# Comprehensive Data Delivery README FILE

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| **Study Section** | Study 10.6: Caribou Distribution, Abundance, Movements, Productivity,and Survival |
| **Study Component** | (not applicable) |
| **Prepared By** | Alaska Department of Fish and Game, Palmer; ABR, Inc.—Environmental Research & Services, Fairbanks |
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| **Field Date Range** | April 2012– December 2015 |

**Introduction:** The overall goal of this data collection effort was to document the distribution, abundance, movements, productivity, and survival of caribou (*Rangifer tarandus*) in areas with the potential to be affected by construction and operation of the proposed Susitna–Watana Hydroelectric Project (Project) in Alaska.

The Caribou Distribution, Abundance, Movements, Productivity, and Survival (Caribou Study) focused on deploying VHF and GPS radio-collars on caribou. A total of 148 GPS and 56 radio-collars were deployed on caribou from April 2012 to April 2015, of which 105 collars were deployed on females and 90 collars were deployed on males. Collars were deployed on caribou from both the Nelchina Herd (NCH) and the Delta Herd (DCH) and herd identification was verified using post-hoc seasonal movement analysis.

This multi-year study began in 2012 and was completed in 2015. The Study Completion Report (SCR) for the study was produced in 2017.

**Data Summary:** Data for the Caribou Study consist of GIS output data layers. Locations from telemetry collars and aerial surveys are confidential under Alaska state statute and regulations; therefore, polygons summarizing results [e.g., Brownian Bridge Movement Models (BBMMs) and kernel density estimation (relative densities)] of analyses are presented, rather than specific animal locations. All data for the study have undergone a QC3 level of review.

*GIS Data*— Contain the Caribou Study Area; DCH and NCH ranges; output files for seasonal BBMMs; relative densities of seasonal locations for VHF- and GPS-collared NCH and DCH animals during this study (2012–2015), GPS locations from 1999–2002, and telemetry locations from 2002–2011; and seasonal summary kernels.

**Data Organization:**

The GIS data are archived in the subfolder /10-WILD/10.06-CBOU/GIS, which contains one geodatabase (SuWa\_10\_6\_GIS\_20170630.gdb) with 7 feature datasets and 67 feature classes:

* CBOU\_2012\_2015\_StudyArea
* CBOU\_2012\_2015\_Delta\_HerdRange
* CBOU\_2012\_2015\_Nelchina\_HerdRange
* CBOU\_2013\_2015\_BBMM\_NonMigFM
* CBOU\_2013\_2015\_BBMM\_NonMigPC
* CBOU\_2013\_2015\_BBMM\_NonMigSM
* CBOU\_2013\_2015\_BBMM\_NonMigWint
* CBOU\_2013\_BBMM\_EMG\_FM
* CBOU\_2013\_BBMM\_EMG\_PC
* CBOU\_2013\_BBMM\_EMG\_SM
* CBOU\_2014\_BBMM\_EMG\_FM
* CBOU\_2014\_BBMM\_EMG\_PC
* CBOU\_2014\_BBMM\_EMG\_SM
* CBOU\_2015\_BBMM\_EMG\_FM
* CBOU\_2015\_BBMM\_EMG\_PC
* CBOU\_2015\_BBMM\_EMG\_SM
* CBOU\_2012\_2015\_DCH\_Aut\_Dens
* CBOU\_2012\_2015\_DCH\_Calv\_NonPart\_Dens
* CBOU\_2012\_2015\_DCH\_Calv\_Part\_Dens
* CBOU\_2012\_2015\_DCH\_Rut\_Dens
* CBOU\_2012\_2015\_DCH\_Spr\_Dens
* CBOU\_2012\_2015\_DCH\_Summ\_Dens
* CBOU\_2012\_2015\_DCH\_Wint\_Dens
* CBOU\_1999\_2002\_GPS\_Aut\_Dens
* CBOU\_1999\_2002\_GPS\_Calv\_Dens
* CBOU\_1999\_2002\_GPS\_Rut\_Dens
* CBOU\_1999\_2002\_GPS\_Spr\_Dens
* CBOU\_1999\_2002\_GPS\_Summ\_Dens
* CBOU\_1999\_2002\_GPS\_Wint\_Dens
* CBOU\_2002\_2011\_Telem\_Aut\_Dens
* CBOU\_2002\_2011\_Telem\_Calv\_Dens
* CBOU\_2002\_2011\_Telem\_Rut\_Dens
* CBOU\_2002\_2011\_Telem\_Spr\_Dens
* CBOU\_2002\_2011\_Telem\_Summ\_Dens
* CBOU\_2002\_2011\_Telem\_Wint\_Dens
* CBOU\_2012\_2015\_NCH\_Calv\_NonPart\_Dens
* CBOU\_2012\_2015\_NCH\_Calv\_Part\_Dens
* CBOU\_2012\_2015\_NCH\_GPS\_Aut\_Dens
* CBOU\_2012\_2015\_NCH\_GPS\_Rut\_Dens
* CBOU\_2012\_2015\_NCH\_GPS\_Spr\_Dens
* CBOU\_2012\_2015\_NCH\_GPS\_Summ\_Dens
* CBOU\_2012\_2015\_NCH\_VHF\_Aut\_Dens
* CBOU\_2012\_2015\_NCH\_VHF\_Rut\_Dens
* CBOU\_2012\_2015\_NCH\_VHF\_Spr\_Dens
* CBOU\_2012\_2015\_NCH\_VHF\_Summ\_Dens
* CBOU\_2012\_2015\_NCH\_VHF\_Wint\_Dens
* CBOU\_2012\_NCH\_GPS\_Wint\_Dens
* CBOU\_2013\_NCH\_GPS\_Wint\_Dens
* CBOU\_2014\_NCH\_GPS\_Wint\_Dens
* CBOU\_1980\_1985\_Summary\_Aut
* CBOU\_1980\_1985\_Summary\_Calv
* CBOU\_1980\_1985\_Summary\_Rut
* CBOU\_1980\_1985\_Summary\_Spr
* CBOU\_1980\_1985\_Summary\_Summ
* CBOU\_1980\_1985\_Summary\_Wint
* CBOU\_1999\_2002\_Summary\_Aut
* CBOU\_1999\_2002\_Summary\_Calv
* CBOU\_1999\_2002\_Summary\_Rut
* CBOU\_1999\_2002\_Summary\_Spr
* CBOU\_1999\_2002\_Summary\_Summ
* CBOU\_1999\_2002\_Summary\_Wint
* CBOU\_2012\_2015\_Summary\_Aut
* CBOU\_2012\_2015\_Summary\_Calv
* CBOU\_2012\_2015\_Summary\_Rut
* CBOU\_2012\_2015\_Summary\_Spr
* CBOU\_2012\_2015\_Summary\_Summ
* CBOU\_2012\_2015\_Summary\_Wint

**Online Data Link:** <http://gis.suhydro.org/SuWa/10-WILD/10.06-CBOU/>

Online Report Link: 10.17 Caribou Distribution, Abundance, Movements, Productivity, and Survival – Study Completion Report under 2017; Study Completion and Implementation Reports at <http://www.susitna-watanahydro.org/type/documents>

[[1]](#endnote-1)

1. **Data Distributor Contact Information:**

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