

Fish and Wildlife Internet Mapping Tool Metadata Guide

FEBRUARY 2022

Alberta 

Ministry of Environment and Parks, Government of Alberta
Published: February 2022
Fish and Wildlife Internet Mapping Tool (FWIMT_PUB) Metadata Guide
© 2022 Government of Alberta

Table of Contents

Fish and Wildlife Internet Mapping Tool (FWIMT_PUB) metadata guide	5
Overview	5
Related guides.....	5
Terms of use	6
Layer List Operational Layers Definition	7
Species Inventory.....	7
Fish and Wildlife Report.....	8
Fish inventories	8
Fish Sustainability Index (FSI).....	11
FWMIS Waterbodies	13
Aquatic Invasive Species (AIS)	16
Amphibians and Reptiles.....	17
Birds	18
Sharp-Tailed Grouse Survey Area	19
Trumpeter Swan Buffer.	19
Trumpeter Swan Waterbody	19
Burrowing Owl Range.	19
Sensitive Raptor Ranges.....	19
• Sensitive Raptor Range - Bald Eagle	20
• Sensitive Raptor Range - Ferruginous Hawk	20
• Sensitive Raptor Range - Golden Eagle.....	20
• Sensitive Raptor Range - Peregrine Falcon	20
• Sensitive Raptor Range - Prairie Falcon	20
Other Layers.....	21
Contact	22

Fish and Wildlife Internet Mapping Tool (FWIMT_PUB) metadata guide

Overview

The Fish and Wildlife Internet Mapping Tool (FWIMT) allows you to view Alberta Fish and Wildlife Management Information System (FWMIS) data spatially and create and print reports and maps. FWMIS provides a central repository for which government, industry, and the public can store and access extensive and reliable fish and wildlife inventory data. The spatial layers represent this data as it is provided to the Government of Alberta. This information is collected by a variety of stakeholders including, but not limited to, academia, environmental consultants, municipal and federal governments, non-government organizations, and internal GoA business areas. All information gathered is an important contribution to the knowledge base for fisheries and wildlife management.

Related guides

Document	Location
Fisheries and Wildlife Management Information System (FWMIS) Data Submission Guide	See the Alberta Environment and Parks website at: https://www.alberta.ca/fisheries-and-wildlife-management-information-system.aspx
Fish and Wildlife Internet Mapping Tool (FWIMT) Quick Reference Guide	See the Alberta Environment and Parks website at: Access FWMIS Data https://www.alberta.ca/access-fwmis-data.aspx

Terms of use (seen when accessing FWIMT)

The fish and wildlife inventory data accessible from this site does not represent a complete record of all fish and wildlife collections and observations available. It only represents the data currently residing in the Fish and Wildlife Management Information System (FWMIS). Many areas in Alberta have not been subjected to a comprehensive species inventory. Information accessible through this site is not intended to be a definitive statement on the presence, absence, or status of a species within a given area, nor as a substitute for on-site surveys.

While every effort has been made to ensure that the information accessible from this site is complete, accurate, and current, the Government of Alberta, their agents and employees are not liable for any loss or damage arising directly or indirectly from the possession, publication, or use of, or reliance on, that information. This information is provided "as is" without expressed or implied warranty.

FWMIS data is provided to individuals and organizations for use related to appropriate conservation and management of Alberta's fish and wildlife, including the review of development proposals. Redistribution of the data is prohibited. All base feature data accessible from this site are owned by the Government of Alberta and protected by copyright law. No base feature data can be reproduced or distributed without the prior written permission of the Government of

Alberta. Base Map Data provided by the Government of Alberta under the Alberta Open Government Licence. Cadastral and Dispositions Data provided by Alberta Data Partnerships. Species observation and fisheries inventory data from the FWMIS databases are provided by the ministry of Alberta Environment and Parks (AEP).

This mapping website is maintained by the provincial government.

Please click on the continue button to consent to the content of this page and proceed to Fish and Wildlife site.

