

Appendix A

HBMP Program Modifications and Changes to the HBMP QA/QC Plan

1.0 Background

The HBMP design document, *Tampa Bypass Canal/Alafia River Water Supply Projects Hydrobiological Monitoring Program – Final Report* (PBS&J, 2000), provides an overview of the monitoring program and descriptions of monitoring elements. The HBMP Quality Assurance/Quality Control Plan (QA/QC Plan) provides more detailed descriptions of the monitoring program as well as methods and procedures for implementation. As stated in Section 1 of the QA/QC Plan, amendments and changes to the design document are to be provided in Appendix A. Approved modifications to the HBMP program and additional changes made to update this Version 2.1 of the QA/QC Plan from Version 1.1 (April 2002) are provided in the following sections.

2.0 HBMP Program Modifications

This section lists recommended modifications to the initial HBMP design based on field conditions observed or data collected during implementation. All listed modifications to the HBMP have been discussed during an annual Focus Group meeting and approved by the SWFWMD.

2.1 Changes to HBMP Reporting

Interpretive reports were originally required to be submitted every five years. This 5-year interval included a mid-term, interpretive report submitted in year-3 of each 5-year evaluation period, and a comprehensive interpretive report submitted in year-5 of each five-year evaluation period. At the May 2003 HBMP Annual Meeting, Tampa Bay Water proposed that the interpretive report submittal schedule be modified such that comprehensive interpretive reports are submitted every three years. Each comprehensive interpretive report would summarize HBMP findings of the previous two years, as well as compare these findings to the HBMP and baseline periods of record. Representatives from the SWFWMD and other meeting participants agreed with this proposed schedule. The first HBMP Interpretive Report was submitted to the SWFWMD on July 1, 2003 with subsequent reports due in 2006, 2009, etc.

2.2 Changes to HBMP Reporting Unit Strata

2.2.1 Discontinuation of Sampling in Stratum AR8

In 2000, Alafia River stratum AR8 was found to be inaccessible on nearly all tides. This portion of the river is also bounded by private property, making access from the land very difficult. As a result of these difficulties, stratum AR8 was deleted from the monitoring program with SWFWMD approval after the first few months of program implementation. The sampling effort scheduled for AR8 was transferred to the other freshwater stratum (AR7), also with SWFWMD approval.

2.3 Changes to the HBMP Hydrology / Water Quality Element

2.3.1 Addition of Fixed-location Water Quality Sample Stations

In Water Year 2001, additional fixed-location water quality sampling stations were added at the mouths of the Hillsborough and Alafia Rivers, and at S-160. As part of the Water Use Permit renewal for the Tampa Bypass Canal Harney Pump Station, the HBMP was modified to include a fixed sample station at the upstream side of the S-160 Dam on the TBC/Palm River. This station is only sampled when there is flow over the S-160 structure. The sample is analyzed for specific conductance, chlorophyll-a and color. At the SWFWMD's request, water quality stations were also added at existing EPCHC sampling sites in Hillsborough Bay near the mouths of the Alafia and Hillsborough Rivers.

2.3.2 Discontinuation of Total and Dissolved Organic Carbon

Sampling for total organic carbon (TOC) and dissolved organic carbon (DOC) was discontinued in the Alafia River, McKay Bay and TBC/Palm River reporting units at the end of Water Year 2004 (September 2004). Based on the Focus Group recommendation, sampling for these parameters in the Hillsborough River reporting unit was not included in the HBMP design. Total organic carbon and dissolved organic carbon had been sampled and analyzed on a monthly basis as part of HBMP water quality elements. Other water quality parameters (salinity, chlorophyll) are more directly related to biological relationships, and much of the organic carbon found in the HBMP reporting units is fixed and/or regenerated internally, or imported from Tampa Bay, rather than delivered via river flows. The HBMP generated a considerable amount of data for dissolved and total organic carbon in these systems; therefore, continued data collection for these parameters was considered to be unnecessary. There was consensus at the 2004 Annual Meeting to discontinue the sampling and analysis of TOC and DOC as part of the HBMP.

2.3.3 Discontinuation of Continuous Dissolved Oxygen Sensors

Dissolved oxygen (DO) probes on the Sligh Avenue and Columbus Avenue continuous recorder stations in the Hillsborough River reporting unit were deactivated during Water Year 2004. There was consensus at the 2004 Annual Meeting that DO measurements at these stations could be discontinued. This consensus was based on the opinion that the data collected under long-term deployments of membrane-based, DO measurement equipment did not have the precision to detect the small changes predicted as a result of withdrawals.

2.4 Changes to the HBMP Biota Element

2.4.1 Discontinuation of Fish Trawls in Stratum HR6

In 2000, Hillsborough River stratum HR6 was found to be unsuitable for fish trawls due to numerous snags and debris. The trawl sampling effort scheduled for HR6 was transferred to HR5, with SWFWMD Approval.

2.4.2 Additional Fish Sampling in Hillsborough Bay

The HBMP was designed to characterize baseline conditions, and detect hydrobiological changes, in the estuaries of the Alafia, Hillsborough and Palm Rivers, and McKay Bay. Although Hillsborough Bay was a defined reporting unit in the HBMP, it was the consensus of the Focus Group that hydrobiological changes associated with the permitted withdrawals would first be detected in the rivers long before any potential cumulative impacts in Hillsborough Bay were realized. Therefore, the HBMP Focus Group did not recommend additional sampling of Hillsborough Bay. Rather, they concluded that data currently being routinely collected by others (e.g., EPCHC and FWRI) would likely be adequate to assess changes in water quality, benthos and fish communities in Hillsborough Bay.

At the 2004 Annual Meeting, FWRI staff pointed out that the FIM sampling effort was not intended to make annual inferences regarding fish population changes in Hillsborough Bay, and suggested that if it is desirable to make annual inferences regarding potential cumulative impacts on fish communities, the sampling intensity of the FIM program would need to be increased. There was agreement among the meeting participants that the original assumptions regarding the initial detection of changes related to surface water withdrawals in the river estuaries still held true, but that the adequacy of sampling activities in Hillsborough Bay should be evaluated further. As a result of re-evaluating the adequacy of existing monitoring programs to address the issues of concern in Hillsborough Bay, additional fish sampling stations were added to the HBMP in Water Year 2005. The stations are located near the mouth of the Alafia River.

2.4.3 Change in Benthic Subcontractor

The Center for Systematics & Taxonomy (CST) was responsible for the identification and enumeration of benthic macroinvertebrates from the onset of the HBMP. Samples through spring of 2005 were analyzed by CST. Due to extenuating circumstances, CST was not able to continue processing HBMP samples beyond this point. Terra Environmental was subsequently contracted to conduct benthic analyses beginning in Water Year 2007. Samples collected between spring of 2005 and late 2006 have been securely stored and will be processed by Terra Environmental.

2.4.4 Changes in Avifaunal Surveys

The ability to link changes in bird communities to flow and salinity changes associated with the surface water projects was identified as tenuous at best by members of the HBMP Annual Meeting group, and data collected subsequent to HBMP implementation have not identified a significant relationship. Many of the bird species utilizing the HBMP sampling sites have foraging ranges of up to 20 miles and are more likely affected by large-scale hydrologic changes across south Florida rather than small, localized salinity variations. In addition, some of the HBMP survey sites will be impacted by dredge spoil disposal activities currently being pursued

by the ACOE. At the 2004 Annual Meeting, there was strong support among meeting participants to reduce or discontinue the avifaunal surveys.

There were several modifications made to the bird survey component of the HBMP in Water Years 2004 and 2005. Bird counts at the Ponds and McKay Bay stations were discontinued after the June 2004 event. Visual surveys of bird species composition and abundance within a defined observation area on the subtidal flats located at the mouth of the lower Alafia River reporting unit will still be conducted every other month during low tide. As in previous years, field data collected during each survey will include species present and counts by species, observed during a standard time interval (e.g., every 10 minutes over a 2-hour observation period). Beginning in Water Year 2005, surveys included an attempt to quantify foraging effort by select benthic feeding indicator species as part of an approved HBMP special study.

2.5 Changes to the HBMP Habitat / Vegetation Element

2.5.1 Change in Frequency of Alafia SAV Surveys

Based on submergent vegetation data collected in the Alafia River during initial HBMP implementation, the SWFWMD approved a request in October 2001 to modify the frequency of submerged aquatic vegetation surveys in the Alafia River from once per year to once every five years.

2.5.2 Changes to the Frequency of Vegetation Mapping

At the 2004 Annual Meeting, the Focus Group and SWFWMD staff agreed that the required interval for vegetation polygon mapping could be lengthened and suggested that once every three years in concert with the submittal of comprehensive interpretive reports would be appropriate. The most recent mapping occurred in 2006.

3.0 Miscellaneous Changes to the HBMP QA/QC Plan

In addition to the HBMP Program modification listed above, additional minor changes and/or updates were included in Version 2.1 of the QA/QC Plan. These additional changes are listed below:

- Key HBMP staff and related years of experience were updated to be current as of September 2007.
- The term “Hydrolab” was replaced with the generic term “multi-parameter sonde” to include all Hydrolab-like sondes that may be utilized throughout the duration of the HBMP.
- With the exception of fish sampling conducted by FWRI, Hydrolab equipment is not currently utilized for the HBMP (and is not anticipated for the foreseeable future) so text (other than within Section 7.0) describing calibration and use for Hydrolab equipment were deleted.

- Certain YSI sondes currently in use employ a relatively new kind of dissolved oxygen sensor. Instructions specific to the calibration of this sensor were added to Chapter 5.
- Software utilized to download and process continuous recorder data was updated to that currently in use (Loggernet).
- The term “conductivity” was changed to “specific conductance”.
- The unit of measurement for salinity was changed from ppt to PSU.
- Color was removed as a water quality parameter for the Hillsborough River reporting unit.
- A description of the HBMP Focus Group was added.
- A description of PBS&J/Southern Analytical Laboratory’s participation in RAMP was included.
- The benthic invertebrate taxonomy list was updated to include species encountered through 2005 instead of 2004.
- Field sheets and related forms were updated to those currently in use.
- FDEP SOPs direct that bottle for grab samples that have been pre-cleaned should not be rinsed twice with ambient water prior to collecting the sample. Text was added to state that pre-cleaned bottles not be rinsed while bottles that could not be confirmed as pre-cleaned should be rinsed.
- The number of non-linear strata (cells) that comprise the McKay Bay reporting unit was corrected. The fixed water quality station above Structure S-160 on the Palm River was added to Chapter 5.
- Because water quality samples are either hand delivered to Southern Analytical or are transferred via a courier service, the portion of Section 5.8 that detailed how to ship coolers to a lab was deleted.
- The data logger for at least one permanent continuously recording water quality station was changed from a Campbell Scientific to a Stevens logger. Text has been added to the QA/QC Plan to address this change.

Appendix B
Data Upload to STORET

1.0 Introduction

STORET (STORAge and RETrieval) is the current data warehouse for biological, chemical, and physical data collected from ground and surface waters. While the United States Environmental Protection Agency (EPA) designed STORET as a national water quality database, Florida's STORET database design is dictated by a state regulation called the "Impaired Waters Rule" (Chapter 62-303, Florida Administrative Code). Data submitted to the Florida STORET database are also automatically loaded to the national EPA STORET database by FDEP.

The Alafia River / Tampa Bypass Canal Water Supply Projects Hydrobiological Monitoring Program (Alafia/TBC HBMP) and the Tampa Bay Desalination HBMP (Desal) collect several forms of water quality data. The water column profile data and laboratory analytical results collected by the program are suitable for upload to the FDEP STORET database.

The FDEP requires that 20 elements of information be provided for each measurement entered into the STORET database. These 20 elements are described in Table 1. The following data collected through both HBMP programs are considered suitable (meet the required 20 elements listed in Table 1) for STORET upload:

Water Column Profile Data:

- Dissolved Oxygen (DO)
- Salinity
- Specific Conductance
- Secchi Depth
- pH

Grab Sample Data (Laboratory measured):

- Chloride
- Chlorophyll a
- Color
- NH₃+NH₄
- Ortho P
- TKN
- Total N
- Total P
- Total Suspended Solids

Currently DO, Salinity, Specific Conductance, and grab sample data collected during the Alafia/TBC HBMP are uploaded to STORET. TBC HBMP data are uploaded to STORET with a minimum frequency of once per Water Year. Recently, PBS&J has also begun to upload water column profile data collected under the Tampa Bay Seawater Desalination Facility HBMP to STORET.

