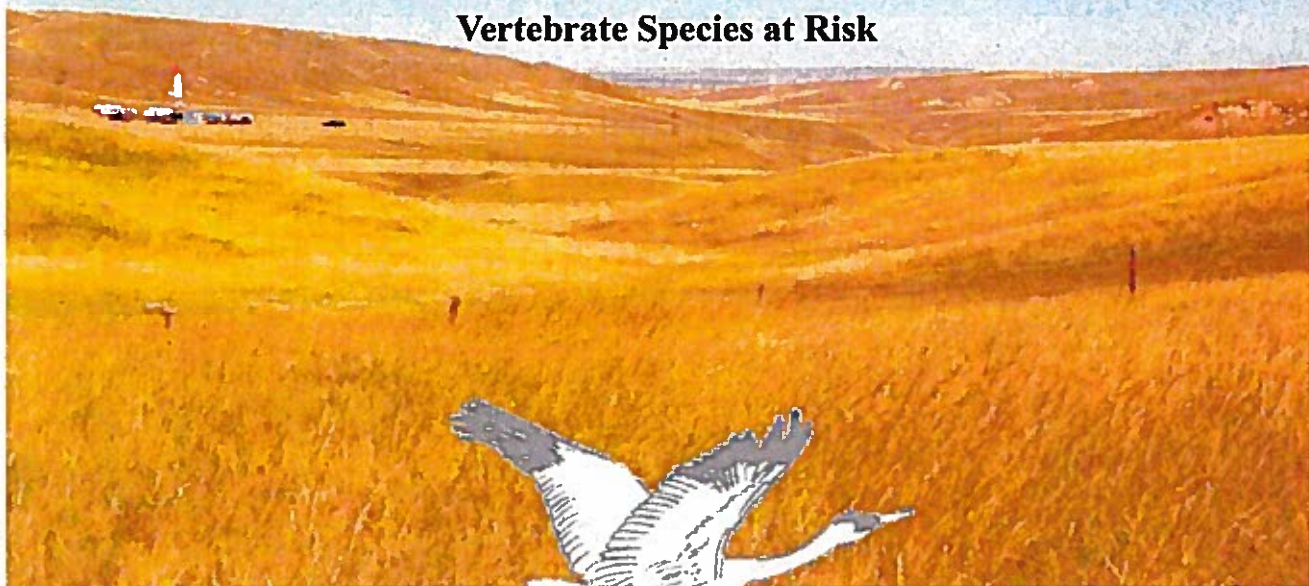


**Development of Standardized Guidelines for Petroleum Industry Activities
that Affect COSEWIC Prairie and Northern Region**

Vertebrate Species at Risk



Prepared for: Environment Canada
Prairie and Northern Region
Edmonton, Alberta

Prepared by: Dave Scobie¹ and Cameron Faminow²
¹ Avocet Environmental Inc.
Box 1644, Brooks AB T1R 1C5
² Ghostpine Environmental Services Ltd.
608 Willacy Drive SE Calgary AB T2J 2C9

MARCH 2000

QL
676.6
.C36
S36
2000

Contents

INTRODUCTION	1
METHODS	2
RESULTS	3
DISCUSSION	4
RECOMMENDATIONS	5
Appendix A-1 - ALBERTA GUIDELINES FOR RED AND BLUE LISTED SPECIES	7
Appendix A-2 - SASKATCHEWAN ACTIVITY RESTRICTIONS	8
Appendix A-3 - MANITOBA MANAGEMENT GUIDELINES	9
Appendix A-4 - ENVIRONMENT CANADA TIMING RESTRICTIONS	10
Appendix B - LIST OF INDUSTRY REPRESENTATIVES CONTACTED	11
Appendix C - LIST OF COSEWIC SPECIES CONSIDERED	12
Appendix D - MATRIX VALUES	13
Appendix E-1 - AVIFAUNA - SETBACK DISTANCES AND CRITICAL TIMING	14
Appendix E-2 - MAMMALS - SETBACK DISTANCES AND CRITICAL TIMING	17
Appendix E-3 - HERPTILES - SETBACK DISTANCES AND CRITICAL TIMING	19
Appendix F-1 - AVIFAUNA - RATIONALE	20
Appendix F-2 - MAMMAL - RATIONALE	23
Appendix F-3 - HERPTILES - RATIONALE	25
Appendix G - MATRIX EXAMPLE	26
Appendix H - CONTACT LIST - AVIFAUNA	27
Appendix H - CONTACT LIST - MAMMALS	36
Appendix H - CONTACT LIST - HERPTILES	38
Appendix I-1 - LETTER TO ENVIRONMENT MINISTERS	40
Appendix I-2 - RESPONSE FROM ALBERTA ENVIRONMENT MINISTER	41
Appendix I-3 - RESPONSE FROM MANITOBA ENVIRONMENT MINISTER	42

INTRODUCTION

Environmental assessment guidelines exist for a variety of wildlife, particularly species of concern in prairie Canada. Current guidelines include species of national, provincial and local concern. For each species of sensitive wildlife, the guidelines identify restrictions on passive and development activities for industry and other wildlife disturbances. The guidelines typically include set back distances from nests or dens and timing of disturbances. Copies of existing guidelines for Alberta, Saskatchewan, Manitoba and Environment Canada – Prairie and Northern Regions can be found in Appendix A.

The guidelines typically include set back distances from nests or dens and timing of disturbances.

As the list of species at risk in southern Saskatchewan grew, guidelines were developed in response to requests from industry to help in their planning and implementation of projects. Setback distances were based on interviews with other researchers and personal observations. Timing guidelines generally revolve around the breeding and brood rearing requirements of the animal. These guidelines were implemented in 1995 and are currently regularly used in the grassland ecoregion of Saskatchewan.

Alberta Environment staff in southern Alberta adopted the Saskatchewan example as a working model and modified the guidelines to reflect species of local concern. Discussions are presently underway to modify these guidelines so that they can be applied for use on any species or significant habitat in Alberta. Other areas of the province have not formally developed guidelines.

Manitoba utilizes publications that are specific to minimizing the environmental impact of activities such as the construction of roads, utility corridors and stream crossings. Buffer considerations are used that may be varied after the critical timing period and Manitoba Conservation staff routinely provide comment on development activities.

Environment Canada has developed a list of guidelines for some of the Prairie and Northern Region species at risk in response to projects that are subject to review by a national agency (i.e., National Energy Board).

The guidelines vary between the three prairie provinces both in the species on each list and the details of the assessments. These discrepancies between jurisdictions made it difficult to justify the guidelines to industry.

...discrepancies between various jurisdictions made it difficult to justify the guidelines to industry.

On December 31, 1999, Avocet Environmental Inc with assistance from Dr. Geoff Holroyd and Paul Gregoire, submitted a proposal to Environment Canada's Environmental Assessment Research and Development Fund to compile a standardized set of guidelines and mitigation strategies for vertebrate species listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in the Prairie and Northern Regions. The contract length was nine weeks. The information for the guidelines was based on broad consultation, the best available knowledge, existing local management and reflects the varying degrees of impact that activities associated with the Petroleum industry may have on these COSEWIC species.

... not all developments are the same in terms of magnitude and risk and thus should warrant different setback distances and timing restrictions.

METHODS

Representatives from the Petroleum industry were consulted in an effort to develop a method that would reflect the range of activities that could impact species. The suggested method plots the Type of Disturbance, Magnitude of Disturbance and Risk in a 3D matrix. This method is based on the premise that not all developments are the same in terms of magnitude and risk and thus should warrant different setback distances and timing restrictions. The level of designation of an animal on the COSEWIC list was not included in rankings as it was assumed that this process should apply equally to all organisms but will focus on COSEWIC in the interim.

For example, on native prairie, drilling a minimal disturbance shallow sweet gas well is much different in construction method, total disturbance, and risk than drilling a deep sour oil well. The deep sour oil well usually requires leveling the lease and the rig may be on site drilling for weeks. In comparison with the drilling of a shallow gas well, there is little if any clearing, the access road and the drilling rig use undisturbed native prairie and the well is usually drilled within 24 hours.

Categories of the range of activities were sent out to Petroleum industry representatives who were asked to rank them. When asked to comment on ranking the values for the matrix, industry representatives were asked to consider that a hypothetical area is "pristine" with no previous development in the area as explained in the following examples.

LEVEL	ACTIVITY
LOW	surveying, drive by
MEDIUM-LOW	<i>interpolated</i>
MEDIUM	short term e.g., 24-hr minimal disturbance drilling event
MEDIUM-HIGH	<i>interpolated</i>
HIGH	permanent structures e.g., roads, buildings

... the biological information would be based on a broad consultation process and for most species, anecdotal evidence.

Participants were asked to provide comment on the LOW, MEDIUM and HIGH categories. The MEDIUM-LOW and MEDIUM-HIGH categories were added to offer more flexibility to the matrix.

The rankings were then compiled and redistributed for additional comments. It was emphasized to industry that for many of the species being considered there was no science to back up the setback distances and that the biological information would be based on a broad consultation process and for most species, anecdotal evidence. A listing of industry representatives contacted is found in Appendix B.

The 32 species assessed, along with their common name, scientific name, COSEWIC status, and year of last review, are listed in alphabetical order in Appendix C. To facilitate ease of use, all lists are organized alphabetically by common name as this document is meant for general distribution.

Species "authorities" included government and non-government personnel from the prairie and northern regions of Canada. They were also asked to consider the animal living in relative isolation from human disturbance when commenting on critical dates, suggested setbacks, rationale for setbacks, suggested mitigation and any known disturbance studies. Existing guideline information and recommendations from other persons were not made available during the interview (except where interviewees had developed guidelines in their jurisdiction) so as not to influence responses. No emphasis was given to the COSEWIC designation, all wildlife should be treated equally through this process and emphasis given to ecosystem approaches for recovery.

...all wildlife should be treated equally through this process and emphasis given to ecosystem approaches for recovery.

The critical dates, suggested setbacks, and rationale for the setback distances were compiled and sent out to the original interviewees and in addition, to a broader range of species "authorities" for final comment.

In discussions with both biological and industry representatives, it was stressed that this is meant to be a work in progress and that the final document will not be static. The process must be continually updated to reflect changes in development practices and species knowledge.

RESULTS

Representatives from various industry organizations were consulted during the project. A copy of the matrix values for the Petroleum industry is found in Appendix D.

During the biological consultation process, 96 interviews were completed, 127 people were contacted for a total of 223 species authorities in British Columbia, Alberta, Saskatchewan, Manitoba, Northwest Territories, Nunavut and various locations in the United States (NOTE: some people have experience with more than one species).

...96 interviews were completed, 127 people were contacted for a total of 223 species authorities...

Appendix E contains the compiled listings of Setback Distances and Critical Timing, and Appendix F lists Rationale for Setback Distances and Critical Timing. These lists for the 32 species being considered are organized into species groups of AVIFAUNA(birds), MAMMALS, and HERPTILES(amphibians and reptiles). An example of the matrix is found in Appendix G.

Species "authorities" who were consulted either in person, by phone, fax or e-mail are listed in Appendix H. The list and their contact information are organized by species groups. Environment Ministers from Alberta, Saskatchewan and Manitoba were also contacted and a copy of the letter sent, along with response from 2 Ministers, can be found in Appendix I.

Species authorities could not be contacted for the following species: Grey Fox, Ivory Gull, Least Bittern, Northern Prairie Skink and Ross' Gull. Some species already have existing local management groups and/or guidelines that are under development, therefore, guidelines were not developed for the Woodland Caribou (e.g., www.deer.r.ualberta.ca/caribou/bcrp.htm) Grizzly Bear (e.g., www.gov.ab.ca/env/)

The development of standardized guidelines ... is a process that must be updated to reflect changes in development practices, species knowledge, existing research and literature.