I have read and understand this terms of use agreement. My use of this site is acknowledgment of my agreement to be bound by these terms and conditions.

Layer List | Operational Layers Definition

FWIMT holds both Business Area and Corporate (GoA) datasets. This guide focuses on Business Area datasets that represent information specific to Alberta Environment and Parks Fish and Wildlife Division species inventory data.

Species Inventory

 Invasive Species Observations

Invasive alien species or invasive species are non-native species that have been introduced, intentionally or unintentionally, from other countries or ecosystems and threaten Alberta's ecosystems and biodiversity. This spatial layer provides locations and associated data gathered by internal and external stakeholders, and derived from FWMIS. The layer represents locations of species with a provincially general classification of Exotic, excluding the following species:

Species name	Species name	Species name
African jewelfish	European starling	ring-necked pheasant
brook trout	golden trout	rock pigeon
brown trout	grass carp	sailfin molly
cabbage white	gray partridge	<i>Sciurus carolinensis</i> ,
chukar	house sparrow	smallmouth bass,
Dolly Varden	<i>Mus musculus</i>	threespine stickleback
domestic pig	Northern bobwhite	wild boar,
<i>Equus caballus</i>	<i>Rattus norvegicus</i>	wild turkey

Eurasian collared-dove	<i>Rattus rattus</i>	
------------------------	----------------------	--

For more information see Alberta Environment and Parks website at:

Invasive Species - <https://www.alberta.ca/invasive-species.aspx>

Fish and Wildlife Report



Fish and Wildlife Report

The wildlife data produced in this report comprise observations derived from FWMIS. The data is limited to species with a provincial general classification of 'At Risk', 'May be at Risk', and 'Sensitive'. No date restrictions were applied.


Fish inventories

— Fish Inventories


 Fish Survey

- **Survey Type** - Survey method/equipment
- **Waterbody ID** - Fish and Wildlife Management Information System Waterbody ID, a maintained unique identifier for mapped waterbodies in Alberta
- **Waterbody Official Name** - Waterbody Official Name determined by both federal and provincial agencies.
- **Waterbody Common Name** - Waterbody Common Name, not official, known locally.
- **Survey Date** – Date at which the survey/inventory took place
- **Proj Loc ID** – Project Location ID, a FWMIS generated unique value pertaining to the location of a particular survey. Location coordinates are provided by the stakeholder, and each unique location in the database is given this unique value. *Hint* Permanent Sample Plots surveyed annually will have the same location ID because the coordinates provided were the same year after year*
- **Location Comments** – Comments specific to the inventory/sampling location

- Lat/Long/UTM Easting/UTM Northing/TTM Easting/TTM Northing – Coordinates of the survey/inventory provided in several formats
- Species Count – Total count of fish species captured and measured at a specific location by a specific survey type
- Species Code – 4-letter abbreviated code representing a specific fish species
- Species Name – Common name of the fish species sampled/measured
- Survey Comments – Comments pertaining to the survey (typically not location or sample comments)
- Pass # - Pass number
- # Traps – Number of traps (if available) used to sample fish (i.e. for use of minnow-traps, pound traps, or all other trap-netting techniques)
- Distance (m) – Distance fished (if available)
- Time (Sec.) – Time in seconds, typically pertaining to electrofishing surveys.
- Time (Hr.) – Time in hours, typically pertaining to hours fished by Sample Angling surveys
- Angler Count – Total number of anglers
- Redd Count – Total number of Redd's found at a particular location
- Stakeholder – Company or agency that conducted the survey/inventory
- Project ID – Inventory Project ID, a FWMIS generated unique value pertaining to specific project or study. This can include multiple Inventory Survey's (Survey ID) and several locations (Project Location ID).
- Survey ID – Inventory Survey ID, a FWMIS generated unique value pertaining to a specific survey type used to sample fish and/or wildlife. Hint* All survey types used in a particular project, or at a particular location will have different Survey ID's. This number identifies a unique survey
- SDE ID – Spatial Database Engine (ArcSDE) unique identifier
- Shape – Field that pertains to ESRI proprietary database function

