

EIM Help – TCP EIM Data Entry Review Checklist

Version 1.1

October 2016

Who is this document for?

This document is for Ecology Toxics Cleanup Program (TCP) cleanup project managers (CPMs) who review data submitted to Ecology’s Environmental Information Management System (EIM). It can also be useful to others reviewing EIM data. Note that Ecology’s Environmental Assessment Program has its own [checklist](#) and [procedure](#).

What is the purpose of this document?

[TCP policy 840](#) requires that electronic environmental monitoring data (e.g. soil, groundwater, sediment, etc.) from TCP sites be submitted to EIM. (See table below for an overview of the data submittal process). This document shows you how to quickly check your site’s EIM data for completeness, accuracy, and appropriateness using EIM Map Search.

Overview of EIM data submittal process

Task	Performed by
Submit monitoring data	Environmental Consultant
Check data	EIM Data Coordinator
Load data	EIM Data Coordinator
Send confirmation email of load to consultant and TCP site manager	EIM Data Coordinator
Review submittal	TCP Site Manager
Send confirmation email of review to EIM Data Coordinator	TCP Site Manager
Change EIM Data Entry Status to “Reviewed”	EIM Data Coordinator

Why is checking my site’s EIM data important?

Your TCP EIM Data Coordinator loads monitoring data that environmental consultants or others submit to EIM for your site(s). Although your Data Coordinator has specific protocols for checking data submittals prior to loading them into EIM, they might not be familiar with site-specific details that could affect data submittals. They also cannot tell if all the necessary data was submitted. Monitoring data is the backbone for consultant reports and recommendations, and ultimately decisions you make with respect to your site(s). Therefore, it is important for you to check the EIM data for your site(s). You should be aware of site-specific details such as data types, data volume, and monitoring location accuracy.

Checklist

Check off each step as you review the EIM data. Click the links to see instructions for each step.

1.		Verify site basics
	A.	Site location is correct
2.		Verify monitoring location accuracy and details
	A.	Monitoring locations are mapped correctly
	B.	Number of monitoring locations is correct
	C.	Street address (if provided) is correct
	D.	Location basics, coordinates, and elevation are correct
	E.	For wells, completion depth is correct
	F.	For wells, logs have been linked and/or loaded
3.		Verify study and data details
	A.	Study Type is correct
	B.	Sampling dates and/or date ranges are correct
	C.	Ecology Contact is correct
	D.	Ecology Program is correct
	E.	Media sampled/measured are correct
	F.	Number of Result Records is correct – no data are missing
4.		Download result data and perform spot checks if needed
5.		Email your Data Coordinator

Data Review Steps

Step 1 – Verify site basics using EIM Map Search

Click link in the “data loaded” notification e-mail from your EIM Data Coordinator.

From: Durkee, Jenna (ECY)
Sent: Wednesday, September 23, 2015 9:19 AM
To: 'Ron Jones'
Cc: Carter, Patti (ECY)
Subject: VCEA0248-Northwest Pipeline GP Mesa C/S, Mesa, WA

All submitted data has been successfully loaded into EIM for the following study. The Ecology Project Manager should verify the results and locations, and that the study in EIM contains the correct number of results.

Facility Site ID: 3047737

Study ID: VCEA0248

Study Name: Northwest Pipeline GP Mesa C/S, Mesa, WA

Locations: 23

Results: 2430

You can view the data by using the following link:

<https://fortress.wa.gov/ecy/eimreporting/Map/Map.aspx?MapType=EIM&StudySystemId=99970803&MapLocationExtent=-13237546.5356399%2c5861330.83449268%2c-13237371.7639902%2c5861453.74808671&CustomMap=y&BBox=-13237660.5861264.-13237257.5861519&Layers=0.1.2.3.4.5.6.7.8.9&Opacity=0.95&Basemap=bmHybrid&Options=v.h.h.h.h.h>

Step 1, cont.

This will open EIM Map Search. The map will zoom to your study data. Your study’s monitoring locations are highlighted blue. (Locations belonging to other studies are brown). Wells are represented by triangles. All other sampling locations are represented by dots.