This project was presented as a working paper at a meeting of the Alberta Chapter of The Wildlife Society on March 10-11, 2000 in Lethbridge, Alberta, Canada. Conference participants were encouraged to contribute to the project with some excellent contacts established. In addition, a 1997 document entitled "The Effects of Linear Developments on Wildlife: A Review of Selected Scientific Literature" compiled by Arc Wildlife Services Ltd, Calgary, for Canadian Association of Petroleum Producers Calgary, Alberta, was made known at the Conference and is available on request from Environment Canada. Contact Paul Gregoire for more information.

DISCUSSION

The development of standardized guidelines for setback distances, timing, and mitigation strategies is the continuation of a process that began in Saskatchewan in 1994 and does not end with this document. The process must be updated to reflect changes in development practices, species knowledge, existing research and literature. A cursory review of the literature found that for most of the species, no studies have been conducted to document the effects of disturbance on critical portions of their life cycle.

Environment Canada is in the process of completing a literature search on selected COSEWIC species that should contribute additional information on the effects of disturbance for these species.

As industry practices evolve and the matrix values are tested, adjustments to these guidelines will need to be made. When a company is considering a project it should first try to schedule the project so it will have the least impact on species, for most species this will mean constructing outside of the breeding season. If avoiding this critical period is not an option, then the guidelines should be applied for planning and operational purposes.

When a company is considering a project it should first try to schedule the project so it will have the least impact on species.

If a company must develop within the critical times, historic species information is available from provincial databases (i.e., Conservation Data Centers) that highlight historic "hot spots". The onus would then be on the developer to hire qualified personnel to conduct surveys within the project area so that current locations of nests/dens can be located. If a den or nest is found within the recommended setback distance, an evaluation should be made to assess existing land-use/above ground structures and topography in the area to determine if the setback can be relaxed. This would be done in consultation with the proper regulating authority.

Industry Matrix values are based on perceived impacts and will need to be revised as more knowledge is gained. There was some debate about the low weighting of Pipeline in the Type of Disturbance for the Petroleum Values. The concern with the low weighting was that pipeline right-of-ways become trails and then roads. If a pipeline right-of way does become a trail or road then setback distance would automatically increase to that of Access Roads.

At this point these guidelines are based on the best available knowledge of industry and biological authorities whose comments were based on personal observation rather than specific scientific quantitative studies. It would therefore not be ethical for these guidelines to be incorporated into any regulatory framework.

A few comments that appeared more than once as suggested mitigation* that could help species and make projects more cost effective are listed below:

1. Construct outside of the Critical Time periods.
2. Encourage traffic control programs to reduce vehicular traffic and speeds, day/night.
3. Reclaim with native species for both diversity and structure.
4. Reduce fences and powerlines where possible.
5. Narrow right of ways.
6. Detour around sensitive areas.

* a section on Suggested Mitigation has not been included in this report until comments can be sent to Recovery Teams to refine. These results will be available at a later date.

It must be emphasized that the 32 species being considered for this project are at risk in Canada for a variety of reasons. Over 2/3 of these species rely on the prairie for a significant portion of their breeding cycle. Though the perceived impact of industrial development on these species can not be dismissed, it is not the only factor at work. Urban development, fragmentation and degradation of habitat are but a few influences along with natural cycles that must be included in discussions of species recovery efforts. Species recovery is not the responsibility of a single industry but of society as a whole as it considers, "What is the worth of a Piping Plover?"

RECOMMENDATIONS

1. Complete literature review of impacts of human activities on wildlife.
2. Consider cumulative effects of all projects.
3. Incorporate data into a computer program for ease of data manipulation and sharing.
4. Continue cooperative partnerships between jurisdictions and encourage information sharing.
5. Encourage cooperative multidisciplinary studies to investigate effectiveness of set-back distances, timing restrictions and industry matrix values. Future research should focus on determining the perceived effects and impacts of activities on species and their habitats.
6. Each jurisdiction adopt this process and expand it for its own species at risk.
7. Incorporate other activities into the framework i.e., ecotourism, mining, agriculture, etc.
8. Explore impacts to fossorial animals by seismic activities.

Species recovery is not the responsibility of a single industry but of society as a whole as it considers, "What is the worth of a Piping Plover?"

Future research should focus on determining the perceived effects and impacts of activities on species and their habitats.

**"RECOMMENDED SETBACK DISTANCES AND TIMING RESTRICTION GUIDELINES FOR
RED AND BLUE LISTED SPECIES* IN THE PRAIRIE BIOME OF ALBERTA"**

*as taken from the document entitled "The Status of Alberta Wildlife, 1996"

SPECIES-OF-CONCERN	DATES OR AREAS	SURVEYING and MONITORING (meters)	SEISMIC and related ACTIVITIES (meters)	PERMANENT OR LONG- TERM DEVELOPMENT (wellsite, powerline, pipeline, battery, road) (meters)
HERPTILES:				
1. North. Leopard Frog: Breeding Ponds	Apr. 1 - Sept. 30 Oct. 1 - Mar. 31	50 No restrictions	50 50	100 100
2. Great Plains Toad	Breeding Ponds Ephemeral Ponds	50 50	50 50	100 100
3. Canadian Toad	Breeding Ponds Ephemeral Ponds	50 50	50 50	100 100
4. Plains Spadefoot Toad	Breeding Ponds Ephemeral Ponds	50 50	50 50	100 100
5. Prairie Rattlesnake: Hibernacula	Apr. 1 - May 30 Aug. 15 - Oct. 31 Nov. 1 - Mar. 31 June 1 - Aug.14	200 200 100 50	200 200 200 200	200 200 200 200
6. Plains Hognose Snake: Hibernacula	Apr. 1 - May 30 Aug. 15 - Oct. 31 Nov. 1 - Mar. 31 June 1 - Aug.14	200 200 100 50	200 200 200 200	200 200 200 200
7. Eastern Short-horned Lizard	all suitable habitats	100	100	100
BIRDS:				
8. Peregrine Falcon: Nest Site	Apr. 1 - July 31 Aug 1 - Mar 31	500 10	1000 100	1000 1000
9. Burrowing Owl: Nest Site	Apr. 1 - Aug. 15 Aug. 16 - Oct. 15 Oct. 16 - Mar. 31	200 200 10	500 200 100	500 500 500
10. Piping Plover: Nesting Beach	May 1 - Aug. 15 Aug. 16 - Apr. 30	200 10	200 10	400 400
11. Ferruginous Hawk: Nest Site	Mar. 15 - July 15 July 16 - Mar. 14	1000 10	1000 10	1000 1000
12. Short-eared Owl: Nest Site	Apr. 1 - July 31	200	200	400
13. Sprague's Pipit: Nest Site	Apr. 15 - July 15	100	100	100
14. Long-billed Curlew: Nest Site	Apr. 15 - July 15	100	100	200
15. Sage Grouse: Dancing Ground/Lek	Mar. 1 - June 15 June 16 - Feb. 29	500 100	500 100	1000 1000
MAMMALS:				
16. Ord's Kangaroo Rat: Dens	Year Round	50	100	100
17. Swift Fox: Dens	Feb. 15 - July 31 Aug.1 - Feb.14	500 50	500 100	500 500

December 1999

**SASKATCHEWAN ENVIRONMENT AND RESOURCE MANAGEMENT - GRASSLAND
ECOREGION ACTIVITY RESTRICTION FOR SENSITIVE VERTEBRATE SPECIES
(NESTS OR DENS UNLESS NOTED OTHERWISE)**

SPECIES	PASSIVE ACTIVITIES (walking, drive by, etc.)		DEVELOPMENT ACTIVITIES (seismic, drilling, etc.)	
	DATES	METERS	DATES	METERS
Golden Eagle	Feb 15 - July 15	500	Feb 15 - July 15	1000
Swift Fox	Feb.15 - August 1	200	Feb. 15 - August 1	500
Ferruginous Hawk	March 15 - June 30	500	March 15 - July 15	1000
Prairie Falcon	March 15 - June 30	500	March 15 - July 15	1000
Sharp-tailed Grouse - Leks	March 15 - May 15	200	no activity year round	400
Sage Grouse - Leks	March 15 - May 15	200	no activity year round	500
Sage Grouse - Nests	April 15 - June 15	200	April 15 - June 15	500
Peregrine Falcon	April 1 - July 31	500	April 1 - July 31	1000
Eastern Screech Owl	April 1 - July 31	200	April 1 - July 31	400
Western Screech Owl	April 1 - July 31	200	April 1 - July 31	400
Cooper's Hawk	April 1 - July 31	200	April 1 - July 31	400
Short-eared Owl	April 1 - June 30	100	April 1 - June 30	400
American White Pelican	April 1 - July 31	500	April 1 - July 31	1000
Double-crested Cormorant	April 1 - July 31	500	April 1 - July 31	1000
Great Blue Heron	April 1 - July 31	500	April 1 - July 31	1000
Black-crowned Night Heron	April 1 - July 31	500	April 1 - July 31	1000
Trumpeter Swan	April 1 - July 31	500	April 1 - July 31	1000
Whooping Crane - spring migration	April 1 - May 15	1000	Apr 1 - May 15	1000
Burrowing Owl	April 15 - July 15	200	April 15 - July 31	500
Long-billed Curlew	April 15 - July 15	100	April 15 - July 15	200
Mountain Plover	April 15 - June 30	200	April 15 - June 30	400
Loggerhead Shrike	May 1 - June 30	100	May 1 - June 30	200
Piping Plover	May 1 - July 15	200	May 1 - July 15	400
Snowy Plover	May 1 - July 15	200	May 1 - July 15	400
American Bittern	May 1 - July 15	200	May 1 - July 15	400
Franklin's Gull	May 1 - July 15	200	May 1 - July 15	400
Common Tern	May 1 - July 15	200	May 1 - July 15	400
Caspian Tern	May 1 - July 15	200	May 1 - July 15	400
Forster's Tern	May 1 - July 15	200	May 1 - July 15	400
Eared Grebe	May 15 - July 15	100	May 15 - July 15	200
Western Grebe	May 15 - July 15	100	May 15 - July 15	200
Sage Thrasher	May 15 - June 30	100	May 15 - June 30	200
Short-homed Lizard	no restrictions		no activity on breeding areas	
Northern Leopard Frog	no restrictions		no activity on breeding areas	
Painted Turtle	no restrictions		no activity on breeding areas	
Snapping Turtle	no restrictions		no activity on breeding areas	
Plains Spadefoot Toad	no restrictions		no activity on breeding areas	
Whooping Crane - fall migration	Aug 15 - Nov 1	1000	Aug 15 - Nov 1	1000
Prairie Rattlesnake - hibernacula	Sept 1 - May 15	100	no activity year round	200
Yellow-bellied Racer - hibernacula	Sept 1 - May 15	100	no activity year round	200
Black-tailed Prairie Dog (Colonies)	no restrictions		no activity on colonies	
Ord's Kangaroo Rat	no restrictions		year round - no blasting within 200 m	

May 1997

**MANITOBA NATURAL RESOURCES
CONSOLIDATED BUFFER MANAGEMENT GUIDELINES
BUFFER CONSIDERATIONS FOR OTHER SIGNIFICANT RESOURCE VALUES**

SPECIAL RESOURCE VALUE	BUFFER WIDTH*	OBJECTIVE OF BUFFER	CRITICAL PERIOD**
COLONIAL WATERBIRD NESTS	200 m	Provide a visual barrier Protection from disturbance	April 1 - July 31
MINERAL LICKS AND SPRINGS	200 m	Provide a visual barrier Protect ground water and maintain soil stability	April 1 to June 30
EAGLE OR OSPREY NESTS	200 m	Protect nest tree. Provide a visual barrier between the nest and worksite. Maintain the site integrity.	April 1 to July 31
SPECIAL HABITATS AND AREAS (SUCH AS ENDANGERED SPECIES, PROTECTED SITES, ETC.)	200 m	Protect the security of the habitat on a year round basis. Maintain the long term existence of the habitat or area.	Year round
RECREATIONAL VALUES (SUCH AS COTTAGES, CANOE ROUTES, ETC.)	200 m	Provide a visual and sound barrier between recreational value and harvesting operations.	Seasonal to year round

* BUFFER WIDTH may vary after the critical period once reviewed by the Integrated Resource Management Team based on site specific evaluations.

