# Comprehensive Data Delivery README FILE

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| **Study Section** | Study 10.16: Landbird and Shorebird Migration, Breeding, and Habitat Use |
| **Study Component** | (not applicable) |
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| **Field Date Range** | May 23–July 16, 2013, and May 20–June 18, 2014 |

**Introduction:** The overall goal of this effort was to collect baseline data on the occurrence, distribution, abundance, and habitat use of breeding landbirds and shorebirds to enable assessments of the direct, indirect, and cumulative impacts on these birds in areas with the potential to be affected by construction and operation of the proposed Susitna-Watana Hydroelectric Project (Project) in Alaska. This study was designed to provide data on landbird and shorebird species of conservation concern that are known or expected to occur in the Project area, as well as numerous other bird species that are protected under the federal Migratory Bird Treaty Act. Three survey methods were used in this study: (1) ground-based point-count surveys for breeding birds (focusing on landbirds and shorebirds) in all available habitats; (2) ground-based point-count surveys (in 2013 only) and transect surveys focused on riverine and lacustrine habitats; and (3) aerial colony surveys and ground-based burrow counts and entry-rate surveys for colonially nesting swallows.

The study area for the ground-based point-count surveys in the Upper and Middle Susitna Basin includes the areas of the proposed Watana Reservoir (at predicted maximum pool elevation), the Watana Dam and Camp Site, the three alternative Susitna-Watana Transmission Line/Access corridors, and a 2-mile buffer surrounding each of those areas. Because lacustrine habitats were surveyed only when they occurred near point-count plots, the surveys for landbirds and shorebirds in lacustrine habitats were conducted in the same survey area used for the point-count surveys. The riverine transect surveys were conducted in the area of the proposed Watana Reservoir (at predicted maximum-pool elevation), in the Watana Dam and Camp Site, and in a 2-mile buffer surrounding those areas. The survey area for colonially nesting swallows includes suitable riverine cliff and bluff nesting habitats in the same area used for the riverine transect surveys. Field surveys for this multi-year study began in 2013 and were completed in 2014. The Study Completion Report (SCR) for the study was produced in 2017.

**Data Summary:** Public data for the Landbird and Shorebird Study consist of field data and GIS data layers delineating the study areas used in the field, density distribution raster grids for 26 species for which densities could be calculated, and field plot and transect photos. All data for the study have undergone at least a QC3 level of review.

*Field Data*—In 2013, field data for point-count surveys were recorded on paper data forms and later entered into an Access database. In 2014, point-count survey data were recorded electronically in the field using a customized avian point-count app created by ABR staff to run on Android tablet computers. Exactly the same field data elements were recorded in 2014 as in 2013, but the electronic data entry in the field in 2014 eliminated the need for post-field data entry and helped streamline the data QA/QC process.

In both 2013 and 2014, field data for the lacustrine and riverine transect surveys were recorded on paper data forms as were the colonially nesting swallow data from aerial surveys. Data from the ground-based swallow burrow counts and entry-rate surveys were obtained from digital video recorded at active swallow colonies. All data paper data and data obtained from digital videos were entered later into an Microsoft Access database and underwent a formal QA/QC process in Access before analysis.

**Data Organization:** Public field data for the study are archived in one Access database (10\_16\_LSBRD\_Field\_Data\_20170630.accdb) at the root level of the /10-WILD/10.16 LSBRD folder and 3 subfolders which contain the following:

* **Density\_geotifs**: geotifs depicting the distribution of predicted densities of 26 species within the point-count study area and a README file with complete metadata and an explanation of density data analysis methods.
* **Photos**: contains landscape photos of each point-count plot and the surrounding area as well as photos of field crews collecting data; the photos are housed in separate subfolders organized by year and date. Within each subfolder, photos are stored in folders identified by the plot identification number and the name of the camera used.
* **GIS**: The GIS data are archived in the subfolder, /10-WILD/10.16 LSBRD /GIS which contains one geodatabase (filename: SuWa\_10\_16\_GIS\_20170630.gdb) containing 11 feature classes of lacustrine, riverine, and swallow study areas, swallow colonies, point count plots, and geo-tagged photos (with hyperlinks to the images in the Photos folders):
* LSBRD\_2013\_2014\_Point\_Count\_Plots
* LSBRD\_2013\_2014\_Riverine\_Transects
* LSBRD\_2013\_2014\_SA\_NotSampled
* LSBRD\_2013\_2014\_Study\_Areas
* LSBRD\_2013\_GeoTagPhotos
* LSBRD\_2013\_Lacustrine\_Survey\_Lakes
* LSBRD\_2013\_NestingSwallowStudyArea
* LSBRD\_2013\_SwallowColonies
* LSBRD\_2013\_SwallowSA\_NotSampled
* LSBRD\_2014\_GeoTagPhotos
* LSBRD\_2014\_Lacustrine\_Survey\_Lakes

**Online Data Link:** <http://gis.suhydro.org/SuWa/10-WILD/10.16-LSBRD/>

**Online Report Link:** 10.16 Landbird and Shorebird Migration, Breeding, and Habitat Use – 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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