

EIM Help for EAP - Procedure for Transferring Puget Sound Stream Benthos Data to EIM

Version 1.1
December 2015

Table of Contents

Introduction	2
Environmental Information Management System (EIM)	2
Puget Sound Stream Benthos (PSSB)	3
Watershed Health Monitoring (WHM) Program.....	3
General Info	4
Study Names.....	4
Taxon Names.....	4
Data Collection Event Code (DCE)	4
Transfer Procedure Checklist	5
Transfer Procedure	6
Enter Data into PSSB	6
Export Data from PSSB.....	12
Update the EIM Results Spreadsheet.....	21
Check Taxon Names	22
Load the Results Spreadsheet into EIM.....	24
Load LIMS Data into EIM.....	28
EIM Data Entry Review	41
Links	41
Appendices	42
Appendix #1 Study ID/Name Crosswalk.....	42
Appendix #2 Problematic Taxa List.....	44
Revision History	45

Introduction

Ecology's Environmental Assessment Program (EAP) is tasked with transferring their macroinvertebrate data, housed in King County's Puget Sound Stream Benthos (PSSB) database, into Ecology's Environmental Information Management (EIM) system.

This document explains the procedures for EAP staff to enter their project's benthic data into PSSB and transfer it into EIM. It also includes instructions for EIM entry of the associated non-benthic data which is not housed in PSSB, such as water chemistry. The chemistry data is entered into EIM using a batch loading process for lab results that are sent from Manchester Environmental Laboratory (MEL) through their Laboratory Information Management System (LIMS). Physical Habitat data is transferred as a separate process from electronic field forms into EIM (Watershed Health Monitoring eforms business rules are currently under development) (Figure 1).

For the benthic data, EAP staff enters the project, sites, and visits into PSSB. The Rhithron taxonomic lab staff enters the benthic macroinvertebrate count results into the project in PSSB. EAP staff then transfers a project's PSSB benthic data into EIM. EAP staff also enters into EIM any non-benthic data associated with the project (Figure 1). After all the data are transferred and loaded into EIM, EAP staff conducts a required EIM data entry review. All steps are described in the Transfer Procedure sections of this document.

This project is only part of a larger picture. Beginning in 2009, Ecology began extensive sampling efforts to measure habitat, water chemistry, and biological assemblages of streams throughout Washington. These efforts encompass three separate, but inclusive monitoring programs in EAP, each employing nearly the same methods and protocols. These three Ecology efforts are the Watershed Health Monitoring (WHM), Sentinel, and the Ambient Biological Monitoring Programs. Only the macroinvertebrate data collected under these monitoring programs are stored in PSSB, not the physical habitat and water chemistry data.

Environmental Information Management System (EIM)

EIM is Ecology's main database for environmental monitoring data. It houses discrete and time-series environmental data for air, water, soil, sediment, aquatic animals, and plants. EIM stores all of the data associated with a project, while PSSB stores only benthic macroinvertebrate data and is also used for a very specific type of analysis, which is calculating B-IBI, the Benthic Index of Biotic Integrity.

Ecology staff must obtain training in order to obtain update rights to load data into EIM. Contact EAP's EIM Data Coordinator, [Carolyn Lee](#), for training or any EIM questions.

Puget Sound Stream Benthos (PSSB)

This is a site that manages, analyzes, and shares data from participating agencies. It is a repository for macroinvertebrate data only, not habitat or chemistry data. Part of what this site does is to calculate B-IBI, the Benthic Index of Biotic Integrity, while EIM only stores the raw data which can then be linked with other databases for reporting of certain metrics (e.g. [EIM STREAM](#)).

You must have permission to edit or add info. Someone who has edit-rights in the PS Stream Benthos site can give you the appropriate permissions. The PSSB link and login details are located in the Related Documents and Links section at the end of this document.

Watershed Health Monitoring (WHM) Program

This project collects data on river and stream health by region for status and trends analysis. This project was previously also known as Status and Trends Monitoring for Watershed Health and Salmon Recovery.

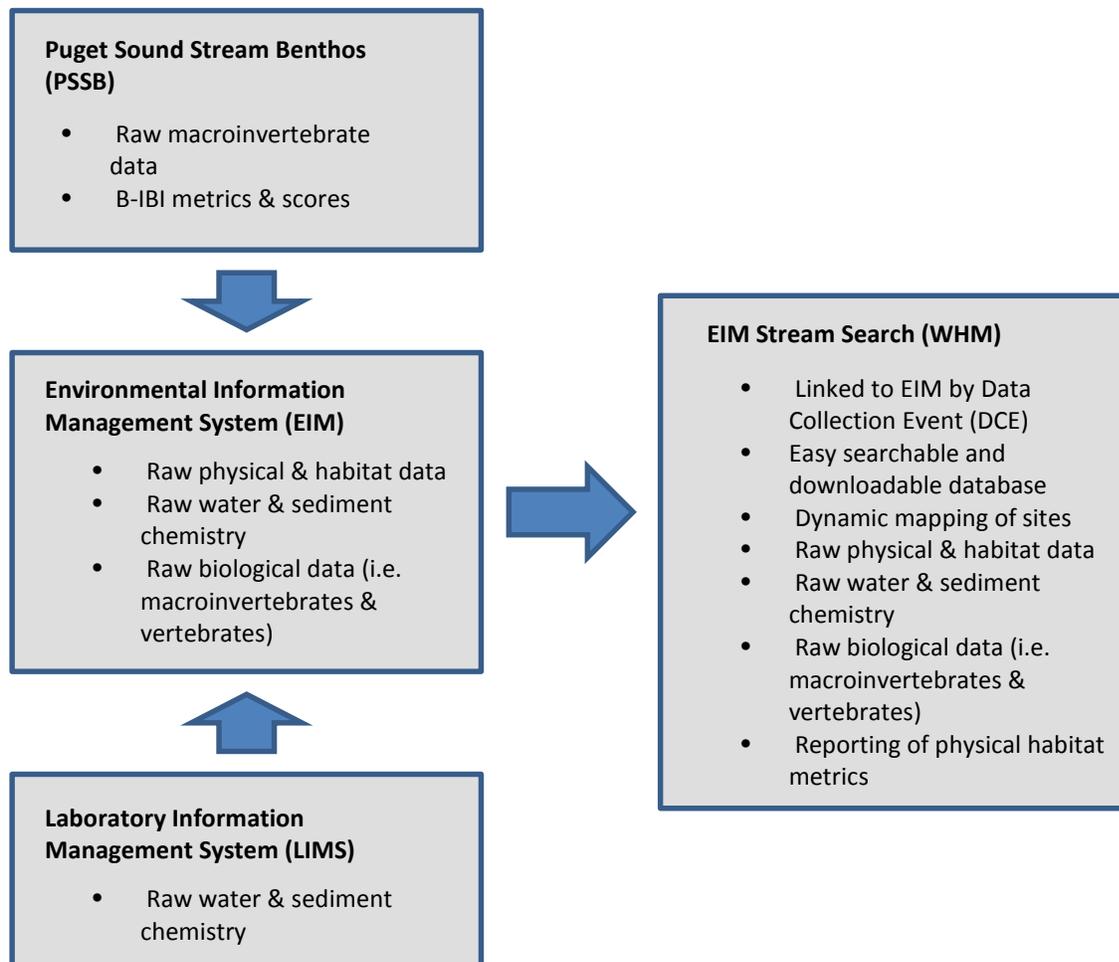


Figure 1. EIM data flow scheme.

General Info

Because the PSSB and EIM databases have different field requirements, it is not a seamless process to transfer the data. Updates to the PSSB export will need to be made prior to loading data into EIM. Follow the steps outlined below in the Transfer Procedure Checklist to get the data into PSSB and transferred to EIM.

Study Names

You will need to refer to the **Study ID/Name Crosswalk** to correlate study names (Appendix #1). For various reasons, a study may be named differently in PSSB than in EIM.

Taxon Names

Prior to loading your benthic macroinvertebrate data into EIM you will need to compare your taxon names to the EIM Taxon Reference list. Instructions for downloading EIM's taxon list can be found in the Related Documents and Links section at the end of the document. We created a **Taxon Name Compare Spreadsheet** with instructions on how to compare a taxon list to EIM's taxon list. This is not ideal, but will suffice for now. In the future, we are hoping EIM could build a "**Taxon Name Checker**" tool so users can easily check their taxon names against EIM's taxa list.

There is a **Problematic Taxa List** you will need to refer to (Appendix #2). This list contains taxa that are commonly rejected during the PSSB EIM loading process due to various reasons. One reason for taxa being rejected by EIM is that EIM does not allow taxa labeled as "Invalid" in the Integrated Taxonomic Information System (ITIS). Taxon name mismatches also occur due to naming disagreements amongst taxonomists. Misspellings are also common, especially for groups such as the Rhyacophilid groups, which all labs seem to name slightly differently.

Data Collection Event Code (DCE)

This unique identifier is created by concatenating the site code, date, and time when a sample is collected. The Watershed Health (WHM), Sentinel, and Ambient Biological Monitoring programs use this code as the unique sample identifier. It is also used in the electronic field forms EAP is now using for these programs.

The DCE is the key field used to align data housed in the WHM database to associated data housed in EIM. It is important to make sure you enter the correct DCE because it is used as the main sample identifier and will help ensure uniformity.

EIM does not have a field for the DCE at this time so we enter it in the **Sample ID** field in EIM. It is called the **Sample Code** in PSSB. WHM requires the DCE to be entered into the **Result Additional Comment** field in EIM.

Transfer Procedure Checklist

This checklist shows the main steps to follow in order to enter your data into PSSB and transfer it into EIM. Details on how to accomplish each step are listed in sections found in the page #s shown. This checklist is only meant to show the “*big picture*” process and does not need to be filled out or routed.

Enter Project, Site, and Visits Data into PSSB

Add the Project, Sites, and Visits to PSSB. If they are already entered, ensure they are correct. Instructions for adding these are on pgs. 6-11. Ensure the taxonomic data have been loaded by the taxonomic laboratory.

Export the Data from PSSB

This process exports the data from PSSB and puts it into EIM format called the “EIM Results Spreadsheet”. Export instructions are on pgs. 12-19.

Update the EIM Results Spreadsheet

The PSSB database does not contain all of the fields required by EIM, so you need to make updates in the EIM Results Spreadsheet - after you export from PSSB, before loading it into EIM. Update instructions are on pg. 20.

Check Taxon Names

Because not all taxon names downloaded from PSSB exactly match EIM’s taxon list, you need to check for taxon name mismatches before loading the EIM Results Spreadsheet into EIM. Instructions are on pgs. 21-22.

Load EIM Results Spreadsheet

This is the process of putting the data into EIM. Instructions are on pgs. 23-26.

Load LIMS Data (if applicable)

If you have associated LIMS data from Manchester Environmental Lab (MEL), such as water chemistry data, you can load it directly in EIM’s Data Loader and do not need to fill out an EIM Results Spreadsheet for the LIMS data. LIMS loading Instructions are on pgs. 27-39.

EIM Data Entry Review

EIM Data Entry Review is required by EAP for **ALL** of their data entered into EIM. The review process is to ensure that the data entry was complete, correct, and per EIM data entry business rules. A review checklist is required to be completed and routed to document the review. EAP’s EIM Data Entry Review Procedure and Review Checklist are described on pg. 40.

Transfer Procedure

The following sections detail the steps to enter your benthic macroinvertebrate data into PSSB and transfer it into EIM.

Enter Data into PSSB

If not already entered into the PS Stream Benthos site, you will need to add the **Project**, **Sites**, and **Visits** (described below). The Project must be added prior to adding Sites. Sites must be entered prior to adding Visits.

To get descriptions of fields while in the PSSB site, click on the field box to get help for that field. Fields with a red asterisk indicate system required fields.

Note: Replicates are designated in the Add a Visit, which will then populate the Field Replicate field in the EIM Export.

Add a Project:

1. Open PSSB and Login. Open the PSSB site at <http://www.pugetsoundstreambenthos.org/>. Login under the Account heading and enter User Name and Password.
2. Under **Data** (top menu) choose **Add a Project**
3. Populate the following fields. Fill out the optional fields to make easier for export to EIM (if populated, these optional fields will auto-populate in the EIM export spreadsheet). Required fields are indicated with a red asterisk.
 - a. **Long Name*** enter the long name here, refer to the EIM Study ID/Name crosswalk located in Appendix #1.
 - b. **Short Name*** enter the Ecology EIM Study ID here also.
 - c. **Description:** provide a short description (if description is not provided, it will not show up in the PSSB main Monitoring Project list).
 - d. **Current Lab Name**
 - e. **Default Taxonomic Effort:** usually "*Fine (Closest to Wash. State DOE)*" taxonomic resolution. Note: this information will also need to be supplied when adding a visit.
 - f. **Collection per Sample Replicate Default** (used to indicate how many samples are in composite i.e. Composite of 8). If no samples were composited enter "1". Ecology's current protocol is "8" for 8 one- sq ft samples are collected and combined into one sample when sent to the lab for Id.
 - g. **Sample Surface Area Default** (i.e. 8 sq ft)
 - h. **Sample Positions in Stream Default** (i.e. Center of Riffle, etc.)
4. Check the box **Visible to Public** if you want public access.