** CRITICAL PERIOD refers to that portion of the year where special resource values are most sensitive to disturbances.

March 1996

ENVIRONMENT CANADA
DEPARTMENT OF ENVIRONMENT COSEWIC SPECIES TIMING RESTRICTIONS

COMMON NAME	STATUS	AREA	DATES	DISTANCE (meters)
Anatum Peregrine Falcon	Threatened	Active Nest		100
Burrowing Owl	Endangered	Active Den	April 15 - August 15	500
Burrowing Owl	Endangered	Encounter	August 15 - Sept 15	250
Ferruginous Hawk	Vulnerable	Active Nest	March 15-June 15	500
Ferruginous Hawk	Vulnerable	Encounter	June 15 - July 15	100
Least Bittern	Vulnerable	Active Nest		100
Mountain Plover	Endangered	Active Nest	May 15-July 15.	
Piping Plover	Endangered	Active Nest	May 1-August 1	250
Red-Headed Woodpecker	Vulnerable	Active Nest	April 15-July 15	100
Sage Grouse	Endangered	Nest or Lek		250
Short-eared Owl	Vulnerable	Active Nest	April 15-August 15	100
Sprague's Pipit	Threatened	Active Nest	May 1 - August 15	100
Swift Fox	Endangered	Active Dens	April 15 - July 15	500
Western Loggerhead Shrike	Threatened	Active Nest	April 15-July 15	250
Ross' Gull	Vulnerable			
Yellow Rail	Vulnerable			
Long-billed Curlew	Vulnerable		April 15-July 15	250
Sage Thrasher	Endangered			
Whooping Crane	Endangered		Encounter	500

January 2000

APPENDIX B

March 2000

LIST OF INDUSTRY REPRESENTATIVES CONTACTED

	<u>Name</u>	<u>Phone/Fax/E-mail</u>	<u>Company</u>	<u>Address</u>
1	Gilmore, Karl General Manager	Phone: 403-265-2885 Fax: 403-266-6471 kgilmore@teraenv.com	Tera Environmental Consultants (Alta) Ltd.	Suite 205 925 7 th Avenue S.W. Calgary AB T2P 1A5
2	Heemeryck, Ken Senior Logistics Supervisor	Phone: 403-296-3476	Petro-Canada Oil and Gas	Box 2844 Calgary AB T2P 3E3
3	Jensen, Carl Superintendent	Phone: 403-290-2294 carl_jensen@pcp.ca	PanCanadian	150 - 9 th Ave S.W. Box 2850 Calgary AB T2P 2S5
4	Lunn, Stu Senior Analyst	Phone: 403-268-7868 stuart_lunn@pancanadian.ca	PanCanadian	150 - 9 th Avenue S.W. Box 2850 Calgary AB T2P 2S5
5	McBride, Stan	Phone: 403-260-4903	Wascana Energy Inc.	Box 2727, Station M Calgary AB T2P 5C1
6	Millions, Noel Landman	Phone: 403-650-8715 noelm@cnrl.com	Canadian Natural Resources Ltd.	Box 2770 Drumheller AB T0J 0Y0
7	Neal, John Contract Construction Foreman	Phone: 403-793-4473 john_neal@pcp.ca	PanCanadian	150 - 9 th Avenue S.W. Box 2850 Calgary AB T2P 2S5
8	Parson, Kevin Logistics Supervisor	Phone: 403-803-3700 jugger@telusplanet.net	Petro-Canada Oil and Gas	Box 2844 Calgary AB T2P 3E3
9	Rausch, Don	Phone: 403-529-8243 Fax: 403-271-2299 donrausch@hotmail.com	City of Medicine Hat	364 Kipling Street S.E. Medicine Hat AB T1A 1Y4
10	Robert, Jim	Phone: 403-233-5919 robert10@amoco.com	Amoco Canada	204 - 4 th Avenue S.W. Box 200 Station M Calgary AB T2P 2H8

LIST OF COSEWIC SPECIES CONSIDERED: MAMMALS, BIRDS, AMPHIBIANS, REPTILES

COMMON NAME	SCIENTIFIC NAME	STATUS	REVIEWED
1 Anatum Peregrine Falcon	<i>Falco peregrinus anatum</i>	Threatened	1999
2 Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	Vulnerable	1999
3 Burrowing Owl	<i>Athene cucularia</i>	Endangered	1995
4 Eastern Loggerhead Shrike	<i>Lanius ludovicianus migrans</i>	Endangered	1991
5 Eastern Short-horned Lizard	<i>Phrynosoma douglassii brevirostre</i>	Vulnerable	1992
6 Eastern Yellow-bellied Racer	<i>Coluber constrictor flaviventris</i>	Vulnerable	1991
7 Ferruginous Hawk	<i>Buteo regalis</i>	Vulnerable	1995
8 Great Plains Toad	<i>Bufo cognatus</i>	Vulnerable	1999
9 Grey Fox	<i>Urocyon cinereoargenteus</i>	Vulnerable	1979
10 Grizzly Bear	<i>Ursus arctos</i>	Vulnerable	1991
11 Ivory Gull	<i>Pagophila eburnea</i>	Vulnerable	1996
12 Least Bittern	<i>Ixobrychus exilis</i>	Vulnerable	1999
13 Long-billed Curlew	<i>Numenius americanus</i>	Vulnerable	1992
14 Mountain Plover	<i>Charadrius montanus</i>	Endangered	1987
15 Northern Leopard Frog	<i>Rana pipiens</i>	Vulnerable	1998
16 Northern Prairie Skink	<i>Eumeces s. septentrionalis</i>	Vulnerable	1989
17 Ord's Kangaroo Rat	<i>Dipodomys ordii</i>	Vulnerable	1995
18 Piping Plover	<i>Charadrius melodus</i>	Endangered	1985
19 Polar Bear	<i>Ursus maritimus</i>	Vulnerable	1999
20 Red-Headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Vulnerable	1996
21 Ross' Gull	<i>Rhodostethia rosea</i>	Vulnerable	1996
22 Sage Grouse	<i>Centrocercus u. urophasianus</i>	Endangered	1998
23 Sage Thrasher	<i>Oreoscoptes montanus</i>	Endangered	1992
24 Short-eared Owl	<i>Asio flammeus</i>	Vulnerable	1994
25 Sprague's Pipit	<i>Anthus spragueii</i>	Threatened	1999
26 Swift Fox	<i>Vulpes velox</i>	Endangered	1998
27 Western Loggerhead Shrike	<i>Lanius ludovicianus excubitorides</i>	Threatened	1986
28 Whooping Crane	<i>Grus americana</i>	Endangered	1978
29 Wolverine	<i>Gulo gulo</i>	Vulnerable	1989
30 Wood Bison	<i>Bison bison athabasca</i>	Threatened	1988
31 Woodland Caribou	<i>Rangifer tarandus caribou</i>	Vulnerable	1984
32 Yellow Rail	<i>Coturnicops noveboracensis</i>	Vulnerable	1999

MARCH 2000

MATRIX VALUES FOR PETROLEUM INDUSTRY ACTIVITIES

TYPE OF DISTURBANCE	WEIGHT
Pipeline	1
Access Roads	3
Wellsite	3
Compressor Station, Oil Battery or Straddle Plant	5
Temporary Surface	1
Permanent Surface Facilities e.g., pig traps, risers, cathodic protection	4

MAGNITUDE OF DISTURBANCE		WEIGHT	
Pipeline	Plowed in	1	
	< or = to 6"	2	
	8"-10"	3	
	12" - 20"	3	
	> 20"	4	
Shallow Gas Well and Associated Facilities		1	
Deep Gas Well and Associated Facilities		2	
Oil Well and Associated Facilities		4	
Permanent Facility	<100x100 m	With Noise e.g., Small Compressor	4
		No Noise e.g., Small Pigging Station	3
	>100x100 m	With Noise e.g., Straddle Plant	5
		No Noise e.g., Tank Farm	4
Temporary Facility e.g., Camps, Stockpile Sites		1	
Access Roads	Permanent	4	
	Temporary	1	

RISK			WEIGHT
Facilities	Liquids		4
	Gas	Sweet	1
		Sour	4
	Oil	Sweet	4
		Sour	5
	Water		1
	Condensate		4
	Roads	Summer Use	3
		Winter Use	1
		All Season	5

AVIFAUNA
SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	ACTIVITY	SETBACK RANGE	
			(METERS)	(METERS)
1 BURROWING OWL (N=40)	Apr 1 - July 15 (nestling, fledgling)	LOW	200	0-500
		MED-LOW	250	
		MED.	300	200-1000
		MED-HIGH	400	
	July 16 - Oct 15 (dispersal, pre-migration)	HIGH	500	500-1000
		LOW	100	100
		MED-LOW	150	
		MED.	200	200
	Oct 16 - Mar 31 (winter)	MED-HIGH	300	
		HIGH	500	500
		LOW	10	10
		MED-LOW	100	
2 FERRUGINOUS HAWK (N=7)	Mar 15 - July 15	MED.	200	200
		MED-HIGH	300	
		HIGH	500	500
		LOW	10	10
3 IVORY GULL (N=0)	NONE SUGGESTED	MED-LOW	500	100-1000
		MED.	500	
		MED-HIGH	750	100-2000
		HIGH	850	400-3000
4 LEAST BITTERN (N=0)	NONE SUGGESTED	HIGH	1000	400-3000
		LOW	50	10-100
		MED-LOW	100	
		MED.	250	100-500
5 LOGGERHEAD SHRIKE (N=22) Note: applies to <i>L. l. excubitorides</i> and <i>L. l. migrans</i> in Manitoba only	May 1 - Aug 15 (active nests)	MED-HIGH	250	
		HIGH	400	100-500
		LOW	50	10-100
		MED-LOW	100	
6 LONG-BILLED CURLEW (N=5)	Apr 15 - July 15	MED.	200	100-200
		MED-HIGH	200	
		HIGH	200	100-200
		LOW	100	100
7 MOUNTAIN PLOVER (N=2)	May 1 - July 31	MED-LOW	300	
		MED.	400	200-500
		MED-HIGH	500	
		HIGH	500	200-750

AVIFAUNA
SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	ACTIVITY	SETBACK (METERS)	RANGE (METERS)
8 PEREGRINE FALCON (N=26)	Apr 1 - Aug 15	LOW	300	100-500
		MED-LOW	400	
		MED.	500	500-2000
		MED-HIGH	750	
		HIGH	1000	500-2000
9 PIPING PLOVER (N=16)	May 1 - July 31 (nesting, brood rearing)	LOW	200	100-500
		MED-LOW	300	
		MED.	400	200-500
		MED-HIGH	500	
		HIGH	600	400-1000
	Aug 1 - Sept 30 (dispersal, migration)	LOW	100	100
		MED-LOW	100	
		MED.	200	200
		MED-HIGH	400	
		HIGH	600	800
10 RED-HEADED WOODPECKER (N=2)	Apr 15 - June 30	LOW	0	0
		MED-LOW	50	
		MED.	100	100
		MED-HIGH	100	
		HIGH	100	100
11 ROSS' GULL (N=0)	NONE SUGGESTED			
12 SAGE GROUSE (N=20)	Mar 1 - July 15 (leks)	LOW	500	200-500
		MED-LOW	750	
		MEDIUM	1000	500-3200
		MED-HIGH	1000	
		HIGH	1000	1000-3200
	Apr 15 - June 15 (nests)	LOW	200	200
		MED-LOW	250	
		MEDIUM	300	
		MED-HIGH	400	
		HIGH	500	500
	July 16 -Feb 29 (leks)	LOW	100	
		MED-LOW	500	
		MEDIUM	1000	
		MED-HIGH	1000	
		HIGH	1000	1000-3200