2.0 STORET Upload Process

Data are uploaded to STORET via the STORET Import Module (SIM) Version 2.0.1 (see Exhibit B1 for details of SIM). STORET and SIM operate in an Oracle environment and, for the HBMP programs, are implemented on a personal desktop. The general procedure for uploading data to STORET via SIM is:

- Amass data with all required fields into delimited text files
- Create SIM Import Configurations that describe the format of the text files
- Import text files into SIM and migrate the data that pass various validation tests into STORET.

These steps are discussed in further detail below.

2.1 Upload Project information to STORET

A project in STORET must include the following elements at a minimum: unique identifier, start data, duration, name, and purpose. This information only needs to be uploaded once for each project. Prior to the first data upload, Alafia/TBC HBMP and Desal project information was manually entered into SIM and migrated to STORET successfully.

2.2 Upload Station Information to STORET

Stations describe the physical location where monitoring occurred. Each monitoring station must include the following elements: ID code, station or waterbody type, latitude, longitude, ge positioning method, datum, and state and county. Exhibit B2 describes station requirements in greater detail. For each data upload to STORET, a “pipe-delimited” text file (a file delimited by the symbol “|”) is created that contains all required information for the stations being uploaded. The text file does not include a header row. If an import configuration matching the layout of the text file does not already exist in SIM, a new one is created. The import configuration defines which data elements are in the text file and the order in which they appear. The import configuration can also generate values for data elements that are not included in the imported text file or establish default values for data elements left null or blank. A more detailed description of SIM is provided in the SIM User Guide and Reference Manual (Exhibit B1).

2.3 Upload Data with SIM

The results of water quality sampling and analyses, in the form of a delimited text file, are uploaded to STORET via import with SIM. Exhibit B2 describes results file requirements in greater detail. The text file is created from multiple data tables in the Alafia/TBC HBMP and Desal master databases to incorporate all required elements for STORET. A SAS program is used to combine the necessary information from the multiple tables into the required formatting for STORET. This formatting, and the fields included in the text file are then defined utilizing a SIM import configuration.

2.4 Error Checking and Final Migration to STORET

At times errors in the data (required fields are missing, multiple date formats, etc.) are not discovered in the station and results files until an upload is attempted. During the import procedure, SIM will identify records that contain errors and define the nature of the errors. The text files are then corrected to eliminate errors and the files are once again imported with SIM. Once all records import with zero errors, the records are migrated to STORET via SIM.

2.5 Export to FDEP

DEPSIM for STORET 2.0 (Exhibit B3) is utilized to export the database to an Export Dump file. This dump file is zipped sent to FDEP via an ftp site (<ftp://ftp.dep.state.fl.us/pub/water/storet/incoming/>). Once the file has been placed on the ftp site, the FDEP STORET Coordinator is notified of the data delivery. As of October 2007, the coordinator is Lisa Schwenning, 850-245-8509.

Table 1. Data Elements Related to Quality Assessment. From FL Dept. of Environmental Protection DEP EAS 01-01 Data Quality Assessment Elements for Identification of Impaired Surface Waters.

ID	Element	Description
1	Sample ID	Unique Field Sample Identifier
2	Parameter Name	Name of the parameter measured
3	Analytical Result	Result for the analytical measurement
4	Result Units	Units in which measurement is reported
5	DEP Qualifiers	Qualifier code describing specific QA conditions as reported by the data provider
6	Result Comments	Free-form text where data provider relates information they consider relevant to the result
7	Date (Time) of sample collection	
8	Date (Time) of sample preparation	
9	Date (Time) of sample analysis	
10	Analytical Method	Method number used for sample analysis
11	Prep Method	Method number used for sample preparation prior to analysis
12	Sample Matrix	Was the sample a surface water or groundwater sample, a freshwater or saltwater sample
13	DOH Certificate Number/Laboratory ID	Certificate number issued by the Department of Health's lab certification program
14	Preservatives Added	Description of the preservatives added to the sample after collection
15	MDL	Method detection limit for a particular result
16	PQL	Practical quantitation limit for a particular result
17	Sample Type	Field identifying sample nature (i.e., environmental sample, trip blank, field blank, matrix spike, etc.
18	Batch ID	Unambiguous reference linking samples prepared or analyzed together (e.g., trip, preparation, analysis batch Ids)
19	Field, Lab Blank Results	Results for field/laboratory blank analysis required by the methods
20	CAS Number	CAS registry number of the parameter measured



STORET Import Module (SIM)

Version 2.0.1

User Guide and Reference Manual

**US Environmental Protection Agency
Updated June 2, 2004**

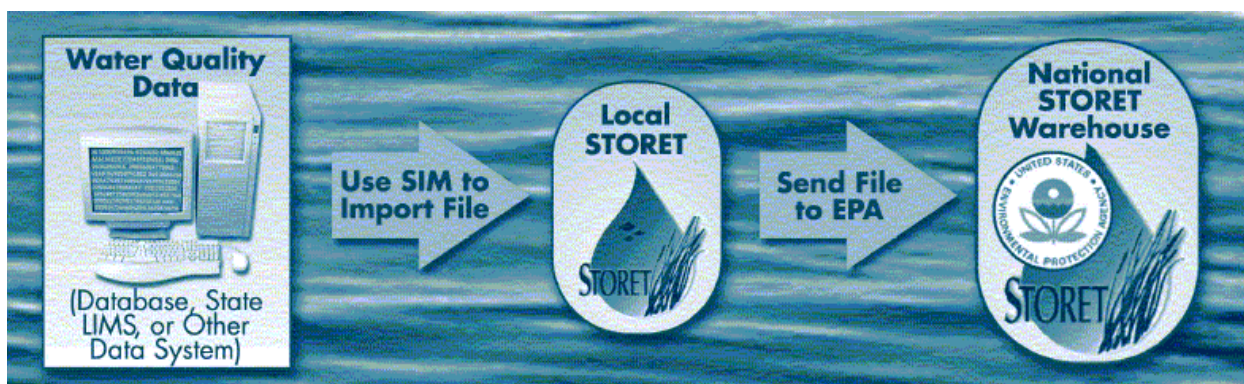
**Technical Support:
1-800-424-9067**

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Introducing SIM v2.0.1

The STORET Import Module (SIM) Version 2.0.1 is a software program that helps users load data into STORET Version 2.0. STORET is an EPA-maintained database of ambient environmental data. STORET is a distributed system where individual agencies manage their own data at a local level and can use a national data warehouse to share it with others. Both STORET and SIM operate in an Oracle environment and can be implemented on a personal desktop or on a client/server basis.



SIM lets users import water quality data into STORET from existing data management systems. Once data are migrated into a local copy of STORET, they can be sent to the National STORET Warehouse.

To use SIM, you must perform the following tasks:

- Organize your data into delimited text files
- Establish SIM Import Configurations that describe the format of your text files
- Import your text files into SIM and migrate the data that passes validation into STORET

This User Guide and Reference Manual will:

- Provide guidance to you as you create your delimited text files
- Teach you how to create a SIM Import Configuration
- Walk you through the process of using SIM to load data into STORET

The successful use of SIM is dependant on your clear understanding of STORET. You should establish all relevant metadata defaults in STORET before you begin to use SIM.

Formatting Your Data

Before using SIM, you must organize your data into delimited text files. Most organizations use common software products such as Excel, Access, or Lotus 1-2-3 to create data tables, which can be saved and exported as delimited text files. Larger organizations may produce these files as exports from existing Data Management or Laboratory Information Management Systems (LIMS). SIM accepts six different file types (See Appendix A for more details):

1. Project Descriptions

Initiatives or reasons why data was collected.

2. Station Descriptions

Points or areas where field measurements are made or samples are collected.

3. Additional Locations

Points that define boundaries, sample locations, or observation sites within a station.

4. Wells

Wells that are constructed to gather samples or field measurements.

5. Field Measurements and Non-biological Samples

Results of field measurements or the analysis of non-biological samples.

6. Biological Samples

Results associated with biological samples.

The data elements or fields in each file type are organized in a tabular format where the column delimiter is either a Tab (), Pipe (|), Tilde (~), or Comma (,).¹ Additionally, using a Back Slash (\) as a sub-delimiter is available for columns that can accept multiple values.² The required and optional elements for each file type are described in Appendix A. Note that many of these data elements have a list of valid values that the user must select from. The order in which you place the data elements in your delimited text files is not important as SIM allows you to define that order before you import your file. ***Do not include a header row in the delimited text files that you create.***

¹ If any of these characters appear in your data, you should NOT use that character as a delimiter since there is no way for SIM to tell which is the delimiter and which is simply part of the data.

² Certain fields such as Project ID in the 'Field Measurements and Non-Biological Samples' can accept multiple values in a single column and row of the import file. See Appendix A for a list of columns that support loading multiple values.

There are several example text files in the C:\STORET\orasto2\SIM\SIM201_EXAMPLES directory that may help you as you organize your data.

Import Order

The data imported under each of the file types complements each other, and the order in which you migrate data files to STORET is important. Station Descriptions should always be loaded before Additional Locations and Wells. Project Descriptions and all the Station files should always be loaded before your Result files. This ensures that the key data elements will be registered in STORET and are ready for results to be associated with them. Likewise, similar rules apply when removing these files from STORET and SIM. As such, it is recommended that when possible, files be removed in reverse chronological order.

Quick Tutorial

This tutorial is designed to provide you with basic “hands on” instruction for using SIM. Each lesson focuses on different pieces of functionality included in SIM. There are text descriptions of the functions and associated concepts, and then there are step-by-step instructions for using the tools. The step-by-step instructions for you to follow on your PC are called out into text boxes, separate from the text. For additional training, please refer to the SIM Training Manual available on the STORET website.

1. This is an example of a text box that contains instructions for using SIM with the sample data.

Tutorial I. Defining an Import Configuration

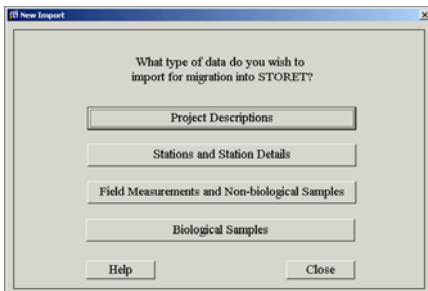
The following lesson will show you how to create a custom Import Configuration that will describe the format of your text files.

1. Begin by starting SIM.



2. From this screen, you can either start a new import of data or access an existing import that you may have brought into SIM but have yet to migrate to the STORET database.

Click **New Import**.



3. From this New Import menu, you select the type of file that you wish to import into SIM. If you choose Stations and Station Details, you will be prompted to select a secondary type.

Click **Field Measurements and Non-biological Samples**.