- A. Check streets and other known landmarks to verify the location.

The screenshot displays the EIM Map Search interface. At the top, there is a navigation bar with tabs for Map Layers, Legend, Tools, Find, and Search. Below this is a toolbar with various map interaction tools like Pan, Zoom In, Zoom Out, Zoom Full, Zoom Last, Zoom Next, Identify, Select Box, Select Polygon, Buffer Point, Buffer Feature, NHD Tool, Lat/Long Tool, Measure Tool, Report Finder, and Clear All. The main map area shows an aerial view of an industrial or residential area with numerous blue diamond markers and triangles representing monitoring locations. Below the map, there are controls for 'View Data', 'Download All', 'Zoom to Selection', and a status indicator '39 locations selected'. A search criteria field shows 'Study ID contains VCSW1187'. Below this is a table with columns for Find, Location ID, Location Name, Well, Well Log, Chart Hydrograph and Well Data, Associated Facility, Studies, and Downloads. The table lists several entries with their respective IDs and names.

Find	Location ID	Location Name	Well	Well Log	Chart Hydrograph and Well Data	Associated Facility	Studies	Downloads
	NV B11-01	NV B11-01	N	N/A	N/A	None	Link	Download
	NV B11-02	NV B11-02	N	N/A	N/A	None	Link	Download
	NV B11-03	NV B11-03	N	N/A	N/A	None	Link	Download
	NV B11-04	NV B11-04	N	N/A	N/A	None	Link	Download

At the bottom of the interface, there are controls for 'Show 5 entries' and 'Showing 1 to 5 of 39 entries', along with pagination options: First, Previous, 1, 2, 3, 4, 5, Next, Last.

Step 2 – Verify the site monitoring location mapping and details

- A. Are the monitoring locations mapped correctly? Zoom in to make sure. There are varying degrees of location accuracy depending on the coordinate collection method. This is covered in the item D below.
- B. Is the number of locations (e.g. wells, test pits, etc.) what you were expecting?

The screenshot shows the 'EIM Map Search' interface. At the top, there are navigation tabs: 'Map Layers', 'Legend', 'Tools', 'Find', and 'Search'. Below these are various map interaction tools like 'Pan', 'Zoom In', 'Zoom Out', etc. The main map area displays an aerial view with several blue diamond markers representing monitoring locations. One location, 'NV B11-01', is highlighted with a red circle and a blue callout box. Below the map, a table lists the search results for 'Study is VCSW1187'. The table has columns for 'Find', 'Location ID', 'Location Name', 'Well', 'Well Log', 'Chart Hydrograph and Well Data', 'Associated Facility', 'Studies', and 'Downloads'. The first three rows of data are visible, with 'NV B11-02' circled in red. A second blue callout box points to this row.

To see location details, click "Location ID" link OR map icon to open "Location Data Summary" page.

Find	Location ID	Location Name	Well	Well Log	Chart Hydrograph and Well Data	Associated Facility	Studies	Downloads
	NV B11-01	NV B11-01	N	N/A	N/A	None	Link	Download
	NV B11-02	NV B11-02	N	N/A	N/A	None	Link	Download
	NV B11-03	NV B11-03	N	N/A	N/A	None	Link	Download

To highlight and label a location on the map, click the "label location" icon.

Step 2, cont.

On the “Location Data Summary” page, verify the following:

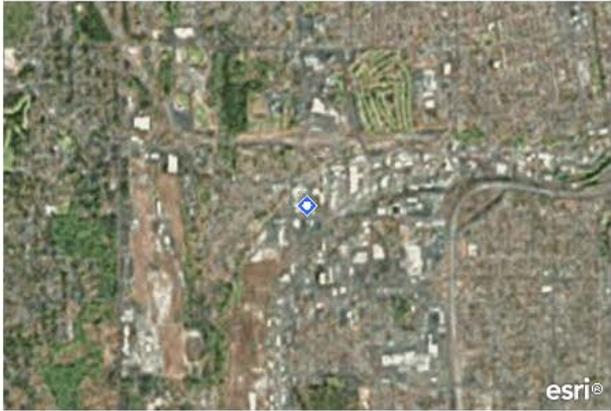
- C. Is this correct street address for this location (if provided)?
- D. Do the location basics, coordinates, and elevation look OK? Are the collection methods and accuracies what you expected?

