# comprehensive Data delivery README FILE (INTERNAL)

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| **Study Section** | Study 9.17: Cook Inlet Beluga Whale (CIBW) Study |
| **Study Component** | Vessel-Based Observation and Sonar Surveys |
| **Field Date Range** | June 2, 2014 - July 22, 2014 |

**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 study was initiated with aerial surveys and photo/video data collection in 2013. In 2014, AEA implemented a pilot study to test vessel based observation and sonar methods to document CIBW prey and prey habitat in the Susitna River delta. Study 9.17 is focused on CIBW, their prey species and habitats with the potential to 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. Data collected as part of these studies will be used to provide a baseline characterization of CIBW use of the Susitna River in support of identification and evaluation of potential Project-induced effects on CIBW and fish-prey resources and inform development of any necessary protection, mitigation, and enhancement measures.

**Data Summary:** Vessel-based surveys were used as a platform to collect data on beluga prey species as well as data from marine mammal sightings including distribution, behavior, and group composition. Split-beam sonar was used to collect prey data while marine mammal observers collected environmental and marine mammal sighting data. Nine surveys were at least partially completed between June 2 and July 22, 2014. Data collection followed the methodology proposed in Part C of the June 2013 ISR and reported in the 2014 Cook Inlet Beluga Whale Prey Study Implementation Technical Memorandum (September 26, 2014).

The data from the 2014 vessel surveys is stored in three data files: survey effort data (survey dates, vessel speed and heading, water depth, and environmental conditions), sightings of whales and seals (location, species, count, beluga whale color, behavior), and sonar data (fish targets, target depth, target length, sonar sample intervals, and calculated beluga whale prey densities).

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:**  2014 vessel survey data are organized into three MS Excel files (Effort, Sighting, and Sonar), accompanied by a data dictionary for information such as table and attribute descriptions.

Internal versions of the databases, field backups, etc. are stored for future analysis and AEA archival.

**Software Considerations:** MS Excel or compatible software is needed for the vessel survey data.

**Online Data Link:** These data and dictionary are available on request from the AEA Data Distributor ([SUWAhelp@aidea.org](mailto: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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| 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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