☑  Aquatic Habitat

- Water Stage – selections include 'Dry', 'Flood', 'High', 'Moderate', and 'Low'. Refers to estimated water levels during time of survey
- Water Temp – Water Temperature, measured in degrees celcius (°C)
- Water Cond – Water Conductivity, measured in microseimens (µS)
- DO – Dissolved Oxygen, measured in milligrams per liter (mg/L)
- PH – pH, as a measure of hydrogen ion concentration
- Depth – Water depth at time of survey, specific to location coordinates provided
- Wetted Width – A wetted area straight-line measurement of a particular body of water, measure in meters (m)
- Rooted Width – A bank to bank (left, to right, or vise-versa) straight-line measurement of woody vegetated roots on a particular body of water, measure in meters (m)
- % Fines – Percent of substrate measuring <2 mm
- % Sm Gravel – Percent of substrate measuring 2-16 mm
- % Lg gravel – Percent of substrate measuring 17-64 mm
- % Cobble – Percent of substrate measuring 65-256 mm
- % Bedrock – Percent of substrate of bedrock
- % Boulder – Percent of substrate measuring >256 mm
- % Pool – Percent pool habitat measured at time of survey, could pertain to a specific site or reach
- % Riffle – Percent riffle habitat measured at time of survey, could pertain to a specific site or reach
- % Run – Percent run habitat measured at time of survey, could pertain to a specific site or reach

 Fish Culture Stocking

- **# Stocked** – Estimated number of fish stocked in waterbody
- **Avg Length** – Average length of fish stocked, measured in millimeters (mm)
- **Avg Weight** – Average weight of fish stocked, measured in grams (g)
- **Genotype** – The genetic constitution of fish. 1N – haploid, 2N – diploid, and 3N - triploid
- **Strain** – The genetic variant or subtype of fish
- **Station** – Refers to the physical location or rearing facility the fish originated

Fish Sustainability Index (FSI)

— Fish Sustainability Index (FSI)

The Fish Sustainability Index (FSI) is Alberta Fish and Wildlife's method of assessing fish stocks on a provincial scale. The FSI was developed to bring consistency to individual fish stock assessments and provide a province-wide evaluation of the status and sustainability of Alberta fish species. For more information, visit: [Fish Sustainability Index](#).

Reporting Current Adult Density, Immature Density, Historical Adult Density, Overharvest Protection Need, and Habitat Protection Need.

- **Current Adult Density** – The current relative abundance of adult fish in a population compared to an undisturbed population
- **Current Immature Density** – The current relative abundance of immature fish in a population compared to an undisturbed population
- **Historical Adult Density** – The relative abundance of adult fish in a population when it was undisturbed by humans
- **Habitat Protection Need** – The amount of habitat protection that is needed based on current threats
- **Overharvest Protection Need** – The amount of overharvest protection that is needed based on current fishing effort

+ Lentic FSI

Lentic (static pond/lake/reservoir) FSI assessments for Walleye, Northern Pike, Lake Trout, and other species (as assessed).

- **FWMIS Waterbody Section ID** – System derived unique identifier for a waterbody or section of a waterbody
- **Assessment Date** – The date at which the FSI was assessed/finalized by EAP Area Fisheries Biologists
- **Termination Date** – The date at which a new FSI was assessed/provided by EAP Area Fisheries Biologists. Primarily used for archiving old FSI scores
- **Species Origin** – captures the origin (native or introduced) and certainty (confirmed or suspected) of the assigned origin designation. Can be classified as ‘confirmed native’, ‘suspected native’, ‘confirmed introduced’ or ‘suspected introduced’
- **Metric Description** – An alias or name given to the FSI metric
- **Coded Domain** – A coded name or text describing the original numeric FSI score.