5. Hit **Save New Project** (Figure 2)

The screenshot shows a web browser window with the URL <http://pugetsoundstreambenthos.org/Admin>. The page title is "Add a Project - Puget Soun...". The main heading is "Add a Project" with sub-links "Save New Project" and "Cancel New Project". The form contains the following fields:

- Long Name:
- Short Name (30 characters maximum):
- Project URL Override:
- Description:
- Notes:
- Visible to Public?
- Current Lab Name:
- Default Taxonomic Effort:
- Visitors Default:
- Sample Code Template: You cannot enter template from this page.
- Collections per Sample Replicate Default:
- Sample Surface Area Default:
- Sample Surface Area Units:
- Sample Positions In Stream Default:
- Image 1 File Name:
- Image 2 File Name:
- Image 3 File Name:
- Image 4 File Name:

Figure 2.

Add a Site:

1. Under **Data** (top menu) choose **Add Sites** (*required)
2. Under **Sites Project**, choose the associated Project
3. Populate the following fields:
 - a. **Site Code*** - should match the Location ID that it will be called in EIM.
 - b. **City***- you might need to search by coordinates to figure out what city is near.
 - c. **County***- you might need to search by coordinates to figure out what county
 - d. **Stream/River*** (pull down menu, see if it's in the list). If it's not in the list, enter it into the Enter Stream Name field instead.
 - e. **Latitude***
 - f. **Longitude***
 - g. **Location Description**
 - h. **Site Notes** (if any)

4. Hit **Save New Site** (Figure 3)

The screenshot shows a web browser window with the URL <http://pugetsoundstreambenthos.org/Edit/Sit>. The page title is "Puget Sound Stream Benthos". The navigation menu includes: Home | Analysis | Monitoring | Projects | Lab | Data | Admin | Account | About Us | Site Map. The main content area is titled "Site Information" and contains the following form fields:

- Site's Project (optional): -- Select a Project --
- Site Code: *
- Site Name: *
- State: WA
- City: *
- County: *
- Stream/River: -- Select the river or stream if listed --
- Enter stream name if not listed: *
- Latitude: 45.0 *
- Longitude: -125.0 *
- Location Description: *
- Site Notes: *

At the bottom left, there are two buttons: "Save New Site" and "Cancel New Site". At the bottom of the page, there are links for "Home Page", "About Us", and "Site Map".

Figure 3.

Add a Visit

1. Choose **Data** (top menu),
2. Choose **Add Visit**
3. Pull down menu under **Project**, choose the Project you're adding a visit to
4. It will then auto generate a list of sites for that project under Site Code. Choose the correct Site Code you wish to enter a visit for
5. Populate the following fields:
 - a. **Event Date** (errors are common here), needs to match what's found in the DCE.
 - b. **Related Events**: enter text if you have any related events
 - c. **Status**: leave at "Taxa Entry Permitted" (so that your taxon lab, i.e. Rhithron can upload the data). Once Rhithron uploads the data you need to change this field to "Released" in order to be able to download it from the site. You can also Release them in batch later instead of individually.
 - d. **Lab Name**: choose from drop-down menu
 - e. **Taxonomic Effort**: usually "*Fine (Closest to Wash. State DOE)*" taxonomic resolution. If this field is not updated, the Taxonomic Effort will read as "*Not specified*", therefore this field should be updated for each visit.
6. Click **Add Visit**. Once you Add Visit, it assigns a Visit ID and a Samples tab appears next to Visit Details tab (Figure 4).

The screenshot shows a web browser window with the URL <http://pugetsoundstreambenthos.org/Edit/Visit>. The page title is "Puget Sound Stream Benthos" and the navigation menu includes Home, Analysis, Monitoring Projects, Lab, Data, Admin, Account, About Us, and Site Map. The main content area is titled "Visit" and contains a "Visit Details" form. The form includes the following fields and controls:

- Project: [Text Input] Auto-Generate Samples? Add Visit Cancel
- Site Code: [Dropdown] (Add or Assign)
- Event Date: [Text Input]
- Samplers: [Text Input]
- Related Visits: [Text Input]
- No Sample Taken?
- Steward Notes: [Text Area]
- Status: Taxa Entry Permitted [Dropdown]
- Lab Name: (Deferred) [Dropdown]
- Taxonomic Effort: (Deferred) [Dropdown]

At the bottom of the page, there are links for Home Page, About Us, and Site Map.

Figure 4.

7. Click **Samples** tab and choose **Start New Sample** (instead of choosing auto-generate new samples). Some of the Visit fields will be auto-populated according to what was entered when you added your Project information. In addition, populate the following fields:
 - a. **Sample Code***: Use the DCE code (site Cd/date/time). Needs to contain the date/time b/c it needs to be unique and using the DCE code will help ensure uniformity. Note: Teleforms are required to have a DCE.
 - b. If it's not a replicate, you are good to go.
 - c. If it is a replicate, fill out **QC Replicate Of**: link it to the exact Sample Code for which it's a replicate (see also the help for that field).
8. Click **Save Your Sample** (Figure 5)

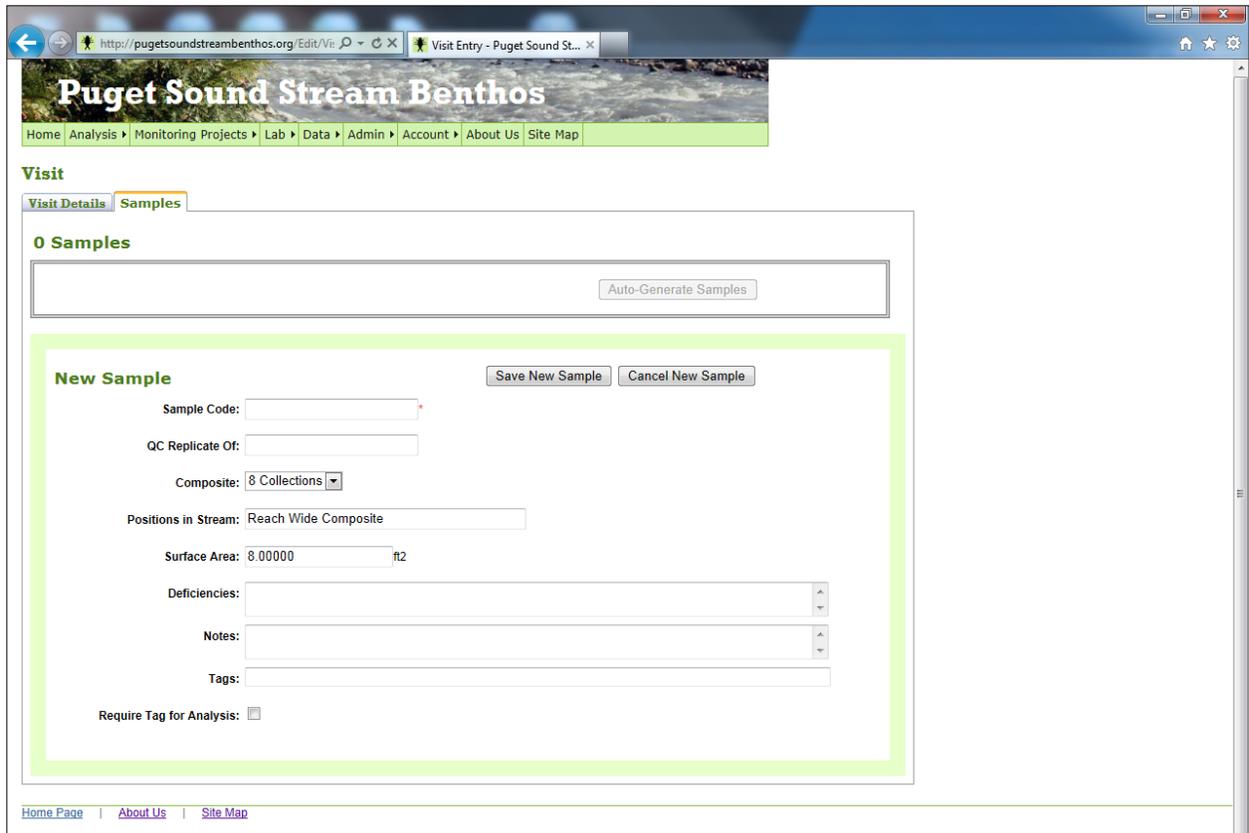


Figure 5.

Below is a screenshot of a Visit (data loaded) illustrating an example of unique Sample Code (DCE) that is also a QC Replicate of another sample:

The screenshot shows the 'Puget Sound Stream Benthos' web application. The main content area displays '1 Sample' with a table of details. Below this is the 'Sample Details' section with various fields and a table of classification data.

View/Edit Details	ID	Sample Code	Surface Area	QC Replicate Of	Composite	Positions in Stream	Deficient
Details	9399	BIO06600-PUGT03-DCE-2013-1007-10:30	8.00 ft ²	BIO06600-PUGT03-DCE-2013-0710-12:30	8 Collections	Reach Wide Composite	No
			8.00 ft ²				

Sample Details

Sample Code: BIO06600-PUGT03-DCE-2013-1007-10:30

QC Replicate Of: BIO06600-PUGT03-DCE-2013-0710-12:30

Composite: 8 Collections

Positions in Stream: Reach Wide Composite

Surface Area: 8.00 ft²

Deficiencies:

Notes:

Tags:

Require Tag for Analysis:

Lab Subsampling: 12/30 Lab QC Flag:

Classification	Taxon	Quantity	Life Stage	Unique	Damaged	Immature	Outside Protocol	Wrong Gender	Modified
Order: Lumbriculida	Lumbriculidae	1	not specified	True	True	False	False	False	3/19/2014
Order: Sarcotiformes	Oribatida	4	adult	True	False	False	False	False	3/19/2014
Order: Trombidiformes	Hygrobatas	170	adult	True	False	False	False	False	3/19/2014
Order: Trombidiformes	Estelloxus	1	adult	True	False	False	False	False	3/19/2014
Order: Trombidiformes	Lebertia	1	adult	True	False	False	False	False	3/19/2014
Order: Trombidiformes	Oxue	2	adult	True	False	False	False	False	3/19/2014

Export Data from PSSB

1. Open PS Stream Benthos site <http://www.pugetsoundstreambenthos.org/>
2. **Analysis Tab**, click on “*B-IBI Results Table*” (table will show all the data)
3. Search for the sites of interest by either using **Location or Keyword** or using **Project** drop-down menu (ours start with “*Ecology:*”). Also on the Analysis screen (Figure 6), Select “*All in Range*” or “*Year*” (either the “latest per site” or “All in Range” (select range) depending on which data you want. Note, sometimes “*All streams*” won’t give you everything and you will need to: in a separate search use same search criteria as before, yet instead of “*All Streams*” select either “*All Rivers*” under the **Area** drop down tab, then hit **Tabulate**. “*All streams*” usually has the most data. The screenshot below selected 2013 data for: “*Ecology: Ambient Biological*” sites for “*All Streams*”.