Location Data Summary

Location ID: **NV B11-15**

[Download Location Data](#)

Location Basics	
Location ID	NV B11-15
Location Name	NV B11-15
Location Description	West of the boiler building.
Location Setting	Land
Address	WA Pierce
Ecology Facility/Site ID	
Location ID Aliases (Alias Type)	



Location Data Summary	
Associated EIM Studies	VCSW1187
Media (Matrix) Sampled	Solid/Sediment
Sample Sources	Soil
Field Collection Date Range	2/1/2011 - 2/1/2011
Number of Parameters Obtained	2 (View Data)
Number of Samples and Measurements	4
Number of Bioassay Records	0
Number of Result Records	8 (View Data)
Time series Data	0
Summarized Time series Data	0
Water Column Profile Data	0
Summarized Water Column Profile Data	0

Horizontal Coordinates	
Calculated Latitude Decimal Degrees (NAD83HARN)	47.2289096831965
Calculated Longitude Decimal Degrees (NAD83HARN)	-122.481401059902
Township/Range/Section/Qtr/Qtr-Qtr	20 N 3 E 7 SW SW
Horizontal Coordinates Represent	Discrete monitoring point
SPCS (State Plane Coordinate System) (Input)	1148181.8 697456.7 S
Horizontal Datum (Input)	North American Datum of 1983 (NAD83)
Horizontal Coordinate Accuracy	+/- 3 ft (1 m)
Horizontal Coordinate Collection Method	Computer map - GIS-based
Paper Map Scale	

Elevation	
Elevation of	Land Surface
Elevation	247.24 ft
Elevation Datum	NAVD88
Elevation Accuracy	+/- 1 ft (0.3 m)
Elevation Collection Method	LIDAR (airborne laser)
Sediment Elevation/Elevation Reference	

Tip – Click on EIM field name to find out more about the field.



Step 2, cont.

If your location is a well, the summary page will have additional details about the well.

- E. Do the well’s completion depth, elevation, and coordinate collection methods and accuracies, etc., appear to be correct? Well elevations are usually measured to the top of casing (TOC). In these cases you will see the elevation information under Well Water Level Measuring Point. In the example below, elevation was measured to land surface.
- F. Has a driller’s well log been linked (from the Wells Logs database)? Have the geologist’s log and/or as-builts been uploaded? Your EIM Data Coordinator can do this for you. Ask them!

Well Location Data

Location ID: **NV MW-14D**

[Download Location Data](#)

Well Basics	
Location ID	NV MW-14D
Location Name	NV MW-14D
Well Tag ID	BHL107
Location Description	150 ft East of the railroad tracks, 30
Location Setting	Land
Address	WA Pierce
Ecology Facility/Site ID	
Groundwater Location Type	Monitoring Well
Completion Depth	73 FT
Completion Type	Cased, Open Interval
Open Interval Depth (Upper/Lower)	63 / 73 FT
Max Casing Diameter	2 IN
Casing Material	Plastic, pvc
Construction End Date	04/25/2012
Construction Method	Bored/Augered
Construction Comment	2-inch Sch 40 PVC in 8 inch borehole
Naturally Flowing Well?	
Is Well Upgradient of a Facility/Site?	
Aquifer Test Conducted?	N
Location ID Aliases (Alias Type)	

Logs and Other Documents	
Well Logs:	
Log ID:	804539
Image:	580098
Additional Well Documents and Information:	
	BirdsEyeMW14-D.pdf (Supplemental Log)