For Current, Immature, and Historical Density: *Functionally Extirpated* = ‘0’; *Very Low* = ‘1’; *Low* = ‘2’; *Moderate* = ‘3’; *High* = ‘4’; and *Very High* = ‘5’.

For Habitat and Overharvest Protection Need: *Very Low* = ‘5’; *Low* = ‘4’; *Moderate* = ‘3’; *High* = ‘2’; and *Very High* = ‘1’.

+ Lotic FSI

Lotic (flowing – creek/stream/river) FSI assessments for Arctic Grayling, Athabasca Rainbow Trout, Bull Trout, Cutthroat Trout, Goldeye, Lake Sturgeon, Mooneye, Mountain Whitefish, Westslope Cutthroat Trout, and other species (as assessed).

In addition to the above Lentic fields:

- ***Area** – The area of the watershed unit in square meters (m²)
- **HUC Code** – Lotic FSI species are assessed at various Hydrologic Unit Code (HUC) Watersheds of Alberta scales.
 - **HUC 6:** Arctic Grayling, Goldeye, Lake Sturgeon, Mooneye, and Mountain Whitefish
 - **HUC 8:** Bull Trout, Mountain Whitefish, Athabasca Rainbow Trout
 - **HUC 10:** Westslope Cutthroat Trout and/or Cutthroat Trout

*the polygon layer is a generalized version of the HUC Watersheds of Alberta layer. This allows faster drawing and selection speeds on the website.

FWMIS Waterbodies

+ FWMIS Waterbodies

FWMIS Waterbodies contain FWMIS derived species and inventory survey information. Data is generalized and provided to support Alberta Fish and Wildlife business and policy.

FWMIS Lakes/Ponds/Reservoirs Label

Text label for a specific lake, pond, or reservoir. Format: Official Name – FWMIS Waterbody ID –

FWMIS River and Stream Label

Text label for a specific creek, stream, or river. Format: Official Name – FWMIS Waterbody ID –

FWMIS Lakes/Ponds/Reservoirs

- **Abstract** - Fish and Wildlife Management Information System (FWMIS) - Hydrology polygons is a derived dataset from the Base Features Waterbody Polygon (Base Waterbody Polygon) dataset. Base Waterbody Polygon is the Alberta Environment and Parks base hydrography polygon dataset, and comprises seamless provincial extent hydrography polygon features collected from various sources of provincial base and resource map based data and some federal topographic data. FWMIS Hydropolygon has been modified for Fish and Wildlife business purposes, where spatial adjustments and field attributes have been added or removed as required. Modifications include, but are not limited to, the addition of a 'Species Presence' field, edits to spatial and a-spatial components, removal of topological error, and semi-annual maintenance as required.
- **Purpose** - FWMIS Hydropolygons are based off of the Base Features Waterbody Polygon (Base Waterbody Polygon) dataset and are used to identify spatial representation of mapped waterbodies within the province of Alberta. This layer provides fish species presence (both current and historic), Fish and Wildlife Management Information System (FWMIS) Waterbody ID, and Waterbody Official and Common Name. FWMIS Waterbody ID's are unique values

assigned to mapped waterbodies with or without fish or fish habitat survey information (both current and historic).