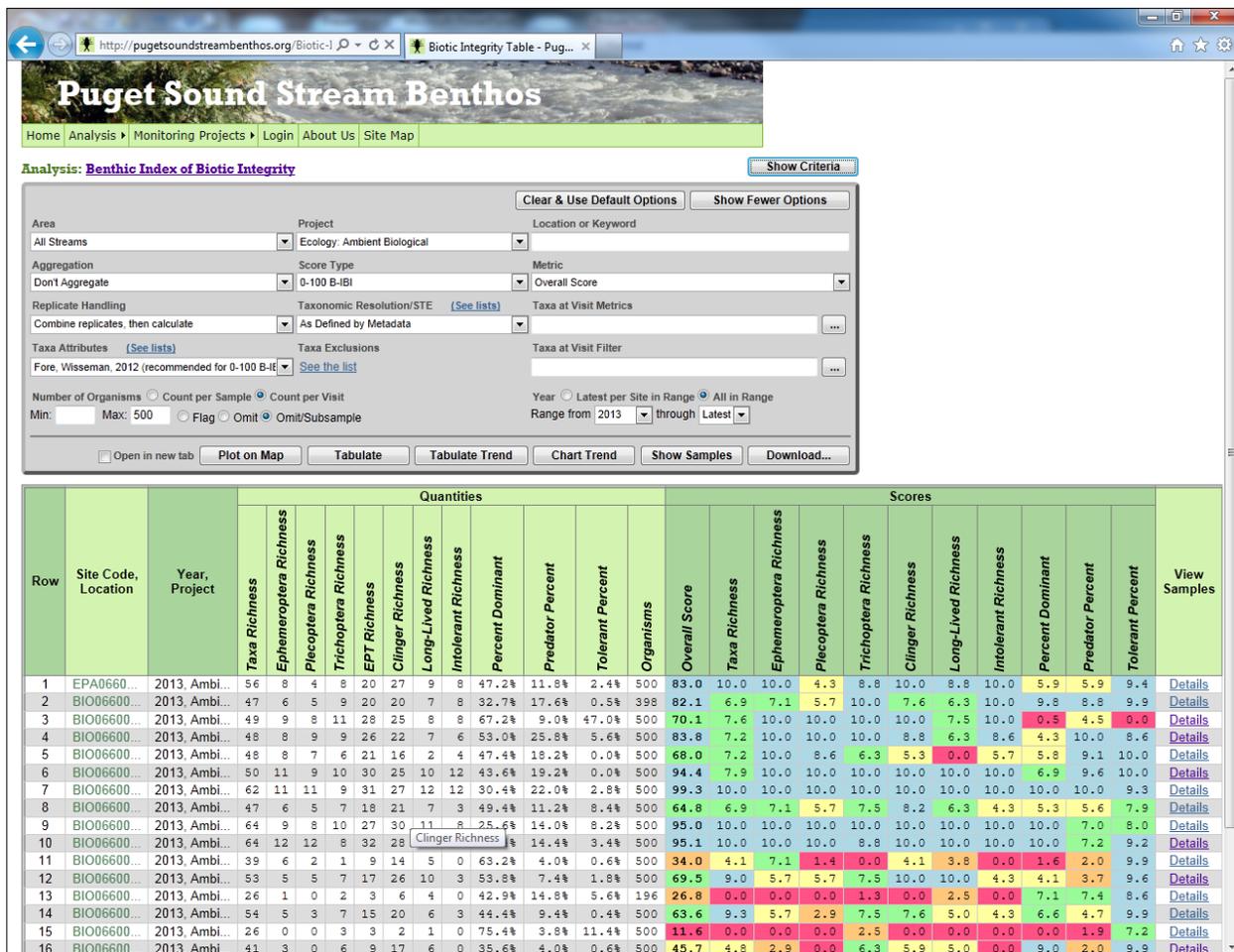


Figure 6.

4. To download your selected data from PSSB into EIM format:

- a. Click on **Tabulate**. Enter search criteria (as in 3). Under “Project” select “Ecology...”. Click on **Tabulate** and a list of your sites/data will be listed. Glance at those to make sure it’s what you want (and not tons more). Click on **Download** (same as below)
- b. After clicking **Download**, a pop-up entitled “Specify your Download” will appear, select “Wash DOE’s EIM”, under “Raw Sample Data”. There is also a QC option which specifies how to handle QC samples. Once the preferred options are selected hit **Download Samples** (Figure 7). A new pop-up entitled “Downloads” will appear showing the download criteria chosen (Figure 8). The information about the download criteria chosen can be copied by clicking on “Select” and copying these criteria to your clipboard. (IMPORTANT to copy criteria b/c you might need to refer to it when you do your BIBI). Click on **Download Part 1 of 1**. A pop-up will appear at the bottom of the screen asking “Do you want to open or save EIMSamples.txt from pugetsoundstreambenthos.org?” (Figure 9). Text file containing the downloaded data can be opened or saved to directory. The text file is in a comma delimited, tabular format and can be imported or pasted into MS Excel, MS Access and other database software.

The screenshot shows the Puget Sound Stream Benthos website interface. A 'Specify Your Download' dialog box is open, allowing users to select download options. Below it, a 'Downloads' window displays the following information:

Title: Wash. DOE's EIM
Area Filter: All Streams
Project Filter: Ecology: Ambient Biological
Date Filter: From 2013, all events at each site
Organisms per Visit: At most 500, subsampled when over
Sorted by: Location, Agency, Project, Site Code, Date, Sample Code
Generation Time: Wednesday, July 30, 2014 10:01 AM

The background shows a table with columns for Row, Site Code, Year, Project, and various benthic metrics like Taxa Richness, Epifaunal Richness, and Phycoplankton Richness.

Figure 8.

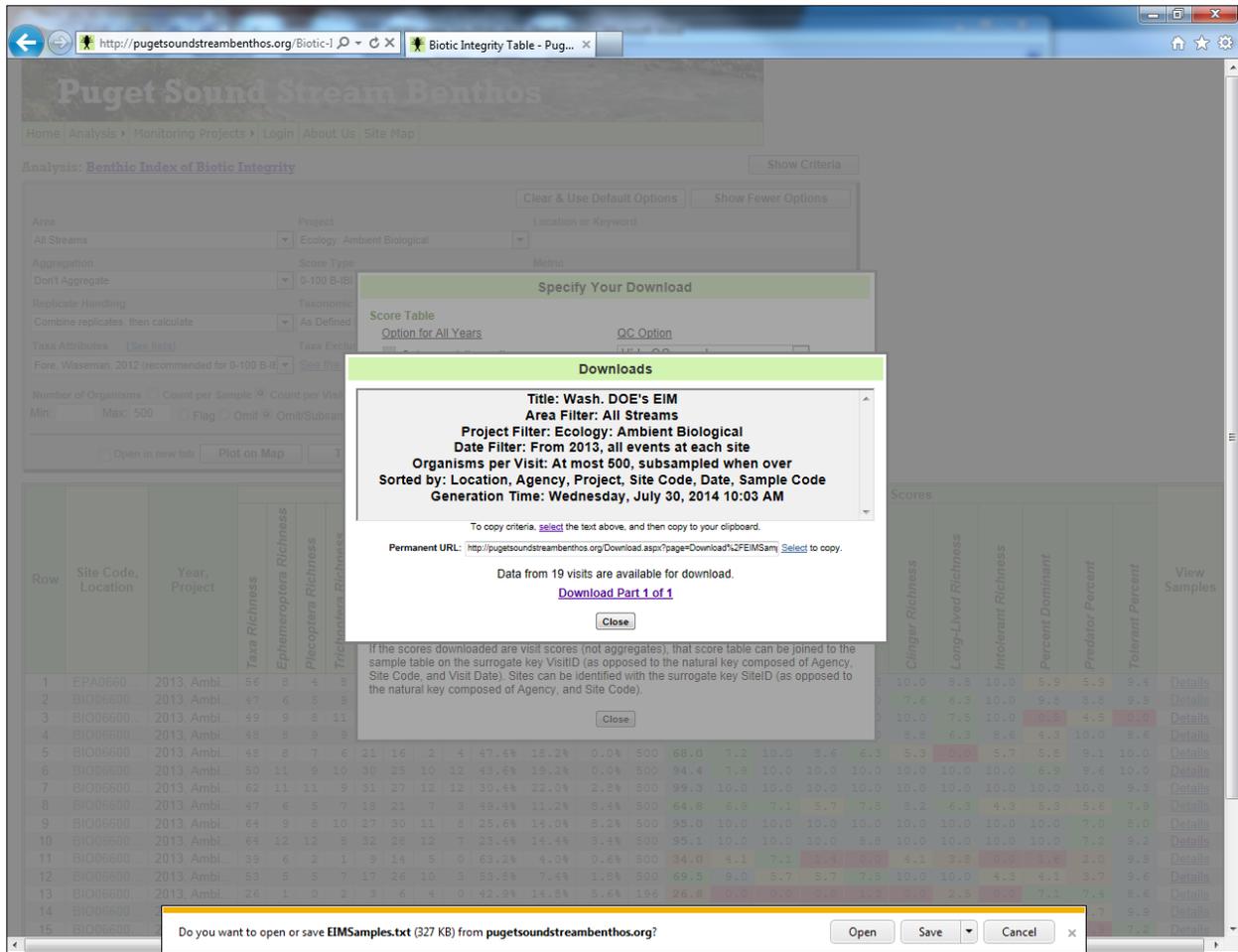
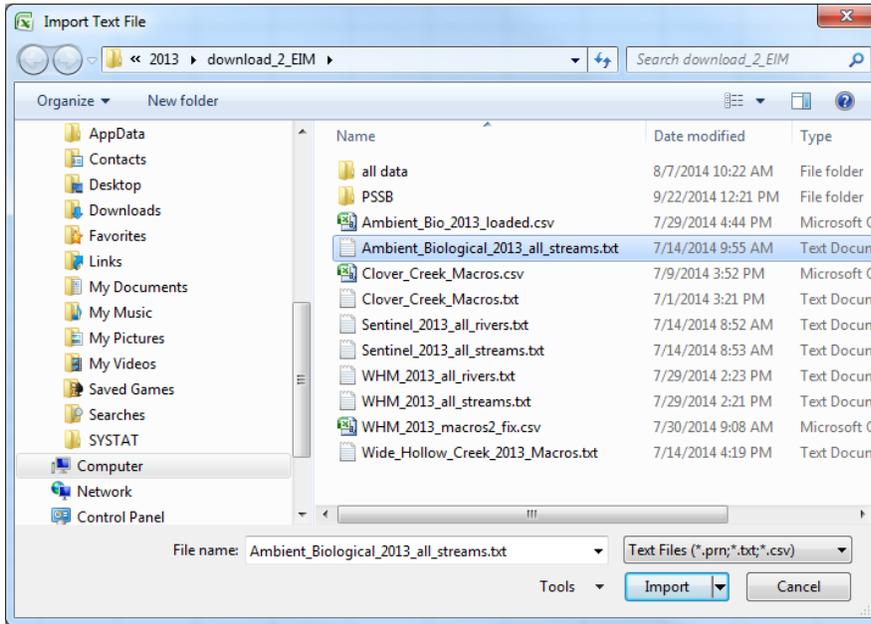


Figure 9.

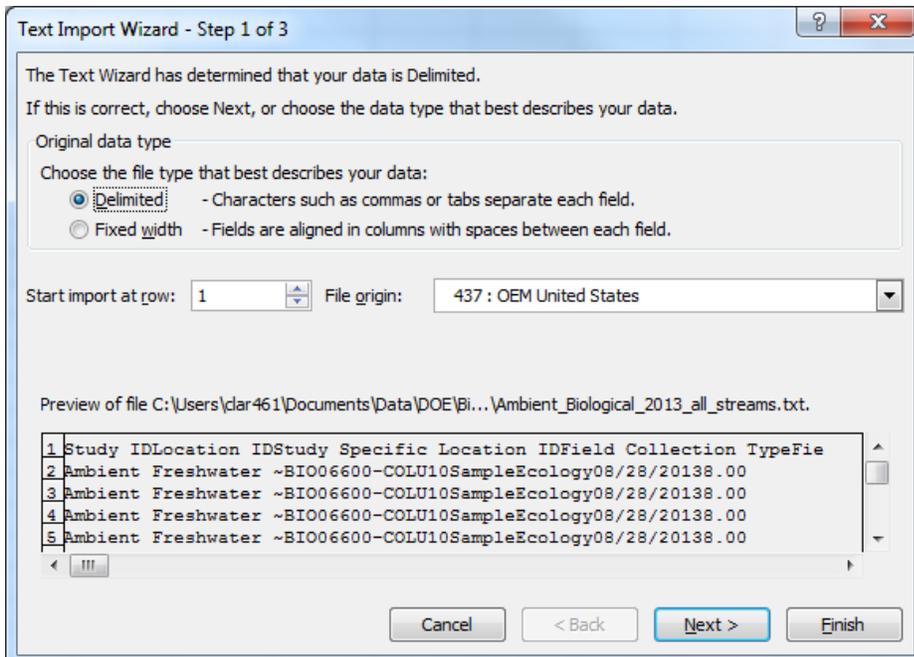
5. Import Text file into Excel (instructions below), then save it as a CSV (looks like EIM template but "EIM Tools" tab is not there which is needed to send the spreadsheet to EIM).

