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Normal

TO: Charles Farris at NP-CACOCC: croman@gso.sun1.gso.uri.edu at NP--INTERNETTO: Janet Wise
at NP-SARACC: Greg Waters at NP--NARSubject: wefa level1wq comments-----
----- Message Contents

Hi Norm

Attached are my comments on your report. some are suggestions since I am not the expert, you are. I am also attaching (below) the original guidance that Gary R. sent out with the call. There are some specific requirements for data format that you need to follow.

Call me if these are not understandable. I must be really tired today. I have been misdialing phone #s all afternoon.

Thanks for taking care of this for the Region. Hope this will create a good template for the other reports.

Beth

FY00 LEVEL 1 WATER QUALITY INVENTORIES

In accordance with the NPS's Strategic Plan for Conducting Level 1 Baseline Natural Resource Inventories in the National Park Service the Water Resources Division will provide assistance to the parks identified below for the initiation and completion of field level Level I water quality inventories. A primary objective of the Servicewide I&M Program is to insure that every unit containing significant natural resources has at least a nominal inventory of its natural resources and that those data are available in a data management system consistent with park management needs.

Several basic water quality parameters for "key" water bodies within the park boundaries are required for a complete inventory. Key waterbodies for the purposes of Level I inventories are defined as those waters that are essential to the central cultural, historical, or natural resources management themes of the park or provide habitats to threatened or endangered plants and animals. This nominal set of water quality information will include:

- Alkalinity
- pH
- Conductivity
- Dissolved Oxygen
- Temperature
- Flow

Other constituents (where important - as determined on a case-by-case basis) include:

- Toxic elements
- Clarity/turbidity

Nitrate/nitrogen
Phosphate/phosphorous
Chlorophyll
Sulfates
Fecal-indicator bacteria

Project Duration

One year

5. Data Management and Archiving: All water-quality inventory data (physical, chemical, and biological) collected during this project must be permanently archived in the Environmental Protection Agency's STORET Version 1.1 water quality database. This will be a primary responsibility of the Principal Investigator. To fulfill this requirement, Principal Investigators may directly archive the data in STORET themselves or elect, in writing, for the NPS Water Resources Division to archive the data in STORET. Irrespective of who archives the data, the Principal Investigator must furnish (on disk with the final report) the following four files:

A. Water Quality Inventory Data

All water-quality inventory data (physical, chemical, and biological) must be entered into a Microsoft Excel spreadsheet (WQDATA.XLS) or Access table (WQDATA.MDB). Each spreadsheet or table row should contain all the results/measurements from one sample at one station including the Station Name (and/or unique ID), date (MM/DD/YYYY), time (HH:MM:SS - military), medium (water, sediment, soil, air, biological), depth, name of the sample collector, and the actual water quality parameter results/measurements. Spreadsheet/table column headers should clearly state the full name of the parameter and measurement units. Parameter results that are below the detection limit should be indicated with a less than sign (<) and the instrument or procedure detection limit. Other remarks, qualifiers, or comments regarding a result should be in a column immediately following the result. All data should be examined for outliers or erroneous values. After entry in the spreadsheet or table, all data should be verified by comparison with the source to eliminate transcription errors.

B. Water Quality Parameter Definitions

Every water quality parameter must be explicitly defined in an ASCII or Microsoft Word file named PARMETER.DOC. Defining a parameter includes providing: (1) full parameter name (e.g. Nitrate as Nitrogen); (2) sample fraction (e.g. total, dissolved, suspended, etc.); (3) measurement units (mg/l, °C, µg/l, etc.); (4) indication of whether it was measured in the field or lab; (5) value type (actual, estimated, calculated); (6) description of lab sample preparation procedures (e.g. filtration of water samples, 0.45 microns); (7) description of sample transport/preservation (e.g. Cool to 4°C, adjust pH <2 with H2SO4); (8) lab analytical method/procedure name, source citation, and ID (e.g. Metals in Marine Waters by ICP/MS - USEPA/ORD 200.1; Ammonia Nitrogen in Water, Hach 8038); (9) name and model number of field and/or lab equipment; (10) maximum and minimum quantification limits for the method/procedure; (11) method/ procedure detection limit; and (12) name of the

chemist/lab technician that analyzed the samples.