AVIFAUNA
SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	ACTIVITY	SETBACK (METERS)	RANGE (METERS)
13 SAGE THRASHER (N=1)	May 15 - June 30	LOW	100	100
		MED-LOW	100	
		MED.	200	200
		MED-HIGH	250	
		HIGH	200	200
14 SHORT-EARED OWL (N=8)	Mar 25 - Aug 1	LOW	100	100-200
		MED-LOW	200	
		MED.	300	100-500
		MED-HIGH	400	
		HIGH	500	100-800
15 SPRAGUE'S PIPIT (N=8)	Apr 21 - Aug 31	LOW	50	0-100
		MED-LOW	100	
		MED.	200	50-250
		MED-HIGH	200	
		HIGH	250	100-400
16 WHOOPING CRANE (N=12)	May 1 - Aug 15	LOW	500	100-1000
	Sept 15 - Nov 1 (staging areas)	MED-LOW	1000	
		MED.	1000	1000
		MED-HIGH	1000	
		HIGH	1000	1000
17 YELLOW RAIL (N=4)	May 1 - July 15	LOW	100	0-100
		MED-LOW	100	
		MED.	150	100-200
		MED-HIGH	250	
		HIGH	350	200-350

MAMMALS
SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	ACTIVITY	SETBACK (METERS)	RANGE (METERS)
1 BLACK-TAILED PRAIRIE DOG (N=2)	YEAR ROUND	LOW	0	0-100
		MED-LOW	125	
		MED.	250	0-500
		MED-HIGH	350	
		HIGH	500	0-1000
2 GREY FOX (N=0)	NONE SUGGESTED			
3 GRIZZLY BEAR	REFER TO LOCAL MANAGEMENT PLANS AND/OR EXISTING GUIDELINES			
4 ORD'S KANGAROO RAT (N=4)	Apr 1 - Aug 15 (breeding)	LOW	50	0-50
		MED-LOW	100	
		MED.	250	200-250
		MED-HIGH	250	250
		HIGH	500	200-750
	Aug 16 - Nov 15 (pre-winter)	LOW	50	50
		MED-LOW	250	
		MED.	500	500
		MED-HIGH	500	
		HIGH	500	1000
	Nov 16 - Mar 31 (winter)	LOW	50	50
		MED-LOW	100	
		MED.	250	250
		MED-HIGH	250	250
		HIGH	500	750
	5 POLAR BEAR	REFER TO EXISTING ENVIRONMENTAL IMPACT ASSESSMENTS		
6 SWIFT FOX (N=9)	Feb 15 - Aug 31 (breeding, rearing, emergence)	LOW	500	500
		MED-LOW	500	
		MED.	500	500-1000
		MED-HIGH	500	
		HIGH	2000	2000
	Sep 1 -Feb 14 (winter)	LOW	100	100
		MED-LOW	250	
		MED.	500	500
		MED-HIGH	500	
		HIGH	2000	2000

MAMMALS
SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	ACTIVITY	SETBACK (METERS)	RANGE (METERS)
7 WOLVERINE (N=3)	YEAR ROUND (dens)	LOW	0	0
		MED-LOW	100	
		MED.	250	
		MED-HIGH	250	
		HIGH	500	500
8 WOOD BISON (N=10)	Apr 1 - Sept 1 (calving, rut grounds)	LOW	0	0
		MED-LOW	0	
		MED.	0	0
		MED-HIGH	500	
		HIGH	1000	1000
	Mar 1 - Apr 15 (winter range)	LOW	500	500
		MED-LOW	500	
		MED.	500	500
		MED-HIGH	750	
		HIGH	1000	1000
9 WOODLAND CARIBOU	REFER TO LOCAL MANAGEMENT PLANS AND/OR EXISTING GUIDELINES			

**HERPTILES
SETBACK DISTANCES AND CRITICAL TIMING**

SPECIES	TIMING	ACTIVITY	SETBACK (METERS)	RANGE (METERS)
1 EASTERN SHORT- HORNED LIZARD (N=5)	Mar 15 - Nov 15	LOW	50	0-100
		MED-LOW	100	
		MED.	200	0-200
		MED-HIGH	200	
		HIGH	200	0-200
2 EASTERN YELLOW- BELLIED RACER (N=3)	YEAR ROUND	LOW	100	100
		MED-LOW	150	
		MED.	200	200
		MED-HIGH	500	
		HIGH	1000	200-2000
3 GREAT PLAINS TOAD (N=5)	YEAR ROUND	LOW	10	0-100
		MED-LOW	200	
		MED.	400	100-1000
		MED-HIGH	500	
		HIGH	500	100-1000
4 NORTHERN LEOPARD FROG (N=10)	Apr 1 - Oct 31 (breeding & dispersal, pre-winter)	LOW	10	0-50
		MED-LOW	100	
		MED.	200	100-500
		MED-HIGH	350	
		HIGH	500	100-1000
5 NORTHERN PRAIRIE SKINK (N=0)	NONE SUGGESTED			

AVIFAUNA

RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	LEVEL	RATIONALE
BURROWING OWL (N=40)	Apr 1 - July 15 (nestling, fledgling)	LOW	will react to disturbance
		MED-LOW	
		MED.	noise, people, losing part of home range
		MED-HIGH	
	July 16 - Oct 15 (dispersal, pre-migration)	HIGH	90% of owl activity is within 600 m, safety factor, same setback as
		LOW	will react to disturbance
		MED-LOW	
		MED.	may affect future nest site selection
		MED-HIGH	
Oct 16 - Mar 31 (winter)	HIGH	90% of owl activity is within 600 m, safety factor, same setback as	
	LOW	avoid destruction of burrow	
	MED-LOW		
	MED.	buffer	
ERRUGINOUS HAWK (N=7)	Mar 15 - July 15	MED-HIGH	
		HIGH	90% of owl activity is within 600 m, safety factor, same setback as
		LOW	weather could affect time off nest, will respond at 400 m with young
		MED-LOW	
		MED.	extreme sensitivity, interrupt brooding, breeding, desertion
RUSTY BLACKBIRD (N=7)	Mar 15 - July 15	MED-HIGH	
		HIGH	interrupt brooding, breeding, affect future nest site selection
		LOW	
		MED-LOW	
MOURNING DOVE (N=0)	NONE SUGGESTED		
EAST BITTERN (N=0)	NONE SUGGESTED		
LOGGERHEAD SHRIKE (N=22)	May 1 - Aug 15 (Active Nests)	LOW	minimize disturbance, are somewhat tolerant
		MED-LOW	
		MED.	concern about habitat integrity and foraging habitat
		MED-HIGH	
		HIGH	concern about habitat integrity and foraging habitat
LONG-BILLED CURLEW (N=5)	Apr 15 - July 15	LOW	aggressive territorial displays
		MED-LOW	
		MED.	avoid nesting disruption
		MED-HIGH	
		HIGH	noise, movement may interfere with nesting
MOUNTAIN PLOVER (N=2)	May 1 - July 31	LOW	avoid nesting disruption
		MED-LOW	
		MED.	more buffer, predators, avoid nesting disruption
		MED-HIGH	
		HIGH	more buffer, unknown effects of roads, traffic, attract raptors

AVIFAUNA

RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	LEVEL	RATIONALE
8 PEREGRINE FALCON (N=26)	Apr 1 - Aug 15	LOW	reduce disturbance, female may "throw" eggs
		MED-LOW	
		MED.	lack of incubation, loss of eggs, feeding, no brooding
		MED-HIGH	
9 PIPING PLOVER (N=16)	May 1 - July 31 (nesting, brood rearing)	LOW	birds will react at 100-150m
		MED-LOW	
		MED.	minimize nest desertion, predation, rare globally
		MED-HIGH	
	Aug 1 - Sept 30 (dispersal, migration)	LOW	maintain habitat
		MED-LOW	
		MED.	concern about permanent habitat loss
		HIGH	concern about permanent habitat loss
10 RED-HEADED WOODPECKER (N=2)	Apr 15 - June 30	LOW	
		MED-LOW	
		MED.	avoid desertion
		MED-HIGH	
11 ROSS' GULL (N=0)	NONE SUGGESTED	LOW	
		MED-LOW	
		MED.	
		MED-HIGH	
12 SAGE GROUSE (N=20)	Mar 1 - July 15 (leks)	LOW	concern about disturbing congregating birds
		MED-LOW	
		MEDIUM	may interfere with lek behaviors
		MED-HIGH	
	Apr 15 - June 15 (nests)	LOW	
		MED-LOW	
		MEDIUM	
		MED-HIGH	
	July 16 - Feb 29 (leks)	LOW	no surface disturbance within setback
		MED-LOW	
		MEDIUM	no surface disturbance within setback
		MED-HIGH	
		HIGH	predation, auditory, mortality

AVIFAUNA

RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	LEVEL	RATIONALE
SAGE THRASHER (N=1)	May 15 - June 30	LOW	minimize disturbance, are somewhat tolerant
		MED-LOW	
		MED.	concern about habitat integrity and foraging habitat
		MED-HIGH	
		HIGH	concern about habitat integrity and foraging habitat
SHORT-EARED OWL (N=8)	Mar 25 - Aug 1	LOW	fairly tolerant, reduce chance of disrupting nesting
		MED-LOW	
		MED.	minimize nest disturbance, noise and vibration
		MED-HIGH	
		HIGH	road mortality, protection of nesting areas
SPRAGUE'S PIPIT (N=8)	Apr 21 - Aug 31	LOW	prevent disturbance during nesting
		MED-LOW	
		MED.	maintain integrity of nesting territory, auditory disturbance
		MED-HIGH	
		HIGH	minimize fragmentation, cowbird parasitism, predators
WHOOPIING CRANE (N=12)	May 1 - Aug 15	LOW	sensitive to visual disturbance
	Sept 15 - Nov 1 (staging areas)	MED-LOW	
		MED.	shy sensitive birds found in only a few areas
		MED-HIGH	
		HIGH	sensitive to visual disturbance
YELLOW RAIL (N=4)	May 1 - July 15	LOW	
		MED-LOW	
		MED.	disturbance and buffer
		MED-HIGH	
		HIGH	disturbance and buffer, may interfere with call

MAMMALS**RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING**

SPECIES	TIMING	LEVEL	RATIONALE
1 BLACK-TAILED PRAIRIE DOG (N=2)	YEAR ROUND	LOW MED-LOW MED. MED-HIGH HIGH	
2 GREY FOX (N=0)	NONE SUGGESTED		
3 GRIZZLY BEAR	REFER TO LOCAL MANAGEMENT PLANS AND/OR EXISTING GUIDELINES		
4 ORD'S KANGAROO RAT (N=4)	Apr 1 - Aug 15 (breeding)	LOW	avoid damage to burrow system, daytime activities only
		MED-LOW	
		MED.	concern about abandonment, loss of food caches, minimize light
		MED-HIGH	concern about mortality, predators, parasites
	Aug 16 - Nov 15 (pre-winter)	LOW	avoid damage to burrow system, daytime activities only
		MED-LOW	
		MED.	critical to over-winter survival
	Nov 16 - Mar 31 (winter)	MED-HIGH	critical to over-winter survival
		HIGH	
LOW		avoid damage to burrow system, not limited to daytime activities	
5 POLAR BEAR	REFER TO EXISTING ENVIRONMENTAL IMPACT ASSESSMENTS	MED-LOW	
		MED.	unknown effects of auditory, underground vibrations
		MED-HIGH	concern about mortality, predators, parasites
		HIGH	could prevent above ground foraging, minimize light
6 SWIFT FOX (N=9)	Feb 15 - Aug 31 (breeding, rearing, emergence)	LOW	correlation between disturbance and lower productivity
		MED-LOW	
		MED.	correlation between disturbance and lower productivity
		MED-HIGH	
	Sep 1 -Feb 14 (winter)	HIGH	concern about mortality, cumulative effects
		LOW	
		MED-LOW	
		MED.	
		MED-HIGH	
		HIGH	