- **Supplemental Information** - FWMIS Hydropolygons does not contain all lentic systems with fish survey information, as there are many 'unmapped' bodies of water within the province of Alberta. This layer provides a broad representation of what fish species could potentially occur in reaches/sections of that particular waterbody, and it does not represent species absence. The field 'Species Presence' is updated bi-annually or as new information becomes available. See 'Use Constraints' for more information. This layer is not suitable for mapping as its intent is to merely provide waterbody information pertaining to fish presence or the possibility of future fish presence findings.
- **Species Presence** – Species Presence represents a historic listing of fish species that have been sampled in a particular body of water and/or what species have been captured/stocked as a result of a fisheries inventory. Any species listed indicates it was captured/measured anywhere along that waterbody, and not a specific location. At time of use, the user assumes all responsibility for discrepancies with data contained in FWMIS. FWMIS/FWIMT is the official holder of all fisheries inventory data, and should be consulted as the sole source of fisheries survey information.
- **Feature Type** - A generalized description of feature polygon type:
 - **LAKE-PER** - perennial lake
 - **ICEFIELD** - icefield
 - **LAKE-RECUR** - recurring lake
 - **STR-INDEF** - indefinite lake
 - **LAGOON** - lagoon representation line
 - **DUGOUT** - dugout representation line
 - **RIV-MAJ** - major river representation line
 - **CANAL-MAJ** - canal representation line
 - **OXBOW-PER** - perennial oxbow
 - **OXBOW-RECUR** - recurring oxbow
 - **RESERVOIR** - reservoir
 - **WETLAND** - wetland area



FWMIS River and Stream By Strahler Order



FWMIS River and Stream By Feature Type

- **Abstract - Fish and Wildlife Management Information System (FWMIS)** - Hydrology Arcs is a derived dataset from the Base Features Derived Simplified Linear Network, which is a

derived dataset of the Single Line Hydrography Network (Base Stream and Flow Representation) dataset. FWMIS Hydrology Arcs has been modified for Fish and Wildlife business purposes, where spatial adjustments and field attributes have been added or removed as required. Modifications include, but are not limited to, the addition of a 'Species Presence' field, edits to spatial and a-spatial components, removal of topological error, and semi-annual maintenance as required.

- **Purpose** - FWMIS Hydrology Arcs are used to identify spatial representation of streams and rivers within the province of Alberta. This layer provides fish species presence (both current and historic), Fish and Wildlife Management Information System (FWMIS) Waterbody ID, Waterbody Official and Common Names, and Strahler Stream Order information. FWMIS Waterbody ID's are unique values assigned to mapped waterbodies with or without fish or fish habitat survey information (both current and historic).
- **Supplemental Information** - FWMIS Hydrology Arcs does not contain all streams and rivers with fish survey information, as there are many 'unmapped' bodies of water within the province of Alberta. This layer provides a broad representation of what fish species could potentially occur in reaches/sections of that particular waterbody, and it does not represent species absence. The field 'Species Presence' is updated bi-annually or as new information becomes available. See 'Use Constraints' for more information.
- **Strahler Stream Order** - a measure of the relative size of streams. The smallest tributaries are referred to as first-order stream, while larger rivers increase in order (numerically) in an upstream to downstream direction.
- **Feature Type** - A generalized description of the stream arc type. Classifications include:
Base Features Derived Simplified Linear Network:
 - **STR-PER** - perennial stream
 - **STR-INT** - intermittent stream
 - **STR-RECUR** - recurring stream
 - **STR-INDEF** - indefinite stream
 - **STR-REP** - representation line
 - **LAKE-REP-PRI** - lake representation line
 - **RIV-MAJ-REP-PRI or SEC** - major river representation line
 - **CANAL** - canal representation line
 - **OXBOW-PER** - perennial oxbow
 - **OXBOW-RECUR** - recurring oxbow
 - **SPILLWAY** - spillway
 - **FLOW-ARB-DEM or MANUAL** - Addition of canal or channel through DEM or Imagery

Aquatic Invasive Species (AIS)

— Aquatic Invasive Species

 Aquatic Invasive Species (AIS) Decontamin...

Aquatic Invasive Species (AIS) Decontamination Zones were generated using the HUC Watersheds of Alberta. In an effort to contain early detections of whirling disease within the affected area, the Government of Alberta has developed a Decontamination Protocol for Watercraft and Equipment for staff and stakeholders. The Decontamination Protocol is linked to the Decontamination Risk Map, which includes recent detections of 'suspect positives' not yet confirmed by the Canadian Food Inspection Agency (CFIA).

