of the Counties of Lacombe and Stettler. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- Sweetgrass Consultants Ltd. 1989a. Environmentally significant areas of the David Thompson Corridor. Prepared by Sweetgrass Consultants, Calgary, for Alberta, Forestry, Lands and Wildlife, Edmonton.
- Sweetgrass Consultants Ltd. 1989b. Environmentally significant areas of the County of Paintearth. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- Sweetgrass Consultants Ltd. 1990. Environmentally significant areas of the County of Red Deer. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.
- Sweetgrass Consultants Ltd. 1991a. Environmentally significant areas in the Bow River Corridor. Prepared by Sweetgrass Consultants, Calgary, for the MD of Bighorn, Exshaw.
- Sweetgrass Consultants Ltd. 1991b. Environmentally significant areas of the MD of Clearwater. Prepared by Sweetgrass Consultants, Calgary, for the Red Deer Regional Planning Commission, Red Deer.



- Sweetgrass Consultants Ltd. 1994. Environmentally significant areas in the Foothills Model Forest. Prepared by Sweetgrass Consultants, Calgary, for Foothills Model Forest, Hinton.
- Tedder, W. 1979. Iosegun Lake study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Tedder, W. 1981. Peace River slopes study area physical land classification. Alberta Forestry, Lands and Wildlife, Edmonton.
- Tokarsky, O. 1977. Hydrogeology of the Whitecourt area, Alberta. Alberta Research Council Report 76-3, Edmonton.
- Toth, J. 1966. Mapping and interpretation of field phenomena for groundwater reconnaissance in a prairie environment, Alberta, Canada. International Association of Scientific Hydrology XI Annee, No. 2: 1-49.
- Turner, W. 1966. Wylie Lake report. Parks Division, Alberta Recreation and Parks, Edmonton.
- United Nations Environment Programme. 1992. Convention on biological diversity. Adopted in June, 1992 at the Earth Summit in Rio de Janeiro, Brazil. United Nations Environment Programme, Nairobi, Kenya.
- Van Waas, C. 1974. Biophysical analysis and evaluation of capability: Namur Lake Area. Land Use Assignment Section, Alberta Lands and Forests.
- Vermeer, K. 1969. Great Blue Heron colonies in Alberta. Canadian Field-Naturalist 83: 237-242.
- Vitt, D. 1992. The peatlands of Alberta: a 1:1,000,000 summary map, edited by B. Nicholson and L. Halsey. Alberta Forestry, Lands and Wildlife, Edmonton.
- Wallace, R.R. and P.J. McCart. 1984. The fish and fisheries of the Athabasca River Basin: their status and environmental requirements. Alberta Environment. 269 pp + appendix.
- Wallis, C. 1976. Milk River Canyon resource evaluation. Alberta Parks, Edmonton.
- Wallis, C. 1977. Red Deer River resource evaluation. Alberta Recreation and Parks Division, Edmonton.
- Wallis, C. 1980. Montane, Foothills Parkland and Southwest Rivers, natural landscapes survey, 1978-79. Alberta Recreation and Parks, Edmonton.
- Wallis, C. 1985. The extravagance of wilderness - whose values, whose dollars and sense? Pages 45-51 in "Economy and ecology - the economics of environmental protection", a symposium sponsored by the Canadian Society of Professional Biologists, February, 1985, Edmonton. Canadian Society of Professional Biologists, Edmonton.
- Wallis, C. 1987. Critical, threatened and endangered habitat. In "Proceedings of workshops on endangered species and habitats in the Prairie Provinces", January, 1986, Edmonton (in press).
- Wallis, C. 1989. Flora and special features survey of the Milk River Natural Area. Publication T/213, Alberta Forestry Lands and Wildlife, Edmonton.
- Wallis, C. 1990a. Chappice Lake, biophysical overview. Prepared by Cottonwood Consultants for the Nature Conservancy of Canada, Calgary.
- Wallis, C. 1990b. Preliminary biophysical survey of the Bodo-Altario area. Prepared by Cottonwood Consultants Ltd. for Alberta Forestry, Lands and Wildlife; Natural and Protected Areas Program. Edmonton. 32 pp.
- Wallis, C. 1990c. Reconnaissance survey of saline wetlands and springs in the grassland-parkland region of eastern Alberta. Prepared by Cottonwood Consultants Ltd., Calgary for World Wildlife Fund, Edmonton.
- Wallis, C. and C. Wershler. 1981. Kootenay Plains flora and grassland vegetation assessment. Natural Areas Program, Edmonton.