MAMMALS

RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING

SPECIES	TIMING	LEVEL	RATIONALE
WOLVERINE (N=3)	YEAR ROUND (dens)	LOW MED-LOW MED. MED-HIGH HIGH	will use roads and seismic lines
WOOD BISON (N=10)	Apr 1 - Sept 1 (calving, rut grounds)	LOW MED-LOW MED. MED-HIGH HIGH	animals will disperse animals may tolerate
	Mar 1 - Apr 15 (winter range)	LOW MED-LOW MED. MED-HIGH HIGH	poor body condition, restricted locomotion poor body condition, restricted locomotion poor body condition, restricted locomotion
WOODLAND CARIBOU	REFER TO LOCAL MANAGEMENT PLANS AND/OR EXISTING GUIDELINES		

HERPTILES**RATIONALE FOR SETBACK DISTANCES AND CRITICAL TIMING**

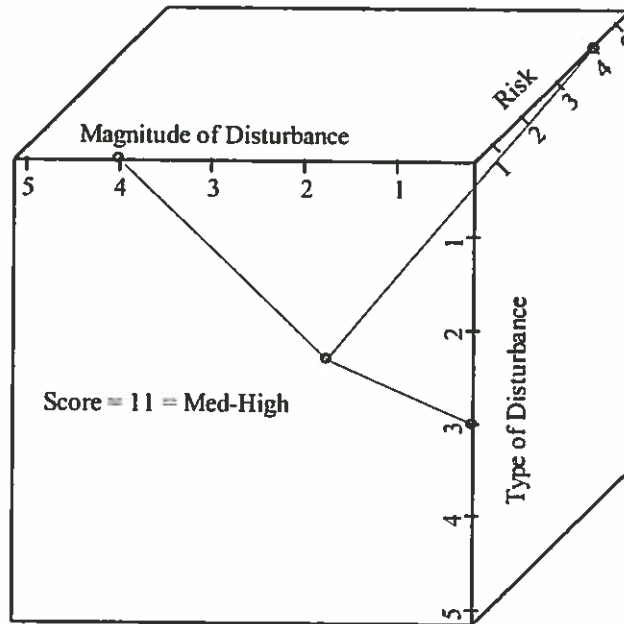
SPECIES	TIMING	LEVEL	RATIONALE
1 EASTERN SHORT-HORNED LIZARD (N=5)	Mar 15 - Nov 15	LOW	concern about quads and vehicles
		MED-LOW	
		MED.	movements beyond rims and ravines
		MED-HIGH	
HIGH	no activity on breeding areas		
2 EASTERN YELLOW-BELLIED RACER (N=3)	YEAR ROUND	LOW	reduce mortal encounters, no disturbance during critical times
		MED-LOW	
		MED.	
		MED-HIGH	
HIGH	prevent den collapse, reduce road mortality		
3 GREAT PLAINS TOAD (N=5)	YEAR ROUND	LOW	not active during day
		MED-LOW	
		MED.	sound may interfere with breeding, reduce road mortalities
		MED-HIGH	
HIGH	contamination from runoff, reduce road mortalities		
4 NORTHERN LEOPARD FROG (N=10)	Apr 1 - Oct 31 (breeding & dispersal pre-winter)	LOW	calling during day
		MED-LOW	
		MED.	activity may cause calling to cease, identify movement corridors
		MED-HIGH	
HIGH	road mortality, no instream effects that will affect flow needs		
5 NORTHERN PRAIRIE SKINK (N=0)	NONE SUGGESTED		

Consider the following scenario: ABC Oil and Gas is planning to drill and construct associated facilities for a deep sweet oil well in known burrowing owl habitat between **May 15-June 7** and want to know how far away they need to be from a burrowing owl nest.

1) Look up values in Disturbance Values for Petroleum Activities:

TYPE OF DISTURBANCE	Well site	3
MAGNITUDE OF DISTURBANCE	Oil well and Associated	4
RISK	Oil - Sweet	4

2) Plot as in diagram:



3) Look up Numerical Value Assigned to Categories (below) $4 + 4 + 3 = \mathbf{11}$ = MED-HIGH value.

NUMERICAL VALUES ASSIGNED TO CATEGORIES	
LOW	1-3
MED-LOW	4-6
MEDIUM	7-9
MED-HIGH	10-12
HIGH	13-15

4) Look up MED-HIGH in SETBACK DISTANCES AND CRITICAL TIMES – AVIFAUNA (Appendix E-1) for **burrowing owls** within the proposed dates = **setback of 400 m.**

5) Assess existing land-use/above ground structures and topography in the area in consultation with the proper authority to determine if the setback or timing can be relaxed.

APPENDIX H - CONTACT LIST

March 2000

AVIFAUNA

BURROWING OWL

1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Banasch, Ursula C, RTM	Phone: 780-951-8678 Fax: 780-495-2615 ursula.banash@ec.gc.ca	Environment Canada Non-Game Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
3	Brechtel, Steve C, RTM	Phone: 780-422-9535 Fax: 780-422-9685 steve.brechtel@gov.ab.ca	Alberta Environment Natural Resources Services Wildlife Management Div.	7th Flr, O.S. Longman Building 6909-116 Street Edmonton AB T6H 4P2
4	Bristol, Bill C, RTM	Phone: 306-780-8155 Fax: 306-780-8229 bristolb@em.agr.ca	Prairie Farm Rehabilitation Agency	#603, 1800 Hamilton Street Regina SK S4P 4L2
5	Brodie, Dawn C, RTM	Phone: 250-573-3265 Fax: 250-573-2406 dbrodie@kamloopswildlife.com	Kamloops Wildlife Park	Box 698 Kamloops BC V2C 5L7
6	Chutter, Myke C, RTM	Phone: 250-387-9797 Fax: 250-356-9145 myke.chutter@gems7.gov.bc.ca	BC Environment Ministry of Environment Lands and Parks	Wildlife Branch Box 9374 Stn Prov Govt Victoria BC V8M 9M4
7	Court, Gord C, RTM	Phone: 780-422-9536 Fax: 780-422-9685 gcourt@env.gov.ab.ca	Alberta Environment Natural Resources Service Wildlife Management Div.	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
8	DeSmet, Ken C, I, RTM	Phone: 204-522-3719 Fax: 204-522-3525 kdesmet@gov.mb.ca	Manitoba Department of Natural Resources	Box 520 Melita, MB R0M 1L0
9	Duxbury, Jason C, RTM	Phone: 780-433-5790 jduxbury@gpu.srv.ualberta.ca	University of Alberta	1142 Saddleback Rd. Edmonton AB T6J 4Z4
10	Fargey, Pat C, RTM	Phone: 306-298-2166 Fax: 306-298-2042 pat.fargey@pch.gc.ca	Canadian Heritage Parks Canada	Grasslands National Park Box 150 Val Marie SK S0N 2T0
11	Felski, Heather C, RTM	Phone: 306-692-1765 felski@hotmail.com	Saskatchewan Burrowing Owl Interpretive Centre	Box 1467 250 Thatcher Drive East Moose Jaw SK S6H 4R3
12	Fyfe, Richard C, RTM	Phone: 780-998-3097 fyferl@telusplanet.net	Wildlife Preservation Trust Canada	Box 3263 Ft. Saskatchewan AB T8L 2T2
13	Harris, Wayne C, I, RTM	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
14	Haug, Betsy C, I, RTM	Phone: 306-373-2213 Fax: 306-975-4089 andrew.didiuk@ec.gc.ca		314 Egbert Avenue Saskatoon SK S7N 0X4
15	Hauser, Julie C, RTM	Phone: 780-437-2342 Fax: 780-438-6872 office@afga.org	Alberta Fish and Game Association	Operation Grassland Community 6924 -104 St Edmonton AB T6H 2L7
16	Holroyd, Dr. Geoff C, RTM	Phone: 780-951-8689 Fax: 780-495-2615 geoffrey.holroyd@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
17	Leupin, Ernest C, RTM	Phone: 250-392-2358 Fax: 250-392-1117 leupin@direct.ca	B.C. Environment	1259 Dalhousie Drive Kamloops BC V2C 5Z5
18	Low, Dave C, RTM	Phone: 250-371-6243 Fax: 250-828-4000 dave.low@gemsl.gov.bc.ca	B.C. Environment	1259 Dalhousie Drive Kamloops BC V2C 5Z5
19	Martin, Rick C, RTM	Phone: 403-362-1413 Fax: 403-362-6206 wildlife@eidnet.org	Eastern Irrigation District	Bag 8 Brooks AB T1R 1B2

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

BURROWING OWL . . . continued

AVIFAUNA

20	Moore, Patrick C, RTM	Phone: 306-780-9273 Fax: 306-780-9263 pmoore@unibase.com	Nature Saskatchewan	Room 206, 1860 Lorne Street Regina SK S4P 2L7
21	Poulin, Ray C, RTM	Phone: 306-545-2834 poulinr@uregina.ca	Biology Department	University of Regina Regina SK S4S 0A2
22	Russell, Reg C, I, RTM	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
23	Scalise, Karyn C, RTM	Phone: 306-787-2889 Fax: 306-787-0737 karyn.scalise.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Wildlife Branch Rm 436, 3211 Albert Street Regina SK S4S 5W6
24	Schmutz, Josef C, I, RTM	Phone: 306-966-2410 Fax: 306-966-8894 schmutzj@duke.usask.ca	Centre for Studies in Agriculture, Law and the Environment	University of Saskatchewan 51 Campus Drive Saskatoon SK S7N 5A8
25	Scobie, Dave RTM	Phone: 403-793-8500 Fax: 403-793-8685 avocet@br.monarch.net	Avocet Environmental Inc.	Box 1644 Brooks AB T1R 1C5
26	Shyry, Darcey C, RTM	Phone: 780-435-2335 darceyshyry@hotmail.com	University of Alberta	751 General Services Bldg Edmonton AB T6G 2H1
27	Sissons, Robert C, RTM	Phone: 780-624-1544 rsissons@ualberta.ca	University of Alberta	11019 - 99 Street #3 Peace River AB
28	Skeel, Margaret C, RTM	Phone: 306-780-9273 Fax: 306-780-9263 nature.sask@unibase.com	Nature Saskatchewan	Room 206, 1860 Lorne Street Regina SK S4P 2L7
29	Skilnick, Joann C, RTM	Phone: 403-893-2291 Fax: 403-893-2291	Saskatchewan Environment and Resource Management	Box 12 Elkwater AB T0J 1C0
30	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon, SK S7N 0X4
31	Strankman, Peggy C, RTM	Phone: 403-275-8558 403-274-5686 strankmanp@cattle.ca	Canadian Cattlemen's Association	Suite 215, 6715 - 8th St NE Calgary AB T2E 7H7
32	Taggart, John C, I	Phone: 403-528-5207 Fax: 403-528-5212 john.r.taggart@gov.ab.ca	Alberta Environment Natural Resources Service	Wildlife Management Division Room 301, Provincial Building Medicine Hat AB T1A 0G7
33	Todd, Danielle C, RTM	Phone: 306-545-2834 todd111L@uregina.ca	Biology Department	University of Regina Regina SK S4S 0A2
34	Trefry, Helen C, RTM	Phone: 780-951-8693 Fax: 780-495-2615 helen.trefry@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
35	Veitch, Lorne C, RTM	Phone: 306-778-8300 Fax: 306-778-8604 lveitch@agr.gov.sk.ca	Saskatchewan Agriculture and Food Lands Branch	#1, 1081 Central Ave. N Box 5000 Swift Current SK S9H 4Z1
36	Watson, Rob C, RTM	Phone: 306-298-2166 Fax: 306-298-2045 robert.watson@pch.gc.ca	Grasslands National Park	Box 150 Val Marie SK S0N 2T0
37	Weir, Colin C, RTM	Phone: 403-345-4262 cweir@telusplanet.net	Coaldale Birds of Prey Center	Box 1150 Coaldale AB T1M 1M9
38	Wellicome, Dr. Troy C, RTM	Phone: 780-951-8671 Fax: 780-495-2615 troy.wellicome@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 210, 4999 - 98 Ave Edmonton Alberta T6B 2X3
39	Williams, Elaine C, RTM	Phone: 519-836-9314 Fax: 519-836-8840 elaine.williams@sympatico.ca	Wildlife Preservation Trust Canada	120 King Street Guelph ON N1E 4P8
40	Wiltse, Earl C, RTM	Phone: 306-787-2889 earl.wiltse.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	3211 Albert Street Regina SK S4S 5W6

