# comprehensive Data delivery README FILE

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| **Study Section** | Study 9.7: Salmon Escapement |
| **Study Component** | Fishwheel Operations |
| **Field Date Range** | June 17, 2012 -September 7, 2014 |

**Introduction:** The overall focus of Study 9.7 is to characterize the distribution, abundance, habitat use, and migratory behavior of all species of adult anadromous salmon (*Oncorhynchus* spp.) across mainstem river habitats and select tributaries above the Three Rivers Confluence (i.e., confluence of the Susitna, Chulitna, and Talkeetna rivers). Study 9.7 is focused on adult salmon and their spawning habitats with the potential to be affected by construction and operation of the proposed Susitna-Watana Hydroelectric Project (Project) in Alaska.

Eight specific objectives have been developed for Study 9.7, a few of which include multiple tasks. As part of Objective 1, adult salmon were collected in fish wheel for subsequent tagging and radio-tracking. These fish were used to provide a baseline characterization of salmon spawning distributions and run timing. These data will support the identification and evaluation of potential Project-induced effects on fish assemblages, and inform development of any necessary protection, mitigation, and enhancement measures.

**Data Summary:** This multi-year study was implemented from 2012 through 2014. In each year, fishwheels were operated in the Lower Susitna River (ADF&G), Middle Susitna River (AEA), and the Yentna River (ADF&G) River. The data summarized here pertain to the Middle Susitna River where AEA operated fishwheels at two (2012 and 2013) or three (2014) sites near Curry (PRM 124.2) during the salmon migration season.

The data for 2012 are structured into tables for fishwheel operation intervals, a separate table for each species count, fish tagged/biosampled, and fish recaptures. The data files for 2013 and 2014 have a similar structure to 2012 except the counts for all species are in a single summary table of the daily total fish caught. Data files for 2013-2014 include an operational/catch summary table, an individual fish data table (species, lengths, tag numbers, genetic biosample information), and an individual fish recapture table (species, and tag numbers). In all cases, the count tables are sums of fish that were tagged/biosampled and fish recaptured.

Data were collected in accordance with the methods outlined in the Final Study Plan for 9.7 with the exception of the variances identified in the ISR Part D (November 2015). Data management followed the QA/QC protocol described in the Implementation Plan resulting in annual databases of fishwheel collections for the Susitna-Watana Project.

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:**  The 2012 data is an MS Access database, and 2013 and 2014 data are in two (2) separate MS Excel workbooks for each year. Each is accompanied by a data dictionary of table and attribute descriptions.

**Software Considerations:** MS Access 2007 or newer andMS Excel or compatible software are needed for the fishwheel data files.

**Online Data Link:** Folder Fishwheel at <http://gis.suhydro.org/SuWa/09-FISH/9.07-ESCAPE/>

File 9\_FAQ\_Database\_Data\_Dictionary\_20170630.pdf at <http://gis.suhydro.org/SuWa/09-FISH/00/FAQ_Data_Documentation/>

**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.

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| **Title** | **Date** | **Description** | **Link** |
| Adult Salmon Distribution and Habitat Utilization Study | 3/4/2013 | This report describes the methods and results of the 2012 study implementation for the Salmon Escapement Study. | [Mar. 2013 TM for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2013/02/2012-Adult-Salmon-Distribution-and-Habitat-Utilization-Study1.pdf) |
| Distribution of Spawning Susitna River Chinook *Oncorhynchus tshawytscha* and Pink Salmon *O. gorbuscha*, 2012 | 6/20/2013 | This attachment includes ADF&G’s report on the results of Chinook and Pink salmon radio telemetry in the Susitna River in 2012. | [June 2013 TM for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2013/05/AEA_2012_SusitnaChinookPinkSalmonDistrib_2013_0513.pdf) |
| Draft Initial Study Report for Study 9.7 | 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 9.7. This draft ISR was later republished as Part A of the final ISR. | [Draft ISR Part A for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2014/01/09.07_ESCAPE_ISR_Draft.pdf) |
| Initial Study Report for Study 9.7 | 6/3/2014 | This document is the Initial Study Report (Parts A, B and C) for Study 9.7. 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 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2014/05/09.07_ESCAPE_ISR_PartA.pdf)[ISR Part B for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2014/06/09.07_ESCAPE_ISR_PartB.pdf)[ISR Part C for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2014/06/09.07_ESCAPE_ISR_PartC.pdf) |
| Salmon Escapement Study (Study 9.7), 2014 Implementation and Preliminary Results Technical Memorandum | 9/30/2014 | This attachment includes a report describing the methods and variances related to 2014 implementation of the Salmon Escapement Study, and preliminary results. | [Sept. 2014 TM for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2014/09/09.07_ESCAPE_TM_Short-Version_new.pdf) |
| Initial Study Report –Part D for Study 9.7 | 11/6/2015 | The purpose of Part D to the Initial Study Report for Study 9.7 is to report on any additional implantation of the Study Plan from June 2014 to the end of the 2014 calendar year. | [ISR Part D for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2015/11/09.07_ESCAPE_ISR_PartD.pdf) |
| Salmon Escapement Study, Study Plan 9.7, Study Completion Report | 11/6/2015 | This report described methods, variances and results for 2014 study year, along with synthesis of findings from the full 3 years of implementation (2012-2014) for salmon escapement study. | [SCR for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2015/11/09.07_ESCAPE_SCR.pdf) |
| Salmon Escapement Study, Study Plan 9.7, Errata to Study Completion Report  | 2/23/2016 | This is a supplementary document to the SCR with updated results, tables, and figures to address inconsistencies found in the 2014 Study Completion Report and the Study 9.7 QC3 database | [Errata to SCR for Study 9.7](http://www.susitna-watanahydro.org/wp-content/uploads/2016/02/09.07_ESCAPE_SCR_Errata_20160223.pdf) |
| Response to Comments on the Initial Study Report, Study 9.7, Section 2.6.3 | 10/24/2016 | This document contains AEA’s responses to agency’s comments and study modification requests in regards to their review of the ISR.  | [AEA ISR Comment Response for Study 9.7, Section 2.6.3](http://www.susitna-watanahydro.org/wp-content/uploads/2016/11/ISR_Response_OCT_2016.pdf) |

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

1. **Data Distributor Contact Information:**

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