

Quick Guide to Understanding SWMP data

Where can I download data?

Through the **Centralized Data Management Office (CDMO)** website: www.nerrsdata.org

To get all data from **a single site** in a file (you can choose your own date range, and select “all data” or “best available data”), choose the **Data Export System** from the right sidebar and work your way through selecting a site and other options.

Note: you have to scroll down in the site list to get nutrient data – sites are listed separately for the separate data types (WQ, MET, NUT).

To get data from **multiple sites** in a file (again, you can choose your own date range; you can also select specific parameters if you don’t want everything), choose the **Advanced Query System** from the right sidebar and work your way through the options.

Site Names

Site names always start with GND, which is our Reserve’s Identifier.

The next two letters give the site:

BH = Bayou Heron

BC = Bayou Cumbest

BL = Bangs Lake

BN = Bangs Lake North

CR = Crooked Bayou

PC = Point aux Chenes

The final letters tell you what type of data it is:

MET = meteorological

Air Temp

Relative Humidity

Barometric Pressure

Wind Speed and Direction

Precipitation
PAR (Photosynthetically Active Radiation)

WQ = water quality: from YSI data loggers

Water Temp
Specific Conductivity/Salinity
Dissolved Oxygen (mg/L and % saturation)
pH
Turbidity
Depth

NUT = nutrient samples

Nitrogen: NO₂₊₃, NH₄
Phosphorus: PO₄
Chlorophyll *a*

gndblwq = water quality data from Bangs Lake (e.g., pH)

gndblnut = nutrient data from Bangs Lake (e.g., PO₄ concentration)

What can I find in metadata documents?

- Background information on the sample sites
- Data collection periods (YSI deployment dates/times for WQ; sample times for NUT)
- Sampling Procedures
- Details on the instruments used for each measurement, including:
 - Probe range, accuracy, and resolution (WQ and MET)
 - Calibration Protocols (WQ)
 - Date of calibration (MET)
 - Nutrient analysis methods (NUT)
- QA/QC Flag Definitions
- Other Comments: anything else that may be relevant to data collection or accuracy

Data Quality

During the QC process, flags are attached to each data point in an adjacent column. There is MUCH more detail in the metadata, including definitions for any associated codes.

<0> or **blank** = data point accepted.

<-3> = data point rejected. There will be one or more 3-letter codes associated with this flag to give further explanations. These data points will be left out of the downloaded data

set when “best available data” is chosen in the download process. If you desire to see these data points, select “all data”.

<-2> = data point not collected. Usually there will be one or more 3-letter codes associated with this flag, but not always.

<1> = suspect. There will always be one or more 3-letter codes with this flag to give further explanation. These data points are included in the “best available” download; if you would like to filter them out, that is up to you.

<-4> or **<-5>** = data point outside normal instrument range. These flags were inserted automatically during data upload and will be changed to <1> or <-3> when data moves through the QC process. The exception to this change is the NUT data set, where data points that are below the minimum detection limit for the parameter remain flagged <-4>.

Where are data files in the QC process?

Provisional: Has been uploaded from instrument and undergone automated QC. Has not been thoroughly looked at or documented by personnel.

Provisional Plus: Has been through at least one round of staff QC. All WQ and MET files have been looked at and documented by personnel. This happens quarterly. Additionally, all four quarters are appended to each other and an annual file is uploaded every spring. This is a second round of QC.

Authenticated: CDMO personnel have gone through the data to catch anything Reserve personnel may have missed. They work with Reserve staff to finalize data and metadata files.

Water Quality:

2005 – 2007 – Authenticated

2008 – Provisional Plus; through Annual QC; awaiting Authentication

2009 – 2010 – Authenticated

2011 – 2012 – Provisional Plus; through Annual QC; awaiting Authentication

2013 – Provisional Plus; through Quarterly QC; awaiting Annual QC

Meteorological:

2005 – 2011 – Authenticated

2012 – Provisional Plus; through Annual QC; awaiting Authentication

2013 – Provisional Plus; through Quarterly QC; awaiting Annual QC

Nutrient:

2005 – 2010 – Authenticated

2011 – 2012 – Provisional Plus; through Annual QC; awaiting Authentication

2013 – Provisional; not yet submitted to CDMO

General QC Submission Dates:

WQ and MET Quarterly QC Files

First Quarter (Jan – Mar): May 1st

Second Quarter (Apr – Jun): Aug 1st

Third Quarter (Jul – Sep): Nov 1st

Fourth Quarter (Oct – Dec): Feb 1st

Annual QC Files for the previous calendar year:

WQ: March 15th

MET: April 15th

NUT: May 15th