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

AVIFAUNA

FERRUGINOUS HAWK

1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Court, Gord C, I	Phone: 780-422-9536 Fax: 780-422-9685 gcourt@env.gov.ab.ca	Alberta Environment Natural Resources Service Wildlife Management Div.	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
3	DeSmet, Ken C, I	Phone: 204-522-3719 Fax: 204-522-3525 kdesmet@gov.mb.ca	Manitoba Department of Natural Resources	Box 520 Melita, MB R0M 1L0
4	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
5	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
6	Schmutz, Josef C, I	Phone: 306-966-2410 Fax: 306-966-8894 schmutzj@duke.usask.ca	Centre for Studies in Agriculture, Law and the Environment	University of Saskatchewan 51 Campus Drive Saskatoon SK S7N 5A8
7	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4

LOGGERHEAD SHRIKE

1	Bird, David C, RTM	Phone: 514-398-7760 Fax: 514-398-7990 bird@nrs.mcgill.ca	MacDonald College Avian Science and Conservation Centre	McGill University 21 - 111 Lakeshore Road St. Anne de Bellevue PQ H9X 3V9
2	Bjorge, Ron C, I, RTM	Phone: 403-340-7699 Fax: 403-340-5575 ron.bjorge@gov.ab.ca	Alberta Environment Natural Resources Service	Suite 404, First Red Deer Place 4911 - 51 St. Red Deer AB T4N 6V4
3	Bradstreet, Michael C, RTM	Phone: 519-586-3531 Fax: 519-586-3532 mswb@nornet.on.ca	Long Point Bird Observatory	Box 160 Port Rowan ON N0E 1M0
4	Cadman, Michael C, RTM	Phone: 519-826-2094 Fax: 519-826-2113 mike.cadman@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 75 Farquhar St. Guelph ON N1H 3N4
5	Chabot, Amy C, RTM	Phone: 603-279-3216 Fax: 603-476-5497 h.vogel@hotmail.com		Box F Holderness NH 3245 U.S.A.
6	Collister, Doug C, RTM	Phone: 403-240-1635 Fax: 403-246-2697 collis@telusplanet.net	Ursus Ecosystem Management	3426 Lane Crescent SW Calgary AB T3E 5X2
7	Cuddy, Dawn C, RTM	Phone: 613-258-8453 Fax: 613-258-3920 dawn.cuddy@mnr.gov.on.ca	Ministry of Natural Resources	Bag 2002 Kemptville ON K0G 1J0
8	DeSmet, Ken C, I, RTM	Phone: 204-522-3719 Fax: 204-522-3525 kdesmet@gov.mb.ca	Manitoba Department of Natural Resources	Box 520 Melita MB R0M 1L0
9	Faminow, Sheryl C	Phone: 403-271-6822 Fax: 403-271-6778 ghostpine@cadvision.com	Ghostpine Environmental Services Ltd.	608 Willacy Drive Calgary AB T2J 2C9
10	Harris, Wayne C, I, RTM	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
11	Hauser, Julie C, RTM	Phone: 780-437-2342 Fax: 780-438-6872 office@afga.org	Alberta Fish and Game Association	Operation Grassland Community 6924 -104 St Edmonton AB T6H 2L7

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX H - CONTACT LIST

March 2000

LOGGERHEAD SHRIKE . . . continued

AVIFAUNA

12	Johns, Brian C, RTM	Phone: 306-975-4109 Fax: 306-975-4089 brian.johns@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
13	Laporte, Pierre C, RTM	Phone: 418-649-6121 Fax: 418-649-6475 pierre.laport@ec.gc.ca	Service Canadien de la Faune	1141, route de l'Eglise C.P. 10, 100 - 93 etage Sainte-Foy PQ G1V 4H5
14	Mason, Tom C	Phone: 416-392-5970 tmason@zoo.metrotor.on.ca	Metro Toronto Zoo	361A Old Finch Avenue Scarborough ON M1B 5K7
15	Norris, Todd C	tod.norris@mnr.gov.on.ca	Ontario Ministry of Natural Resources	Peterborough District, ON
16	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
17	Scalise, Karyn C, RTM	Phone: 306-787-2889 Fax: 306-787-0737 karyn.scalise.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Wildlife Branch Rm 436, 3211 Albert Street Regina SK S4S 5W6
18	Schmutz, Josef C, I	Phone: 306-966-2410 Fax: 306-966-8894 schmutzj@duke.usask.ca	Centre for Studies in Agriculture, Law and the Environment	University of Saskatchewan 51 Campus Drive Saskatoon SK S7N 5A8
19	Shutt, Laird C, RTM	Phone: 819-953-4098 Fax: 819-953-6612 laird.shutt@ec.gc.ca	National Wildlife Research Centre	100 Gamelin Boulevard Hull QC K1A 0H3
20	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
21	Wenting, Robert C, RTM	Phone: 519-826-2100 Fax: 519-826-2108 robert.wenting@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 75 Farquhar St. Guelph ON N1H 3N4
22	Wiltse, Earl C, RTM	Phone: 306-787-2889 earl.wiltse.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	3211 Albert Street Regina SK S4S 5W6

LONG-BILLED CURLEW

1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Foster, Janna C	Phone: 306-585-4268 fosterj@uregina.ca	Department of Biology	University of Regina Regina SK S4S 0A2
3	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
4	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
5	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4

MOUNTAIN PLOVER

1	Goossen, Paul C, I	Phone: 780-951-8679 Fax: 780-495-2615 paul.goossen@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

AVIFAUNA

PEREGRINE FALCON

1	Amirault, Diane C, RTM	Phone: 506-364-5062 Fax: 506-364-5062 diane.amirault@ec.gc.ca	Canadian Wildlife Service Atlantic Region	Box 6227 17 Waterfowl Lane Sackville NB E4L 1G6
2	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
3	Armstrong, Ted C, RTM	Phone: 807-475-1127 Fax: 807-473-3023 ted.armstrong@mnr.gov.on.ca	Ontario Ministry of Natural Resource	Suite 221, 435 South James Street Thunder Bay ON P7E 6S8
4	Banasch, Ursula C, I, RTM	Phone: 780-951-8678 Fax: 780-495-2615 ursula.banasch@ec.gc.ca	Environment Canada Non-Game Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
5	Bird, David C, RTM	Phone: 514-398-7760 Fax: 514-398-7990 bird@nrs.mcgill.ca	MacDonald College Avian Science and Conservation Centre	McGill University 21 - 111 Lakeshore Road St. Anne de Bellevue QC H9X 3V9
6	Bjorge, Ron C, I, RTM	Phone: 403-340-7699 Fax: 403-340-5575 ron.bjorge@gov.ab.ca	Alberta Environment Natural Resources Service	Suite 404, First Red Deer Place 4911 - 51 Street Red Deer AB T4N 6V4
7	Bradley, Mark C, RTM	Phone: 867-872-7932 Fax: 867-872-3910 mark_bradley@pch.gc.ca	Parks Canada	Wood Buffalo National Park Box 750 Fort Smith NT X0E 0P0
8	Brazil, Joe C, RTM	Phone: 709-729-3773 Fax: 709-729-6629 joebrazil@mail.gov.nf.ca	Newfoundland Department of Natural Resources Wildlife Division	Building 810 Pleasantville Box 8700 St John's NF A1B 4J6
9	Brechtel, Steve C, RTM	Phone: 780-422-9535 Fax: 780-422-9685 steve.brechtel@gov.ab.ca	Alberta Environment Natural Resources Service Wildlife Management Div.	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
10	Carriere, Suzanne C, RTM	Phone: 867-920-6327 Fax: 867-873-0297 suzanne.carriere@gov.nt.ca	NWT Department of Resources, Wildlife and Fisheries Division	5 th Floor Scotia Centre 600, 5102 - 50 th Avenue Yellowknife NT
11	Chutter, Myke C, RTM	Phone: 250-387-9797 Fax: 250-356-9145 myke.chutter@gems7.gov.bc.ca	BC Environment Ministry of Environment, Lands and Parks	Wildlife Branch Box 9374 Stn Prov Govt Victoria BC V8M 9M4
12	Court, Gord C, I, RTM	Phone: 780-422-9536 Fax: 780-422-9685 gcourt@env.gov.ab.ca	Alberta Environment Natural Resources Service Wildlife Management Div.	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
13	Dauphine, Chuck C, RTM	Phone: 819-953-1429 Fax: 819-953-6283 chuck.dauphine@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service Head Office Ottawa ON K1A 0H3
14	Elderkin, Mark C, RTM	Phone: 902-679-6219 Fax: 902-679-6176 elderkmf@env.gov.ns.ca	Nova Scotia Department of Natural Resources	136 Exhibition Street Kentville NS B4N 3E5
15	Erikson, Gary C	Phone: 403-381-5281 Fax: 403-381-5723 gary.erikson@gov.ab.ca	Alberta Environment Natural Resources Service	Bag 3014 530 - 8 th Street Lethbridge AB T1J 2J8
16	Han, Siu-ling C, RTM	Phone: 867-979-5133 Fax: 867-979-6026/5920 shan@gov.nu.ca	Sustainable Development Wildlife and Environmental Protection	Box 1340 Iqaluit NT X0A 0H0
17	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
18	Hoefs, Manfred C, RTM	Phone: 867-667-5671 Fax: 867-393-6405 manfred.hoefs@gov.yk.ca	Yukon Department of Natural Resources	Box 2703 (R-5H) Whitehorse YT Y1A 2C6

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

PEREGRINE FALCON . . . continued

AVIFAUNA

19	Holroyd, Dr. Geoff C, RTM	Phone: 780-951-8689 Fax: 780-495-2615 geoffrey.holroyd@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
20	Koonz, Bill C, RTM	Phone: 204-945-6811 Fax: 204-945-3077 wkoonz@nr.gov.mb.ca	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
21	Laporte, Pierre C, RTM	Phone: 418-649-6121 Fax: 418-649-6475 pierre.laport@ec.gc.ca	Service Canadien de la Faune	1141, route de l'Eglise C.P. 10, 100-93 etage Sainte-Foy QC G1V 4H5
22	Lepage, Michel C, RTM	Phone: 418-521-3940 Fax: 418-646-6863 michel.lepage@mef.gouv.qc.ca	Faune et Parcs Quebec Direction de la faune et des habitats	Ediface Marie-Guyat, 11e etage 675 Boulevard Rene Levesque Quebec QC G1R 5V7
23	Longmuir, Ray C, RTM	Phone: 306-787-2464 Fax: 306-787-9544 ray.longmuir.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	3211 Albert Street Regina SK S4S 5W6
24	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
25	Shutt, Laird C, RTM	Phone: 819-953-4098 Fax: 819-953-6612 laird.shutt@ec.gc.ca	National Wildlife Research Center	100 Gamelin Boulevard Hull QC K1A 0H3
26	Taichel, Bruce C, I	Phone: 780-422-9534 Fax: 780-422-9685 bruce.treichel@gov.ab.ca	Alberta Environment Natural Resources Service Fish and Wildlife Division	7th Flr, O.S. Longman Building, 6909 - 116 Street Edmonton AB T6H 4P2
PIPING PLOVER				
1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Bjorge, Ron C, RTM	Phone: 403-340-7699 Fax: 403-340-5575 ron.bjorge@gov.ab.ca	Alberta Environment Natural Resources Service	Suite 404, First Red Deer Place 4911 - 51 Street Red Deer AB T4N 6V4
3	Goossen, Paul C, I, RTM	Phone: 780-951-8679 Fax: 780-495-2615 paul.goossen@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
4	Haig, Dr. Susan C, RTM	Phone: 541-750-7482 Fax: 541-758-7761 susan_haig@brd.usgs.gov	Oregon State University Forest and Rangeland Ecosystem Science	US Geological Survey 3200 SW Jefferson Way Corvallis OR 97331 U.S.A.
5	Harris, Wayne C, I, RTM	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
6	Hecht, Anne C, RTM	anne hecht@fws.gov	Fish and Wildlife Services	
7	Heyens, Leo RTM	Phone: 807-468-2546 Fax: 807-468-2736	Ontario Ministry of Natural Resources	810 Robertson Street Kenora ON P9N 3X9
8	Hofman, Ed C, I	Phone: 403-934-3422 Fax: 403-934-3433 ed.hofman@gov.ab.ca	Alberta Environment Natural Resources Service Brooks Mgmt Area	Bow Region 208A Ridge Road Strathmore AB T1P 1B6
9	Koonz, Bill C, RTM	Phone: 204-945-6811 Fax: 204-945-3077 wkoonz@nr.gov.mb.ca	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
10	Michaud, Isabelle C	Phone: 780-427-1248 Fax: 780-422-9685 isabelle.michaud@gov.ab.ca	Alberta Conservation Association	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