Importing Text file into Excel

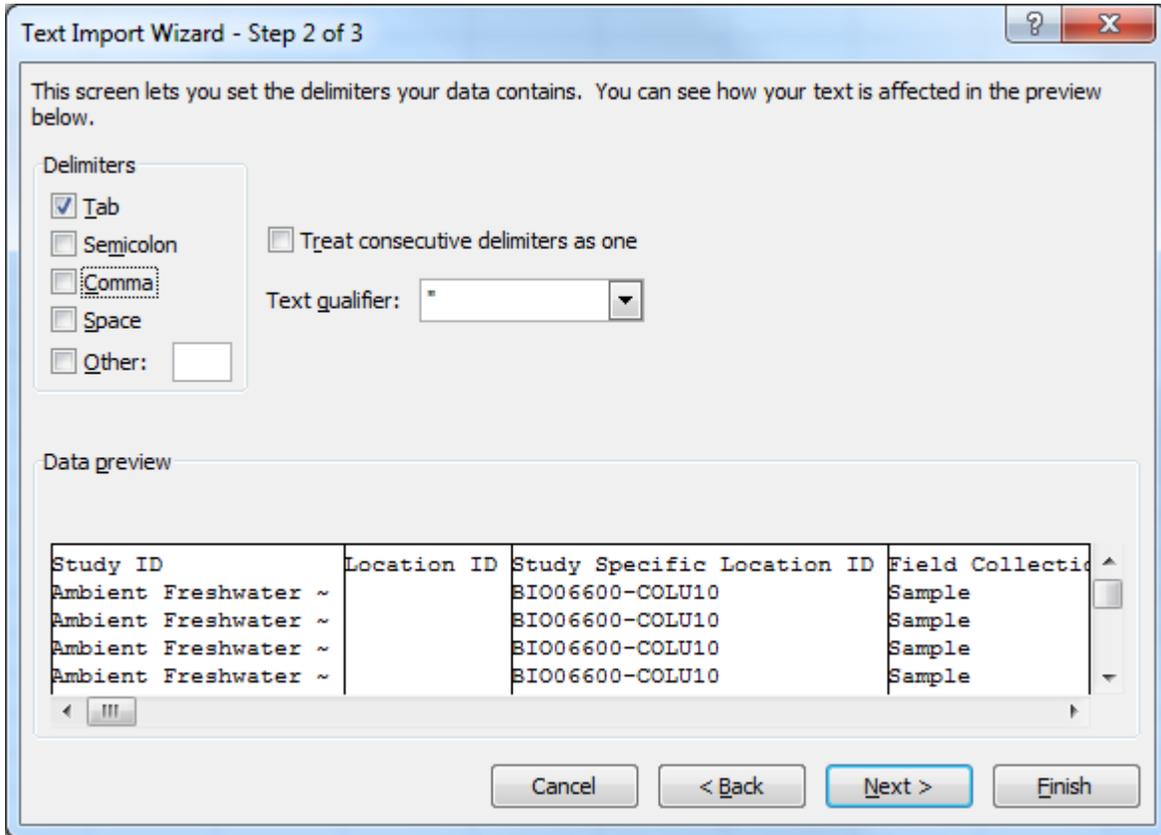
1. Open new file in Excel
2. Click on Data tab
3. Click on From Text and the following will appear:



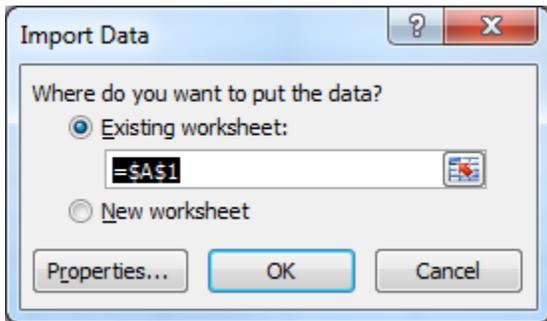
4. Select the directory and the Text file you want and click on **Import** and the following will appear:



5. Click **Next >** and the following will appear:



6. Click **Next >** and the following will appear:

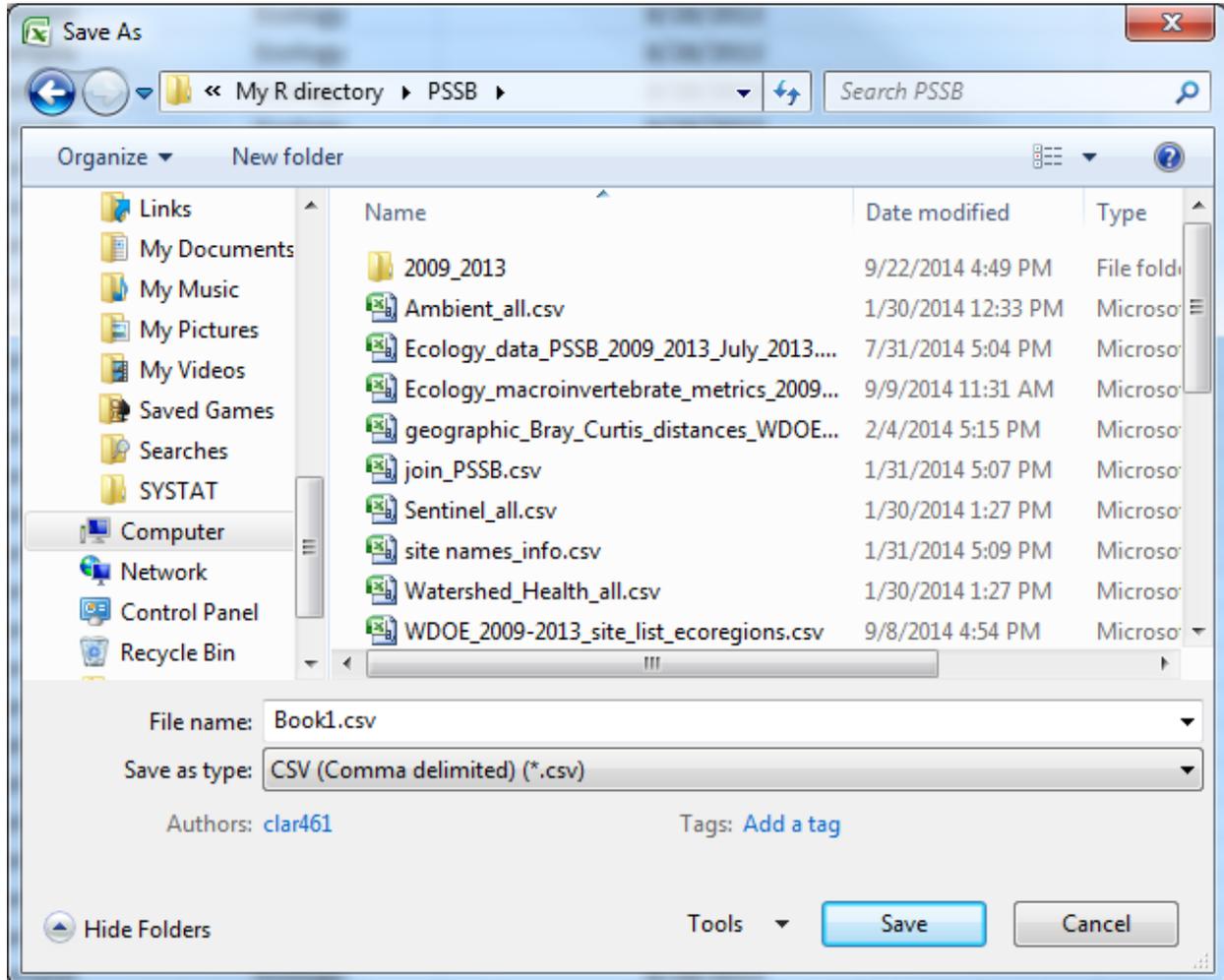


7. Select cell A1 and click **OK**

The screenshot shows an Excel spreadsheet with the following data:

Study ID	Location ID	Study Specific Location ID	Field Collection Type	Field Collector	Field Collection Start Date	Field Collection Start Time	Field Collection End Date	Field Collection
2	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
3	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
4	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
5	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
6	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
7	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
8	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
9	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
10	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
11	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
12	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
13	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
14	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
15	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
16	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
17	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
18	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
19	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
20	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
21	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
22	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
23	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
24	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
25	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
26	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
27	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
28	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
29	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
30	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
31	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
32	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
33	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
34	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
35	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
36	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
37	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			
38	Ambient Freshwater ~	BIO06600-COLU10	Sample	Ecology	8/28/2013			

8. Save file as .csv



Update the EIM Results Spreadsheet

After exporting the data from PSSB in EIM Result Spreadsheet format, you will need to make some updates to the data in the spreadsheet in order to follow EIM data entry business rules. These rules are to help ensure consistency and data integrity in EIM. Different types of data require different types of updates. The updates below refer only to benthic counts data.

The fields needing to be updated below are the fields not already populated in the PSSB export. The EIM Benthic Counts help document describes all the fields required for benthic counts. The EIM Benthic Counts help document is available on the [EIM Focused Help](#) site.

1. **Study ID** (column A): Update if it does not exactly match as it is in EIM. If you do not know the EIM Study ID, refer to the PSSB/EIM Study ID/Name crosswalk (Appendix #1)
2. **Location ID** and **Location Names** (B, C): You need to make sure they match exactly as they are called in EIM. Locations must already be in EIM before loading the result data. To check if your Locations have already been entered into EIM, open the [EIM Search](#) system, search for your study, and download the list of Locations for the study.
3. **Sample ID** (R): Make sure they are correct. For benthic data, the EIM Sample ID corresponds to the PSSB Sample Code. This is the DCE, which is the site code/date/time combination and is further described in the DCE Code section on pg 4.
4. **Replicate Flag** (S). If you populated this correctly in PSSB, this field will be correctly populated in the PSSB export. If not, enter “Y” if it is a replicate or “N” if not.
5. **Sample Composite Flag** (V): PSSB exports as “Y”, unless you change the default in PSSB. If your samples were not composited, change to “N”. EIM considers a sample composited if samples from more than one area are combined into a single sample container.
6. **Sample Collection Method Code** (AA): This is a required field and is not auto-populated in the PSSB EIM export. A common method used by Ecology is “BENTHDFKN” (*Macroinvertebrates (benthic) from stream riffle or pool w/500 –um mesh D-Frame kicknet, 8 sq. ft.*). [EIM Methods Search](#)
7. **Lab Analysis Date** (AJ): enter 12/01/xxxx (year sampled)
8. **Lab Analysis Date Accuracy** (AK): Enter “Y” which indicates accuracy of year
9. **Result Method Code** (AY): Make sure the PSSB export auto-populated “BENTHCOUNT”.
10. **Result Additional Comment** (BA): Enter the DCE (see pg. 4 for DCE explanation). It is very important to enter the DCE here in order to align data housed in the WHM database.
11. **Result Taxon Life Stage** (BX): Make sure the entries were populated correctly from the PSSB export. PSSB auto-populates this field for all insect taxa (i.e. “Adult”, “Larva”, “Pupa”) and leaves the field blank for all non-insect taxa.

12. Result Taxon Name (BE): Check against EIM Taxon list (see pg. 21 for instructions)

Check Taxon Names

An excel spreadsheet is available ([add link after it gets posted to the EIM Help Document site](#)) from which to compare a list of macroinvertebrate taxa from data ready to be transferred into EIM with a master macroinvertebrate taxa list from EIM. Once the file is opened, the first column (**WDOE taxa list**) will contain a list of all macroinvertebrate taxa in EIM (Figure 10). A list of taxa from data ready to be transferred into EIM can be copied into the second column (**downloaded PSSB**). Once a list is transferred into the second column, the third column (**missing taxa from WDOE list**) will provide a list of taxa names from the new data set not matching names in the master taxa list (Figure 11). Taxa names not matching those in EIM will need to be changed [e.g. Rhyacophila (Rhyacophila Betteni Grp) should be changed to Rhyacophila (Rhyacophila Betteni Group)] in the EIM Results spreadsheet prior to uploading, or as new taxa are encountered, they will need to be given to Chris Nuemiller so that the new taxa name can be added to the EIM master taxa list.

WDOE taxa list	downloaded PSSB	missing taxa from WDOE list
1		
2		0
3		0
4		0
5		0
6		0
7		0
8		0
9		0
10		0
11		0
12		0
13		0
14		0
15		0
16		0
17		0
18		0
19		0
20		0
21		0
22		0
23		0
24		0
25		0
26		0
27		0
28		0
29		0
30		0
31		0
32		0
33		0
34		0
35		0
36		0
37		0
38		0
39		0
40		0
41		0
42		0
43		0
44		0
45		0
46		0
47		0

Figure 10.

