# comprehensive Data delivery README FILE

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| **Study Section** | Study 7.06: Hydrology (HYDRO) |
| **Study Component** | Ice Processes (ICE) |
| **Prepared By** | HDR |
| **Field Date Range** | March 2012 - May 2014 |

**Introduction:** The overall goal of this data collection effort was to collect ice condition observations to support river modeling efforts including habitats in areas with the potential to be affected by construction and operation of the proposed Susitna-Watana Hydroelectric Project (Project) in Alaska.

These data contain ice processes observations collected between project rive r mile (PRM) 0 – 236. Data was collected via periodic helicopter flights as well as fixed time-lapse cameras. The ice processes observed and documented throughout this period were used to create and calibrate 1D and 2D river models.

**Data Summary:**

During the 2012 river break-up the following data was collected:

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Georeferenced Still Photos | 3058 photos | QC3 |  |
| Georeferenced Video | 44 clips | QC3 |  |
| Open Lead Observations | 256 Points167 Lines | QC3 |  |
| Ice Jam Observations | 398 Points80 lines | QC3 |  |
| Time Lapse Photos | 12 locations | QC3 |  |

During the 2012 river freeze-up the following data was collected:

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Georeferenced Still Photos | 2424 photos | QC3 |  |
| Georeferenced Video | 22 clips | QC3 |  |
| Ice Observations | 187 Points | QC3 |  |

During the 2013 river break-up the following data was collected:

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Georeferenced Still Photos | 8080 photos | QC3 |  |
| Georeferenced Video | 88 clips | QC3 |  |
| General Ice Observations | 924 Points | QC3 |  |
| Open Lead Observations | 443 Points | QC3 |  |
| Ice Bridge/Jam Observations | 118 Points | QC3 |  |
| Time Lapse Photos | 7 Locations | QC3 |  |
| Ice Sensor Locations | 19 Locations |  |  |

During the 2013 river freeze-up the following data was collected:

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Georeferenced Still Photos | 6423 photos | QC3 |  |
| Georeferenced Video | 68 clips | QC3 |  |
| General Ice Observations | 1149 Points | QC3 |  |
| Time Lapse Videos | 13 Locations | QC3 |  |

During the 2014 river break-up the following data was collected:

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Georeferenced Still Photos | 6780 photos | QC3 |  |
| Georeferenced Video | 165 clips | QC3 |  |
| General Ice Observations | 1322 Points | QC3 |  |
| Open Lead Observations | 443 Points | QC3 |  |
| Ice Bridge/Jam Observations | 118 Points | QC3 |  |
| Time Lapse Photos | 7 Locations | QC3 |  |
| Ice Sensor Locations | 15 Locations |  |  |

**Historic Data:** In addition this deliverable contains several datasets compiled from historic data of ice conditions.

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| --- | --- | --- | --- |
| **Data Type** | **Quantity** | **QC Level** | **Comments** |
| Historic Ice Event Obs | 533 observations | QC3 | Observations circa early 1980’s |
| Historic Ice Lead Locations | 112 Lines | QC3 |  |

**Data Organization:** Delivered data is organized in a ESRI File Geodatabases, with links to related media files in folders.

**Software or Hardware Considerations:**

**Spatial Data:** Delivered in an ESRI File Geodatabase with accompanying map document (MXD) compatible with ArcGIS 10.1 or newer. MXDs organize collected data by date of collection.

**Photos:** Captured with Panasonic DMC-TS3 GPS Cameras. Provided in JPEG format. Georeference information provided in EXIF tags. Photos are linked from HDR\_IceSurveyPhotoPoints feature class. Points represent location of observer when capturing photo

**Video:** H.264 MP4 video captured on POV.HD camera. Processed with spatial data overlay using Dashware video processing software. Recommend installing VLC video player to view videos. Video is linked from HDR\_IceSurveyVideoLines feature class. Lines represent flight path of helicopter while capturing video.

**Online Data Link:** <http://gis.suhydro.org/SuWa/07-HYDRO/7.06-ICE/>

**Online Report Link:** 7.6 Ice Processes in the Susitna River Study filed June 3, 2014 at <http://www.susitna-watanahydro.org/type/documents>

[[1]](#endnote-1)

1. **Data Distributor Contact Information:**

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