# Comprehensive Data Delivery README FILE

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| **Study Section** | Study 10.5: Moose Distribution, Abundance, Movements, Productivity, and Survival |
| **Study Component** | (not applicable) |
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| **Field Date Range** | October 2012–March 2016 |

**Introduction:** The overall goal of this data collection effort was to document the population size, productivity, calf survival, and composition of moose, assess the relative importance of the habitat, document moose browse utilization, and document the amount of available habitat for improvement in areas with the potential to be affected by construction and operation of the proposed Susitna-Watana Hydroelectric Project (Project) in Alaska.

The Moose Distribution, Abundance, Movements, Productivity, and Survival (moose Study) focused on deployment of VHF and GPS radio-telemetry collars deployed on moose as well as aerial surveys, and browse surveys. The study area consists of the majority of Game Management Unit (GMU) 13E east of the Parks Highway and the Alaska Railroad and from the Denali Highway south to upper Chunilna Creek. The study area also includes a small portion of northwestern GMU 13A, from Kosina Creek east to the Oshetna River drainage and encompasses the proposed Project facilities, potential access and transmission line corridors, and reservoir inundation zone. A total of 62 VHF collars were deployed on moose in October 2012, March 2013, and November 2013. 65 GPS collars were deployed on moose in October 2012, November 2013, and April 2015. A GeoSpatial Population Estimator (GSPE) survey was conducted in November 2013; the inundation area was surveyed in March 2012, 2013, 2015, and 2016; the Susitna River between the proposed Watana Dam site and the confluence of the Susitna, Chulitna, and Talkeetna rivers was surveyed in March 2015 and 2016; and two trend count areas were surveyed in November 2012 and November 2013. Browse surveys werew conducted March–April 2013 and March 2016.

This multi-year study was initiated in 2012 and completed in 2016. The Study Completion Report (SCR) for the study was finalized in 2017.

**Data Summary:** Data for the Moose Study consist of GIS output data layers. Locations from telemetry collars and aerial surveys are confidential by Alaska state statute; therefore polygons summarizing results of kernel density estimation (relative densities) are presented rather than specific animal locations. All data for the study have undergone a QC3 level of review.

*GIS Data*— Contain the Moose Study Areas; the Count Area, GSPE, late-winter, and Browse survey areas; the relative densities of seasonal locations during telemetry surveys, of locations from GPS-collared moose, and of moose during Count Area and late-winter surveys; the Browse Survey plots sampled; Resource Selection Function output by sex; and the moose habitat available for improvement.

**Data Organization:**

The GIS data are archived in the subfolder /10-WILD/10.05-MOOSE/ GIS, which contains one geodatabase (SuWa\_10\_5\_GIS\_20170630.gdb) containing the following datasets:

* Survey Areas
  + Moose Study Areas 2012-2014 and 2015-2016
  + Count Area 7 and 14 Survey Areas
  + GSPE survey grid
  + Late-winter survey grids
  + Browse survey grid, 2013
* Relative\_Density\_CA
  + Relative densities of CA 7 data, 2012-2013
  + Relative densities of CA 14 data, 2012-2013
* Relative\_Density\_LWS
  + Relative densities of Inundation Late-winter Surveys, 2012-2013 and 2015-2016
  + Relative densities of Downstream Late-winter Surveys, 2015-2016
* Relative\_Density\_VHF
  + Relative density of moose telemetry locations during calving, summer, fall, post-rut, winter, and spring
* Relative\_Density\_GPS
  + Relative density of all moose GPS locations collected during the study
* Resource\_Selection
  + Resource Selection Function output for males and females
* Browse\_Survey\_Plots
  + Browse Survey plots sampled in 2013 and 2016
* Habitat\_Improvement
  + Moose habitat available for improvement

**Online Data Link:** <http://gis.suhydro.org/SuWa/10-WILD/10.05-MOOSE/>

**Online Report Link:** Study 10.5: Moose 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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