

INSTRUCTIONS FOR STORET/WQX EXERCISES

Here are two exercises that can help you understand how to complete a WQX Excel document with the data your organization has collected. These exercises are meant to help you organize your tribe's water quality data into a STORET/WQX compatible format and to grasp a stronger understanding of the WQX layout. These exercises provide sample data to illustrate what type of data to input for each element.

Each exercise consists of three pages:

1. **Matching Page:** A worksheet that contains all the primary data elements for WQX on the left side of the document, while the right side has blanks that you fill in.
2. **Answer Bank:** This page includes a list of all the answers that you may use to fill in the blanks on the previous page. Each answer corresponds to a primary data element listed on the left side of the Matching Page.
3. **Example Sheet:** The exercise is based off of information provided on this page.

Goal: Use the Answer Bank to fill in the Matching Page with the monitoring information that corresponds to the data elements listed. The first exercise has a few answers already provided in the Matching Page to get you started, while the second exercise provides no initial help.

Purpose: These exercises are intended to help you determine how WQX data elements are related to the information you collected from your organization's water quality program. The exercises will help you make the connections between your monitoring data and STORET/WQX compatible formatting in your WQX Excel spreadsheet.

Matching Page for Exercise 1

Matching WQX data elements and monitoring information: Field Measurements

Match monitoring information from the Answer Bank on the next page with the data elements listed here.

Project ID	
Project Name	University Water Quality Monitoring
Project Description	Baseline data collection for University Water Quality Project
Monitoring Location ID	
Monitoring Location Name	
Monitoring Location Type Name	
Latitude Measure	29.935653
Longitude Measure	-95.577643
Horizontal Collection Method Name	
Source Map Scale Numeric	
Horizontal Coordinate Reference System Datum Name	NAD83
State Code	TX
County Code	
Activity ID	
Activity Type Code	
Activity Media Name	Water
Activity Start Date	
Activity Start Time	
Activity Start Time Zone Code	CST
Activity Depth Height Measure	
Activity Depth Height Measure Units	
Sample Collection Method Identifier	
Sample Collection Equipment Name	
Characteristic Name	Dissolved oxygen (DO)
Result Detection Condition Text	
Result Measure Value	
Result Measure Unit Code	
Result Sample Fraction Text	
Result Status Identifier	
Result Statistical Base Code	
Result Value Type Name	
Result Analytical Method Identifier	
Result Analytical Method Identifier Context	
Detection Quantitation Limit Type Name	
Detection Quantitation Limit Measure Value	
Detection Quantitation Limit Measure Unit Code	

ANSWER BANK FOR EXERCISE 1

Matching WQX data elements and monitoring information: Field Measurements

Use the monitoring information from this Answer Bank to fill in the information which corresponds to the correct data elements on the Matching Page.

1	8.26	GPS-Unspecified	BearCk_1_08172007_F
Field Msr/Obs	(Not applicable since the result is a field measurement)	mg/L	Final
(Not applicable since I have a result measure value)	2007-08-17	Univ_WQMP	River/Stream
Actual	8:30:00	m	(Not applicable since I did not determine coordinates with a map)
BearCk_1	Harris	(Not applicable since only one measurement was taken per charac.)	

Example Field Sheet

The information within the Example Field Sheet was used to create the Answer Bank in Exercise 1. Use this page as a reference when matching the WQX data element to the information in the Answer Bank.

Monitoring Location Name	Bear Creek at Clay Road
Monitoring Location Coordinates	GPS reading: 29.935653, -95.577643
	Assume Datum of NAD83
Monitoring Location Description	Bear Creek stream crossing at Clay Road, Harris County
Sample Date	8/17/2007
Sample Time	8:35 a.m.
Sample Description	Results of instantaneous Sonde reading measured according to University Water Quality Monitoring program QAPP. Recorded at 1 m below surface.
DO - mg/l	8.26
Temperature - Deg. C	17.53
pH	6.94

Notes:

- Fulfills one of three sampling events in Harris County, TX for the University Water Quality Monitoring Program. See QAPP for monitoring details.
- Monitoring Location coordinates taken with GPS: 29.935653, -95.577643
- Assume Datum of NAD83
- Water samples were also collected using a Niskin Bottle for Total Suspended Solids and sent to the lab. See the Example Laboratory Results page for all the lab results from 8/18/07.
- A continuous reading was also taken, the results of which were provided on a different sheet.

Matching Page for Exercise 2

Matching WQX data elements and monitoring information: Lab Results

Match monitoring information from the Answer Bank on the next page with the data elements listed here.

Project ID	
Project Name	
Project Description	
Monitoring Location ID	
Monitoring Location Name	
Monitoring Location Type Name	
Latitude Measure	
Longitude Measure	
Horizontal Collection Method Name	
Source Map Scale Numeric	
Horizontal Coordinate Reference System Datum Name	
State Code	
County Code	
Activity ID	
Activity Type Code	
Activity Media Name	
Activity Start Date	
Activity Start Time	
Activity Start Time Zone Code	
Activity Depth Height Measure	
Activity Depth Height Measure Units	
Sample Collection Method Identifier	
Sample Collection Equipment Name	
Characteristic Name	
Result Detection Condition Text	
Result Measure Value	
Result Measure Unit Code	
Result Sample Fraction Text	
Result Status Identifier	
Result Statistical Base Code	
Result Value Type Name	
Result Analytical Method Identifier	
Result Analytical Method Identifier Context	
Detection Quantitation Limit Type Name	
Detection Quantitation Limit Measure Value	
Detection Quantitation Limit Measure Unit Code	

ANSWER BANK FOR EXERCISE 2

Matching WQX data elements and monitoring information: Lab Results

Use the monitoring information from this Answer Bank to fill in the information which corresponds to the correct data elements on the Matching Page.

Actual	CST	BearCk_1	Obtain environmental baseline and ensure water quality standards are met.
University Water Quality Monitoring	-95.577643	2007-08-17	Bear Creek at Clay Rd
Final	BearCk_1_08172007_L	GPS-Unspecified	(Not applicable since I have a result measure value)
160.2M	(Not required for this characteristic)	29.935653	Univ_QAPP
TX	Harris	Total suspended solids	Water
River/Stream	USEPA	mg/L	Univ_WQMP
NAD83	37.5	Sample-Routine	(Not applicable since only one measurement was taken per charac.)
Niskin Bottle			

Example Laboratory Results

The lab results from this example were used to create the Answer Bank in Exercise 2. Use this lab sheet as a reference when matching the WQX data element to the information in the Answer Bank.

Analysis prepared for University Water Quality Monitoring Program

Characteristic Name	Monitoring Location Name	Sample Date	Analysis Date	Value (mg/L)	Preparation and Analysis Tech.	Lab Sample ID
Total Suspended Solids	Bear Creek at Clay Rd	8/17/2007	8/18/2007	37.5	USEPA 160.2M	BC1081708TSL
Total Suspended Solids	Bear Creek at Hwy 6	8/17/2007	8/18/2007	<0.02 *	USEPA 160.2M	BC2081708TSL
Total Suspended Solids	White Oak Stream at Eldridge Rd	8/17/2007	8/18/2007	9.5	USEPA 160.2M	WO1081708TSL

* The "<" symbol indicates that the constituent was not detected because it was below the detection limit of the method used in the analysis.