AVIFAUNA

... continued **PIPING PLOVER**

11	Morrison, Dr. Guy C, RTM	Phone: 819-997-6120 Fax: 819-953-6612 guy.morrison@ec.gc.ca	Canadian Wildlife Service National Wildlife Research Centre	100 Gamelin Boulevard Hull QC K1A 0H3
12	Phillips, Nell C, RTM	Phone: 605-224-8693 ext.32 Fax: 605-224-9974 nell_mcpPhillips@fws.gov	US Fish and Wildlife Service South Dakota Field Office	420 South Garfield Avenue Pierre SD 57501 U.S.A.
13	Prescott, Dr. Dave C	Phone: 780-427-4000 Fax: 780-422-6441 dprescot@ab-conservation.com	Alberta Conservation Association	Box 40027 Baker Centre Postal Outlet Edmonton AB T5J 4M9
14	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
15	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
16	Wiltse, Earl C, RTM	Phone: 306-787-2889 earl.wiltse.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	3211 Albert Street Regina SK S4S 5W6

SAGE GROUSE

1	Aldridge, Cam C, RTM	Phone: 306-585-4562 Fax: 306-585-4894 aldridge@uregina.ca	Biology Department	University of Regina 3737 Wascana Parkway Regina SK S4S 0A2
2	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
3	Brigham, Dr. Mark C, RTM	Phone: 306-585-4255 Fax: 306-585-4894 mark.brigham@uregina.ca	Department of Biology	University of Regina 3737 Wascana Parkway Regina SK S4S 0A2
4	Bristol, Bill C, RTM	Phone: 306-780-8155 Fax: 306-780-8229 bristolb@em.agr.ca	Prairie Farm Rehabilitation Agency	#603, 1800 Hamilton Street Regina SK S4P 4L2
5	Dickinson, Dawn C, RTM	Phone: 403-526-6443 mureynol@memlane.com	Grassland Naturalists	10 Clover Court SE Medicine Hat AB T1B 2G8
6	Eslinger, Dale C, RTM	Phone: 403-529-3680 Fax: 403-528-5212 dale.eslinger@gov.ab.ca	Alberta Environment Natural Resources Service	Room 301, Provincial Building 346 3rd Street SE Medicine Hat AB T1A 0G7
7	Fargey, Pat C, RTM	Phone: 306-298-2166 Fax: 306-298-2042 pat_fargey@pch.gc.ca	Canadian Heritage Parks Canada	Grasslands Natural Park Box 150 Val Marie SK S0N 2T0
8	Harris, Wayne C, I, RTM	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grasslands Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
9	Kroshus, Jim C, RTM	Phone: 306-693-9022 Fax: 306-693-4370 sask.wildlife@sk.sympatico.ca	Saskatchewan Wildlife Federation	444 River Street W. Moose Jaw SK S6H 6J6
10	Livingston, Tom C, RTM	Phone: 403-378-4701 Fax: 403-378-4730	Alberta Cattle Commission	Box 179 Duchess AB T0J 0Z0
11	Lungle, Ken C, RTM	Phone: 780-427-6612 Fax: 780-422-9557 ken.lungle@gov.ab.ca	Alberta Environment Natural Resources Service	Main Floor 9945 - 108 th Street Edmonton AB T5K 2G6
12	Lunn, Stu C, RTM	Phone: 403-268-7868 Fax: 403-290-2440 stuart_lunn@pancanadian.ca	PanCanadian	150 - 9 th Avenue SW Box 2850 Calgary AB T2P 2S5
13	McAdam, Sue C, RTM	Phone: 306-778-8489 Fax: 306-778-8212 sue.mcadam.erm@govmail.gov.sk.ca	Nature Saskatchewan	#3, 640 - 3 rd Avenue NE Swift Current SK S9H 2H5

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX H - CONTACT LIST

March 2000

SAGE GROUSE... continued

AVIFAUNA

14	Milner, Dennis C, RTM dennis.milner@agric.gov.ab.ca	Phone: 403-529-3718 Fax: 403-528-5213	Alberta Agriculture Public Land Management	Room 106, Provincial Building 346 - 3rd Street SE Medicine Hat AB T1A 0G7
15	Poirier, Thelma C, RTM	Phone: 306-266-4750 Fax: 306-266-4910	Saskatchewan Stock Growers	Box 70 Fir Mountain SK S0H 1P0
16	Russell, Reg C, I, RTM reg.russell@gov.ab.ca	Phone: 403-362-1201 Fax: 403-362-1295	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
17	Scalise, Karyn C, RTM karyn.scalise.erm@govmail.gov.sk.ca	Phone: 306-787-2889 Fax: 306-787-0737	Saskatchewan Environment and Resource Management Wildlife Branch	Rm 436, 3211 Albert Street Regina SK S4S 5W6
18	Scobie, Dave RTM avocet@br.monarch.net	Phone: 403-793-8500 Fax: 403-793-8685	Avocet Environmental Inc.	Box 1644 Brooks AB T1R 1C5
19	Taggart, John john.r.taggart@gov.ab.ca	Phone: 403-528-5207 Fax: 403-528-5212	Alberta Environment Natural Resources Service	Room 301, Provincial Building 346 - 3rd Street SE Medicine Hat AB T1A 0G7
20	Veitch, Lorne C, RTM lveitch@agr.gov.sk.ca	Phone: 306-778-8300 Fax: 306-778-8604	Saskatchewan Agriculture and Food Lands Branch	#1, 1081 Central Ave. N Box 5000 Swift Current SK S9H 4Z1

SHORT-EARED OWL

1	Court, Gord C, I gcourt@env.gov.ab.ca	Phone: 780-422-9536 Fax: 780-422-9685	Alberta Environment Natural Resources Service Wildlife Mgmt. Division	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
2	DeSmet, Ken C, I kdesmet@gov.mb.ca	Phone: 204-522-3719 Fax: 204-522-3525	Manitoba Department of Natural Resources	Box 520 Melita MB R0M 1L0
3	Harris, Wayne C, I wayne.harris.erm@govmail.gov.sk.ca	Phone: 306-778-8218 Fax: 306-778-8212	Saskatchewan Environment and Resource Management	Grasslands Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
4	Holt, Denver C owl@montana.com		Owl Research Institute Inc	Box 8335 Missoula MT 59807 U.S.A.
5	Koonz, Bill C, I wkoonz@nr.gov.mb.ca	Phone: 204-945-6811 Fax: 204-945-3077	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
	Mazur, Kurt C, I kmazur@nr.gov.mb.ca	Phone: 204-945-6816 Fax: 204-945-3077	Partners in Flight	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
16	Russell, Reg C, I reg.russell@gov.ab.ca	Phone: 403-362-1201 Fax: 403-362-1295	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
17	Smith, Alan C, I alan.smith@ec.gc.ca	Phone: 306-975-4091 Fax: 306-975-4089	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4

SPRAGUE'S PIPIT

1	Dale, Brenda C, I brenda.dale@ec.gc.ca	Phone: 403-951-8686 Fax: 403-495-2615	Environment Canada Non-Game Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
2	Davis, Stephen C, I sdavis@wetland.sk.ca	Phone: 306-787-0711 Fax: 306-787-0780	Saskatchewan Wetland Conservation Corporation	#101, 2022 Cornwall Street Regina SK S4P 2K5

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX H - CONTACT LIST

March 2000

AVIFAUNA

... continued SPRAGUE'S PIPIT

3	DeSmet, Ken C, I	Phone: 204-522-3719 Fax: 204-522-3525 kdesmet@gov.mb.ca	Manitoba Department of Natural Resources	Box 520 Melita MB R0M 1L0
4	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grasslands Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
5	Koonz, Bill C, I	Phone: 204-945-6811 Fax: 204-945-3077 wkoonz@nr.gov.mb.ca	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
6	Mazur, Kurt C, I	Phone: 204-945-6816 Fax: 204-945-3077 kmazur@nr.gov.mb.ca	Partners in Flight	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
7	Prescott, Dr. Dave C, I	Phone: 780-427-4000 Fax: 780-422-6441 dprescot@ab-conservation.com	Alberta Conservation Association	Box 40027 Baker Centre Postal Outlet Edmonton AB T5J 4M9
8	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8

WHOOPING CRANE

1	Archibald, George C, RTM	Phone: 608-356-9462 Fax: 608-356-9465 george@savingcranes.org	International Crane Foundation	East 11376 Shady Lane Road Baraboo WI 53913-447 U.S.A.
2	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada Environmental Conservation Branch	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
3	Bergeson, Doug C, RTM	Phone: 403-872-7900 Fax: 403-872-3910 doug_bergeson@pch.gc.ca	Parks Canada	Wood Buffalo National Park Box 750 Fort Smith NT X0E 0P0
4	Carriere, Suzanne C, RTM	Phone: 867-920-6327 Fax: 867-873-0297 suzanne_carriere@gov.nt.ca	NWT Department of Resources, Wildlife and Fisheries Division	5 th Floor Scotia Centre 600, 5102 50 th Avenue Yellowknife NT
5	Gee, George C, RTM	Phone: 301-497-5750 Fax: 301-497-5675 george_gee@usgs.gov	Patuxent Wildlife Research Center Biological Resources Division	National Biological Survey 12011 Beech Forest Road Laurel MD 20708-4041 U.S.A.
6	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grasslands Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
7	Johns, Brian C, RTM	Phone: 306-975-4109 Fax: 306-975-4089 brian.johns@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
8	Langenberg, Julie C, RTM	Phone: 608-266-3143 Fax: 608-267-7857 langj@dnr.state.wi.us	Wisconsin Department of Natural Resources	101 South Webster Street Box 7921 Madison WI 53707-7921 U.S.A.
9	Nesbitt, Steve C, RTM	Phone: 352-955-2230 Fax: 352-376-5359 nesbit@wrl.gfc.state.fl.us	Florida Fish and Wildlife Conservation Commission	Wildlife Research Laboratory 4005 South Main Street Gainesville FL 32601-9099 U.S.A.
10	Smith, Alan C, I	Phone: 306-975-4091 Fax: 306-975-4089 alan.smith@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
11	Stehn, Tom C, RTM	Phone: 361-286-3559/3533 Fax: 361-286-3722 tom.stehn@fws.gov	Arkansas National Wildlife Refuge	U.S. Fish and Wildlife Service Box 100 Autwell TX 77950 U.S.A.
12	Tarry, Greg C, RTM	Phone: 403-232-9337 Fax: 403-237-7582 gregt@calgaryzoo.ab.ca	Calgary Zoo Calgary Zoological Society	Box 3036 Station "B" Calgary AB T2M 4R8

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX H - CONTACT LIST

March 2000

YELLOW RAIL

AVIFAUNA

1	Chranowski, Dan C	Phone: 204-726-6450 dchranowski@nr.gov.mb.ca	Manitoba Conservation	Brandon MB
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grasslands Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
3	Koonz, Bill C, I	Phone: 204-945-6811 Fax: 204-945-3077 wkoonz@nr.gov.mb.ca	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
4	Mazur, Kurt C, I	Phone: 204-945-6816 Fax: 204-945-3077 kmazur@nr.gov.mb.ca	Partners in Flight	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3

