

EIM Help for EAP - EIM Data Entry Review Procedure

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This document pertains only to Ecology Environmental Assessment Program (EAP) employees.

Data Entry Review is the process of ensuring that data was correctly entered into EIM. The review process involves making sure that the Study, Locations, and Results were entered following EIM data entry business rules and that loading was complete and accurate.

EAP requires the Data Entry Review Procedure for all data entered into EIM. When the review is finished, the person who entered the data must complete and route [EAP's EIM Data Entry Review Checklist](#) in order to finalize the EIM Study. Links to the review procedure, checklist, help documents, and contact information for EAP's EIM Data Coordinator are listed in the Links section at the end of this document.

The **Study and Location information** should be reviewed by the Project Manager. **Results** should be reviewed by someone other than the person who entered the data and is usually assigned by the appropriate Unit Supervisor in EAP's [Activity Tracker](#). If no one has been assigned to EIM Data Entry Review, contact the Unit Supervisor of the Project Manager.

Study Review

Search for your Study using either the [EIM Editor](#) or [EIM Search](#). Highlight your Study and select *View Details* from the drop-down menu . Review ALL Study details, including the fields listed below. If updates are needed, notify the person who entered the data.

1. **Confirm the Study QA Planning Level is correct.** It should be *Level 4* if the QAPP was approved prior to sampling, or *Level 3* if QAPP was approved after sampling started. If you do not know, ask the Project Manager.
2. **Confirm the Study QA Assessment Level is correct or update as described below:**
 - a. **If the report has been published** and was peer reviewed, assign Level 5, the highest **Study QA Assessment Level**. If the report was not peer reviewed, assign *Level 4*.
 - b. **If report has not yet been published or is not going to be published** for this Study, the **Study QA Assessment Level** should be *Level 3 - Data Verified and Assessed for Usability*. This will be updated to Level 4 or 5 by EAP's EIM Data Coordinator when/if report is published.
3. **Confirm the Study ID matches that listed in the QAPP and the report.** If they don't match, contact EAP's EIM Data Coordinator, [Carolyn Lee](#), to resolve.
4. **Confirm the correct QAPP and reports are linked to the Study in EIM.** Links are found under "Publications" on the Study Data Summary page by searching on your Study in [EIM Search](#). Note that you will not see the "Publications" field if there are no publications linked to the Study. If any publication links are incorrect, contact EAP's EIM Data Coordinator, [Carolyn Lee](#), to resolve.

Locations Review

Check the details entered for your Locations. Do this by using [EIM Search](#). On the Search homepage, select *Search by Studies*. On the next page, type your EIM Study ID into the form and click the *Search Data* button. On the next page, select *List of Locations* from the drop-down menu . On the next page, select *Download All* from the top menu. On the EIM Download Summary page, uncheck all but the Locations box. Click the *Queue Download* button. EIM will send you an email with a link to a spreadsheet with all of your Locations, including the details entered for each of them. Check that the number of Locations is correct. Also make sure the Location Names, Location Descriptions, and other details are correct.

You also need to look at your Locations on the EIM map to make sure they are correctly located. In [EIM Search](#), again *Search by Studies*. On the next page, type your EIM Study ID into the form and click the *Search Data* button. On the next page, select *List of Locations* from the drop-down menu . On the next page, select *Map All* from the top menu. Zoom into the map to check your Locations. If you notice that any are incorrect, use the Lat/Long tool on the EIM map to get new coordinates. If you don't know how to use this tool, refer to the [Get Lat/Long and Elevation from EIM Map](#) help document. Give the new coordinates to your data entry person so they can update EIM.

Results Review

There are many different types of results entered into EIM, each with various requirements. Some data specific requirements are system enforced; others are not and are detailed in help documents or business rules. **The Data Entry Reviewer needs to ensure that all pertinent EIM field requirements and data entry business rules were followed.** Field definitions, requirements, and valid value details, are contained in the **EIM Results Spreadsheet Help Document** downloadable from the [Data Loader](#) homepage. **Data entry business rules** for certain data types are found in the [EIM Focused Help Documents](#).

Follow the review steps below. Steps 1-7 are global checks to be done on the entire dataset and are easiest done with the use of Excel's filtering capabilities. When you review the individual Result Values, you only need to check a small portion of the dataset as described in step 8. Report any errors found to the person who entered the data so that they can make the updates in EIM.

