# comprehensive Data delivery README FILE (INTERNAL)

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| **Study Section** | Study 9.17: Cook Inlet Beluga Whale (CIBW) Study |
| **Study Component** | Aerial Surveys to Document CIBWs and other Marine Mammals in the Susitna River Delta |
| **Field Date Range** | May 6 – October 11, 2013 |

**Introduction:** The goals of this study are to (1) provide current, fine scale information on Cook Inlet Beluga Whale (*Delphinapterus leucas*; CIBW) distribution and movements within the Susitna River delta, (2) correlate these data with information on the ecology and habitat parameters of CIBW prey species, including Eulachon (*Thaleichthys pacificus*) and Pacific salmon (*Oncorhynchu*s spp.), and (3) record incidental observations of all marine mammals sighted during beluga whale studies. This multi-year study was initiated with aerial surveys and photo/video data collection in 2013. Study 9.17 is focused on understanding CIBW habitat use and behavior within the Susitna River in order to evaluation the potential that this whale population could be affected by construction and operation of the proposed Susitna-Watana Hydroelectric Project (Project) in Alaska.

Three specific objectives have been developed for Study 9.17, a few of which include multiple tasks. Aerial surveys provided information on CIBW distribution, group size, and behavior in support objectives 1 & 2. Data collected as part of these studies will be used to provide a baseline characterization of Beluga Whale use of the Susitna River in support of identification and evaluation of potential Project-induced, indirect effects on CIBW and inform development of any necessary protection, mitigation, and enhancement measures.

**Data Summary:**

Seventeen aerial surveys were conducted with a fixed-wing aircraft during the open-water season, from May 6 through October 11, 2013. From May 6 through June 21, survey flight paths were primarily focused on nearshore areas between the Little Susitna River and the Beluga River. Offshore areas towards Point Possession and behind Fire Island were added to the survey design beginning on June 27. Surveys were conducted at 1,000 feet to minimize disturbance and most included coverage of the Susitna River as far upstream as PRM 15. CIBWs were sighted during 12 of the 17 aerial surveys, including all surveys between May 6 and August 30. The number of CIBW groups observed during each survey ranged from zero to nine and the monthly sighting rate of CIBW groups (among months that had any sightings) was highest in July and August and lowest in June. Data were collected following the methodology proposed in the Final Study Plan with the exception of variances reported in the ISR Part D.

The data from the 2013 aerial surveys is contained in a single database with survey and sightings data (survey dates, location, species, count). The sightings for CIBW and harbor seals are summarized in separate tables in the same file. The CIBW sightings table includes additional information on CIBW group size, color, behavior and direction of travel.

Data have undergone 3 levels of data quality control (QC), named QC1 to QC3. The QC levels, briefly, are as follows:

* QC1–Field Review: Review of field forms before leaving the field, or the QC level of raw data collected via field equipment such as thermistors, cameras, GPS units, etc.;
* QC2–Data Entry: Data from paper forms are entered into an electronic format and verified;
* QC3–Senior Review: Final review by senior professional before submitting field data to AEA, or the QC level of raw data cleaned up for delivery to AEA.

**Data Organization:**  2013 aerial survey data are organized into an MS Excel file, accompanied by a data dictionary for information such as table and attribute descriptions.

INTERNAL: Internal versions of the databases, field backups, etc. are stored for future analysis and AEA archival. A geodatabase is also available.

**Software Considerations:** MS Excel or compatible software is needed for the spreadsheet file.

INTERNAL: Esri ArcGIS 10 is needed for the geodatabase.

**Online Data Link:** These data and dictionary are available on request from the AEA Data Distributor (SUWAhelp@aidea.org). They are in AEA internal folder SuWa/09-FISH/9.17-CIBW/INTERNAL. Users should also reference INTERNAL\_9\_FAQ\_Database\_Data\_Dictionary\_20170630.pdf in AEA internal folder [SuWa/09-FISH/00/FAQ\_Data\_Documentation/INTERNAL/](http://gis.suhydro.org/SuWa/09-FISH/00/FAQ_Data_Documentation/INTERNAL/).