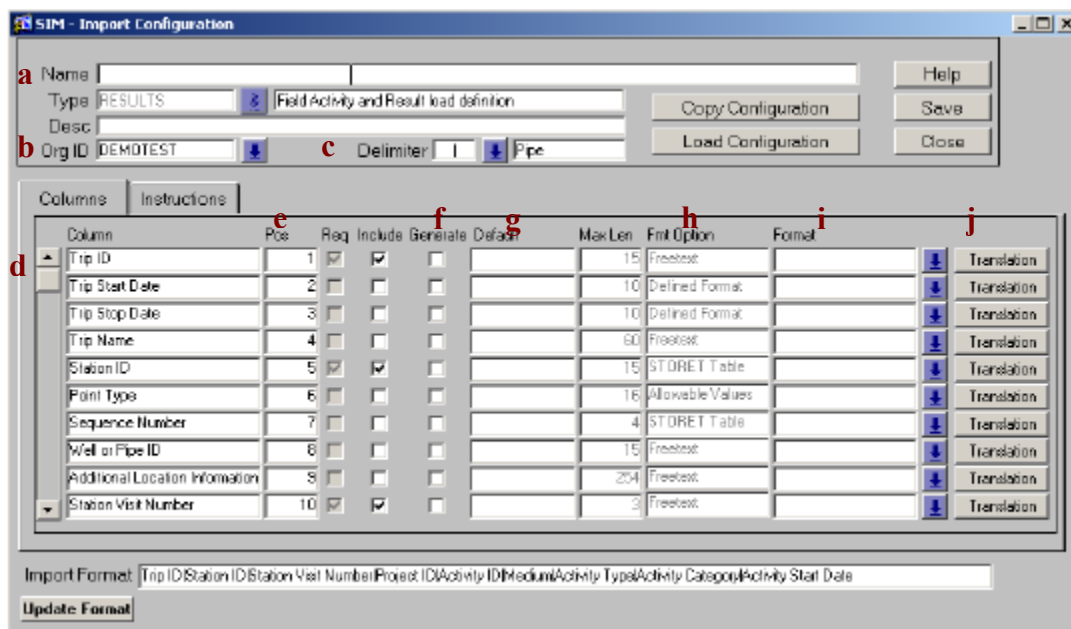
4. This menu allows you to specify the Import Configuration and the path to the text file that you want to import.

Click **Define New Import Configuration**.

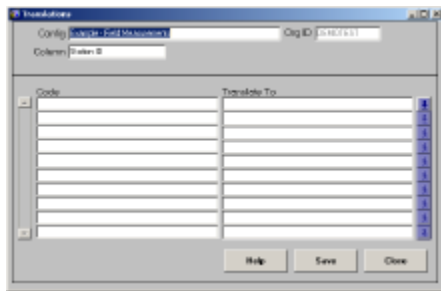


5. From this SIM Import Configuration menu, you can:

- a) Provide a name and description for the Import Configuration
- b) Define the organization that this data will load into.
- c) Indicate the delimiter that will be used in the text file.
- d) Select the data elements that will be included in the text file.
- e) Define the position or order in which the data elements will appear in the file.
- f) Select a column to generate a value, which is not included in the import file.
- g) Establish default values for the data elements in the import file that are left null or blank.
- h) View the format that each row in the import file must adhere to if this configuration is used.
- i) Establish how individual data elements will be additionally formatted (if appropriate).
- j) Establish translation parameters that change values while a file is being imported.

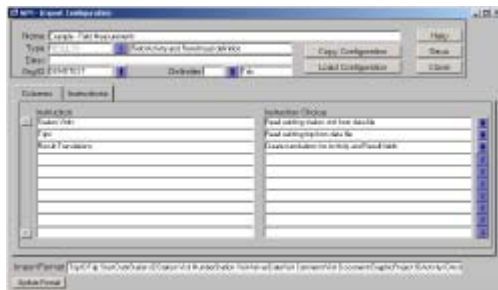


6. Click any **Translation**.



7. You can establish a translation by defining the “Code” that should be translated and the value that it should be “Translated To”. Users can use the arrows at the end row of each data elements to translate to valid STORET values (if they exist). For instance, a user could translate a CAS number to an appropriate STORET “Characteristic” name.

Click **Close** and then the **Instructions** tab on the Import Configuration menu.



8. You can use this menu to establish general import instructions. Change an instruction by highlighting a row and clicking the relevant arrow. If you choose to “create translations...”, the software will populate the “Code” field on the Translations menu with any values that do not match required valid values. You must then fill in the “Translate To” field and re-import the file for the changes to take place. Other instructions allow you to auto-generate Trip IDs and Visit Numbers.

Summary

The purpose of an import configuration is to set up a pattern to translate your source data file into STORET by using SIM. SIM import configurations can help you set up the order of fields, format data, and perform simple data translations.

In Tutorial I. Defining an Import Configuration, you learned how to:

- Define a new import configuration
- Use translations to change values while a file is being imported.

Tutorial II. Using SIM to Import & Migrate Data to STORET

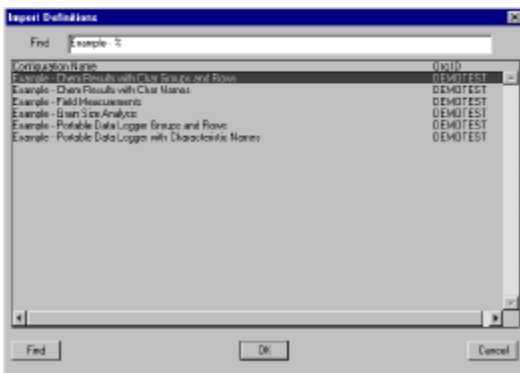
This tutorial illustrates the following:

- The Import of a text file into SIM so that it can be validated.
- The Migration of data that passes validation from the temporary SIM tables into STORET.

1. From the SIM Welcome screen, click **New Import** then click **Field Measurements and Non-biological Samples** to reach the Import File menu for Field Measurements and Non-Biological Samples.



2. You must first select an existing Import Configuration. Click the down-turned arrow at the end of the line labeled “Import Configuration”.

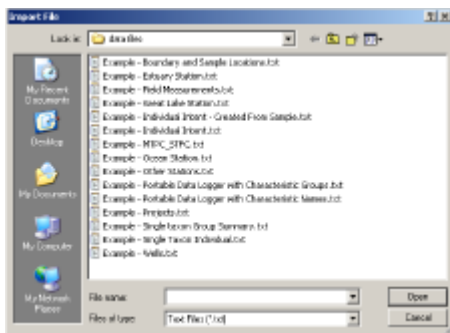


3. This screen provides a list of Import Configurations that have been created in SIM. Highlight “Example-Field Measurements” and click **OK**.



4. The name of the Import Configuration and the Organization to which the data will be associated should now appear on the Import File menu. You can review the configuration details by clicking the button labeled “Edit Existing Import Configuration”.

You must now define the path to the file that you want to import. From the Import File menu, click **Browse**.



5. This menu allows you to navigate your drives and directories to locate the appropriate file.

Select “C:\STORET\orasto2\SIM\SIM201_EXAMPLES\Example - Field Measurements” and click **Open**. Note – This is the default path for a stand-alone installation. Based on your original installation parameters, the example files may be located on a different path on your system.



6. The name of the text file should now appear on the Import File menu.

Now click **IMPORT** and then **OK** when the import is complete.

7. SIM checked the file for errors that would prevent the data from being loaded to STORET and it has imported the data into a series of temporary tables.

From this Import Status menu, you can:

- a) Review the number of records that that SIM imported, the number of those records that had errors, and the number of those records that are ready to be migrated to STORET.
- b) View import errors for the entire file and/or preview records with errors on a record-by-record basis.
- c) Delete an import from SIM's temporary tables. All data remains in the SIM temporary tables until the import is deleted. You should delete your imports after migration once you are satisfied that your data has been accurately loaded to STORET.
- d) Export records with errors after an *Export Path* and an *Export File Name* have been designated.
- e) Reference and/or edit the Import Configuration that was used for this import.
- f) Click **Migrate Records to STORET** and move the data you imported from the SIM to STORET.

The screenshot shows the 'Import Status' dialog box with the following fields and buttons:

- Import ID: 106517
- Import Type: R
- Org ID: DEMOTEST
- Import File: C:\orasta2\SIM\Example - Field Measurements.txt
- Import Configuration: Example - Field Measurements
- Buttons: Edit Import Configuration
- Import Status section:
 - Date Imported: 04-16-2004
 - Rows Read: 15 (labeled 'a')
 - Rows with Errors: 0 (labeled 'b')
 - Results Ready to Migrate: 15 (labeled 'f')
 - Activities Ready to Migrate: 2 (labeled 'c')
 - Buttons: View Import Errors, Preview Records with Errors, Migrate Records to STORET, Delete Import From SIM
- Export to Text section:
 - Export Path: c:\ (labeled 'd')
 - Export File: unmigrec.txt
 - Button: Export Records with Errors
- Buttons: Help, Close

Summary

In Tutorial II, Using SIM to Import and Migrate Data to STORET, you learned how to:

- Import files to SIM using a pre-defined import configuration and text file.
- Migrate data into STORET.

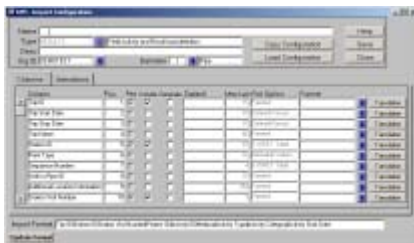
Tutorial III. Advanced Functions

This tutorial illustrates the following:

1. Reordering field positions in an Import Configuration
2. Saving and Loading Import Configurations
3. Viewing data that has been imported to SIM
4. Viewing the status of import files brought into SIM but not migrated or deleted
5. Removing (undo) a migration of data from STORET
6. Generating an error report to print or save

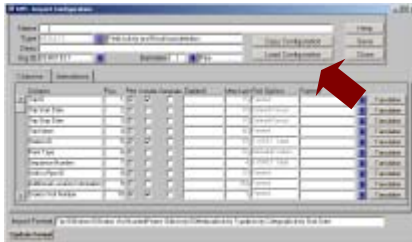
1. Reordering field positions in an Import Configuration

Field or column positions can be reordered from the Import Configuration menu. Suppose Start Date needs to be in the second position instead of the third. You can change the position number from 3 to a number between 1 and 2 (such as 1.5) and click **Save** to reorder the columns.



2. Saving and Loading Import Configurations

From the Import Configuration menu: you can save import configurations to a external file and load copied configurations using the **Copy Configurations** and **Load Configurations** buttons.



3. Viewing Data that has been imported to SIM

View data that is in SIM using the View...List capability that can be found under the Projects, Stations, or Results and Activities menus. Double-click an individual record to recall and view the data. Each record will have a status of:

Approved for migration to STORET

Not approved for migration to STORET

Exported (migrated) from SIM to STORET

Uploaded if SIM copied data from STORET itself



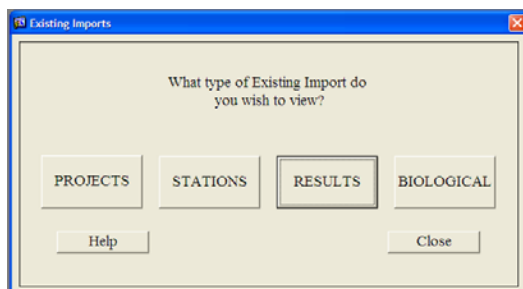
4. View the status of an import that was brought into SIM but was not migrated or deleted

There may be cases where you have previously imported files to SIM, but did not migrate them to STORET. This may occur because you had to stop your session, you wanted to review a file, or for another reason. Other times, you may not recall whether you migrated a particular file to STORET, or removed the imported data from STORET. The following outlines reviewing your imports to determine their status.

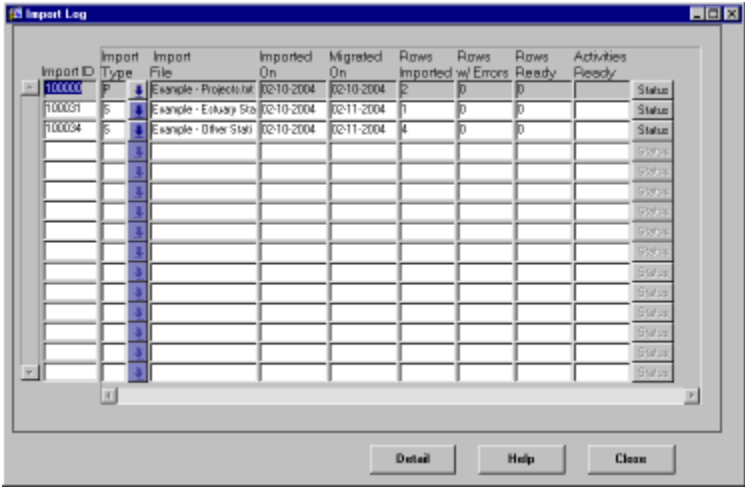
From the SIM Welcome menu, click **Existing Imports**.



There are four different categories of imports that you can access: Projects, Stations, Results, and Biological. To review the status of the import that was performed in Tutorial II, click **RESULTS**.