Notifying staff and stakeholders of the most up-to-date potential detections in the province provides a precautionary approach for curbing the spread of whirling disease in the province associated with the movement of contaminated vehicles, boats and equipment. **Government of Alberta field staff will be using this protocol, as well as contractors or permit holders, and we encourage industry, stakeholders and recreational users to adopt these preventative practices as well.**

For more information on the Decontamination Protocol, visit Alberta's Open Government Publications Portal at:

- Decontamination protocol for watercraft and equipment
<https://open.alberta.ca/publications/9781460134986>
- Whirling disease decontamination risk zone [MAP]
<https://open.alberta.ca/publications/whirling-disease-decontamination-risk-zone-map>

Also visit the Canadian Food Inspection Agency website at:

- Whirling Disease
<http://www.inspection.gc.ca/animals/aquatic-animals/diseases/reportable/whirling-disease/eng/1336685663723/1336685826959>

For more information on the HUC Watersheds, consult the GeoDiscover Alberta portal at:

- Hydrologic Unit Code Watersheds of Alberta
<https://geodiscover.alberta.ca/geoportal/rest/metadata/item/243f7273de0a435f8099f193f81662b3/html>

— Wildlife Sensitivity

The wildlife sensitive feature layers that AEP uses are derived from aerial surveys, historical information, movements of collared animals (Telemetry), and specific habitat types. These range delineations are based on all available scientifically-derived information.

These wildlife feature layers provide industrial operators, government departments and the general public with the best information currently available on the extent of wildlife sensitivities. These layers are also available through the Landscape Analysis Tool used by the Government of Alberta's Enhanced Approval Process. Specific operating conditions apply to industrial activities within these sensitive feature layers to help mitigate the effects of development on populations and habitat.

For more information regarding wildlife sensitivity data and maps, see:

- Wildlife Sensitivity Maps
<https://www.alberta.ca/wildlife-sensitivity-maps.aspx>

Amphibians and Reptiles

Sensitive Amphibian Range - This layer represents the fill area with a boundary outline information supplied to the industrial operators and government department's information regarding the location of Sensitive Amphibians Ranges for the application of appropriate wetland setbacks and specific operating conditions.

Eastern Short-Horned Lizard Range - This layer represents the information provided to industrial operators and government departments regarding the location of Short-horned Lizard Range fill area with a boundary outline for the application of appropriate wildlife surveys.

Specific operating conditions may apply upon the results of wildlife surveys. Eastern Short-horned Lizard Range was based upon 10 years of FWMIS observation data records.

Sensitive Snake Range - This layer represents the fill area with a boundary outline information supplied to the industrial operators and government department's information

- Amphibians and Reptiles
- Amphibians
- Sensitive Amphibian Range
- Reptiles
- Eastern Short-Horned Lizard Range
- Sensitive Snake Range

regarding the location of sensitive snake range for the application of appropriate wildlife surveys. Specific operating conditions may apply upon the results of wildlife surveys.

Birds

Federal Emergency Order Area -

These groups of layers represent the Federal Emergency Order outline and fill with an outline. The Federal Emergency Order is under the Species at Risk Act (SARA) and can be used for species facing imminent threats to its survival, and current protection measures are deemed inadequate.

Greater Sage-Grouse - This layer represents the Federal Emergency Order for the Greater Sage-Grouse fill with outline. The intent of the Emergency Order is to impose obligatory restrictions designed to protect the Sage-Grouse and its habitat on provincial and federal crown lands in Alberta with no restrictions on activities on private land, nor on grazing on provincial or federal lands.

Colonial Nesting Birds Buffer - This group of layers represents the Great Blue Heron and American White Pelican species nesting colony locations. These species nest at discrete locations. Colonial Nesting Birds was based upon all known and confirmed population locations in GOA datasets from 1998 onward. These point features are buffered by a distance of 1000m; and 100m for Medium and Low disturbance activities.