- Wallis, C. and C. Wershler. 1984. Kazan Upland Resource Assessment for ecological reserves planning in Alberta. Alberta Energy and Natural Resources Report T/54, Natural Areas Technical Report No. 12. Public Lands Division, Edmonton.
- Wallis, C. and C. Wershler. 1985. Little Fish Lake resource assessment for Ecological Reserves planning in Alberta. Prepared by Cottonwood Consultants Ltd. for Alberta Energy and Natural Resources, Public Lands Division. Edmonton.
- Wallis, C. and C. Wershler. 1988. Rare wildlife and plant conservation studies in sandhill and sand plain habitats of southern Alberta. Alberta Forestry, Lands and Wildlife, Edmonton.
- Wallis, C. and L. Knapik. 1990. Environmentally significant areas of the County of Barrhead. Prepared by Cottonwood Consultants Ltd. for the Agriculture Services Board, County of Barrhead, Barrhead.

- Wallis, C., W. Smith and C. Wershler. 1994. An overview of wetland, old-growth and riparian avian resources in Lakeland Provincial Park and Provincial Recreation Area. Alberta Parks, Lac La Biche.
- Wayland, M. and T. Arnold. 1993. A survey of birds -- Wapiti, Peace and Athabasca Rivers, June and July 1992. Project 2362-B1, Northern River Basins Study, Edmonton.
- Wells, R. and J. Bentz. 1990. Integrated resource inventory - Red Deer River Corridor Study Area. Alberta Forestry, Lands and Wildlife, Edmonton.
- Wershler, C. 1976. South Writing-on-Stone natural history inventory. Alberta Recreation and Parks, Edmonton.
- Wershler, C. 1989. 1988 Census and habitat evaluation for migrating shorebirds in Alberta. Prepared by Sweetgrass Consultants, Calgary for World Wildlife Fund Canada, Canadian Wildlife Service, and Alberta Forestry, Lands and Wildlife, Edmonton.
- Wershler, C. and C. Wallis. 1987. Status of the Piping Plover in Alberta. Prepared by Sweetgrass Consultants, Calgary for World Wildlife Fund Canada, , Canadian Wildlife Service, and Alberta Forestry, Lands and Wildlife, Edmonton.
- Wershler, C. and C. Wallis. 1989. Survey and evaluation of Northern Fescue Grassland in Alberta. Prepared by Sweetgrass Consultants, Calgary, for Alberta Forestry, Lands and Wildlife, Edmonton.
- Weseloh, D. and L. Cocks. 1979. Recent nesting of the Caspian Tern at Egg Island, Lake Athabasca, Alberta. Blue Jay 37: 212-215.
- Westgate, J. 1968. Surficial geology of the Foremost-Cypress Hills area, Alberta. Research Council of Alberta Bulletin 22.
- Westworth and Associates. 1990. Significant natural features of the eastern boreal forest region of Alberta. Prepared by Westworth and Associates for Alberta Forestry, Lands and Wildlife, Edmonton.
- Westworth and Associates. 1992. An overview of potential forest harvesting impacts on fish and fish habitats in the northern boreal forests of Canada's Prairie Provinces. Prepared for Department of Fisheries and Oceans, Ottawa.
- Westworth and Associates. 1994. An inventory of significant natural features in the Birch Mountains -- Firebag River Integrated Resource Planning Area. Prepared by Westworth and Associates Ltd. for Resource Information Branch, Alberta Environmental Protection, Edmonton.
- Westworth, D. 1990. An assessment of the significant features of the Amisk Valley. Prepared by Westworth and Associates Ltd. for Alberta Forestry, Lands and Wildlife, Resource Information Branch. Edmonton. 71 pp.
- Westworth, D. and L. Knapik. 1987. Significant natural features and landscapes of Strathcona County. Prepared by D. Westworth and Associates for County of Strathcona, Recreation and Parks.
- Wildlife Management Division. 1996. The status of Alberta Wildlife. Alberta Environmental Protection, Edmonton.
- Wilson, E.O. and F.M. Peter. 1988. Biodiversity. National Academy Press, Washington, D.C. 521 pp.
- World Resources Institute. 1992. Global biodiversity strategy. World Resources Institute, Washington, D.C. 244 pp.
- World Wide Fund for Nature. 1988. The importance of biological diversity. World Wide Fund for Nature, Gland, Switzerland.
- Yamnuska Natural Area Study Committee. 1974. Yamnuska - introductory study of a natural area with proposals for its protection and use. Joint report of Calgary Field Naturalists' Society and the Bow River Naturalists.
- Zelt, K. and W. Glasgow. 1976. Fish and wildlife. In: Cooking Lake area study, Volume IV. Prepared by Alberta Fish and Wildlife for Planning Division, Alberta Environment, Edmonton.