**Online Report Link:** AEA has prepared several documents with data pertaining to this study component. However, because database QC is an ongoing process, the most recent version of the data found through the hyperlink above may supersede the results reported in study documents. Copies of the datasets used for analysis in the ISR and SIR are available through the hyperlink found at the beginning of the results section (Section 5). To aid review, study documents using this study component are listed below. Each of these documents is accessible on AEA’s Project licensing website (<http://www.susitna-watanahydro.org/type/documents/>) or through FERC’s eLibrary system (<http://www.ferc.gov/docs-filing/elibrary.asp>), in Docket No. P-14241.

| **Title** | **Date** | **Description** | **Link** |
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| Draft Initial Study Report for Study 9.17  | 2/3/2014 | This draft of the ISR summarized the study methods and variances during the 2013 study season, and presented preliminary data collected for Study 9.16. This draft ISR was later republished as Part A of the final ISR. | [Draft ISR for Study 9.17 (File 1)](http://www.susitna-watanahydro.org/wp-content/uploads/2014/01/09.17_CIBW_ISR_Draft_1_of_2.pdf) [Draft ISR for Study 9.17 (File 2)](http://www.susitna-watanahydro.org/wp-content/uploads/2014/01/09.17_CIBW_ISR_Draft_2_of_2_Apps_A-D.pdf) |
| Initial Study Report for Study 9.17  | 6/3/2014 | This document is the Initial Study Report (Parts A, B and C) for Study 9.16. Part A republishes the Draft ISR. Part B identifies supplemental information and errata in Part A. Part C presents study modifications and plans for completing the study. | [ISR Part A for Study 9.17 (File 1)](http://www.susitna-watanahydro.org/wp-content/uploads/2014/05/09.17_CIBW_ISR_PartA_1_of_2.pdf)[ISR Part A for Study 9.17 (File 2)](http://www.susitna-watanahydro.org/wp-content/uploads/2014/05/09.17_CIBW_ISR_PartA_2_of_2_Apps_A-D.pdf)[ISR Part B for Study 9.17](http://www.susitna-watanahydro.org/wp-content/uploads/2014/06/09.17_CIBW_ISR_PartB.pdf)[ISR Part C for Study 9.17](http://www.susitna-watanahydro.org/wp-content/uploads/2014/06/09.17_CIBW_ISR_PartC.pdf) |
| Cook Inlet Beluga Whale Study (Study 9.17) 2014 Study Implementation Technical Memorandum | 9/26/2014 | Technical memorandum prepared by AEA that summarizes activities conducted in 2014 that tested methods to document CIBW prey and prey habitat in the Susitna River delta. | [Sept. 2014 TM for Study 9.17](http://www.susitna-watanahydro.org/wp-content/uploads/2014/09/9.17_CIBW_DRAFT_TM_20140909.pdf) |
| Cook Inlet Beluga Whale Study Plan (Study 9.17) 2015 Implementation Plan Technical Memorandum | 9/30/2014 | Technical memorandum prepared by AEA that describes modifications to Study 9.17. | [Sept. 2014 TM for Study 9.17](http://www.susitna-watanahydro.org/wp-content/uploads/2014/09/9.17_CIBW_DRAFT_2015_IP_20140911-1.pdf) |
| Initial Study Report Meetings, October 21, 2014 (Parts A and B) | 11/15/2014 | Transcripts and AEA’s agenda and PowerPoint presentations for the ISR meeting concerning the Project fish and aquatic studies filed by AEA. | [Transcripts from ISR Meeting](http://www.susitna-watanahydro.org/wp-content/uploads/2014/11/Oct15_ISR_Meeting_PartA_Transcripts.pdf)[Materials from ISR Meeting](http://www.susitna-watanahydro.org/wp-content/uploads/2014/11/Oct15_ISR_Meeting_PartB_Agenda_Presentations.pdf) |

**[[1]](#endnote-1)**

1. **Data Distributor Contact Information:**

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