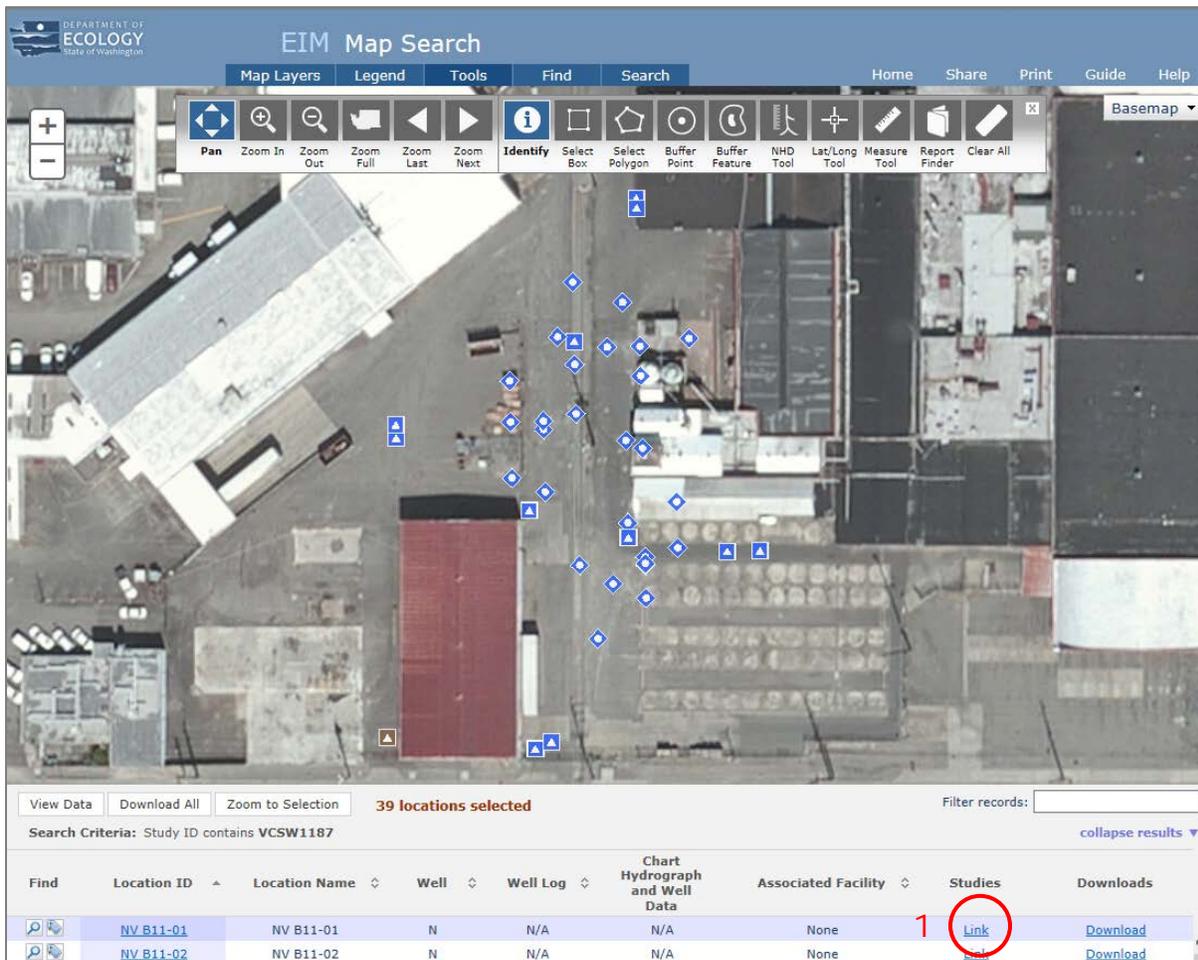
Horizontal Coordinates	
Calculated Latitude Decimal Degrees (NAD83HARN)	47.2286957491089
Calculated Longitude Decimal Degrees (NAD83HARN)	-122.480808975034
Township/Range/Section/Qtr/Qtr-Qtr	20 N 3 E 7 SW SW
Horizontal Coordinates Represent	Discrete monitoring point
SPCS (State Plane Coordinate System) (Input)	1148326.9 697375 S
Horizontal Datum (Input)	HARN (High Accuracy Reference Network / NAD83 HARN)
Horizontal Coordinate Accuracy	+/- 0.1 ft (0.03 m)
Horizontal Coordinate Collection Method	Survey - conventional
Paper Map Scale	