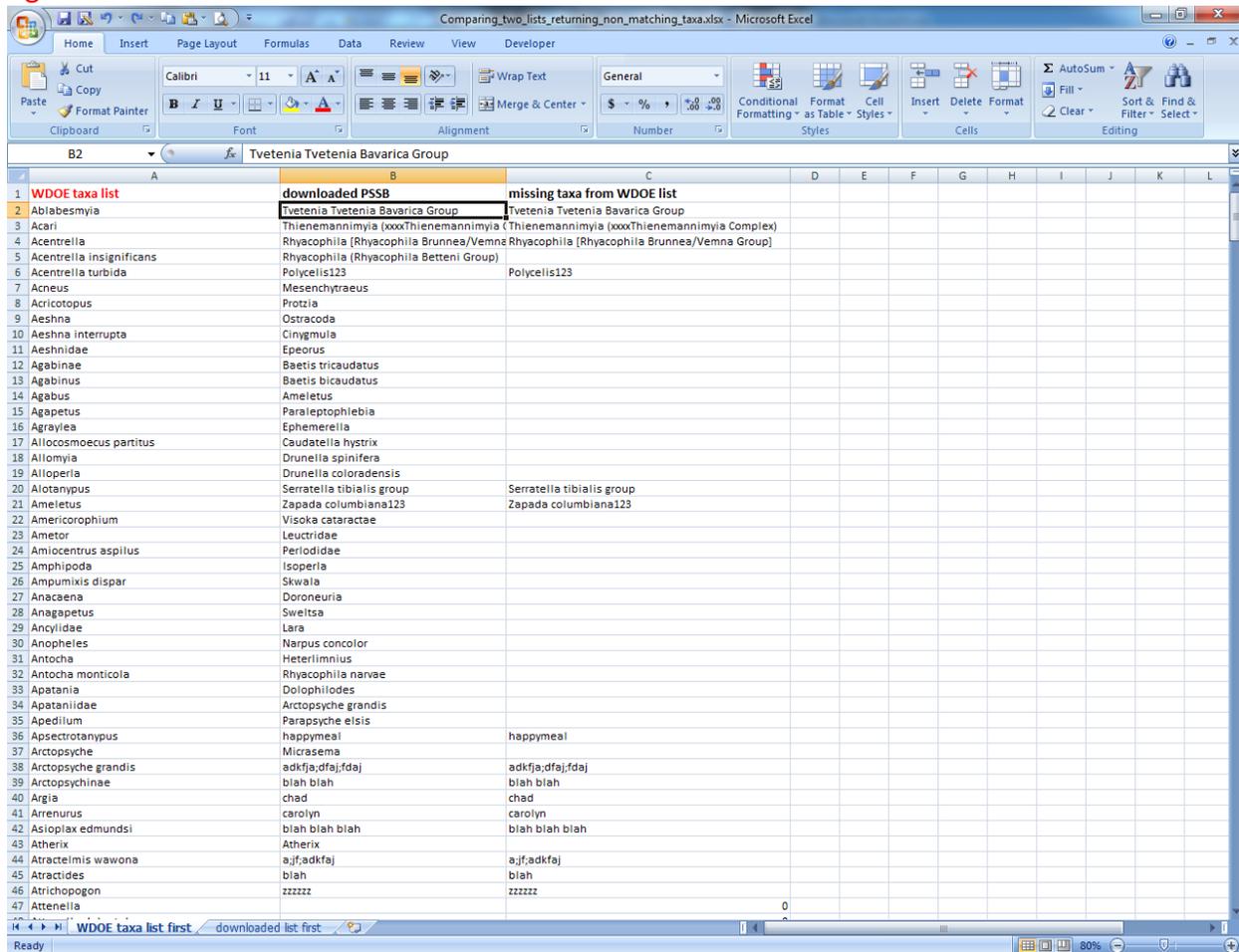


Figure 11.

To download the current EIM Taxon Name Reference list:

Open the EIM [Data Loader](#) or the [Data Editor](#)

Choose **Reference Tables** from the top menu

Select **Taxa** and then on **Export to Excel ->**

Note that the EIM taxa list has ALL taxon names found in EIM, not just benthic

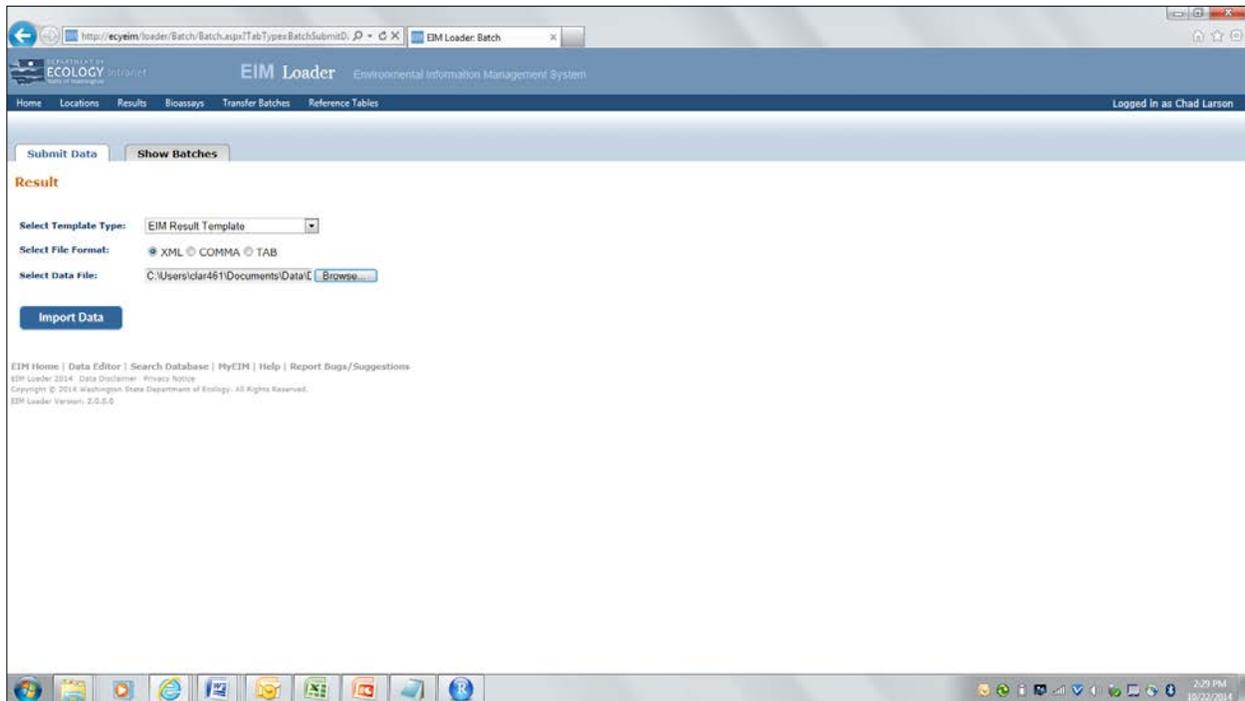
Load the Results Spreadsheet into EIM

The following are the steps to load the EIM Results Spreadsheet after you have made all of the updates discussed in the previous section. You need to have update rights to the study in EIM in order to load or edit. If you do not have update rights to the study, contact EAP's EIM Data Coordinator, Carolyn Lee. EIM training is required before you can load data into EIM.

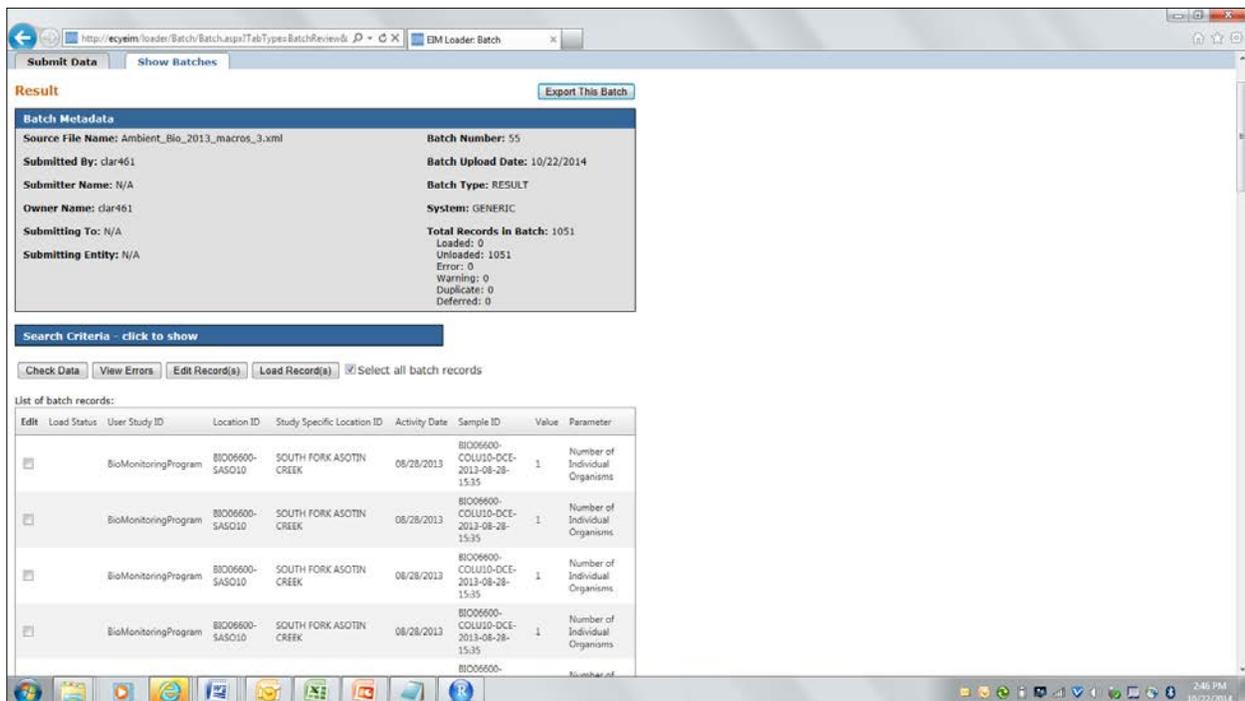
Because the EIM Result Spreadsheet that you export from PSSB does not contain the macros needed to load it into EIM, you will need to download a new EIM Result Spreadsheet from EIM and paste everything into it each time.

1. Open the [EIM Data Loader](#), select Result Template to download a new EIM Result Spreadsheet Template. The new spreadsheet will have an additional tab on the top menu called "Add Ins". This contains the macros needed to load the spreadsheet into EIM.
2. Paste the data from the old spreadsheet (the EIM Result Spreadsheet you downloaded from PSSB and made updates to) into the new one. It's best to not copy and paste the column headers from the old spreadsheet to the new one because it confuses Excel's macros. Don't forget to save the new spreadsheet to your computer.
3. Click on the **Add Ins** tab (on the top menu of spreadsheet).
4. Choose **EIM** and then on **Export** (click on OK if a message window pops up saying it might take some time). This will create an xml file. Save this xml to your computer.
5. Open the [EIM Data Loader](#).
6. Choose **Results** from the top menu.
7. Click on **Submit Data** tab.
8. Select Template Type of **EIM Result Template**.
9. Select File Format (**XML**, Comma, or Tab)

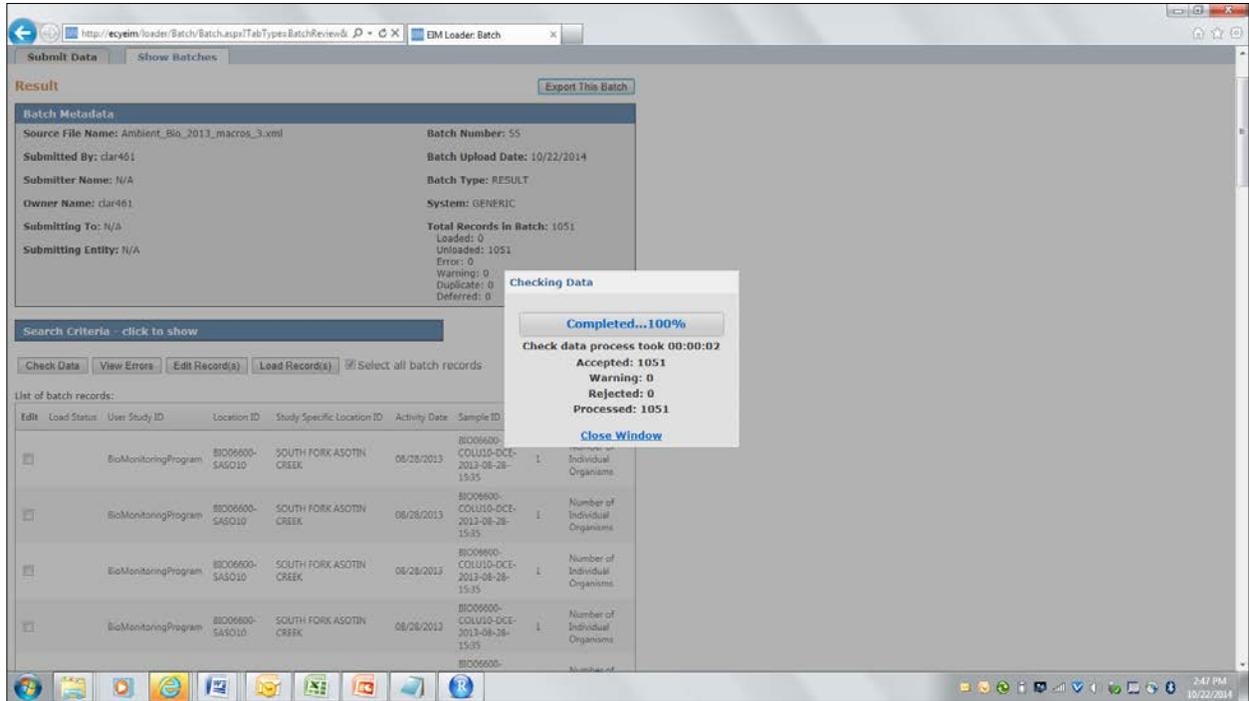
10. Under **Select Data File**, path to the xml file you saved.