Click on the row that represents the relevant import and click **Status** at the end of the line. You will return to the Import Status menu that you saw in Step 4 of Tutorial II where depending on the status of the import, a variety of actions can be performed.



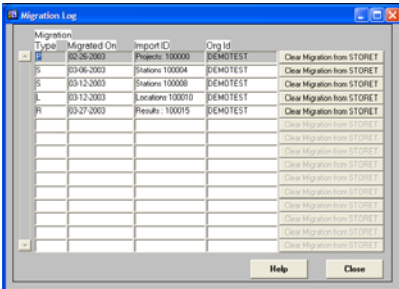
5. Remove or undo a migration of data from STORET

Select “Advanced” then “Migration Log” from the SIM windows menu.



Highlight the migration that you would like to remove from STORET and click the appropriate

Clear Migration from STORET button.



****Note** that SIM cannot undo a migration once the import has been deleted from SIM. Additionally, you cannot undo a migration once any changes or additions have been made to the migrated data through the STORET Data Entry Module.

Although you can unmigrate files in any order, it is recommended that possible files be removed in reverse chronological order to avoid complications with parent/child relationships between files.

6. Generate an error report file to print or save

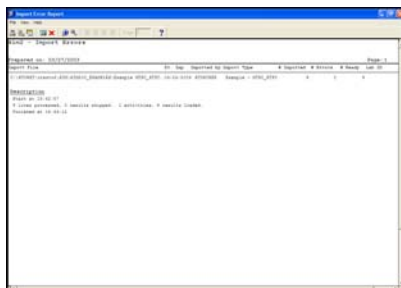
Select “Advanced” then “Import Error Report” from the SIM windows menu.



Use the down-turned arrow to select the file that was imported. Next, click **Run Report**.



A report of errors that occurred during import is displayed. From this screen, you can print the report or save it to a file.



SIM v2.0.1 New Features

New Data Elements

SIM v2.0.1 has been enhanced to support the following data elements.

1. Project Descriptions

Data Element	Required	Allowed Values
Document/Graphic		

2. Station Descriptions

Data Element	Required	Allowed Values
Document/Graphic		
Primary Estuary State	Conditional	Yes

3. Additional Locations

Data Element	Required	Allowed Values

No new additions

4. Wells

Data Element	Required	Allowed Values

No new additions

5. Field Measurements and Non-biological Samples

Data Element	Required	Allowed Values	Multiple Allowed
Visit Document/Graphic			
Parent Sample ID	Conditional	Must exist in STORET or in same data file	Yes. Separate with “\” for Composites with Parents
Cooperating Organization		Must Exist in STORET	Yes. Separate with “\”
Activity Document/Graphic			
Particle Size Basis			
Result Document/Graphic			
Lab Remark Codes		Yes	Yes. Separate with “\”
PDL Line Number			
PDL Line Name			

6. Biological Samples

Data Element	Required	Allowed Values	Multiple Allowed
Visit Document/Graphic			
Parent Sample ID	Conditional	Must Exist in STORET or Current Data File	Yes. Separate with “\” for Composites with Parents
Cooperating Organization		Must Exist in STORET	Yes. Separate with “\”
Activity Document/Graphic			
Particle Size Basis			
Result Document/Graphic			
Lab Remark Codes		Yes	Yes. Separate with “\”

Instructions on the use of many of these new data elements are outlined in the paragraphs below.

- Document/Graphics

Document or graphic files can now be imported into SIM and migrated to STORET for Projects, Stations, Station Visits, Activities, and Results. To add documents to your import:

1. In the SIM Import Configuration form, select to include the Document/Graphic column(s).
2. Place your documents in the SIM201_Documents folder. For Personal Oracle Installations this will be located under your STORET/Orasto2/SIM folder. For Client/Server installation, the documents folder will be located on the Server. As such, you should contact your STORET administrator for the full name and location of this folder.
3. Include the complete file name, without the path, of each image to your import file.
4. Initiate the standard import process.
5. Note: The images must remain in the SIM201_Documents folder until they have been migrated into STORET.

- Composites with Parents

Composite with Parents data can now be imported into SIM and migrated to STORET for either Chemical or Biological Results. To import composite with parents results:

1. Parent Activity samples must either be contained in the same data file as the Child records or must exist in STORET.
2. Add the Parent Sample ID column to the import configuration for Child samples.
3. Add multiple Parent Sample ID's to the data file separated by a '\'
4. Initiate the standard import process.

- Cooperating Organizations

Multiple Cooperating Organizations can now be associated with an Activity. To add cooperating organizations to your imports:

1. Add the new Cooperating Organization column to a results import configuration
2. Add Cooperating Organization to the import file.
3. If importing multiple cooperating organizations for an activity, use '\'
4. Initiate the standard import process.

- Lab Remark Codes

Multiple Lab Remark Codes can now be associated with a result. To add lab remark codes to your imports:

1. Add the new Lab Remark Code column to a results import configuration
2. Add Lab Remark Codes to the import file.
3. If importing multiple lab remark codes for a result, use '\'
4. Initiate the standard import process.

- **Portable Data Loggers**

Portable Data Logger (PDL) data can now be imported into SIM and migrated to STORET.

To import portable data logger results:

1. Add the new PDL Line Number and PDL Line Name columns to the import configuration.
2. Add the Data Logger Line Numbers and Line Names to your import file.
3. Set the Activity Type to 'Field Msr/Obs' in the import file.
4. Set the Activity Category to 'Portable Data Logger' in the import file.
5. Initiate the standard import process.

For a working example of loading PDL results, access the Portable Data Logger configurations and example files provided with the SIM application.

New Features:

In addition to the new data elements and their processes, SIM v2.0.1 has added other new features. These are described below:

- **New in Configuration Settings: Generation of Columns not included in the import file**
When an import configuration is created, users now have the option to generate columns that the user has not included in the import file. To generate columns during import:

1. Open the Import Configuration Window.
2. Check the Generate Check box for all columns that will be imported into SIM but not included in the import file.
3. Enter the default value that SIM will use for each generated column.
4. For Station Visits and Trips, the default column can be left blank if an instruction has been chosen that will generate these values automatically.
5. Save your configuration and initiate the standard import process.

- **Export of Additional Locations and Wells Errors to a file**

During the data import process, the Import Status form displays the number of lines with errors. In SIM v2.0 and earlier, an option exists for Project, Station, and Results to export these error records into a text file, correct the records, and re-import the data into SIM. New to SIM v2.0.1, this functionality has been added to the Location and Wells import processes.

To export records with errors:

1. Access the Import Status window.
2. Enter the desired output file name in the Export File field.
3. Enter the desired output file path in the Export Path field.
4. Click the 'Export Records with Errors' button.

- **System-Defined Habitat Assessments**

In SIM v2.0.1, System-Defined Habitat Assessments may be migrated to STORET in much the same manner as the User-Defined Habitat Assessments that were already supported by SIM in previous versions. To import Habitat Assessments:

1. First create a Habitat Assessment Characteristic Group in STORET.

2. Include an activity type of 'Field Msr/Obs' and an activity category of 'Routine Habitat Assessment' or 'Replicate Habitat Assessment' in the data file.
 3. Include the Habitat Assessment Characteristic Group and Row Ids along with the appropriate result values in the data file.
 4. Initiate the standard import process.
- Updated example files and configurations are available to test the new features that SIM v2.0.1 provides.
 - The SINGLE_USER_ENVIRONMENT system configuration setting was removed. SIM is now always able to handle multiple users.
 - SIM will now accept Well ID's that are alphanumeric.
 - Free text values can now be translated in SIM.
 - Primary Estuary State is now needed in addition to Primary and Secondary Estuary in order to determine the exact area.
 - The short name for Sample Matrix is required in the data file or translation in place of the code.
 - Imports for Created from Sample are available for both Chemical and Biological samples.
 - The layout to view activity data in SIM has been rearranged so that Activity Depth and Activity Parent data are now on separate forms.
 - The SIM time format of HHMM is now equivalent to a twenty-four hour day to provide consistency with the STORET Data Entry Application.

System Configuration Definitions

Under the Advanced/System Config menu option in SIM v2.0.1, there are several user-defined settings used to configure your system. The definitions for each of the configuration settings are listed below.

BUILD_NUMBER

The Build Number configuration item displays the four-digit release number for this installation for SIM. This number is displayed in the description column. The value column is not used.

DFLT_ORG

The Default Organization configuration item allows the user to identify a STORET organization that will default throughout the SIM application when the user is prompted to enter an organization. This will not prohibit the user from selecting another valid organization if desired. Value is set to organization “DEMOTEST” by default.

IMPORT_PATH

The Import Path configuration item allows the user to set a path to a directory where text files are located for import into SIM. When the user clicks the Browse button in the Import File form, the user will automatically be directed to the directory named in the Import Path configuration item value. If the ALLOW_LONG_LINES configuration item is set to “Yes”, the import path must be entered as it would be mapped from the database server and the browse button will be disabled.

DFLT_EXPORT_PATH

The Default Export Path configuration item allows the user to set a path to a directory where files will be created if errors were found in the import. In the Import Status window, the user can view/edit the export path and click the Export Records with Errors button to create the export file.

DFLT_EXPORT_FILE

The Default Export File configuration item allows the user to define the default name of a file, which will be created if errors were found in the import. In the Import Status window, the user can view/edit the export filename and click the Export Records with Errors button to create the export file.

HELP_PATH

The Help Path configuration item allows the user to point to a directory that contains the files needed to access the general help window. The chosen directory path must contain the files sim2_gen.gid and sim2_gen.hlp. In a standard SIM v2.0.1 installation, the files will be contained in the directory where the software was installed.

COPY_PATH

The Copy Path configuration item allows the user to set a default path to a directory where the copy/load utility will read/write the import configuration files. In the Copy and Load Configuration forms, the user can view/edit the default copy path and file name.

ALLOW_LONG_LINES

The Allow Long Lines configuration item allows the user to configure the system to read ASCII files with very long lines. When the configuration value is set to “Yes”, the user can import files with lines longer than 1000 characters. When the system is configured to allow long lines, the import file is parsed by the database rather than the client machine. As a result, the browse button is disabled and you must enter the full path and file name as it could be found from the database server. Value is set to “No” by default.

**Appendix A:
Listing of Available STORET Data Elements
for Each File Type**

Overview:

The SIM v2.0.1 application supports imports for Projects, Stations, Additional Locations, Wells, Field Measurements and Non-Bio Results, and Biological Results. The tables below list all of the STORET data elements supported by each of these import types.

The Required column indicates for each data element if it is required by SIM /STORET, is conditionally required, or is optional.

The Allowable Values column indicates if there is a set of valid values for the data element, which are enforced by STORET. For additional information on the STORET Tables and Allowable Values by column, review the *Data Structure List with definitions.pdf* included in the documentation on the STORET v2.0 CD.

For the result imports, an additional column has been added to the tables to indicate where multiple values can be imported separated by a Back Slash (\) for a single data element on a single data line.

