

Government of Yukon
 Conservation Values Analysis Map

Data Sources:

Data layer	Data source	Notes
Caribou Summer Habitat	Fortymile Caribou Habitat Model	Habitat quality predicted by using 2014 to 2018 GPS collar data
Caribou Winter Habitat	Fortymile Caribou Habitat Model	Habitat quality predicted by using 2014 to 2018 GPS collar data
Fortymile Summer Corridor	GPS post calving summer 2014 to 2018 data	Movement paths from GPS collar data
Fortymile Spring/Fall Corridors	GPS post calving summer 2014 to 2018 data	Movement paths from GPS collar data
Wetland Areas	2020 Ducks Unlimited Canada wetland layer	Buffered by 500 meters, smoothed polygon
	Environment Yukon Flat Creek Wetlands Preliminary Habitat Assessment	Used to better delineate the Flat Creek Wetland and its conservation values
Mount Klotz Alpine	Predictive ecosystem map for the Dawson Regional Land Use Plan	Used to identify the alpine areas (important region for endemic and rare species and species at risk).
Endemic Meadows	Conservation Data Center (CDC) rare endemic meadow plant locations	Predictive model created with a delineation threshold of 80% probability of occurrence, buffered by 500 meters
	Sentinel 2 satellite imagery	
	Adapt west climate data	
Data considered in the analysis that isn't Plotted on the map	Conservation Data Centre occurrence data	Point data for species at risk (<i>Species at Risk Act</i> listing), rare and endemic species
	Caribou herd ranges	Fortymile, Clear Creek, Hart River and Porcupine Caribou herd ranges derived from GPS collar data

	Caribou GPS Collar data	Fortymile, Clear Creek, Hart River and Porcupine Caribou GPS collar data
	Ecoregion representation map	Percentage of each ecoregion currently protected by Yukon's protected areas network
	Existing nearby protected areas map	Existing protected areas within or bordering the Dawson Land Use Planning Region
	Mount Hart Alpine	Predictive ecosystem map for the Dawson Regional Land Use Plan used to identify the alpine areas (important region for endemic and rare species and species at risk).

Methods

Caribou Summer and Winter Habitat

Seasonal habitat models were created for summer and winter using 4 years of Fortymile caribou herd (FMCH) GPS collar data. We used a 5km hexagon grid to summarize average summer and winter habitat values and selected areas with high quality habitat, known caribou locations, and informed by expert knowledge. We also included high quality summer and winter habitat in areas that overlap Clear Creek, Hart River, and Porcupine caribou ranges, as there is no habitat model available for these herds.

Fortymile Summer Corridor:

Summer migration corridors were delineated using movement paths from caribou that were GPS collared from 2014 to 2018. We selected areas with a high concentration of caribou using the same areas in multiple years.

Fortymile Spring/Fall Corridors:

Spring and fall migration corridors were delineated using movement paths from caribou that were GPS collared from 2014 to 2018. We selected areas with common paths used by the FMCH. We also used aerial survey data from the FMCH pre-rut 2013 to spring migration 2014 to identify movement corridors between summer and winter habitats. A key difference between spring and fall corridors, is that summer corridors are quite concentrated on the landscape – and fall corridors are more spread out or dispersed.

Important Wetland Complexes:

Several important wetland complexes exist within the Dawson planning region: Scottie Creek wetlands, Flat Creek wetlands, and Indian River wetlands.

Scottie Creek wetlands has previously been identified as a proposed Habitat Protection Area as part of preliminary discussions with White River First Nation. To define the extent of this wetland complex we identified wetland areas within Scottie Creek drainage mapped in the 2020 Ducks Unlimited Canada Phase 1 wetland inventory.

Flat Creek wetlands have previously been identified as an important area of open-water wetlands—a wetland type that is relatively rare in the Dawson planning region. As an open-water wetland located within the Tintina Trench, Flat Creek wetlands are considered an important staging ground for migratory birds. The extent of these wetlands were defined based the 2020 Ducks Unlimited Canada Phase 1 wetland inventory, as well as existing national wetland inventory data. A preliminary assessment of this wetland complex was completed by the Department of Environment in 2012 to support previous regional land use planning discussions.

Indian River wetlands have been identified as an important wetland area by the Tr'ondek Hwech'in. These wetlands were mapped in detail in 2017-18 to support improving management of placer mining in the region. The extent of this mapping is used to define wetlands in this region.

Mount Klotz Alpine:

Based on discussion with relevant local experts, as well as limited biodiversity surveys in the region, the alpine region of Mount Klotz is home to a variety of endemic and rare species. To define this region, we used the existing Broad Ecosystem Units developed for the Dawson Regional Land Use Planning process, which delineated alpine ecosystems. Several observations of species tracked by the Conservation Data Centre are known from the region.

Endemic Meadows:

Within the Dawson Planning Region, a number of species of conservation concern are tracked by the Yukon Conservation Data Centre. Many of these species are known to be associated with dry meadow ecosystems. To improve our understanding of these regions, we conducted a habitat suitability mapping exercise, based on known species locations and satellite imagery. We delineated areas with the highest probability for finding these endemic meadow species—those areas with > 80% probability of occurrence within the model.

We enhanced and overlaid modeled results with known locations for species tracked by the conservation data centre, as well as several federally listed Species at Risk. We also compared

modeled results against expert information on the distribution of endemic species within the region.

Data considered in the analysis that isn't plotted on the map:

Conservation Data Centre Occurrence Data:

We reviewed existing information on locations of species of conservation concern tracked by the Yukon Conservation Data Centre. Known locations of federally listed Species at Risk were also reviewed. Many of these species occurrences overlap with mapped endemic meadow areas.

Caribou Herd Ranges:

We reviewed Fortymile, Clear Creek, Hart River and Porcupine Caribou herd ranges delineated using the GPS collar derived herd ranges.

Ecoregion Representation Map:

We calculated the percentage of each ecoregion currently protected by Yukon's protected areas network in order to determine which areas of the planning region were under-represented in the system.

Existing Nearby Protected Areas Map:

Our analysis included a review of existing protected areas within or bordering the Dawson Land Use Planning Region to assess potential connectivity with proposed protected areas.

Mount Hart Alpine:

Based on discussion with relevant local experts, as well as limited biodiversity surveys in the region, the alpine region of Mount Hart is home to a variety of endemic and rare species. To define this region, we used the existing Broad Ecosystem Units developed for the Dawson Regional Land Use Planning process, which delineated alpine ecosystems. Several observations of species tracked by the Conservation Data Centre are known from the region. This area overlaps almost entirely with mapped Fortymile caribou summer habitat and movement corridors.