# Comprehensive Data Delivery README FILE

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| **Study Section** | Study 10.18: Wood Frog Occupancy and Habitat Use Study |
| **Study Component** | (not applicable) |
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| **Field Date Range** | May 30–June 8, 2013, and May 20–29, 2014 |

**Introduction:** The overall goal of this data collection effort was to characterize the use by breeding wood frogs of areas with the potential to be affected by construction and operation of the proposed Susitna–Watana Hydroelectric Project (Project) in Alaska.

The Wood Frog Occupancy and Habitat Use Study (Wood Frog Study) focused on auditory surveys of calling male wood frogs (*Rana* [*Lithobates*] *sylvatica*), including deployment of acoustic monitors during the spring breeding season, and on habitat occupancy modeling using the results of those surveys. The study area encompassed the reservoir inundation zone, associated areas for the dam and camp infrastructure, and the potential access-road corridors (Gold Creek, Chulitna, and Denali corridors) and material sites, and included those water bodies and wetland habitats suitable for use by breeding wood frogs. Field sampling in 2013 was focused on the reservoir zone, dam and camp facilities area, Chulitna corridor, and a small portion of the Denali corridor (ABR 2014a). In 2014, field sampling was focused on the Gold Creek corridor and on the Denali West and Denali East corridor options. The study team conducted ground-based auditory surveys of randomly selected waterbodies and wetlands in the study area during the early spring breeding season for wood frogs. Up to three replicate surveys were made by trained observers at each waterbody or wetland during May 30–June 8, 2013, and May 20–29, 2014. In addition to these surveys, incidental detections of wood frogs were documented during data collection efforts for other studies (mainly ground-based surveys for landbirds and shorebirds).

This multi-year study began in 2013 and was completed in 2014. The Study Completion Report (SCR) for the study was produced in 2015.

**Data Summary:** Data for the Wood Frog Study consist of GIS layers, digital photos, and an acoustic monitoring spreadsheet. All data for the study have undergone a QC3 level of review.

*Acoustic Monitoring Data*—Acoustic recordings from the automated acoustic monitoring devices provided a sample of 5-min intervals that were used to quantify when frogs were heard calling. Monitors used were Wildlife Acoustics Song Meter SM2BAT+ platforms with SMX-II microphones to record frog calls onto 32-GB (Class 4 SDHC) data cards. Acoustic monitoring data collected on SD cards in the detector that were downloaded on a server, run through analytical software, and results saved in Microsoft Excel files.

*Chytrid Fungus Bioassay*— Skin-swab samples collected from seven frogs captured opportunistically in 2013 were sent to the USGS Reston Molecular and Environmental Microbiology Laboratory in Reston, Virginia, and tested for the presence of chytridiomycosis (Bd) using standard qPCR protocols (Boyle et al. 2004). All seven samples tested negative for Bd. No samples were collected in 2014.

*GIS Data*— The file geodatabase contains feature classes for the study areas, randomly selected survey water bodies and wetlands with ground-based auditory field survey results, acoustic monitor locations, photos linked to auditory field survey sites and acoustic monitor locations, and incidental observations.

**Data Organization:**

Acoustic Monitoring spreadsheet data: 10\_18\_FROG\_AcousticMonitoring\_20170630.xlsx is archived in the root directory, /10-WILD/10.18-FROG.

The field photos are in the subfolder /10-WILD/10.18-FROG/Photos with subdirectories for acoustic stations and frogs for both 2013 and 2014. Photos in the acoustic\_stations subdirectory correspond to acoustic monitor locations and are hyperlinked to the feature class FROG\_2013\_2014\_AcousticStationPhotos.

Photos in the frog subdirectory correspond to study sites and contain landscapes and field shots hyperlinked to the feature class FROG\_2013\_2014\_Photos.

The GIS data are archived in the subfolder, /10-WILD/10.18-FROG/GIS, with one geodatabase (SuWa\_10\_18\_GIS\_20170630.gdb) containing the feature classes:

* FROG\_2013\_StudyArea
* FROG\_2014\_StudyArea
* FROG\_2013\_2014\_AcousticMonitorSites: locations of 10 acoustic monitoring devices
* FROG\_2013\_2014\_AuditorySurvArea\_Results: waterbody and wetland survey polygons with auditory survey results
* FROG\_2013\_2014\_IncidentalObs: point file of incidental observations of frogs from other surveys
* FROG\_2013\_2014\_AcousticStationPhotos: point file with hyperlinks to acoustic station photos
* FROG\_2013\_2014\_Photos: point file with hyperlinks to frog photos

**Online Data Link:** <http://gis.suhydro.org/SuWa/10-WILD/10.18-FROG/>

**Online Report Link:** 10.18 Wood Frog Occupancy 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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