1. Project Descriptions

Data Element	Required	Allowed Values
Project ID	Yes	
Name	Yes	
Start Date	Yes	
Duration	Yes	
Purpose	Yes	
Contact		
Document/Graphic		

2. Station Descriptions

Data Element	Required	Allowed Values
Station ID	Yes	
Station Name		
Primary Type	Yes	Yes
Secondary Type	Yes	Yes
Establishment Date		
Point Name		
Water Depth		
Water Depth Units	Conditional	Yes
Station Description		
Document/Graphic		
EPA Key Identifier		
Point Name		
Latitude	Yes	
Latitude Direction	Defaults to "N"	Yes
Longitude	Yes	
Longitude Direction	Defaults to "W"	Yes
Lat/Long Measurement Date		
Geopositioning Datum	Yes	Yes
Geopositioning Method	Yes	Yes
Scale	Conditional	
State	Yes	
County	Yes	
HUC		
Ecoregion Name		
NRCS Watershed ID		
Influence Area		

Data Element	Required	Allowed Values
Travel Directions		
ZID Relation		Yes
Native American Land Name		
Native American Land State		
Elevation		
Elevation Units	Conditional	Yes
Elevation Method	Conditional	
Elevation Datum	Conditional	
Elevation Measurement Date		
Ocean Name	Conditional	Yes
Shore Relation	Conditional	Yes
Additional Ocean Name		
Ocean Station Dist to Shore		
Ocean Station Dist to Shore Units	Conditional	Yes
Ocean Station Ref Point		
Ocean Station Bottom Topography		
Primary Estuary	Conditional	
Primary Estuary State	Conditional	Yes
Secondary Estuary		
Other Estuary		
Additional Estuary Name		
Estuary Distance to Shore		
Estuary Dist to Shore Units	Conditional	Yes
Estuary Reference Point		
Great Lake	Conditional	Yes
Additional Great Lake Name		
Great Lake Dist to Shore		
Great Lake Dist to Shore Units	Conditional	Yes
Great Lake Reference Point		

3. Additional Locations

Data Element	Required	Allowed Values
Station ID	Yes	Must exist in STORET
Point Type	Yes	Yes
Point Name		
Sequence Number	Yes	
Latitude	Yes	
Latitude Direction	Defaults to "N"	Yes
Longitude	Yes	
Longitude Direction	Defaults to "W"	Yes
Lat/Long Measurement Date		
Geopositioning Datum	Yes	Yes
Geopositioning Method	Yes	Yes
Elevation		
Elevation Units	Conditional	
Elevation Method	Conditional	Yes
Elevation Datum	Conditional	Yes
Elevation Measurement Date		
Scale	Conditional	

4. Wells

Data Element	Required	Allowed Values
Station ID	Yes	Must Exist in STORET
Well Number	Yes	
Well Name	Yes	
Well Status	Yes	Yes
Well Use	Yes	Yes
Well Head Latitude		
Well Head Latitude Direction	Conditional. Defaults to "N"	Yes
Well Head Longitude		
Well Head Longitude Direction	Conditional. Defaults to "N"	Yes
Well Head Geopositioning Datum	Conditional	Yes
Well Head Geopositioning Method	Conditional	Yes
Well Head Scale	Conditional	
Well Head Measurement Date		
Well Head Elevation		
Well Head Elevation Units	Conditional	Yes
Well Head Elevation Method	Conditional	Yes
Well Head Elevation Datum	Conditional	Yes
Elevation Measurement Date		

5. Field Measurements and Non-biological Samples

Data Element	Required	Allowed Values	Multiple Allowed
Trip ID	Yes	Must Exist in STORET	
Trip Start Date			
Trip Stop Date			
Trip Name			
Station ID	Yes	Must Exist in STORET	
Point Type		Must Exist in STORET	
Sequence Number	Conditional		
Well or Pipe ID	Conditional		
Additional Location Information			
Station Visit Number	Yes		
Station Visit Arrival Date			
Visit Comments			
Visit Document/Graphic			
Project ID	Yes	Must Exist in STORET	Yes. Separate with "\"
Activity ID	Yes		
Medium	Yes	Yes	
Activity Type	Yes	Yes	
Activity Category	Conditional	Yes	
Trip QC Type	Conditional	Yes	
QC Indicator		Yes	
Sample Matrix		Yes	
Chain of Custody ID			
Replicate Number	Conditional		
Parent Sample ID	Conditional	Must exist in STORET or in same data file	Yes. Separate with "\" for Composites with Parents
Activity Start Date	Yes		
Activity Start Time			
Activity Start Time Zone	Conditional	Yes	
Activity End Date			
Activity End Time			
Activity End Time Zone	Conditional	Yes	
Total Sample Weight			
Total Sample Weight Units	Conditional	Yes	
Depth to Activity			
Depth to Activity Units	Conditional	Yes	

Data Element	Required	Allowed Values	Multiple Allowed
Relative Depth		Yes	
Depth Measured From			
Lower Depth			
Upper Depth			
Upper/Lower Depth Units	Conditional	Yes	
Depth Zone Type		Yes	
Thermocline		Yes	
Halocline		Yes	
Pycnocline		Yes	
Personnel		Must Exist in STORET	Yes. Separate with "\
Cooperating Organization		Must Exist in STORET	Yes. Separate with "\
Activity Comments			
Activity Document/Graphic			
Sample Collection Procedure ID	Conditional	Must Exist in STORET	
Gear ID	Conditional	Yes	
Gear Configuration ID		Must Exist in STORET	
Gear Deployment Comments			
Sample Preservation, Transport & Storage ID		Must Exist in STORET	
Sample Transport and Storage Comments			
Field Set Name	Conditional		
Field Set ID	Conditional		
Detection Condition		Yes	
Characteristic Group ID	Conditional	Must Exist in STORET	
Characteristic Row ID	Conditional	Must Exist in STORET	
Characteristic Name	Conditional	Yes	
Result Value	Conditional	Yes*	
Result Value Units	Conditional	Yes	
Result Status	Defaults to "F"	Yes	
Sample Fraction	Conditional	Yes	
Statistic Type		Yes	
Value Type	Defaults to "Actual"	Yes	
Precision			
Confidence Level		Yes	
Bias			
CL Corrected for Bias		Yes	
Duration Basis		Yes	
Temperature Basis		Yes	
Weight basis		Yes	
Particle Size Basis			
Result Comment			
Result Document/Graphic			
Laboratory ID		Must Exist in STORET	
Field/Lab Procedure	Conditional	Must Exist in STORET	
Field/Lab Procedure Source	Conditional	Yes	
Laboratory Certified		Yes	
Laboratory Batch ID			
Lab Remark Codes		Yes	Yes. Separate with "\
Analysis Date			
Analysis Time			
Analysis Time Zone	Conditional	Yes	
Lab Sample Prep Procedure		Must Exist in STORET	
Lab Sample Prep Procedure Source	Conditional	Yes	
Quantification Low			
Quantification High			
Detection Limit			
Detection Limit Unit	Conditional	Yes	
Detection Limit Comment			
PDL Line Number			
PDL Line Name			

*Result values can be numbers or, in some cases they are chosen from lists of allowable values.

6. Biological Samples

Data Element	Required	Allowed Values	Multiple Allowed
Trip ID	Yes		
Trip Start Date			
Trip Stop Date			
Trip Name			
Station ID	Yes	Must Exist in STORET	
Point Type		Must Exist in STORET	
Sequence Number	Conditional		
Well or Pipe ID	Conditional		
Additional Location Information			
Station Visit Number	Yes		
Station Visit Arrival Date			
Visit Comments			
Visit Document/Graphic			
Project ID	Yes	Must Exist in STORET	Yes. Separate with "\
Activity ID	Yes		
Medium	Yes	Yes (Biological)	
Activity Type	Yes	Yes	
Activity Category	Yes	Yes	
QC Indicator		Yes	
Sample Matrix		Yes	
Chain of Custody ID			
Replicate Number	Conditional		
Intent	Yes	Yes	
Parent Sample ID	Conditional	Must Exist in STORET or Current Data File	Yes. Separate with "\ for Composites with Parents
Community	Conditional	Yes	
Bio Part	Conditional	Yes	
Subject Taxon	Conditional	Yes	
Subject Taxon Species Number		Yes	
Total Sample Weight			
Total Sample Weight Units	Conditional	Yes	
Activity Start Date	Yes		
Activity Start Time			
Activity Start Time Zone	Conditional	Yes	
Activity End Date			
Activity End Time			
Activity End Time Zone	Conditional	Yes	
Depth to Activity			
Depth to Activity Units	Conditional	Yes	
Relative Depth		Yes	
Depth Measured From			
Lower Depth			
Upper Depth			
Upper/Lower Depth Units	Conditional	Yes	
Depth Zone Type		Yes	
Thermocline		Yes	
Halocline		Yes	
Pycnocline		Yes	
Personnel		Must Exist in STORET	Yes. Separate with "\
Cooperating Organization		Must Exist in STORET	Yes. Separate with "\
Activity Comments			
Activity Document/Graphic			
Sample Collection Procedure ID	Conditional	Must Exist in STORET	
Gear ID	Conditional	Yes	
Gear Configuration ID		Must Exist in STORET	
Gear Deployment Comments			

Data Element	Required	Allowed Values	Multiple Allowed
Sample Preservation, Transport & Storage ID		Must Exist in STORET	
Sample Transport and Storage Comments			
Field Set ID	Conditional		
Field Set Name	Conditional		
Distance Fished			
Distance Fished Units	Conditional	Yes	
Fished Duration			
Fished Duration Units	Conditional	Yes	
Trap or Net Sampling Duration			
Trap or Net Sampling Duration Units	Conditional	Yes	
Relative Current Direction			
Relative Wind Direction			
Orientation to Current		Yes	
Trap or Net Comments			
Bio Results Group ID	Conditional		
Bio Results Type	Conditional	Yes	
Bio Results Group Description			
Bio Group Count Type	Conditional	Yes	
Total Number in Group	Conditional		
Frequency Analysis Type	Conditional	Yes	
Primary Class Descriptor	Conditional	Yes	
Secondary Class Descriptor		Yes	
Primary Class Value	Conditional		
Secondary Class Value			
Common Class Descriptor	Conditional	Yes	
Common Class Descriptor Units	Conditional	Yes	
Sex		Yes	
Life Stage		Yes	
Frequency Class Count	Conditional		
Lower Class Bound	Conditional		
Upper Class Bound	Conditional		
Number of Individuals in Group	Conditional		
Individual Number	Conditional		
Detection Condition		Yes	
Characteristic Group ID	Conditional	Must Exist in STORET	
Characteristic Row ID	Conditional	Must Exist in STORET	
Characteristic Name	Conditional	Yes	
Characteristic Species Number			
Result Value	Conditional	Yes*	
Result Value Units	Conditional	Yes	
Result Status	Defaults to "F"	Yes	
Sample Fraction	Conditional	Yes	
Statistic Type		Yes	
Value Type	Defaults to "Actual"	Yes	
Precision			
Confidence Level		Yes	
Bias			
CL Corrected for Bias		Yes	
Duration Basis		Yes	
Temperature Basis		Yes	
Weight basis		Yes	
Particle Size Basis			
Cell Form		Yes	
Cell Shape		Yes	
Habit		Yes	
Voltinism		Yes	
Taxon Pollution Tolerance			
Trophic Level			
Functional Feeding Group			

*Result values can be numbers or, in some cases they are chosen from lists of allowable values.

Data Element	Required	Allowed Values	Multiple Allowed
Result Comment			
Result Document/Graphic			
Laboratory ID		Must Exist in STORET	
Field/Lab Procedure	Conditional	Must Exist in STORET	
Field/Lab Procedure Source		Yes	
Laboratory Certified		Yes	
Laboratory Batch ID			
Lab Remark Codes		Yes	Yes. Separate with "\
Analysis Date			
Analysis Time			
Analysis Time Zone	Conditional	Yes	
Lab Sample Prep Procedure		Must Exist in STORET	
Lab Sample Prep Procedure Source		Yes	
Quantification Low			
Quantification High			
Detection Limit			
Detection Limit Unit	Conditional	Yes	
Detection Limit Comment			

**Appendix B:
SIM v2.0.1 Example Files**

Overview:

The SIM v2.0.1 application contains eighteen examples of various import types listed as follows: Projects, Stations, Locations, Wells, Regular Results, and Biological Results. At least one example of each of these types is included to demonstrate the correct use of the data elements required for valid entry into STORET v2.0.

The data imported under each of the file types complements each other, and the order in which you migrate data files to STORET is important. Station Descriptions should always be loaded before Additional Locations and Wells. Project Descriptions and all the Station files should always be loaded before your Result files. This ensures that the key data elements will be registered in STORET and are ready for results to be associated with them. Likewise, similar rules apply when removing these files from STORET and SIM. As such, it is recommended that when possible, files be removed in reverse chronological order.

Getting Started:

In order to import example data into SIM and STORET, a valid import configuration and data file is required as shown in Tutorial II of this document. The SIM v2.0.1 installation pre-loads the import configurations for each of these examples into SIM.

The SIM v2.0.1 installation also installs the associated import data files in the following directory for Personal Oracle users: C:\STORET\Orasto2\SIM\SIM201_EXAMPLES. The SIM v2.0.1 installation process sets the IMPORT_PATH System Configuration setting to this path so that the example data files are readily accessible for use. The directory path may be slightly different for use on the server. Contact your Database Administrator for the correct example file path and directory if the Server installation was completed.