Greater Sage Grouse Range - This group of layers represents the range outline and fill area with an outline for the Greater Sage Grouse.

Piping Plover Buffer - This group of layers provides to the general public, industrial operators and government departments information regarding the location of Piping Plover buffer outlines

—	<input checked="" type="checkbox"/>	Birds
<hr/>		
+	<input checked="" type="checkbox"/>	Federal Emergency Order Area
<hr/>		
+	<input checked="" type="checkbox"/>	Colonial Nesting Birds Buffer
<hr/>		
+	<input checked="" type="checkbox"/>	Greater Sage Grouse Range
<hr/>		
+	<input checked="" type="checkbox"/>	Piping Plover
<hr/>		
+	<input checked="" type="checkbox"/>	Sharp-Tailed Grouse Survey Area
<hr/>		
+	<input checked="" type="checkbox"/>	Trumpeter Swan
<hr/>		
+	<input checked="" type="checkbox"/>	Burrowing Owl Range
<hr/>		
+	<input checked="" type="checkbox"/>	Sensitive Raptor Ranges

and fill areas with a boundary outline. Piping Plover Buffers are multiple ring buffers of 50m, 100m and 200m determined by buffering the Piping Plover Waterbodies.

Piping Plover Waterbodies - This layer represents the Piping Plover Waterbodies fill area with a boundary outline, which includes all water bodies as of 2009 with confirmed breeding pairs as determined by annual surveys. An entire waterbody is considered a nesting site. Piping Plover lakes were determined by clipping mapped waterbody features to survey points. Accuracy of hydro layers is limiting, and it is recommended that all proponents measure setback distances from the high-water mark.

Sharp-Tailed Grouse Survey Area - This layer represents the fill area with a boundary outline information provided to industrial operators and government departments regarding the probable location of Sharp-tailed Grouse habitat for the application of appropriate wildlife surveys. Proponents are recommended to survey for Sharp-tailed Grouse leks and respect buffers where they occur.

Trumpeter Swan Buffer - This layer represents the fill area with a boundary outline information provided the general public, industrial operators and government departments regarding the location of Trumpeter swan 500m, and 800m buffers. Specific operating conditions apply to these zones. Land-use guidelines stipulate timing and setback conditions for all identified breeding locations.

Trumpeter Swan Waterbody - This layer represents waterbody polygons fill area with a boundary outline where Trumpeter Swans are present. This layer includes all water bodies as of 2010 with confirmed breeding swan pairs as determined by swan surveys and supplemented by Fish and Wildlife's database (FWMIS). An entire water body is considered a nesting site. Swan lakes were determined by clipping mapped waterbody features to survey points. Sites not associated with waterbodies (lotic systems, unmapped wetlands, beaver ponds) were indicated by circular polygons (5m radius). Accuracy of hydro layers is limiting, and it is recommended that all proponents measure setback distances from the high-water mark.

Burrowing Owl Range - This layer represents the fill area with a boundary outline information provided to industrial operators and government department's information regarding the location of Burrowing Owl range for the application of appropriate wildlife surveys. Specific operating conditions may apply upon the results of wildlife surveys.

Sensitive Raptor Ranges - This group of layers represents the outline, fill area with a boundary outline and label information supplied to the industrial operators and government department's information regarding the location of sensitive raptor ranges for the application of appropriate wildlife surveys.

- Sensitive Raptor Range** - Bald Eagle
- Sensitive Raptor Range** - Ferruginous Hawk
- Sensitive Raptor Range** - Golden Eagle
- Sensitive Raptor Range** - Peregrine Falcon
- Sensitive Raptor Range** - Prairie Falcon

Mammals

Grizzly Bear Zone - Core

Grizzly Bear Zone - Secondary

This group of layers represents the Grizzly Bear Zone boundaries and fill based on agreed upon grizzly bear core and secondary grizzly bear watershed units determined by ASRD, and the Boreal Grizzly bear range of the Chinchaga area. Core Areas are areas of high habitat value (Resource Selection Function) and generally low mortality risk currently measured through Open Route Densities.