Well Water Level Measuring Point	
ID:	MP1
Description:	Mark on north edge of PVC
Height:	-0.33 FT
Elevation:	
Datum:	
Accuracy:	
Collection Method:	
Start Date:	

Land Surface Elevation	
Elevation	249.43 ft +/- 0.1 ft (0.03 m)
Elevation Datum	NAVD88
Elevation Accuracy	+/- 0.1 ft (0.03 m)
Elevation Collection Method	Survey - conventional
Elevation Reference	

Step 3 – Verify your study details and data summary

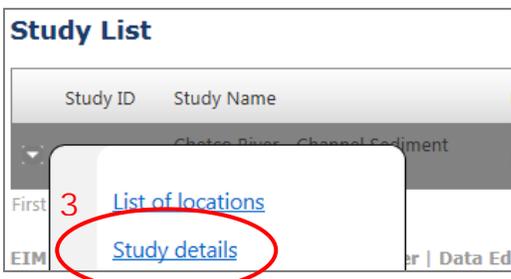
Go back to the EIM Map Search page and (1) click “Link” under “Studies.”



This opens the Study List page. (2) Click the arrow beside the Study ID.



This opens a drop-down list. (3) Click “Study Details.”



Step 3, cont.

This opens the “Study Data Summary” page. There are two sections on this page.

Study Data Summary

Study ID: VCSW1187

[Download Study Data](#)

Study Basics

Study ID	VCSW1187
Study Name	Birds Eye Foods, Tacoma, WA
EIM Data Entry Review Status	Not Reviewed
Study Type	Voluntary Cleanup Program (VCP) or independent cleanup at a contaminated site
Study Purpose	Determine the extent of contamination on site.
Field Collection Date Range	6/9/2005 - 3/16/2015
First/Last Loaded Date Range (First/Last updated)	2/12/2014 (4/3/2013) - 8/11/2015 (8/11/2015)
Ecology Contact	Tom Middleton
Ecology Program or Other Responsible Entity	Ecy Toxics Cleanup Program, Southwest Region
Ecology Monitoring Program	
Submitting Organization	Pacific Groundwater Group - Seattle WA
Study QA Planning Level	LEVEL 4: Approved QAPP or SAP.
Study QA Project Plan Description	
Study QA Assessment Level	Level 4 - Data Verified and Assessed for Usability in a Formal Study Report
Study Result Description	
Study Comment	
Ecology Grant Number	
Ecology Loan Number	
Ecology Facility/Site ID	1328
Ecology Cleanup Site ID	5012
Study ID Aliases (Alias Type)	

Study Data Summary

Number of Locations	39 (View Data)
Media (Matrix) Sampled	Air/Gas Solid/Sediment Water
Sample Sources	Groundwater Soil Soil Gas
Number of Parameters Obtained	50 (View Data)
Number of Samples and Measurements	233
Number of Bioassay Records	0
Number of Result Records	2729 (View Data)
Time series Data	0
Summarized Time series Data	0
Water Column Profile Data	0
Summarized Water Column Profile Data	0



Step 3, cont.

The top section contains Study Basics.

- A. Is the Study Type correct?
- B. Are the sampling dates what you expected?
- C. Is the Ecology Contact correct?
- D. Is the Ecology Program correct?

Note – you might need to look at the Sampling Analysis Plan (SAP) or the Quality Assurance Project Plans (QAPP).