All of the import configurations are created to utilize the DEMOTEST organization which is pre-loaded in the STORET v2.0 database and will not impact your actual water quality data. Please note that if your server installation of the STORET database was converted from version 1.2 to version 2.0, the DEMOTEST organization will not automatically be updated. In such cases, the SIM example files may generate error messages during the import process. If desired, scripts to update the DEMOTEST data are provided on the STORET v2.0 CD.

A breakdown of each example by file type, import configuration, and data file is displayed below.

No	File Type	Import Configuration	Import Data File
1	Project	Example – Projects	Example – Projects.txt
2	Station	Example – Estuary Station	Example – Estuary Station.txt
3	Station	Example – Great Lake Station	Example – Great Lake Station.txt
4	Station	Example – Ocean Station	Example – Ocean Station.txt
5	Station	Example – Other Stations	Example – Other Stations.txt
6	Location	Example – Additional Sample Points	Example – Additional Sample Points.txt
7	Well	Example – Wells	Example – Wells.txt
8	Results	Example – Field Measurements	Example – Field Measurements.txt
9	Results	Example – Portable Data Logger with Characteristic Groups	Example – Portable Data Logger with Characteristic Groups.txt
10	Results	Example – Portable Data Logger with	Example – Portable Data Logger with

		Characteristic Names	Characteristic Names.txt
11	Results	Example – Chem Results with Char Groups and Rows	Example – Chem Results with Char Groups and Rows.txt
12	Results	Example – Chem Results with Char Names	Example – Chem Results with Char Names.txt
13	Results	Example – Grain Size Analysis	Example – Grain Size Analysis.txt
14	Biological	Example – Individual Intent	Example – Individual Intent.txt
15	Biological	Example – Individual Intent – Created from Sample	Example – Individual Intent – Created from Sample.txt
16	Biological	Example – MTPC_STFC	Example – MTPC_STFC.txt
17	Biological	Example – Single Taxon Group Summary	Example – Single Taxon Group Summary.txt
18	Biological	Example – Single Taxon Individuals	Example – Single Taxon Individuals.txt

Example File Overview:

Projects

Example – Projects

Things to note:

- All three projects are required for the Results and Biological example files.
- One of the projects contains a Document/Graphic called Chesapeake_Bay_EMAP.pdf.

Stations

Example – Estuary Station

Things to note:

- Illustrates the usage of the Primary Estuary, Secondary Estuary, and Estuary State. Since the names of certain Primary and Secondary Estuaries can be the same in multiple areas, the inclusion of Estuary State ensures that the correct combination of three is migrated to STORET.
- Illustrates the use of specific formats for latitude, longitude, date, and time.
- The station contains a Document/Graphic called Station_CBC050.jpg.

Example – Great Lake Station

Things to note:

- Illustrates the usage of required data elements needed to define a Great Lake Station.
- The station contains a Document/Graphic called Station_CBC051.jpg.

Example – Ocean Station

Things to note:

- Illustrates the usage of required data elements needed to define an Ocean Station.
- The station contains a Document/Graphic called Station_CBC052.jpg.

Example – Other Stations

Things to note:

- Illustrates the usage of required data elements needed to define a River/Stream, Well, and Lake Station.
- Two of the stations contain Document/Graphics called Station_CBC053.jpg and Station_CBC056.jpg.

Additional Station Locations

Example – Additional Sample Points

Things to note:

- Illustrates the usage of required data elements needed to define the additional sampling or boundary locations for a station.
- The Other Station example file must be migrated to STORET before this example file can be imported to SIM.

Wells

Example – Wells

Things to note:

- Illustrates the usage of required data elements needed to define additional wells and their usage for a station.
- The Other Station example file must be migrated to STORET before this example file can be imported to SIM.

Results

Example - Chem Results with Char Groups and Rows

Things to note:

- Illustrates the usage of required data elements needed to define a User-Defined Habitat Assessment and Routine Sample when accessing a STORET Characteristic Group and Row to provide additional information.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.

Example - Chem Results with Char Names

Things to note:

- Illustrates the usage of required data elements needed to define a Routine Sample with characteristics details loaded in the file. No STORET characteristic group is needed to load this file.
- Illustrates the usage of required data elements for a single trip with multiple visits to a station.
- Illustrates the entry of multiple lab remark codes.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.

Example - Field Measurements

Things to note:

- Illustrates the usage of required data elements needed to define a Field Measurement and Observation using a STORET Characteristic Group and Row.
- Illustrates the use of choice list Characteristics and corresponding Result Values.
- No example files need to be migrated to STORET before the example is imported to SIM.

Example - Grain Size Analysis

Things to note:

- Illustrates the usage of required data elements needed to define Routine Sample with a medium of Sediment using a STORET Characteristic Group and Row.
- Both the Projects and Ocean Station example files must be migrated to STORET before importing this example to SIM.

Example - Portable Data Logger with Groups and Rows

Things to note:

- Illustrates the usage of required data elements needed to define a Portable Data Logger category using a STORET Characteristic Group and Row.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.

Example - Portable Data Logger with Char Names

Things to note:

- Illustrates the usage of required data elements needed to define a Portable Data Logger import.
- Both the Projects and Ocean Station example files must be migrated to STORET before importing this example to SIM.

Biological Results

Example - Individual Intent

Things to note:

- Illustrates the usage of required data elements needed to define a Routine Sample for a medium of Biological and intent of Individual.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.
- The example contains the parent activities for another example file.

Related Business Rules:

- When importing parent and child activities in separate data files, the parent activities must always be migrated to STORET before the children can be imported to SIM.

- In order to clear a migration of parent activities from STORET, the child activities must be completely removed from STORET and SIM if they have been added through a separate data file or direct use of the STORET interface.
- When importing parent and child activities in the same data file, the parent activities must always precede the child activities.

Example - Individual Intent - Created From Sample

Things to note:

- Illustrates the usage of required data elements needed to define a Created from Sample for a Biological Sample. Note the use of the Parent Sample ID column, which references the parent activity created in the Individual Intent example file.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.
- The example contains the child activities created from the parent activities in the Individual Intent example file.

Related Business Rules:

- When importing parent and child activities in separate data files, the parent activities must always be migrated to STORET before the children can be imported to SIM.
- When importing parent and child activities in the same data file, the parent activities must always precede the child activities.

Example - MTPC_STFC

Things to note:

- Illustrates the usage of required data elements needed to define intent of Taxon Abundance and bio results type of Multi-Taxon Population Census and Single Taxon Frequency Classes.
- Illustrates the use of frequency analysis type of both Biological and Physical for Single Taxon Frequency Class.
- Both the Projects and Estuary Station example files must be migrated to STORET before importing this example to SIM.

Example - Single Taxon Group Summary

Things to note:

- Illustrates the usage of required data elements needed to define intent of Taxon Abundance and bio results type of Single Taxon Group Summary.
- Both the Projects and Other Stations example files must be migrated to STORET before importing this example to SIM.

Example - Single Taxon Individual

Things to note:

- Illustrates the usage of required data elements needed to define intent of Taxon Abundance and bio results type of Single Taxon Individuals.

- Both the Projects and Estuary Station example files must be migrated to STORET before importing this example to SIM.

STORET 2.0 Guidance

This document is to be used as a reference for loading data into STORET 2.0 using SIM2.0.1 and DEPSIM2.0. Not every situation or allowed value has been listed. If you have are unsure about an allowed value to best way to find it is by looking within the STORET application. EPA has included a DEMOTEST organization for the dual purpose of viewing examples and testing data. Also within the SIM program the translation button in the edit import configuration will allow you to search for the allowed value for that field. As always, the STORET Staff is available to assist you with any questions.

PROJECTS						
Column	Required by STORET	Required by DEP	Condition	Allowed Values	Description	Length
Project ID	Yes					8
Name	Yes					60
Start Date	Yes			Specify format for SIM.		10
Duration	Yes					15
Purpose	Yes					1999
Contact						1999
Document/Graphic						256
STATIONS						
Column	Required by STORET	Required by DEP	Condition	Allowed Values	Description	Length
Station ID	Yes			Must exist in STORET		15
Station Name		Yes		DEP needs a descriptive location in this field. For example: Big River - 1 mile N of US 27 Bridge.		60
Primary Type	Yes			CERCLA Superfund Site Canal Cave Channelized stream Combined sewer Constructed Wetland Estuary Facility Gallery Great Lake Lake Land Land runoff Landfill Mine/mine discharge Ocean Reservoir River/Stream Riverine impoundment Spring Storm sewer Waste pit Waste sewer Well Wetland		

STORET 2.0 Guidance

Latitude	Yes	Yes			Specify format for SIM.		14
Latitude Direction	Defaults to "N"				Yes		1
Longitude	Yes	Yes			Specify format for SIM.		15
Longitude Direction	Defaults to "W"				Yes		1
Lat/Long Measurement Date					Specify format for SIM.		10
Geopositioning Datum	Yes				AMSMA ASTRO GUAM JHNSN NAD27 NAD83 OLDHI OTHER PR SGEOR SLAWR SPAUL UNKWN WAKE WGS72 WGS84	American Samoa Datum Midway Astro 1961 Guam 1963 Johnson Island 1961 North American Datum 1927 - Common North American Datum 1983 - Most Common Old Hawaiian Datum Other Puerto Rico Datum St. George Island Datum St. Lawrence Island Datum St. Paul Island Datum Unknown Wake-Eniwetok 1960 World Geodetic System 1972 WGS84 - World Geodetic System 1984 - Common	
Geopositioning Method	Yes				001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038	Address Matching-House Number Address Matching-Block Face Address Matching-Street Centerline Address Matching-Nearest Intersection Address Matching-Primary Name Address Matching-Digitizec Address Matching-Other Census Block-1990-Centroid Census Block/Group-1990-Centroid Census Block/Tract-1990-Centroid Census-Other GPS Carrier Phase Static Relative Position GPS Carrier Phase Kinematic Relative Position GPS Code (Pseudo Range) Differential GPS Code (Pseudo Range) Precise Position GPS Code (Pseudo Range) Standard Position (SA Off) GPS Code (Pseudo Range) Standard Position (SA On) Interpolation-Map Interpolation-Photo Interpolation-Satellite Interpolation-Other Loran C Public Land Survey-Quarter Sector Public Land Survey-Sector Classical Surveying Technique ZIP Code-Centroid Unknown GPS-Unspecified GPS, with Canadian Active Control System Interpolation - Digital Map Source (TIGER) Interpolation - SPOT Interpolation - MSS Interpolation - TV Public Land Survey-Eighth Sector Public Land Survey-Sixteenth Sector Public Land Survey-Footing ZIP+4 Centroid ZIP+2 Centroid	

STORET 2.0 Guidance

Scale	Conditional		If Method = Interpolator			20
State	Yes			FL		2
County	Yes			See List in STORET		25
HUC						8
Ecoregion Name						60
NRCS Watershed ID						8
Influence Area						120
Travel Directions						254
ZID Relation				AB NF WZ FF RF	At Boundary At Outfall Within ZID Beyond ZID Reference	
Native American Land Name						40
Native American Land State						2
Elevation						9
Elevation Units	Conditional		If elevation is given	ft m		2
Elevation Method	Conditional		If elevation is given			3
Elevation Datum	Conditional		If elevation is given			6
Elevation Measurement Date				Specify format for SIM.		10
Ocean Name	Conditional		If primary type is Ocear	Arctic Ocean Atlantic Ocean Caribbean Sea Gulf of Mexico Pacific Ocean		15
Shore Relation	Conditional		If primary type is Ocear	Near Shore Off Shore	within territorial waters beyond territorial waters	10
Additional Ocean Name						30
Ocean Station Dist to Shore						6
Ocean Station Dist to Shore Units	Conditional		If distance is given	nmi mi mi km ft		3
Ocean Station Ref Point						30
Ocean Station Bottom Topography						254
Primary Estuary	Conditional		If Primary type is Estuary	A list of Primary Estuaries can be found in Sim, STORET, or DEP's additional documentation		30
Primary Estuary State	Conditional		If Primary type is Estuary	Yes	You will most likely use 'Florida'	40
Secondary Estuary				A list of Primary Estuaries can be found in Sim, STORET, or DEP's additional documentation		30
Other Estuary						30