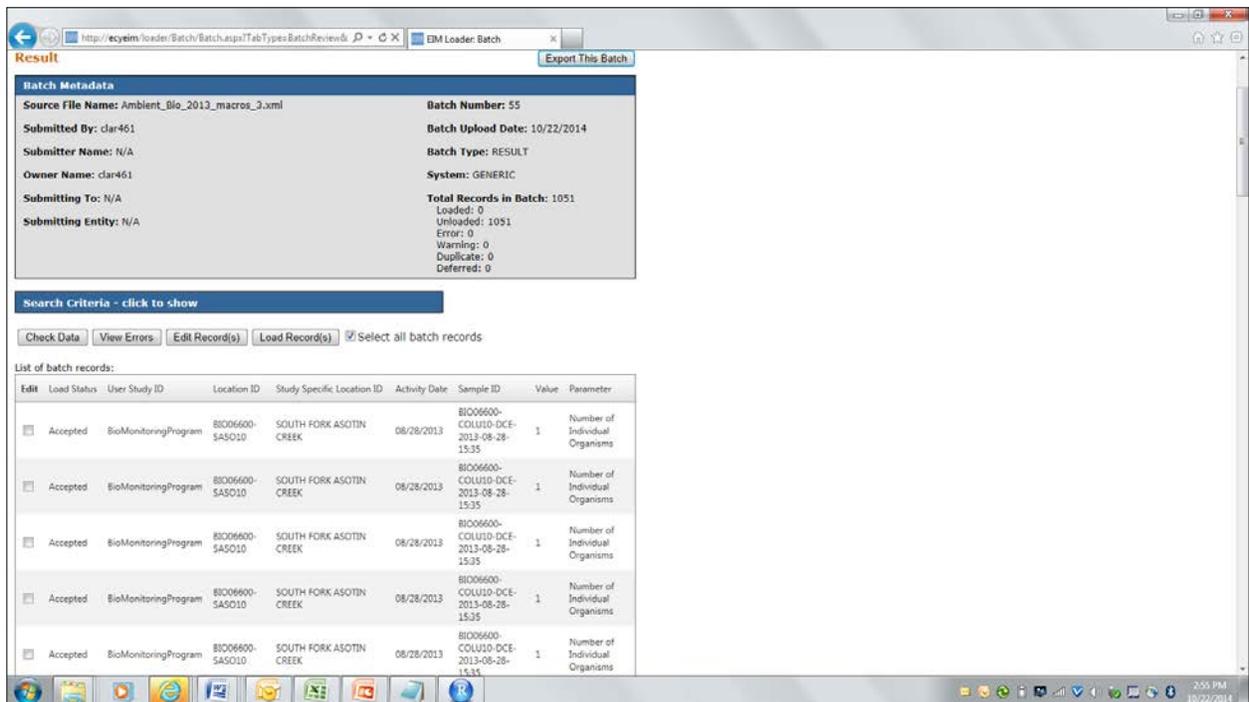
11. Click on **Import Data**. After Import is complete, your batch will open in the Show Batches tab.



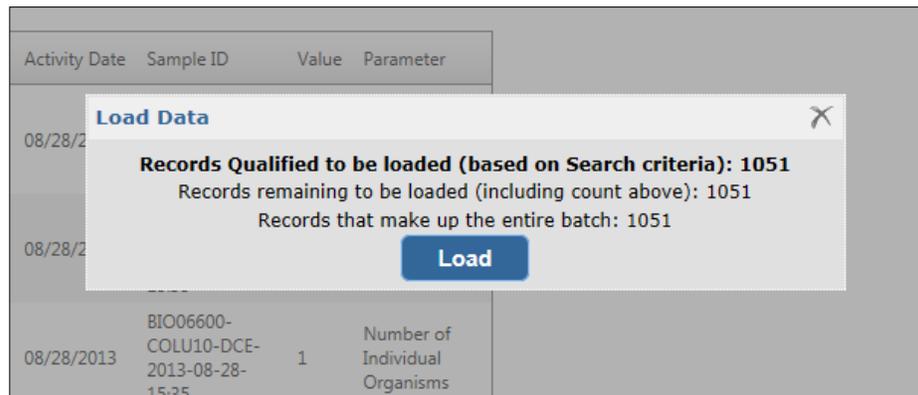
12. Click on **Select All**, then on **Check Data**. A list will appear showing the number of accepted, rejected, or records with warnings. The number of records processed will also be shown. Click **Close Window**.



Notice the Load Status is now Accepted:



13. Click on **Select All**, then on **Load Records**. The following message will appear:



14. Click on **Load** to complete the process. Make sure the counts look correct. Counts of *Loaded, Rejected, Duplicates, Deferred, and Processed* will be listed. Make sure all of your counts look correct. If all loaded, great!

15. If you received *Rejected, Duplicate, or unexpected Deferred* counts, click on **View Batch Records**, then on **View Errors**. You can fix most types of errors directly in the batch by updating the batch records in the Data Loader. If there are extensive errors, you need to make fixes in your xls spreadsheet and re-load it. If you do resend and reload your spreadsheet, remember to delete any records that may have correctly loaded during the first try.

Load LIMS Data into EIM

For samples sent to the Manchester Environmental Lab for analysis, results are sent directly to the project manager’s Show Batches area in the EIM Data Loader. Following the instructions below negates the necessity for creating a results spreadsheet. Some updates still need to be made in the batch before loading as described below.

- 1) Open EIM Loader and select a Batch # with a MEL Wrk ID:

Status	Ecology Program	Type	Batch #	Batch Filename	Total Records	Unloaded Records	Submitted By	Submitter Name	Submitting Entity	Created On	Options
		R	52	MEL Wrk ID 1409041	37	37	clar461			Oct 18, 2014 09:00:04 AM	
		R	51	MEL Wrk ID 1409049	28	28	clar461			Oct 18, 2014 09:00:03 AM	
		R	50	MEL Wrk ID 1409043	27	27	clar461			Oct 18, 2014 09:00:03 AM	
		R	49	MEL Wrk ID 1409050	28	28	clar461			Oct 15, 2014 09:00:04 AM	
NotReviewed		R	48	MEL Wrk ID 1409049	28	18	clar461			Oct 15, 2014 09:00:03 AM	
NotReviewed		R	47	MEL Wrk ID 1408060	35	25	clar461			Sep 27, 2014 09:00:05 AM	
NotReviewed		R	46	MEL Wrk ID 1409040	30	20	clar461			Sep 27, 2014 09:00:05 AM	
NotReviewed		R	45	MEL Wrk ID 1409067	24	24	clar461			Sep 27, 2014 09:00:05 AM	
NotReviewed		R	44	MEL Wrk ID 1408062	35	25	clar461			Sep 27, 2014 09:00:04 AM	
NotReviewed		R	43	MEL Wrk ID 1408059	32	22	clar461			Sep 11, 2014 09:00:04 AM	
NotReviewed		R	42	MEL Wrk ID 1408049	28	18	clar461			Sep 10, 2014 09:00:06 AM	
NotReviewed		R	41	MEL Wrk ID 1408048	33	18	clar461			Sep 10, 2014 09:00:06 AM	
NotReviewed		R	40	MEL Wrk ID 1408061	27	27	clar461			Sep 03, 2014 09:00:04 AM	
NotReviewed		R	39	MEL Wrk ID 1407084	23	18	clar461			Aug 09, 2014 09:00:03 AM	
NotReviewed		R	38	MEL Wrk ID 1407056	33	18	clar461			Aug 09, 2014 09:00:02 AM	
NotReviewed		R	37	MEL Wrk ID 1407054	28	18	clar461			Aug 01, 2014 09:00:03 AM	
NotReviewed		R	36	MEL Wrk ID 1407055	22	17	clar461			Aug 01, 2014 09:00:01 AM	
NotReviewed		R	35	MEL Wrk ID 1308045	23	18	clar461			Jul 31, 2014 09:00:06 AM	
NotReviewed		R	34	MEL Wrk ID 1307048	24	24	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	33	MEL Wrk ID 1309034	27	17	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	32	MEL Wrk ID 1307049	34	23	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	31	MEL Wrk ID 1309045	37	27	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	30	MEL Wrk ID 1310027	35	25	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	29	MEL Wrk ID 1307050	52	37	clar461			Jul 31, 2014 09:00:05 AM	
NotReviewed		R	28	MEL Wrk ID 1308074	33	19	clar461			Jul 31, 2014 09:00:04 AM	

2) Under selected Batch #, click **Select all batch records**

The screenshot shows a web browser window titled "EIM Loader: Batch" with the URL "http://ecyem/loader/Batch/Batch.aspx?Tab1". The main content area is titled "Result" and contains a "Batch Metadata" section. Below this is a "Search Criteria - click to show" section with several buttons: "Check Data", "View Errors", "Edit Record(s)", "Load Record(s)", and a checked checkbox for "Select all batch records". At the bottom is a table titled "List of batch records:" with columns for Edit, Load Status, User Study ID, Location ID, Study Specific Location ID, Activity Date, Sample ID, Value, and Parameter.

Batch Metadata

Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Errors: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Search Criteria - click to show

Select all batch records

List of batch records:

Edit	Load Status	User Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
<input type="checkbox"/>	NO GO		BEAR04		09/15/2014	1409041-01	1	Total Suspended Solids
<input type="checkbox"/>	NO GO		BEAR04		09/15/2014	1409041-01	0.0305	Total Phosphorus
<input type="checkbox"/>	NO GO		BEAR04		09/15/2014	1409041-01	0.055	Total Persulfate Nitrogen
<input type="checkbox"/>	NO GO		BEAR04		09/15/2014	1409041-01	0.9	Chloride
<input type="checkbox"/>	NO GO		BEAR04		09/15/2014	1409041-02	766	Chlorophyll
<input type="checkbox"/>	NO GO		NSK001		09/17/2014	1409041-06	1	Total Suspended Solids
<input type="checkbox"/>	NO GO		NSK001		09/17/2014	1409041-06	0.0051	Total Phosphorus
<input type="checkbox"/>	NO GO		NSK001		09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
<input type="checkbox"/>	NO GO		NSK001		09/17/2014	1409041-06	0.84	Chloride
<input type="checkbox"/>	NO GO		NSK001		09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	NO GO					B14I033-BLK1	0.1	Chloride
<input type="checkbox"/>	NO GO					B14I033-BS1	97	Chloride
<input type="checkbox"/>	NO GO					B14I033-DUP1	13.5	Chloride
<input type="checkbox"/>	NO GO					B14I033-MS1	100	Chloride
<input type="checkbox"/>	NO GO					B14I033-MS2	92	Chloride
<input type="checkbox"/>	NO GO					B14I115-BLK1	0.005	Total Phosphorus
<input type="checkbox"/>	NO GO					B14I115-BS1	96	Total Phosphorus

3) Under the Study Details tab, enter the correct **Study ID**

The screenshot shows the EIM Loader web application interface. At the top, there is a navigation bar with the following items: Home, Locations, Results, Bioassays, Transfer Batches, Reference Tables, and a user login status: Logged in as Chad Larson. Below the navigation bar, there are two tabs: "Submit Data" and "Show Batches".

The main content area is titled "Result" and contains a "Batch Metadata" section. This section is a table with the following data:

Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Error: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Below the metadata table, there is a "Load Status:" label followed by a dropdown menu set to "Go".

Underneath, there are four tabs: "Study Details", "Field Collection Details", "Sample Details", and "Result Details". The "Study Details" tab is active and contains the following fields:

- Study ID:** BioMonitoringProgram (with a ">>" button)
- Location ID:** (with a ">>" button)
- Study Specific Location ID:** (with a ">>" button)

At the bottom of the "Study Details" section, there are "Update" and "Cancel" buttons.

At the very bottom of the page, there is a footer with the following text:

EIM Home | Data Editor | Search Database | MyEIM | Help | Report Bugs/Suggestions
EIM Loader 2014 Data Disclaimer Privacy Notice
Copyright © 2014 Washington State Department of Ecology. All Rights Reserved.
EIM Loader Version: 2.0.0.0

- Click on the Field Collection Details tab and enter the correct **Field Collector**. Clicking on the double arrow to the right of the field will open various selections from which to choose from.