1. Make sure that all of the field data was entered as "*Measurements*" by filtering on the **Field Collection Type** and looking at the **Result Parameter Names**. Do the same for the lab data by filtering on "*Sample*". Rarely a Field Collection Type will be an "*Observation*."
2. Check the **Field Collector** field. EAP's data is usually "*Ecology*."
3. Filter each **Sample Matrix** and check for correct **Sample Source**. If you have more than one type of matrix or source in your Study, also check to make sure the correct parameters are present for each matrix/source combination. For example, if metals were only analyzed in sediment, make sure that there are no metal parameters listed with a water matrix or source. The Sample Source worksheet in the **EIM Results Spreadsheet Help Document**, downloadable from the [Data Loader](#) homepage, is helpful in determining which Sample Source to use.
4. Check the **Sample Replicate Flag** (field replicates). There should be no blanks in this field. If they are replicates, they should be flagged with "Y." If they are not replicates, they should be flagged with "N".

For replicates, it is also preferable to include a comment in both samples of the replicate pair (original and replicate). An example comment is: "*Sample #06123456 is a field replicate of sample #06123457*". Whenever possible, the **Field Collection Comment** field should be used, if not, use either of the 2 result level comment fields will work (Result Comment or Result Additional Comment). Refer to the [Entering Field Replicates](#) help document for detailed data entry requirements.

Results Review - continued

5. Check the **Sample Composite Flag** field. Similar to replicates, there should be no blanks in this field. If they are composites, they should be flagged with “Y.” If they are not composites, they should be flagged with “N”. Refer to the [Entering Composite Samples](#) help document for detailed data entry requirements.
6. Filter each **Result Parameter Name** and check for correct **Result Value Units** and **Result Method**. If you have large parameter groups such as pesticides, it would be easier to filter on the method instead and then check for correct units and parameter names. This is also where you need to make sure that all the data types for the Study were entered.
7. Make sure the correct **Result Lab Names** were entered (lab name required for samples only).
8. Now is the time to check the actual result values. This involves checking result specific information that you haven’t looked at already. Pay particular attention to data that was entered by hand, such as field data transferred from field notebooks. All of the Results for 10% of the Locations need to be reviewed. For example, if you have 20 Locations you’ll need to review all of the Results for two of them. The Locations you choose should be most representative of the Study. If errors are found, the review process should be repeated for an additional 10% of the Locations until no errors are found.

Compare the EIM results against the original data from the lab or field notes. Make sure the **Result Values** are correct and that they are attached to the correct Location and sampling event (**Field Collection Start Date/Time**, and **Sample ID**).

Check your results having a value of zero to make sure they should be zero. Sometimes there are formatting issues in the original raw data and results less than one (.00067 for example) inadvertently get loaded as zero instead of the correct decimal number.

After all results are checked, complete the **Review Checklist** described in the following section.

Review Checklist

After Study, Locations, and Results data entry review has been completed, **the [EAP EIM Data Entry Review Checklist](#) must be filled out in order to finalize the EIM Study**. It is the responsibility of the person who entered the data into EIM to complete the checklist.

This review procedure and checklist are available in [Activity Tracker](#) under Monthly Reporting/Reports and also on the [EIM Focused Help Documents](#) webpage. If you print the checklist in Activity Tracker, it will auto-fill the EIM details (EIM Study Name, Study ID, due dates, etc).

The EIM portion of the Study will not be labeled as being completed in Activity Tracker until the checklist is completed and routed.

Links

[EIM Homepage](#)

[EIM Focused Help Documents](#)

EIM Spreadsheet Help Documents can be downloaded from the [Data Loader](#) homepage.

EIM Reference Tables with valid values can be found on the top menus of the [Data Editor](#) and [Data Loader](#).

Contact [EAP's EIM Data Coordinator](#), Carolyn Lee, if you have any EIM data entry or review questions.

Document Revision History

Revision Date	Revision No.	Summary of Changes	Reviser(s)
1999	n/a	Original Document	DN, CL
5/05	n/a	Minor Revisions	CL
5//07	n/a	Minor Revisions	CL
3/31/08	1.1	Procedure Revised	CL
3/01/10	1.2	Updated Column Headings	CL
7/1/13	2.0	Combined QA Guidelines and Procedure documents	CL
7/15/13	3.0	Updated with System Revisions	CL
8/9/13	3.1	Updated with Reviewer Comments	CL
6/24/14	3.2	Expanded Study Review Section	CL
4/7/15	3.3	Removed reference to separate review rules for fish tissue and macroinvertebrates (they are non-existent now)	CL
7/15/15	3.4	Added step to check results of zero (pg. 3, step 8). Updated links.	CL