Study Basics	
Study ID	VCSW1187
Study Name	Birds Eye Foods, Tacoma, WA
EIM Data Entry Review Status	Not Reviewed
Study Type	Voluntary Cleanup Program (VCP) or independent cleanup at a contaminated site
Study Purpose	Determine the extent of contamination on site.
Field Collection Date Range	6/9/2005 - 3/16/2015
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Ecology Contact	Tom Middleton
Ecology Program or Other Responsible Entity	Ecy Toxics Cleanup Program, Southwest Region
Ecology Monitoring Program	
Submitting Organization	Pacific Groundwater Group - Seattle WA
Study QA Planning Level	LEVEL 4: Approved QAPP or SAP.
Study QA Project Plan Description	
Study QA Assessment Level	Level 4 - Data Verified and Assessed for Usability in a Formal Study Report
Study Result Description	
Study Comment	
Ecology Grant Number	
Ecology Loan Number	
Ecology Facility/Site ID	1328
Ecology Cleanup Site ID	5012
Study ID Aliases (Alias Type)	

Step 3, cont.

The bottom section contains Study Data Summary

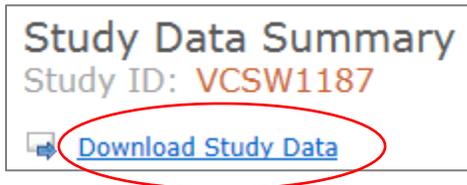
- E. Are the media (Sample Sources, like soil, groundwater, etc.) what should have been sampled? Is anything missing?
- F. Are the number of Result Records about what you were expecting?

To view the actual data, click the “View Data” link – although it is better to download the data to look at it, as demonstrated in the next step.

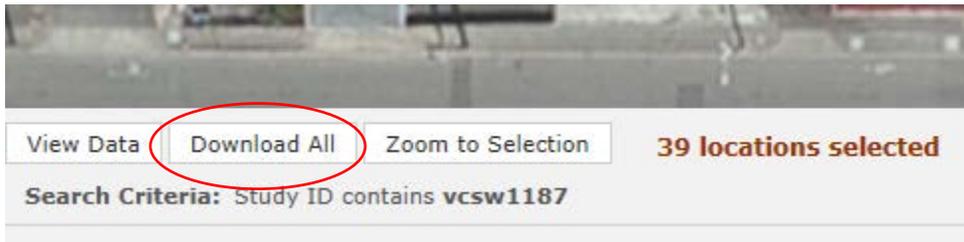
Study Data Summary	
Number of Locations	39 (View Data)
Media (Matrix) Sampled	Air/Gas Solid/Sediment Water
Sample Sources	Groundwater Soil Soil Gas
Number of Parameters Obtained	50 (View Data)
Number of Samples and Measurements	233
Number of Bioassay Records	0
Number of Result Records	2729 (View Data)
Time series Data	0
Summarized Time series Data	0
Water Column Profile Data	0
Summarized Water Column Profile Data	0

Step 4 – Download result data and perform spot checks if needed

Download your data. Every EIM page has a download link near the top.



The Map Search page also has a download link under the left side of the map.



Step 4, cont.

On the EIM Download Summary page, enter your email and verification code and click “Queue Download.”

EIM Download Summary

Email (required) Email is required to process your download request.

Description (optional)

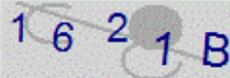
Additional options: (optional)

Include data flagged as suspect/rejected

Include data submitted to WQX

Files available for download. Uncheck any you don't want included.

	Category	Record Count
<input checked="" type="checkbox"/>	Studies	(1)
<input checked="" type="checkbox"/>	Locations	(39)
<input checked="" type="checkbox"/>	Well Locations	(11)
<input checked="" type="checkbox"/>	Well Measuring Point	(11)
<input checked="" type="checkbox"/>	Results	(2729)
<input type="checkbox"/>	Bioassay	
<input type="checkbox"/>	Time series Data	
<input type="checkbox"/>	Summarized Time series Data	
<input type="checkbox"/>	Water Column Profile Data	
<input type="checkbox"/>	Summarized Water Column Profile Data	