STORET 2.0 Guidance

Additional Estuary Name							30
Estuary Distance to Shore							6
Estuary Dist to Shore Units	Conditional			If distance is given	nmi mi mi km ft		3
Estuary Reference Point							30
Great Lake	Conditional			If primary type is Great Lake	Lake Ontario Lake Erie Lake Huron Lake Michigan Lake Superior	You will most likely not use this field	
Additional Great Lake Name							30
Great Lake Dist to Shore							6
Great Lake Dist to Shore Units	Conditional			If distance is given	nmi mi mi km ft		3
Great Lake Reference Point							30
Results							
Column	Required by STORET	DEP Planning	DEP Verified	Conditional Explanation	Allowed Values	Description/Help	Multiple Entries
Trip ID	Yes		Yes		Must Exist in STORET		15
Trip Start Date	Conditional			If not generated by SIM, Trip Start Date must be in file or exist.	Specify format for SIM.		10
Trip Stop Date					Specify format for SIM.		10
Trip Name							60
Station ID	Yes		Yes		Must Exist in STORET		15
Point Type					Must Exist in STORET		16
Sequence Number	Conditional			When needed			4
Well or Pipe ID	Conditional			For Wells			15
Additional Location Information							254
Station Visit Number	Yes		Yes				3
Station Visit Arrival Date	Conditional			If not generated by SIM, Station Visit Arrival Date must be in file or exist.	Specify format for SIM.		10
Visit Comments							4000
Visit Document/Graphic							256
Project ID	Yes		Yes		Must Exist in STORET	Separate Multiple Entries with ""	8
Activity ID	Yes		Yes				12
Medium	Yes		Yes		Air Biological Other Sediment Soil Water		8
Activity Type	Yes		Yes		Sample Field Msr/Obs Data Logger Trip QC	Material removed from the field for analysis elsewhere. A measurement or observation made in the field, not removing material for analysis elsewhere.	15

STORET 2.0 Guidance

Activity Category	Conditional	Conditional	If Activity Type = Field Msr/Obs, Sample		30
			Routine Sample	A sample gathered using straightforward 'grab' procedures for purposes of a general evaluation of the environment at the site.	
			Field Replicate/Duplicate	A sample 'twinning' to another sample with respect to procedures, medium, and tools used. Used to confirm or assure sample results.	
			Composite-with Parents	A sample created by combining two or more 'parent' samples may only contribute to such a composite sample once. They are 'consumed' by the compositing process.	
			Routine Msr/Obs	MEASUREMENTS involve something measured in its environmental setting usually using some type of equipment.	
			Automated Measurement	OBSERVATIONS are made by people, usually without the use of equipment, and are frequently qualitative. Measurement made in the field by an automated data logging device, running unattended and producing a suite of data values at repeating intervals set by its owner/operator.	
			Routine Habitat Assessment	A field activity conducted to evaluate a habitat, according to an organization's pre-defined habitat assessment scheme.	
			Depletion Replicate	A sample which is part of a sampling method described as 'depletion sampling'. It is used to obtain an accurate estimate of the population of a species by observing successive samples which show decreasing numbers.	
			Replicate Msr/Obs	A measurement 'twinning' to another measurement with respect to a field protocol, procedure, etc. Used to confirm/assure measurement results.	
			Created from Sample	This is used when a sample is 'created' from another sample. For example, a liver is taken from a fish, or a 100 ml specimen can be drawn from a 500 ml sample.	
			Integrated Time Series	A discrete/integrated sample, usually derived from a continuous record, representing some portion or segment of elapsed time within the overall activity duration or sample period.	
			Integrated Flow Proportioned	A sample integrated over an interval or space within which changes in flow are used to alter the proportion of the sampled medium contributing to the integrated sample.	
			Integrated Horizontal Profile	A discrete/integrated sample, usually derived from a continuous record, representing some portion or segment of a horizontal track within the study area.	
			Integrated Vertical Profile	A discrete/integrated sample, usually derived from a continuous record, representing some portion or segment of a vertical track within the study area.	
			Integrated Cross-Sectional Profile		
			Composite w/o Parents	Describes a sample which is a composite of either several discrete sampling events not described elsewhere, or is a sample collected by a continuous process over some time period. No database record exists as its parent.	
			Replicate Habitat Assessment	An evaluation of a habitat, repeating an earlier evaluation, used to confirm or assure the previous results.	
			Field Spike	A 'spiked' sample, whose concentration(s) of one or more contaminants have been intentionally increased by a known amount, through the (secret) addition of material to the sample.	
			Portable Data Logger		
			Field Equipment Rinsate Blank		
			Field Blank		
			Field Subsample		
			Field Split		
			Field Calibration Check		
			Field Surrogate Spike		
			Field Ambient Conditions Blank		

STORET 2.0 Guidance

Trip QC Type	Conditional	Conditional	If Activity Type = Trip QC		
				Trip Blank	This sample is prepared by putting analyte-free/organic-free water in the container and then adding preservatives and/or reagent and the sample thus prepared accompanies other samples collected
				Trip Reagent Blank	This sample is prepared by putting analyte-free/organic-free water in the container and then adding preservatives and/or reagent
				Trip Equipment Blank	Analysis of this sample, when compared with that of related QC samples, will determine if the equipment is clean. Equipment field blanks are defined as samples which are obtained by running organic-free water over/through sample collection equipment after it has been cleaned. These samples will be used
				Trip Pre-Preserv Bk	This sample is prepared by putting analyte-free/organic-free water in the container without adding preservatives. Analysis of this sample, when compared with that of related QC samples, will determine if the equipment is clean.
				Trip Post-Preserv Bk	This sample is prepared by putting analyte-free/organic-free water in the container and then adding preservatives. Analysis of this sample, when compared with that of related QC samples, will determine if the equipment is clean.
				Trip Field Spike	Organic-free water is taken to the field in sealed containers and poured into the appropriate sample containers at pre-designated locations. This is done to determine if any contaminants are present.
				Trip Reference Sample	
				Trip Bottle Blank	Self Describing
				Trip Perform Eval Sample	Self Describing
				Ship Container Temp Bk	Self Describing
				Trip Storage Blank	Self Describing
				Trip Calibration Blank	Self Describing
				Trip Control Blank	Self Describing
Sample Matrix		Yes		Ambient Air	
				Drilling Air	
				Air, Vapor Well Effluent	
				Air QC Matrix	
				Cinder-Ash	
				Fly Ash Cinder	
				Drill Cuttings	
				Dredged Material	
				Forest Litter	
				Gaseous Effluent	
				Headspace, Liquid Sample	
				Soil Gas	
				Aqueous Phase/Sample	
				Liquid Condensate	
				Drilling Fluid	
				Liquid Emulsion	
				Product on GW Table	
				Liq Waste< 5% Dry Solids	
				Multiphase Liquid Sample	
				Organic Liquid	
				Elutriate	
				Liquid-Vadose Zone	
				Haz. Multiphase Waste	
				Oil 1	
				Plant	
				Rock/Cobbles/Gravel	
				Stormwater	

STORET 2.0 Guidance

Sample Matrix (cont)			Yes		Surface Soil Bentonite Cement Drill Cuttings, Solid Surface Water Sediment Filter Sandpack Soil Waste> 5% Dry Solids Subsurface Soil Sludge Solid Filter Material Misc. Solid Materials Soil Casing (various) Soil/Solid QC Matrix Water Filter Residue Scrapings Solid Waste Swab or Wipe Unknown Water Drill Cuttings, Aqueous Drilling Water Well Development Water Estuary Ground Water Equipment Wash Water Leachate Disturbed Water Ocean Water Drinking Water Water QC Matrix Water Undifferentiated Surface Water Water-Vadose Zone Waste Water Special Water QC Matrix		
Chain of Custody ID							30
Replicate Number	Conditional		Conditional	If Activity Type was replicate		Used for duplicates	3
Parent Sample ID	Conditional			If sample had a parent	Must Exist in STORET	Separate with "&" for Composites with Parents	12
Activity Start Date	Yes	Yes	Yes			Specify format for SIM.	10
Activity Start Time			Yes			Specify format for SIM.	8
Activity Start Time Zone	Conditional		Yes			EST EDT CDT CST	3
Activity End Date						Specify format for SIM.	10
Activity End Time						Specify format for SIM.	8
Activity End Time Zone	Conditional					EST EDT CDT CST	3

STORET 2.0 Guidance

Total Sample Weight								7
Total Sample Weight Units	Conditional			If Sample Weight was given	g lb mg oz			10
Depth to Activity		Yes	Yes - Depth/Unit or Relative			DEP would prefer both the Depth/Unit and the Relative Depth		8
Depth to Activity Units	Conditional	Yes	Yes - Depth/Unit or Relative	If Depth to Activity was given	ft m	DEP would prefer both the Depth/Unit and the Relative Depth		2
Relative Depth		Yes	Yes - Depth/Unit or Relative		Bottom Midwater Near Bottom Subbottom Surface	DEP would prefer both the Depth/Unit and the Relative Depth		8
Depth Measured From								30
Lower Depth								8
Upper Depth								8
Upper/Lower Depth Units	Conditional			If upper or lower depths are given	ft m			2
Depth Zone Type					Yes			11
Thermocline					Above Below In			5
Halocline					Above Below In			5
Pycnocline					Above Below In			5
Personnel					Must Exist in STORET	This will need to be added through the preferences and defaults menu. Separate with "\		256
Cooperating Organization					Must Exist in STORET	This will need to be added through the preferences and defaults menu. Separate with "\		60
Activity Comments						DEP has asked for samples taken immediately after 2004 Hurricanes in effected areas to be indicated here with the comment "HURRICANE".		254
Activity Document/Graphic								256
Sample Collection Procedure ID	Conditional			If Sample was collected.	Must Exist in STORET	This will need to be added through the preferences and defaults menu		8
Gear ID	Conditional			If Sample Collection Procedure is used and Gear Group Name does not = <BLANK>	Extensive Pick list in STORET	DEP ask you to leave Gear Group name Blank in Sample Collection Procedure. This will need to be added through the preferences and defaults menu if you choose to use it.		30
Gear Configuration ID				Use only if Gear_ID is used	Must Exist in STORET	This will need to be added through the preferences and defaults menu		10
Gear Deployment Comments								1998

STORET 2.0 Guidance

Sample Preservation, Transport & Storage ID					Must Exist in STORET		10
Sample Transport and Storage Comments							1998
Field Set Name	Conditional						30
Field Set ID	Conditional						10
Detection Condition					Detected and Quantified ----- Detected not Quantified ----- Not Detected ----- Present above Quantification ----- Present below Quantification ----- Not Reported		40
Characteristic Group ID	Conditional		Conditional	Dependent on loading methodology	Must Exist in STORET		8
Characteristic Row ID	Conditional		Conditional	Dependent on loading methodology	Must Exist in STORET		20
Characteristic Name	Conditional	Yes	Conditional	Dependent on loading methodology	Yes - See Storet1.TSRCHAR Table		60
Result Value	Conditional	Yes	Yes	Not reported values	Yes - Number, choice list, or allowed values (below) *Non-detect *Not Reported *Present >QL *Present <QL *Present	Non-detect Not reported Present above quantification limit Present below quantification limit Present but not quantified	254
Result Value Units	Conditional	Yes	Conditional	Detected results. Choice list result may not need units	Yes - See Storet.TSRUOM Table		10
Result Status	Defaults to F				F ----- P ----- Total	Final ----- Preliminary ----- The total of all fractions of the analyte.	1
Sample Fraction	Conditional			Required for some Characteristics	Dissolved ----- Suspended ----- Settleable ----- Non-settleable ----- Filterable ----- Non-filterable ----- Volatile ----- Non-volatile ----- Acid Soluble ----- Vapor ----- Supernate ----- Fixed ----- Total Recoverable ----- Comb Available ----- Total Residual ----- Free Available ----- Pot. Dissolved	That portion of the analyte found in the liquid medium. Cannot be removed by filtration. ----- That portion of the analyte which is suspended in the sampled medium, either as, or adsorbed to, particles which are more or less uniformly dispersed within the medium. ----- That portion of the analyte which is found in or absorbed to that part of the sample which has settled (fallen out of suspension) to the bottom of the sample container. ----- That portion of the analyte which is in or absorbed to particles remaining in suspension in the sample container after a settling process. ----- That portion of the analyte which is extracted from the liquid medium by filtration. ----- That portion of the analyte which is in or absorbed to material which passes through the filter during sample filtration. ----- That portion of the analyte which evaporates readily at normal temperature and pressure. ----- That portion of the analyte which is in a liquid or solid state under normal temperature and pressure. ----- That portion of the analyte which becomes dissolved within the sample following treatment with an appropriate acid. ----- That portion of the analyte which exists in a gaseous state and that under ordinary conditions is liquid or solid. ----- That portion of the analyte found in the liquid layer above a precipitate produced from the sample. ----- That portion of the analyte found in the liquid layer above a precipitate produced from the sample. ----- Combined Available ----- Total Residual ----- Free Available ----- Potentially Dissolved	15