MAMMALS

BLACK TAILED PRAIRIE DOG

1	Gummer, Dave C, I	Phone: 306-966-4452 Fax: 306-966-4461 david.gummer@usask.ca	Biology Department	University of Saskatchewan 112 Science Place Saskatoon SK S7N 5E2
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3

ORD'S KANGAROO RAT

1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton Alberta T6B 2X3
2	Gummer, Dave C, I	Phone: 306-966-4452 Fax: 306-966-4461 david.gummer@usask.ca	Biology Department	University of Saskatchewan 112 Science Place Saskatoon SK S7N 5E2
3	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
4	Reynolds, Hal C, I	Phone: 780-951-8702 Fax: 780-495-2615 hal.reynolds@ec.gc.ca	Environment Canada Resource Conservation Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3

SWIFT FOX

1	Armbruster, Harry C, I	Phone: 780-435-7295 Fax: 780-495-2615 harry.armbruster@ec.gc.ca	Environment Canada	CWS Western and Northern Region Room 210, 4999 - 98 Ave Edmonton Alberta T6B 2X3
2	Brechtel, Steve C, I, RTM	Phone: 780-422-9535 Fax: 780-422-9685 steve.brechtel@gov.ab.ca	Alberta Environment Natural Resources Services Wildlife Mgmt Division	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
3	Carbyn, Dr. Lu C, I, RTM	Phone: 780-435-7357 Fax: 403-435-7259 lu.carbyn@ec.gc.ca	c/o Environment Canada University of Alberta	CWS Prairie and Northern Region Room 210, 4999 - 98 Ave Edmonton AB T6B 2X3
4	Eslinger, Dale C, I, RTM	Phone: 403-529-3680 Fax: 403-528-5212 dale.eslinger@gov.ab.ca	Alberta Environment Natural Resource Service	Room 301, Provincial Building 346 - 3rd Street SE Medicine Hat AB T1A 0G7
5	Fargey, Pat C, I, RTM	Phone: 306-298-2166 Fax: 306-298-2042 pat.fargey@pch.gc.ca	Canadian Heritage Parks Canada	Grasslands Natural Park Box 150 Val Marie SK S0N 2T0

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

MAMMALS

... continued SWIFT FOX

7	Scalise, Karyn C, RTM karyn.scalise.erm@govmail.gov.sk.ca	Phone: 306-787-2889 Fax: 306-787-0737	Saskatchewan Environment and Resource Management Wildlife Branch	Room 436, 3211 Albert Street Regina SK S4S 5W6
8	Smitton, Clio C, RTM cei@cadvision.com	Phone: 403-932-6303 Fax: 403-932-6303	Cochrane Wildlife Reserve	Box 484 Cochrane AB T0L 0W0
9	Stuez, George C, RTM stuezgg@hotmail.com	Phone: 403-255-6444	Swift Fox Conservation Society	67 Rosewood Road NW Calgary AB T2K 1N3

WOLVERINE

1	Banci, Vivian C vbanci@sprint.ca	Phone: 604-466-2645		Maple Ridge BC
2	Cluff, Dean C dean.cluff@gov.nt.ca	Phone: 867-873-7783 Fax: 867-873-6230	NWT Department of Resources, Wildlife and Economic Development	Wildlife and Fisheries Box 2668 Yellowknife NWT X1A 2P9
3	Koonz, Bill C, I wkoonz@nr.gov.mb.ca	Phone: 204-945-6811 Fax: 204-945-3077	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3

WOOD BISON

1	Chisholm, Jane C, RTM jane_chisholm@pch.gc.ca		Parks Canada	Wood Buffalo National Park Box 750 Fort Smith NT X0E 0P0
2	Cool, Norm C, RTM norm_cool@pch.gc.ca		Parks Canada	Elk Island National Park R.R. #1, Site 4 Fort Saskatchewan AB T8L 2N1
3	Gates, Corm C, RTM ccgates@nucleus.com	Phone: 403-220-3027	Faculty of Environmental Design	University of Calgary 2500 University Drive NW Calgary AB T2N 1N4
4	Hoefs, Manfred C, RTM manfred.hoefs@gov.yk.ca	Phone: 867-667-5671 Fax: 867-393-6405	Yukon Department of Natural Resources	Box 2703 (R-5H) Whitehorse YT Y1A 2C6
5	Koonz, Bill C, RTM wkoonz@nr.gov.mb.ca	Phone: 204-945-6811 Fax: 204-945-3077	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
6	Moyles, Dave C, RTM dave.moyles@gov.ab.ca			AB
7	Nishi, John C, RTM john_nishi@gov.nt.ca		Government of NWT	NT
8	Reynolds, Hal C, I, RTM hal.reynolds@ec.gc.ca	Phone: 780-951-8702 Fax: 780-495-2615	Environment Canada Resource Conservation Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3
9	Schwantje, Helen C, RTM helen.schwantje@gems2.gov.bc.ca			BC
10	Stephenson, Bob C, RTM bstephenso@fishgame.state.ak.us			AR U.S.A.

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER

APPENDIX H - CONTACT LIST

March 2000

HERPTILES

EASTERN SHORT-HORNED LIZARD

1	Didiuk, Andy C, I	Phone: 306-975-4005 Fax: 306-975-4089 andrew.didiuk@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
3	James, Janice C	Phone: 403-320-3484 Fax: 403-317-3504 jdjames@raptor.lethbridge.ab.ca	Centre for Environmental Science and Agriculture	Lethbridge Community College 3000 College Drive S. Lethbridge AB T1K 1L6
4	Powell, Larry C, I	Phone: 403-289-3557 Fax: 403-289-9311 lpowell@acs.ucalgary.ca	Department of Biological Sciences	University of Calgary 2500 University Drive Calgary AB T2N 1N4
5	Wright, Jonathon C			AB wrightjd@telusplanet.net

EASTERN YELLOW-BELLIED RACER

1	Didiuk, Andy C, I	Phone: 306-975-4005 Fax: 306-975-4089 andrew.didiuk@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
3	Kissner, Kelly			Canada
4	MacCartney, Malcolm			Canada
5	Wright, Jonathon C			AB wrightjd@telusplanet.net

GREAT PLAINS TOAD

1	Didiuk, Andy C, I	Phone: 306-975-4005 Fax: 306-975-4089 andrew.didiuk@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
3	Preston, Bill C, I	Phone: 204-475-4692 breston@icenter.net		Winnipeg MB
4	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
5	Trottier, Garry C	Phone: 780-951-8680 Fax: 780-951-2615 garry.trottier@ec.gc.ca	Environment Canada Resource Conservation Division	CWS Prairie and Northern Region Room 200, 4999 - 98 Ave Edmonton AB T6B 2X3

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX H - CONTACT LIST

March 2000

HERPTILES

NORTHERN LEOPARD FROG

1	Didiuk, Andy C, I	Phone: 306-975-4005 Fax: 306-975-4089 andrew.didiuk@ec.gc.ca	Environment Canada Environmental Conservation Branch	Canadian Wildlife Service 115 Perimeter Road Saskatoon SK S7N 0X4
2	Harris, Wayne C, I	Phone: 306-778-8218 Fax: 306-778-8212 wayne.harris.erm@govmail.gov.sk.ca	Saskatchewan Environment and Resource Management	Grassland Ecoregion 350 Cheadle Street W Swift Current SK S9H 4G3
3	Hofman, Ed C, I	Phone: 403-934-3422 Fax: 403-934-3433 ed.hofman@gov.ab.ca	Alberta Environment Natural Resources Services Brooks Mgmt Area	Bow Region 280A Ridge Road Strathmore AB T1P 1B6
4	Koonz, Bill C, I	Phone: 204-945-6811 Fax: 204-945-3077 wkoonz@nr.gov.mb.ca	Manitoba Conservation Wildlife Branch	Box 24 200 Saulteaux Cr. Winnipeg MB R3J 3W3
5	Preston, Bill C, I	Phone: 204-475-4692 breston@icenter.net		Winnipeg MB
6	Roberts, Wayne C	Phone: 780-492-4622 Fax: 780-492-9234 wayne.roberts@ualberta.ca	Department of Biological Sciences	University of Alberta CW 404, Biological Sciences Bldg Edmonton AB T6G 2E9
7	Russell, Reg C, I	Phone: 403-362-1201 Fax: 403-362-1295 reg.russell@gov.ab.ca	Alberta Environment Natural Resources Service	Fish and Wildlife Division Box 909 Brooks AB T1R 1B8
8	Takats, Lisa C, I	Phone: 780-427-1249 Fax: 780-422-9685 lisa.takats@gov.ab.ca	Alberta Conservation Association	7th Flr, O.S. Longman Building 6909 - 116 Street Edmonton AB T6H 4P2
9	Wagner, Greg C	Phone: 403-652-7134 wagnere@cadvision.com		Site 2, Box 2, R.R 3 High River AB T1V 1N3
10	Wendlandt, Mark C	Phone: 403-243-7319 barnswallow@hotmail.com		63 Flagstone Crescent St. Albert AB

NORTHERN PRAIRIE SKINK

1	Bredin, Errol C			Box 268 Austin MB
---	--------------------	--	--	----------------------

● C=CORRESPONDED ● I=INTERVIEWED ● RTM=RECOVERY TEAM MEMBER



APPENDIX I - 1
LETTER TO ENVIRONMENT MINISTERS
ALBERTA, SASKATCHEWAN AND MANITOBA



Box 1644 Brooks Alberta Canada T1R 1C5 Ph: 403 793 8500 Fax: 403 793 8685 avocet@br.monarch.net

February 5, 2000

Dear ;

I am currently working on a contract with Environment Canada to develop standardized guidelines for setback distances, project timing and mitigation strategies for developments that affect COSEWIC Prairie and Northern Region Species at Risk.

Part of the contract involves meeting with appropriate experts and Provincial and Federal agencies in Alberta, Saskatchewan and Manitoba to solicit their input to build a set of guidelines that will be based on the best available knowledge. I wish to thank you in advance for the time and cooperation of your staff and Department during this process.

This project could act as another tool in developing a comprehensive approach to mitigating the cumulative effects of development activities. I would ask in the spirit of cooperation and conservation that your department consider adopting the final report and recommendations.

I have attached a summary of the project and a list of the species under review for your consideration. I will forward you a copy of the Final Report once it is available.

Yours in conservation

David Scobie, President

Encl.

APPENDIX I - 2
RESPONSE FROM ALBERTA ENVIRONMENT MINISTER



ALBERTA ENVIRONMENT

Office of the Minister

March 13, 2000

Mr. David Scobie, President
Avocet Environmental Inc.
Box 1644
Brooks, Alberta
T1R 1C5

Dear Mr. Scobie:

Thank you for your letter of February 5, 2000 about the development of land management guidelines and mitigation for species at risk on the prairies. I appreciate the opportunity to respond to the information you provided.

I understand that you have had some initial discussions with staff of my department and I encourage you to continue. It is very important to conduct this kind of work in co-operation and consultation with all jurisdictions and affected stakeholders.

Good luck with your project, and thank you for bringing it to my attention. I look forward to receiving a copy of the final report.

Sincerely,

Gary G. Mar, Q.C.
Minister of Environment
M.L.A. Calgary Nose Creek

Gary G. Mar

MO00-MOA-0627

323 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 Telephone 780/427-2391, Fax 780/422-6259

♻️ Printed on recycled paper



APPENDIX I - 3
RESPONSE FROM MANITOBA ENVIRONMENT MINISTER



MINISTER OF CONSERVATION

Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8

February 15, 2000

Mr. David Scobie
President
Avocet Environmental Inc.
Box 1644
Brooks AB T1R 1C5

Dear Mr. Scobie:

I would like to acknowledge your letter dated February 5, 2000, enclosing a summary of your project and a list of species under review.

Thank you for forwarding this information to me. I appreciate being made aware of your organization's endeavours.

Sincerely,

Oscar Lathlin
Minister



*Our Past. Our Future. Our Celebration.
Notre Passé. Notre Avenir. Notre Fête.*