Secondary Areas are areas of good habitat, reflecting the broader range of grizzly bears. All Core and Secondary areas within a grizzly bear population unit were merged producing Core and Secondary population units.

Caribou Range - This grouping of layers represents the information regarding the outline, fill area with a boundary outline and label of the Caribou Ranges, grouped individually, Sub-units grouped by individual ranges and grouped en masse to depict the ranges as an area of coverage.

Caribou Range - Banff

Caribou Range - Bistcho

— Mammals

+ Grizzly Bear - Zones

+ Caribou Range

+ Mountain Goat and Bighorn Sheep Areas

+ Ords Kangaroo Rat Range

+ Swift Fox Range

Yates Caribou Range Sub-Units

Bistcho Caribou Range Sub-Units

Caribou Range - Caribou Mountains **Caribou Mountains Caribou Range Sub-Units**

Caribou Range - Chinchaga **Chinchaga Caribou Range Sub-Units**

Caribou Range - Cold Lake **Banff Caribou Range Sub-Units**

Caribou Range - East Side Athabasca **Cold Lake Caribou Range Sub-Units**

Caribou Range - Jasper **East Side Athabasca Caribou Range Sub-Units**

Caribou Range - Little Smoky **Jasper Caribou Range Sub-Units**

Mountain Goat and Bighorn Sheep Areas - This group of layers represents the label, boundary and fill information provided to the general public, industrial operators and government departments regarding the location of Mountain Goat and Bighorn Sheep Areas. Specific operating conditions apply to the Goat and Sheep Areas. Mountain Goat and Sheep Areas were determined from both observations (telemetry and aerial sheep/goat surveys) and habitat suitability indexes. Goat and sheep areas have been buffered by 800 metres to derive zones. Area delineation encompasses use during all seasons. To identify goat and sheep areas in an effort to:

- a. avoid land use disturbances that may have a direct or indirect adverse effect on the behavior of the animals, and
- b. avoid permanent alteration of physical habitat conditions.

Ord's Kangaroo Rat Range - This group of layers represents the outline, fill area with a boundary outline and label information supplied to the industrial operators and government departments regarding the location of Ord's Kangaroo Rat Range for the application of appropriate wildlife surveys. Specific operating conditions may apply upon the results of wildlife surveys.

Swift Fox Range - This group of layers represents the outline, fill area with a boundary outline and label information supplied to the industrial operators and government department's information regarding the location of swift fox range for the application of appropriate wildlife surveys. Specific operating conditions may apply upon the results of wildlife surveys.

Other Layers

The following are GoA corporate data layers. They are managed by the Informatics Branch, Alberta Environment and Parks. More information on the below layers can be found at:

- GeoDiscover Alberta_
<https://geodiscover.alberta.ca/geoportal/#searchPanel>

For specific information on availability and distribution of the below layers, contact Environment and Parks Data Distribution Division (Resource Data Product Catalogue).

1. Wildlife Sensitivity
2. Wildlife Sanctuary
3. Fish and Wildlife Administration
4. Military base and Training Grounds
5. Access
6. GOA Administrative Area
7. Tertiary Watershed Unit
8. Hydrologic Unit Code Watershed
9. Hydrography
10. Alberta Township System
11. NTS Index
12. First Nations Land
13. Disposition Application and Amendments (Agricultural, Commercial, Industrial, Reservation)
14. Urban and Rural Municipality
15. Federal Land
16. Provincial Park and Protected Areas
17. Land Management
18. AESRD Administration Area
19. Administration Area
20. 2011 Panchromatic SPOT5 10m
21. Base Maps

Contact

For comments or questions related to the data on this site, please contact:
AEP.FWDataMgmt@gov.ab.ca

For comments or questions or to report technical issues with this site, please contact:
ER.IMT-GSS@gov.ab.ca