# Susitna Hydrology Project

# ESGFA138-5 Groundwater Station

# Data Measurement and Recording Standards

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**Groundwater Station**

Data-Collection Objectives: Meteorological data to evaluate the potential for hydro-electric power generation in the Susitna River region.

Time Recording Standard: **Always** Alaska Standard Time (UTC – 9).

Datalogger Scan Interval Standard: 15 minutes.

Time Measurement Standards:

* Hourly readings are recorded at the end of the hour; therefore, the hourly average water temperature, for example, with a 60-second scan interval and a time stamp of 14:00 is measured from 13:01 to 14:00:00. For a 60-second scan interval, the hourly average would be the average of 60 min = 60 values.
* Quarter-hourly readings are recorded every fifteen minutes starting at the top of the hour.
* Instantaneous readings are taken at the time specified by the time stamp.
* A day begins at midnight (00:00:00) and ends at midnight (23:59:55). All daily data are from the day prior to the date of the time stamp. For example, if the time stamp reads 09/09/2007 00:00 or 09/09/2007 12:00:00 AM, the data are from 09/08/2007.

Data Retrieval Interval: Data will be retrieved manually.

Data Reporting Interval: Quarter-hourly.

# Water Height

Sensor: INW PT2X integrated datalogger and pressure/temperature sensor.

Pressure Measurement Range: 0-15 psig

Output Units: psig

Scan Interval: 15 minutes

Output:

* Fifteen-Minute Sample Water Height: Fifteen minute sample (point) reading recorded at the top of the hour, 15, 30, and 45 minutes past the hour.

# Water Temperature

Sensor: INW PT2X integrated datalogger and pressure/temperature sensor.

Sensor Range: -40°C to 125°C

Output Units: °C

Scan Interval: 15 minutes

Output:

* Fifteen-Minute Sample Water Temperature: Fifteen minute average of all 15 readings recorded at the top of the hour, 15, 30, and 45 minutes past the hour.

# Resulting Final Storage Data Tables:

See Datalogger Output Files Excel Document

**Notes**

Definitions:

Scan interval = sampling duration = scan rate

Time of maximum or minimum values is not recorded

Sample reading = instantaneous reading

Beginning of the hour = top of the hour