STORET 2.0 Guidance

Statistic Type					Maximum Mean Median Minimum Mode MPN Standard Deviation 5 pct 10 pct 15 pct 20 pct 25 pct 75 pct 80 pct 85 pct 90 pct 95 pct	5th percentile 10th percentile 15th percentile 20th percentile 25th percentile 75th percentile 80th percentile 85th percentile 90th percentile 95th percentile	18
Value Type	Defaults to Actual				Actual Calculated Estimated		11
Precision							12
Confidence Level					67 75 80 85 90 95 97.5 99 99.9		8
Bias							12
CL Corrected for Bias					Y N		1
Duration Basis					See list in STORET		8
Temperature Basis					See list in STORET		8
Weight basis					Ash-free Dry Dry Wet		12
Particle Size Basis							40
Result Comment							4000
Result Document/Graphic							256
Laboratory ID		Yes			Refer to list of NELAC Certified Labs	This is a DOH#. For example E50002. See Labs_All_Info.xls.	8
Field/Lab Procedure	Conditional		Yes	Required for some Characteristic	Must Exist in STORET	For field paramaters see the Methods help list, DEP_Field_Methods.xls.	15
Field/Lab Procedure Source	Conditional		Yes	Required if Procedure is given	AOAC APHA ASTM ENV/CANADA FISON HACH IL/SWSD ISO NCASI NIOSH USDON/NOAA USDOE/ASD USDOE/EML USDOI/USGS USEPA USFDA Organization_ID	If the Method was added (not Adopt Nat'l).	12

STORET 2.0 Guidance

Laboratory Certified							1
Laboratory Batch ID			Yes			Links QC data to Field/Lab results	10
Lab Remark Codes	Conditional					AL Aldol condensation present. Analyte may not be present. Separate with "\n" CNT Non-acceptable colony counts. EHT Sample or extract held beyond acceptable holding time. FBK Analyte found in blank. Sample contamination indicated. FDB Failed. Dry blank not acceptable. FDC Failed. Drift check not acceptable. FIS Failed. Internal standard not acceptable. FLD Failed. Lab duplicate not acceptable. FFD Failed. Field duplicate not acceptable. FFB Failed. Field blank not acceptable. FFS Failed. Field spike not acceptable. FFT Failed. Trip blank not acceptable. FLC Failed. Linearity check did not meet quality criterion. FLS Failed. Lab spike recovery not acceptable. FMS Failed. Matrix spike recovery not acceptable. FPC Failed. Lab performance check not acceptable. FQC Failed. Quality control criteria exceeded during analysis. FRS Failed. Internal reference sample not acceptable. FSP Failed. Surrogate spike recovery not acceptable. FFB Failed. Spiked field blank recovery not acceptable. FSL Failed. Spiked lab blank recovery not acceptable. INT Interference suspected. Analyte may not be present. ISP Improper sample preservation noted. Analysis performed. LIS Lab internal standard(s) added to sample. LLS Value less than lower quality control standard. PRE Presumptive evidence that analyte is present. NJ TIC, Tentatively Identified Compound, result is approximate N TIC, Tentatively Identified Compound, presumptive id only	6
				If you want your Value qualifiers to be viewed by EPA or anyone retrieving data from EPA, it is suggested that you translate your Value Qualifiers to a Lab Remark Code and/or include your qualifier in the Result Comment field. An extensive list of how you should translate and report your Value Qualifiers to EPA STORET can be found in the STORET Documents.			
Analysis Date			Yes			Specify format for SIM.	10
Analysis Time			Yes			Specify format for SIM.	8
Analysis Time Zone	Conditional		Yes	Required if Analysis Time is given		EDT EST CDT CST	3
Lab Sample Prep Procedure			Conditional	Required for some Characteristics		Must Exist in STORET	15
Lab Sample Prep Procedure Source	Conditional		Conditional	Required if Procedure is given		APHA ASTM DEMOTEST USDOE/ASD USEPA	12
Quantification Low			Yes				8
Quantification High			Conditional	If result text = Present >QL			8
Detection Limit			Yes				8
Detection Limit Unit	Conditional		Yes			See Storet.TSRUOM Table	8
Detection Limit Comment							254
PDL Line Number							8
PDL Line Name							25
Value Qualifier			Conditional	As needed	See Value Qualifier List	This field is for FDEP use, EPA will not receive or acknowledge this field. **If preservation NOT intact, use "Y" qualifier	7
Prep Date			Conditional	Required for some Characteristics	Specify format for SIM.	This field is for FDEP use, EPA will not receive or acknowledge this field.	10
Prep Time			Conditional	Required for some Characteristics	Specify format for SIM.	This field is for FDEP use, EPA will not receive or acknowledge this field.	10

DEPSIM for STORET 2.0

User Instructions:

The DEPSIM module allows users to edit Value Qualifiers, Result Comments, Prep Dates, Prep Times, and export the data for upload to DEP. DEPSIM no longer requires you to load the same text file twice. Data will be loaded into the STORET 1 and STORET2 schemas of the STORET database in one pass. Before you can edit data in TSRXELMS, logically you will need to load data into TSRXELMS. Accomplish this via EPA SIM or through an Oracle import of a .dmp file. When loading data be certain that your EPA SIM import configuration contains the extra column headers for the prep date, prep time and value qualifiers. Once you have loaded data through EPA SIM without errors and migrated to STORET, you are ready to make any necessary edits.

1. Open the DEPSIM20 Edit screen by double clicking on the DEPSIM Icon:



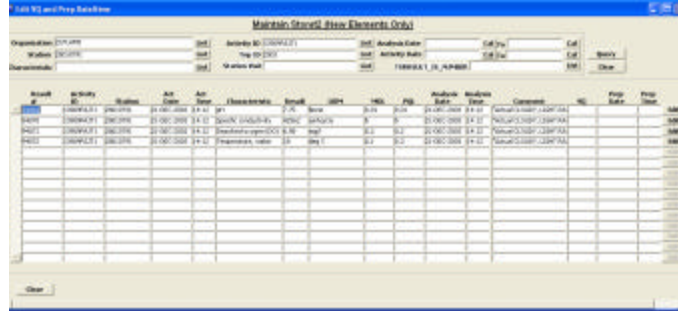
2. The Edit VQ, and Prep Date/time Screen will open:



If you have any question please contact your STORET Coordinator.
<http://www.dep.state.fl.us/water/storet/contacts.htm>

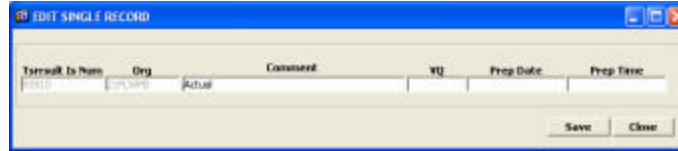
DEPSIM for STORET 2.0

- Now select the result you want to edit or choose an additional field(s) to filter your results. The example below used the Station_ID, Trip_ID, and Activity_ID:

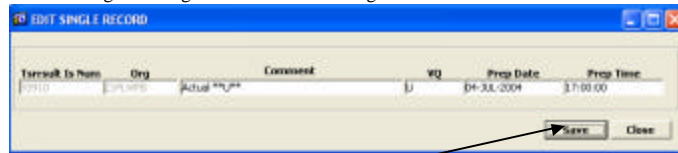


- Note only Four rows returned.

- Once you have located the result you want to edit, choose the edit button on the far right of that row. This will bring up the edit single record form:



- At this point, you will be editing the rows directly in the STORET database. You have the options of adding a DEP approved Value Qualifier, adding a preparation date in a DD-MON-YYYY format, adding a prep time in a HH24:MI format, and/or editing or adding a comment for this single result.



- Click Save to commit your edit.

- Your edits have been made. Click Close to exit.

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<http://www.dep.state.fl.us/water/storet/contacts.htm>

DEPSIM for STORET 2.0

9. Click the Query button to refresh the view and see your edits.
10. Repeat for any further results that need editing.

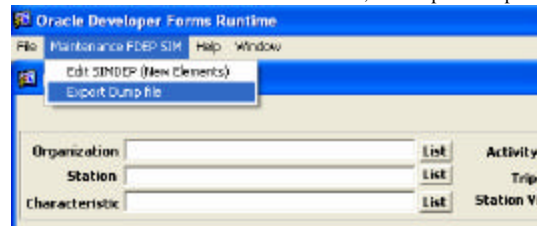
Other notes for DEPSIM editing:

1. If your data requires a qualifier that cannot be translated to a DEP Value Qualifier, please insert a '+' in the VQ field and a detailed description of your qualifier in the Comment field.
2. Use the Calendar function on the edit screen to limit your search by dates. You need both beginning and end dates.
3. Using multiple search fields will not affect what returns within the list boxes for other search fields. Example: You select an Organization, and then a Station_ID, and then select the list box for the Activity_ID. All of Activity_IDs for your selected Organization will be returned, not only the Activity_IDs correlated to your chosen station.
4. If you need to update the VQ, Prep date or time for data that is not loaded into TSRXELM, but is in your STORET, contact your STORET Coordinator. A new row must be inserted into TSRXELM.

Exporting data :

Once you have loaded your data and made any necessary edits you are ready to export your database and send it to DEP to be included in the IWR process.

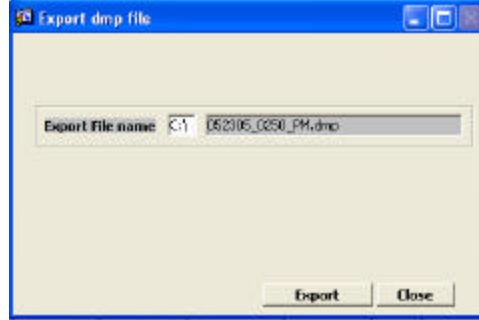
1. Double click the DEPSIM icon.
2. On the menu choose: Maintenance FDEP SIM, then Export Dump file.



If you have any question please contact your STORET Coordinator.
<http://www.dep.state.fl.us/water/storet/contacts.htm>

DEPSIM for STORET 2.0

- This will bring up the Export dmp file screen, as seen below.



- Click export to save your file to the path shown in the dialog box.
- Zip the file and place it on the DEP STORET ftp site and notify your STORET Coordinator. The DEP ftp site is:
<ftp://ftp.dep.state.fl.us/pub/water/storet/incoming/>

Other notes for DEPSIM exporting:

- DEP asks that you run Referential Integrity checks and make corrections before sending data to DEP. DEP has created a data checker that has the script built in or you can run a script using SQL+. If you do not have the Data Checker installed, please consult your STORET Coordinator.
- In addition to the RI Checks, DEP has provided a series of data checks that will help you see possible errors that may result in the exclusion of your data from the IWR process. These checks include logical date checks, EAS -01-01 compliance (20 elements – IWR Rule), and other data checks. Contact your STORET Coordinator for more details.
- Once DEP receives a dump file from you, DEP will load the data into Florida STORET replacing your entire previous dataset.

If you have any question please contact your STORET Coordinator.
<http://www.dep.state.fl.us/water/storet/contacts.htm>