C. Water Sampling Location Information

The location where every water quality sample was collected must be documented in a Microsoft Excel spreadsheet (STATIONS.XLS) or Access table (STATIONS.MDB). Each row in the spreadsheet or table should contain all the attributes to describe a sample location including: (1) full station name; (2) station ID; (3) station type (stream, river, spring, lake, ocean, estuary, wetland, etc.); (4) description of the station (e.g. natural history, geographical location, access directions, etc.); (5) purpose of station in monitoring effort; (6) latitude and longitude (either decimal degrees or degrees, minutes, and seconds); (7) method of determining latitude and longitude (e.g. manual map interpolation, GPS, GIS, etc.); (8) the scale of the map used for interpolation or type of GPS (Carrier, Code, Kinematic, etc.); (9) the datum to which the latitude and longitude are referenced (e.g. NAD1927, NAD1983, etc.); (10) state and county of the station; (11) U.S. Geological Survey 8-digit Hydrologic Unit number for the station; (12) Natural Resource Conservation Service Watershed ID; (13) elevation; (14) elevation source; (15) elevation datum; and (14) secondary station name(s).

D. Project Background Information

Basic information about the water quality sampling effort must be included in an ASCII or Microsoft Word file named README.DOC. This file may incorporate all or parts of the sampling plan and final report. The purpose is to provide additional background information on the sampling effort including: (1) project goals and objectives; (2) contact information (names, addresses, and telephone numbers) for those who conducted the work; (3) contact information for the lab that analyzed the samples; and (4) any other information relevant to the effort.

Reporting Requirements

Upon completion of the field portion of the inventory, an administrative report shall be prepared and submitted to the Park Superintendent and the NPS Water Resources Division. The report must contain a brief description of the inventory process, goals, and objectives; a map depicting the sites inventoried; tables depicting the results of the laboratory and field analyses; and a 3.5" diskette containing the four files documenting the water-quality inventory results as outlined in Section 5 Data Management and Archiving above.

Hi Norm:

Comments on your WEFA report.

1. Under the existing water quality data section: "WRD produced a "seeping" report".....should that read "status" instead?
2. Also in the same paragraph: Add the year (1999) after January. I also recommend rewriting the last two sentences since it sounds like you are mixing apples and oranges to me. "These revealed that the Jan 1999 ppt was 3.77 inches above the 1961-1990 *.monthly median value.* By August 1999 ppt was at a 40 year low (*how many inches below the 30 year monthly median value?*) Statewide stream flow was.....here you mention the mean value.
3. Under the sampling plan section the second paragraph needs a rewrite. Your data table tells when you sampled. You should use the dates from the table (October 99 rather than August99. You might say. Sampling was done four times per year to coincide with seasons.
4. According to the guidance provided by Gary Rosenleib, we have to submit several databases in addition to the wqdata.xls. They want a parameter.doc and another as well. I will attach the guidance again in case you don't have it. Even the wqdata.xls has specific instructions for lableing of fields and required fields. You seem to be missing some of the required fields such as sampling time, medium, depth, collector. You might want to take a look at thoses again.
5. A couple of things that might be addressed in the document to make it more comprehensive:
 - a. Add dates for when the large ppt events occurred that might have influenced sampling. This is not clear since on the one hand you talk about the 40 year lows, on the other had large ppt events.
 - b. Sampling date should be better than a monthly date. Time should also be included in the report
 - c. Could eutrophication be "natural" sue to shallow pond, dam construction?
 - d. although wetland and vernal pool nutrients were high in Jan...how do you know how other months might compare since they wer dry and no samples were taken?
 - e. Since no samples were taken for several periods at two of the locatiions did this result in a savings to the project that might require us to resample to obtain data for those periods?
 - f. F. standard methods include time limits for some samples..I assume you met the time limit for fecal coliform. You didn't mention fecal coliform numbers as indicative of development/septic/run off impacts, you just mentioned nutrients. Were the values within standards?
 - g. Should there be some discussion of why you did not sample toxics, and other parameters that might be permitted (these are listed in the guidelines)
 - h. You indicate that you put the data in STORET. If you did, great, if not, you have to make arrangements for WRD to put it in. I think we should say that in the report.

Thanks for doing this Norm. Some of my comments may be totally off base, but I thought I would lay them all out for you. Perhaps they will help you to get additional comments from Charley, Janet and the park. Beth