The screenshot shows the EIM Loader web application interface. At the top, there is a navigation menu with options: Home, Locations, Results, Bioassays, Transfer Batches, and Reference Tables. The user is logged in as Chad Larson. The main content area is titled 'Result' and contains a 'Batch Metadata' section with the following information:

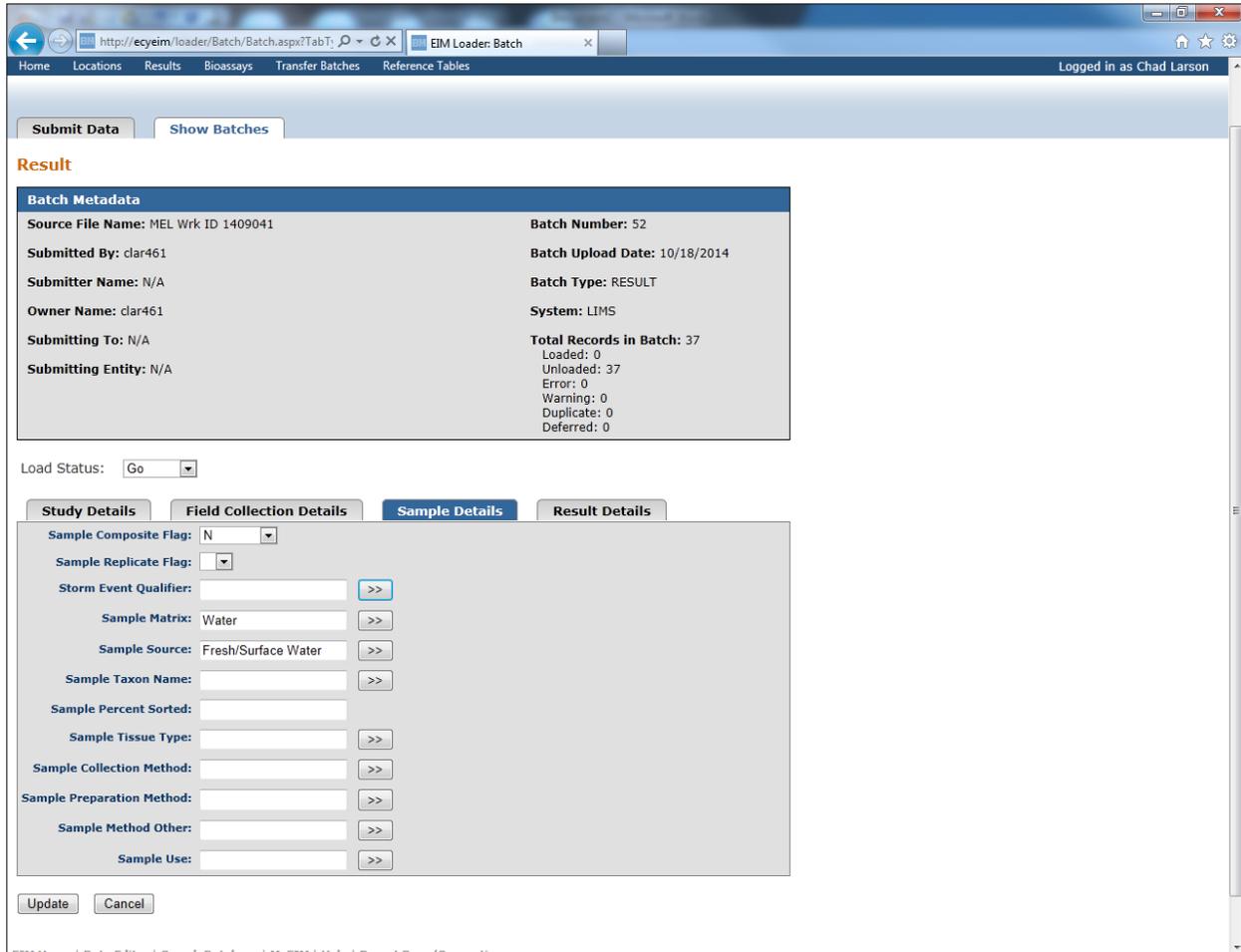
Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Errors: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Below the metadata, there is a 'Load Status' dropdown menu set to 'Go'. The 'Field Collection Details' tab is active, showing a form with the following fields:

- Field Collection Start Date: []
- Field Collection Start Time: []
- Field Collection End Date: []
- Field Collection End Time: []
- Field Collection Comment: []
- Field Collection Area: [] Field Collection Area Units: [] >>
- Field Collection Reference Point: [] >>
- Field Collection Upper Depth: [] Field Collection Lower Depth: []
- Field Collection Depth Units: [] >>
- Field Collector: Ecology >>

At the bottom of the form are 'Update' and 'Cancel' buttons. The footer contains links for EIM Home, Data Editor, Search Database, MyEIM, Help, and Report Bugs/Suggestions, along with copyright information for 2014 Washington State Department of Ecology.

- Click on the Sample Details tab and enter the correct **Sample Composite Flag**, **Sample Matrix** and **Sample Source**. Clicking on the double arrow to the right of each field will open various selections from which to choose from.



6) Click **Update** and you will be redirected back to the Batch # page. Click tick marks next to the Study Specific Location ID you want to edit (e.g. BEAR04 below). Click **Edit Record(s)**.

The screenshot shows a web browser window with the URL `http://ecyeim/loader/Batch/Batch.aspx?Tab1:` and the page title "EIM Loader: Batch". The page has two tabs: "Submit Data" and "Show Batches".

Result [Export This Batch](#)

Batch Metadata

Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Error: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Search Criteria - click to show

Select all batch records

List of batch records:

Edit	Load Status	User Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BEAR04	BEAR04	09/15/2014	1409041-01	1	Total Suspended Solids
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BEAR04	BEAR04	09/15/2014	1409041-01	0.0305	Total Phosphorus
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BEAR04	BEAR04	09/15/2014	1409041-01	0.055	Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BEAR04	BEAR04	09/15/2014	1409041-01	0.9	Chloride
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BEAR04	BEAR04	09/15/2014	1409041-02	766	Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram	NSKO01	NSKO01	09/17/2014	1409041-06	1	Total Suspended Solids
<input type="checkbox"/>	Go	BioMonitoringProgram	NSKO01	NSKO01	09/17/2014	1409041-06	0.0051	Total Phosphorus
<input type="checkbox"/>	Go	BioMonitoringProgram	NSKO01	NSKO01	09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
<input type="checkbox"/>	Go	BioMonitoringProgram	NSKO01	NSKO01	09/17/2014	1409041-06	0.84	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram	NSKO01	NSKO01	09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram				B14I033-BLK1	0.1	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				B14I033-BS1	97	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				B14I033-DUP1	13.5	Chloride

- 7) Enter the correct **Location ID** and **Study Specific Location ID** associated with the right Study Specific Location ID you want to edit (e.g. BEAR04 = BIO06600-BEAR04 and BEAR CREEK below). Click **Update**.

You also need to add the DCE to the EIM Result Additional Comment field at this time. Search for each study individually and for each sample in a location, add the DCE by clicking on the Result Details tab (shown below) and enter the DCE into the Result Additional Comment field.

The screenshot shows the EIM Loader web application interface. At the top, there is a navigation bar with the logo for the Department of Ecology, State of Washington, and the text "EIM Loader Environmental Information Management System". The user is logged in as Chad Larson. The main content area is titled "Result" and contains a "Batch Metadata" table with the following information:

Batch Metadata	
Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Error: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Below the metadata table, there is a "Load Status:" dropdown menu set to "Go". Below that, there are four tabs: "Study Details", "Field Collection Details", "Sample Details", and "Result Details". The "Study Details" tab is active, showing input fields for "Study ID:", "Location ID:" (containing "BIO06600-BEAR04"), and "Study Specific Location ID:" (containing "BEAR CREEK"). There are "Update" and "Cancel" buttons below the input fields.

At the bottom of the page, there is a footer with the following text:

EIM Home | Data Editor | Search Database | MyEIM | Help | Report Bugs/Suggestions
 EIM Loader 2014 Data Disclaimer Privacy Notice
 Copyright © 2014 Washington State Department of Ecology. All Rights Reserved.
 EIM Loader Version: 2.0.0.0

- 8) You will be redirected back to the Batch # page. You should notice that all of the fields have been correctly updated for the Location ID of interest (e.g. BIO06600-BEAR04 below). Click tick marks next to the Study Specific Location ID you want to edit (e.g. NSKO01 below). Click **Edit Record(s)**.

The screenshot shows a web browser window with the URL `http://ecyeim/loader/Batch/Batch.aspx?Tab1`. The page title is "EIM Loader: Batch". There is a button labeled "Export This Batch".

Batch Metadata

Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Error: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Search Criteria - click to show

Select all batch records

List of batch records:

Edit	Load Status	User Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
<input type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	1	Total Suspended Solids
<input type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.0305	Total Phosphorus
<input type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.055	Total Persulfate Nitrogen
<input type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.9	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-02	766	Chlorophyll
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram		NSKO01	09/17/2014	1409041-06	1	Total Suspended Solids
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram		NSKO01	09/17/2014	1409041-06	0.0051	Total Phosphorus
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram		NSKO01	09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram		NSKO01	09/17/2014	1409041-06	0.84	Chloride
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram		NSKO01	09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram				814033-BLK1	0.1	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				814033-BS1	97	Chloride

- 9) Enter the correct **Location ID** and **Study Specific Location ID** associated with the right Study Specific Location ID you want to edit (e.g. NSKO01 = BIO06600- NSKO01 and NORTH FORK SKOKOMISH RIVER below). Click **Update**.

The screenshot shows the EIM Loader web application interface. At the top, there is a navigation bar with the following items: Home, Locations, Results, Bioassays, Transfer Batches, Reference Tables, and Logged in as Chad Larson. Below the navigation bar, there are two tabs: "Submit Data" and "Show Batches".

The main content area is titled "Result" and contains a "Batch Metadata" section. This section displays the following information:

Source File Name: MEL Wrk ID 1409041	Batch Number: 52
Submitted By: clar461	Batch Upload Date: 10/18/2014
Submitter Name: N/A	Batch Type: RESULT
Owner Name: clar461	System: LIMS
Submitting To: N/A	Total Records in Batch: 37
Submitting Entity: N/A	Loaded: 0
	Unloaded: 37
	Error: 0
	Warning: 0
	Duplicate: 0
	Deferred: 0

Below the batch metadata, there is a "Load Status:" dropdown menu set to "Go".

The "Study Details" section is active, showing the following information:

Study ID: []	>>
Location ID: BIO06600-NSKO01	>>
Study Specific Location ID: NORTH FORK SKOKOMISH RIVER	

At the bottom of the study details section, there are "Update" and "Cancel" buttons.

At the bottom of the page, there is a footer with the following text:

EIM Home | Data Editor | Search Database | MyEIM | Help | [Report Bugs/Suggestions](#)
 EIM Loader 2014 Data Disclaimer Privacy Notice
 Copyright © 2014 Washington State Department of Ecology. All Rights Reserved.
 EIM Loader Version: 2.0.0.0

At the very bottom, there is a small text box containing the URL: <http://ecyapps3/bers/bugs.asp?systemID=634>

10) You will be redirected back to the Batch # page. You should notice that all of the fields have been correctly updated for the Location ID of interest (e.g. both BIO06600-BEAR04 and BIO06600-NSKO01 below). Click tick marks next to the Study Specific Location IDs you want to load (e.g. both BIO06600-BEAR04 and BIO06600-NSKO01 below). Click **Load Record(s)**.

The screenshot shows a web browser window titled "EIM Loader: Batch". The address bar shows the URL: http://ecyeim/loader/Batch/Batch.aspx?TabT... The interface is divided into several sections:

- Batch Information:**
 - Source File Name: MEL Wrk ID 1409041
 - Submitted By: clar461
 - Submitter Name: N/A
 - Owner Name: clar461
 - Submitting To: N/A
 - Submitting Entity: N/A
 - Batch Number: 52
 - Batch Upload Date: 10/18/2014
 - Batch Type: RESULT
 - System: LIMS
 - Total Records in Batch: 37
 - Loaded: 0
 - Unloaded: 37
 - Error: 0
 - Warning: 0
 - Duplicate: 0
 - Deferred: 0
- Search Criteria - click to show**
- Actions:** Check Data, View Errors, Edit Record(s), Load Record(s), Select all batch records
- List of batch records:**

Edit	Load Status	User	Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	1	Total Suspended Solids
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.0305	Total Phosphorus
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.055	Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.9	Chloride
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-02	766	Chlorophyll
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	1	Total Suspended Solids
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.0051	Total Phosphorus
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.84	Chloride
<input checked="" type="checkbox"/>	Go		BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	Go		BioMonitoringProgram				B141033-BLK1	0.1	Chloride
<input type="checkbox"/>	Go		BioMonitoringProgram				B141033-BS1	97	Chloride

11) The following screen will appear. Because only the lines with actual data (i.e. not lab blanks) were selected, the **Records Qualified to be loaded (based on Search criteria)**: is 10 for the example below rather than the entire batch of 37. Click **Load**.

