**Susitna-Watana Hydroelectric Project**

**2013 Baseline Monthly Water Quality Study Data Dictionary**

Field data were collected at all baseline monthly water quality monitoring sites along the Susitna River from July to September 2013. In situ field parameters were collected using a Hydrolab MS5 probe and a Hanna Instruments HI 727 colorimeter. This document describes the standard abbreviations used in the MS Excel database used to assemble tables and to report values. Further, it describes the nomenclature for labeling sample bottles and identifying sample locations. The baseline monthly water quality field data, formatted for input into the GINA database, is described in the following sections. Each section corresponds to the column heading in the Excel database.

# PRM

Describes the project river mile (PRM) from which monthly samples were collected.

# Location

Describes the location in the water column (vertically and horizontally) from which the sample was taken. LT = left top, LB = left bottom, MT = middle top, MB = middle bottom, RT = right top, and RB = right bottom. Duplicate samples are indicated with a “D”.

# Site Name

The table below summarizes sampling location (in PRMs) on the river and its corresponding site name.

| **Project River Mile (PRM)** | **Site Name** |
| --- | --- |
| 29.9 | Susitna Station |
| 32.5 | Yentna River |
| 33.6 | Susitna above Yentna |
| 45.1 | Deshka River |
| 59.9 | Susitna |
| 87.8 | Susitna at Parks Highway East |
| 102.8 | Talkeetna River |
| 107 | Talkeetna |
| 118.6 | Chulitna River |
| 124.2 | Curry Fishwheel Camp |
| 140.1 | Gold Creek |
| 142.2 | Indian River |
| 142.3 | Susitna above Indian River |
| 152.3 | Portage Creek |
| 152.7 | Susitna above Portage Creek |
| 174\* | Susitna below Watana Dam Site |
| 187.2 \*\* | Susitna at Watana Dam Site |
| 235.2 | Oshetna Creek |

\*Sampled twice as a point sample due to accessibility

# **\*\***Due to access, this site was sampled by helicopter at PRM 184 and PRM 187.8.Date\_Collected

This field indicates the date which the samples and field measurements were collected.

# GPS\_Coord.\_LB\_Latitude

This field gives the global positioning system (GPS) coordinates(WGS 84) for the location where samples were taken. This is the latitude coordinate for the left bank.

### GPS\_Coord.\_LB\_Longitude

This field gives the global positioning system (GPS) coordinates(WGS 84) for the location where samples were taken. This is the latitude coordinate for the left bank.

### GPS\_Coord.\_RB\_Latitude

This field gives the global positioning system (GPS) coordinates(WGS 84) for the location where samples were taken. This is the latitude coordinate for the right bank.

### GPS\_Coord.\_RB\_Longitude

This field gives the global positioning system (GPS) coordinates(WGS 84) for the location where samples were taken. This is the longitude coordinate for the right bank.

# River\_Width\_Yds

This field gives the distance across the sampling transect from left bank to right bank, in yards.

# Data\_Sonde.\_No

This field corresponds to the serial number on the sampling probe that was used to sample that day.

# GPS\_No.

This number corresponds to the GPS number which was used each day to collect coordinates of the sampling site, often on the right or left bank of a transect.

# Camera\_No.

This field corresponds to the serial number of the camera used in the field that day to document the sampling site.

# Log\_Book\_ No.

This number corresponds to the log book used in the field each day where additional comments, not included on the field forms, were documented. These comments were usually schedule-related such as when the boat departed from the dock in the morning etc.

# MS/MSD

This field indicates whether a matrix spike/matrix duplicate (MS/MSD) sample was collected at the site.

# Duplicate

This field indicates whether or not a duplicate sample was collected at the site.

# Reagent\_Blank

This field indicates whether or not a reagent blank sample was collected at the site.

# FMeas\_Pt.No.

This field indicates the point number across the transect and is used as a sample identifier. Point 1 corresponds with 25% from the LB, point 2 corresponds with 50% from the left bank, etc.

# Field\_Meas\_Time

This field indicates the time at which sample were collected. In most instances, the time was recored under “Grab\_Sample\_Time” (column AG, see below).

### Field\_Meas\_Sample\_ID

This field indicates the specific location of the sample within the transect. For example, WQ-SW-B-29.9L is a **W**ater **Q**uality, **S**urface **W**ater sample collected as part of the **B**aseline monitoring at PRM **29.9**, Susitna Station, 25% off of the **L**eft bank.

# Dist\_fr\_LB\_yds

# This field indicates the distance, in yards, from the left bank (LB) each sample and measurement were taken. A range finder was used to determine these distances. Water\_Depth\_ft

This field indicates total depth, in feet, of the water at each sampling and field data collection point along the transect. Total depth was determined with a depth meter or sounding reel.

# Field\_meas\_Location

This field indicates the longitudinal position of the sample and measurement at each point along the transect; either top or bottom (T or B).

# Field\_meas\_Depth\_ft

This field gives the exact depth, in feet,where the sample and field measurements were collected. Samples and field measurements were collected 1.5 feet from the surface for the top sample, and 1.5 feet from the bottom for the bottom sample.

# Color\_Apparent

This field indicates the unfiltered color of the sample read in a colorimeter. Values were often >500.

### Color\_Apparent\_Flag

This field indicates if an apparent color sample was >500 or not.

# Color\_True

This field indicates the filtered color of the sample read in a colorimeter. Values were often near 0.

# Temp\_deg\_C

This field indicates temperature (°C) measurements collected at each transect sampling site.

# AB. DO\_mg/L

This field represents the dissolved oxygen concentration (mg/L) collected at each transect sampling site.

# AC. pH

This field indicates pH values collected at each transect sampling site.

# AD. Specific\_Conductance\_uS/cm

This field indicates specific conductivity (uS/cm) measurements collected at each transect sampling site.

## AE. Redox\_potential\_mV

This field indicates the redox potential (mV) of each sampling point along the transect.

## AF. Fmeas\_notes

This field indicates any visual observations taken during sample collection, or equipment issues.

## AG. Grab\_Sample\_ID

This field indicates the sample ID written on each sample bottle for identification at the lab.

## AH. Grab\_Sample\_Depth\_ft

This field indicates the depth, in feet, each sample was collected at and is the same as measurement depth (F\_meas\_depth).

## AI. Grab\_Sample\_Time

This field indicates the time at which the laboratory sample was collected.

## AJ. Time\_Zone

This field indicates if the samples were collected in Alaskan Standard Time (AKST) or Alaskan Daylight Time (AKDT).

## AK. No.\_Grab\_Samples\_Coll

This field indicates the number of sample jars that were used to collect water at a specific site.

## AL. Grab\_Notes\_Location\_Specific

This field describes notes taken that are location specific.

## AM through AR. Site\_Specific\_Photos

These fields describe photos that were taken at a specific site , for example PRM 29.9, Susitna Station.

## AS. General\_Weather\_and\_Site\_Observations

This field describes the general weather conditions on the sample day.

## AT through BI. General\_Photos\_and\_Locations and General\_Site\_Notes

These fields provide photo identification numbers and corresponding narrative of up to 6 photos at each site, often taken across the transect and provide additional site or sampling notes that were not written in previous fields.

**BL. General\_Site\_Notes**

This section describes any other site notes that were mentioned in the site observations column.