The screenshot shows the 'EIM Loader: Batch' window. At the top, there are fields for Source File Name, Submitted By, Submitter Name, Owner Name, Submitting To, and Submitting Entity. To the right, there are fields for Batch Number, Batch Upload Date, Batch Type, System, and Total Records in Batch (with sub-fields for Loaded, Unloaded, Error, Warning, Duplicate, and Deferred).

Below these fields is a 'Search Criteria - click to show' button. Underneath are several action buttons: 'Check Data', 'View Errors', 'Edit Record(s)', 'Load Record(s)', and a checkbox for 'Select all batch records'.

The main area contains a 'List of batch records:' table with columns: Edit, Load Status, User Study ID, Location ID, Study Specific Location ID, Activity Date, Sample ID, Value, and Parameter. The table lists 10 records with checkboxes in the 'Edit' column. A 'Load Data' dialog box is overlaid on the table, displaying the following text:

Load Data

Records Qualified to be loaded (based on Search criteria): 10

Records remaining to be loaded (including count above): 37

Records that make up the entire batch: 37

Load

Edit	Load Status	User Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR				
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR				
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR				
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.9	Chloride
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-02	766	Chlorophyll
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	1	Total Suspended Solids
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.0051	Total Phosphorus
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.84	Chloride
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-BLK1	0.1	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-BS1	97	Chloride

12) The following screen will be shown. In this example, all 10 records loaded successfully. Click **Close Window**.

The screenshot shows the EIM Loader Batch application window. At the top, there is a summary section with the following details:

- Source File Name: MEL Wrk ID 1409041
- Submitted By: clar461
- Submitter Name: N/A
- Owner Name: clar461
- Submitting To: N/A
- Submitting Entity: N/A
- Batch Number: 52
- Batch Upload Date: 10/18/2014
- Batch Type: RESULT
- System: LIMS
- Total Records in Batch: 37
 - Loaded: 0
 - Unloaded: 37
 - Error: 0
 - Warning: 0
 - Duplicate: 0
 - Deferred: 0

Below the summary is a 'Search Criteria - click to show' button. Underneath are several action buttons: 'Check Data', 'View Errors', 'Edit Record(s)', 'Load Record(s)', and a checkbox for 'Select all batch records'. A 'List of batch records:' table is visible, with a 'Load Data' dialog box overlaid on top. The dialog box displays the following information:

Completed...100%
 Load data process took 00:00:01
 Loaded Count: 10
 Rejected Count: 0
 Duplicate Count: 0
 Deferred Count: 0
 Processed Count: 10
[Close Window](#)

Edit	Load Status	User Study ID	Location ID	Study	Date	Value	Parameter
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR			
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR			
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR			
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR			
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-02	766 Chlorophyll
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	1 Total Suspended Solids
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.0051 Total Phosphorus
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.033 Total Persulfate Nitrogen
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.84 Chloride
<input checked="" type="checkbox"/>	Go	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-07	2410 Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-BLK1	0.1 Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-B51	97 Chloride

13) You will be redirected back to the Batch # page. Notice that the Load Status has changed from “Go” to “Loaded”. You are now finished loading this particular batch #. The preceding instructions will need to be followed for each individual batch #.

The screenshot shows a web browser window titled "EIM Loader: Batch" with the URL "http://ecyeim/loader/Batch/Batch.aspx?Tab1:". The page displays the following batch information:

- Source File Name:** MEL Wrk ID 1409041
- Submitted By:** clar461
- Submitter Name:** N/A
- Owner Name:** clar461
- Submitting To:** N/A
- Submitting Entity:** N/A
- Batch Number:** 52
- Batch Upload Date:** 10/18/2014
- Batch Type:** RESULT
- System:** LIMS
- Total Records in Batch:** 37
 - Loaded: 10
 - Unloaded: 27
 - Error: 0
 - Warning: 0
 - Duplicate: 0
 - Deferred: 0

Below the batch details is a "Search Criteria - click to show" section with buttons for "Check Data", "View Errors", "Edit Record(s)", "Load Record(s)", and a checkbox for "Select all batch records".

The "List of batch records:" table is as follows:

Edit	Load Status	User Study ID	Location ID	Study Specific Location ID	Activity Date	Sample ID	Value	Parameter
	Loaded	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	1	Total Suspended Solids
	Loaded	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.0305	Total Phosphorus
	Loaded	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.055	Total Persulfate Nitrogen
	Loaded	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-01	0.9	Chloride
	Loaded	BioMonitoringProgram	BIO06600-BEAR04	BEAR CREEK	09/15/2014	1409041-02	766	Chlorophyll
	Loaded	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	1	Total Suspended Solids
	Loaded	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.0051	Total Phosphorus
	Loaded	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.033	Total Persulfate Nitrogen
	Loaded	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-06	0.84	Chloride
	Loaded	BioMonitoringProgram	BIO06600-NSKO01	NORTH FORK SKOKOMISH RIVER	09/17/2014	1409041-07	2410	Chlorophyll
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-BLK1	0.1	Chloride
<input type="checkbox"/>	Go	BioMonitoringProgram				B14033-BS1	97	Chloride

EIM Data Entry Review

After completing EIM data entry, EAP staff is required to complete a data entry review process to ensure that the EIM data was entered correctly, completely, and followed EIM data entry business rules. Follow the procedure and complete the checklist linked below to complete your EIM study.

EAP's [Data Entry Review Procedure](#) and [Data Entry Review Checklist](#) are located on EIM's [Focused Help Documents](#) page. They are also downloadable in EAP's Activity Tracker system if you have an EIM task assigned to you. If you do, the forms will show under "Reports" from the top menu. Activity Tracker will auto-fill the EIM details (names, due dates, etc.).

Links

Puget Sound Stream Benthos (PSSB)

Homepage: <http://www.pugetsoundstreambenthos.org/>

Login under the Account heading and enter User Name and Password. Someone who has permissions to edit in the PS Stream Benthos site can give you permissions.

Environmental Information Management (EIM)

Homepage (Ecology intranet): http://aww.ecology/eim/EIM_Home.htm

EIM Search (Ecology intranet): <http://ecyeim/search/>

EIM Search (Ecology intranet): <https://fortress.wa.gov/ecy/eimreporting/>

EIM training is required in order to load data into EIM, it is not needed for searching or downloading.

Watershed Health Monitoring (WHM)

Homepage: <http://www.ecy.wa.gov/programs/eap/stsmf/index.html>

WHM EIM data: <https://fortress.wa.gov/ecy/eimreporting/> accessed from EIM Search homepage under Focus Areas/Status and Trends Monitoring.

EIM Focused Help Documents

Focused Help homepage: <http://www.ecy.wa.gov/eim/helpDocs.htm> all EIM help documents listed below can also be accessed from this link.

[Freshwater Benthic](#)

[Marine benthic](#)

[EAP EIM Data Entry Review Procedure](#) – EIM Data Entry Review is required by EAP

[EAP EIM Data Entry Review Checklist](#) – This is required to be completed and routed after the review

[Using EIM Online Reference Tables](#) – use this to download the EIM Taxa Reference list or to search for EIM methods

Appendices

Appendix #1 Study ID/Name Crosswalk

EIM study ID and corresponding study names in Puget Sound Stream Benthos site for WDOE Ecology’s macroinvertebrate data.

EIM Study ID	Prior EIM Study ID	Site ID	PSSB Long Name	PSSB Short Name	Earliest Year
WatershedHealth_WAM0	STMEcology STMEcology2009 STMEcology2010 STMEcology2011	WAM06600 SEN06600	Watershed Health Monitoring	STMEcology	2009
WatershedHealth_WAM1	STMKingCounty STMKingCounty2009 STMKingCounty2010	WAM06600	WRIA 08 Wadable Streams Survey Project, King County - DNRP	King-DNRP: WRIA08_WS_Survey	2009
WatershedHealth_WAM2	STMPuyallupTribe	WAM06600	NA	NA	NA
WatershedHealth_EPA	STMPugetSen	EPA06600	NA	NA	2009
WatershedHealth_SEN	STMWASen	SEN06600	Status and Trends WA Statewide Sentinel Site Monitoring	STMWASen	2010
WatershedHealth_BIO	BioMonitoringProgram	BIO06600	Ambient Freshwater Biological Monitoring Program	BioMonitoringProgram	2010
WatershedHealth_WHB	JICA0002	WHB06600	Wide Hollow Creek Bioassessment	Wide Hollow Creek	2013
WatershedHealth_ERR	Sampled in error	ERR06600			
JKAR0004		CCB06600	Clover Creek TMDL Biomonitoring Study	Clover Creek	2013
SCOL0003		13-DESBIOT	Effectiveness Monitoring for the Deschutes River TMDL Project	Deschutes Effectiveness Monit	2009
RSMP_PLES	Stormwater monitoring, Puget Lowland Ecosystem Streams	NA	NA	NA	2015

KC_AmBug		09SOOXXXX	Ambient Monitoring Project, King County - DNRP	Ambient Monitoring	2006
Brwa0007		SQ-6_SQUAL	Soos & Squalicum TMDL studies	TMDL studies	2012
NA	NA	NA	Soos & Squalicum TMDL studies	TMDL studies	2012
NA	NA	NA	Boundary Creek Macroinvertebrate Monitoring	Boundary Creek	2002
NA	NA	NA	Muckleshoot Macroinvertebrate Monitoring	Muckleshoot	2003
fwbenth1	Ecology's Freshwater Ambient Biological Assessment Program (Historical data: 1993-2004)		Ambient Macroinvertebrate Monitoring	Ambient	2002

Appendix #2 Problematic Taxa List

Rhrithron	Tax. level	TSN	PSSB	Tax. level	TSN	EIM	Tax. level	TSN	Parent TSN	Issue
<i>Radotanypus</i>	Genus		<i>Brundiniella</i>	Genus	128026	<i>Brundiniella</i>	Genus	128026		same tribe, different genus; Rhrithron distinguishes <i>Radotanypus</i> , while PSSB does not
<i>Reomyia</i>	Genus		<i>Tanypodinae</i>	Subfamily	127994	<i>Tanypodinae</i>	Genus	127994	127917	when both <i>Reomyia</i> & <i>Zavrelimyia</i> are in sample from Rhrithron, only <i>Zavrelimyia</i> displayed in EIM
<i>Zavrelimyia</i>	Genus	128259	<i>Zavrelimyia</i>	Genus	128259	<i>Zavrelimyia</i>	Genus	128259		
<i>Ephemerella tibialis</i>	Species	101401	<i>Ephemerella tibialis</i>	Species	101401	<i>Serratella tibialis</i> <i>Ephemerella tibialis</i>	Species	101399	101395	ITIS indicates that the current taxonomic status for <i>Serratella tibialis</i> is invalid & <i>Ephemerella tibialis</i> is valid
<i>Meropelopia</i>	Genus		<i>Tanypodinae</i>	Subfamily	127994	<i>Conchapelopia</i>	Genus	128130		<i>Meropelopia</i> TSN 128132; <i>Meropelopia</i> is alias of <i>Conchapelopia</i>
<i>Symposiocladius</i>	Genus	128877	<i>Orthocladius</i>	Genus	128874	<i>Orthocladius</i> <i>Orthocladius</i> (<i>Symposiocladius</i>)	Genus	128874	128457	ITIS suggests the current standing of <i>Symposiocladius</i> is invalid-junior synonym
<i>Bilyjomymia algens</i>	Species		<i>Tanypodinae</i>	Subfamily	127994	<i>Bilyjomymia algens</i>	Species		127917	ITIS valid <i>Bilyjomymia algens</i> is species name & <i>Tanypodinae</i> is subfamily
			<i>Tanypodinae</i>	Subfamily	127995	<i>Tanypodinae</i>	Genus	127994	127917	
<i>Ellipteroides</i>	Genus		<i>Tipulidae</i>	Family	118840	NA				PSSB exports it as <i>Ellipteroides</i> , which is not in EIM. PSSB labels its Family as <i>Tipuliidae</i> , other websites list Family as <i>Limoniidae</i> .

Revision History

Revision Date	Revision No.	Summary of Changes	Reviser(s)
1/15/2015	1.0	Original Document	Chad Larson, Carolyn Lee
12/7/2015	1.1	Fixed layout of WHM flowchart on pg. 3 and saved document as pdf to prevent reoccurrence.	C. Lee