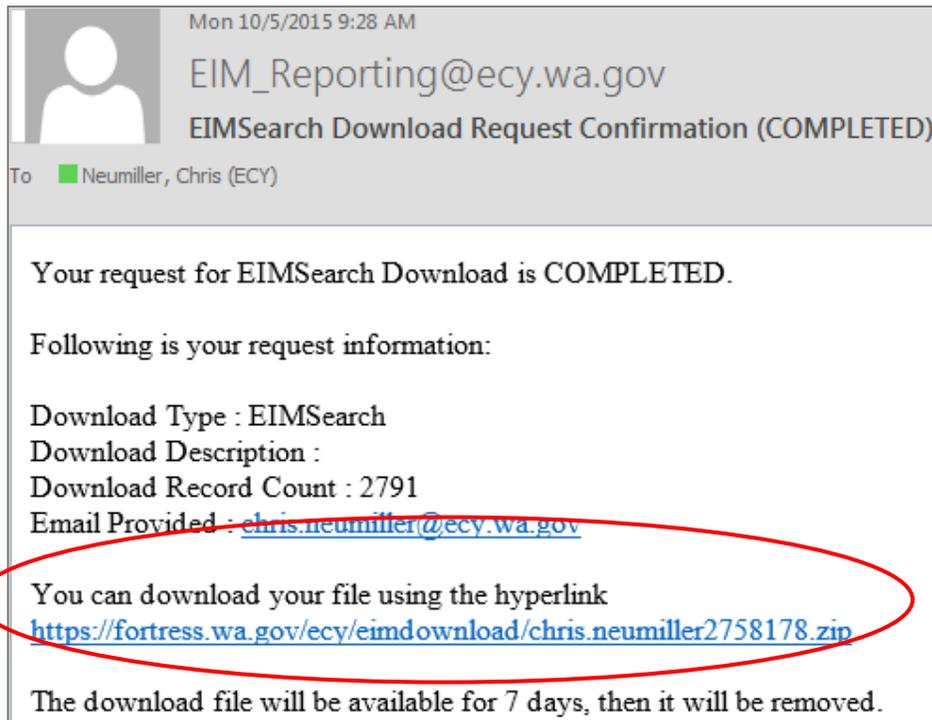


Enter verification code from the image:

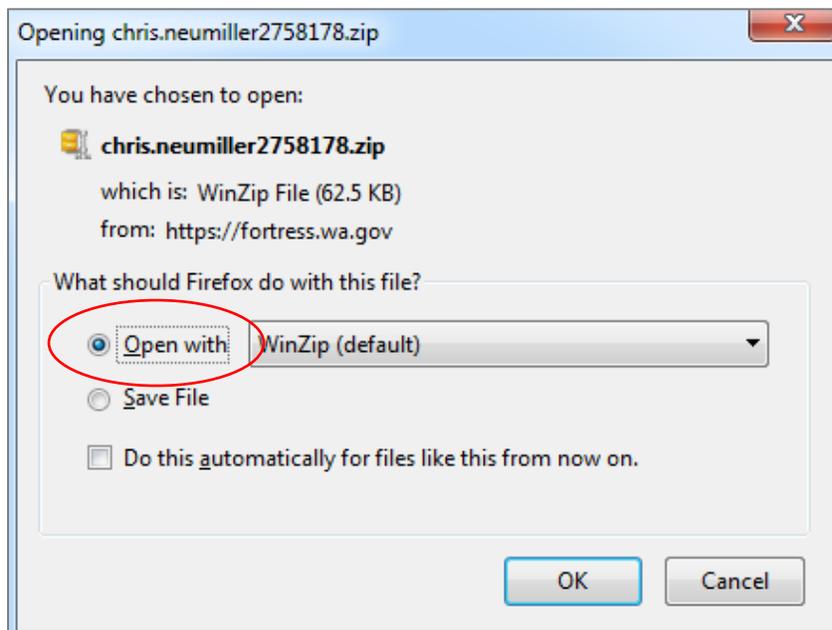
Step 4, cont.

You will receive two confirmation emails from EIM_Reporting@ecy.wa.gov. The first confirms your EIM Search Download is “PROCESSING” and the second confirms your EIM Search Download has “COMPLETED.”

Open the “COMPLETED” email and click on the download link.

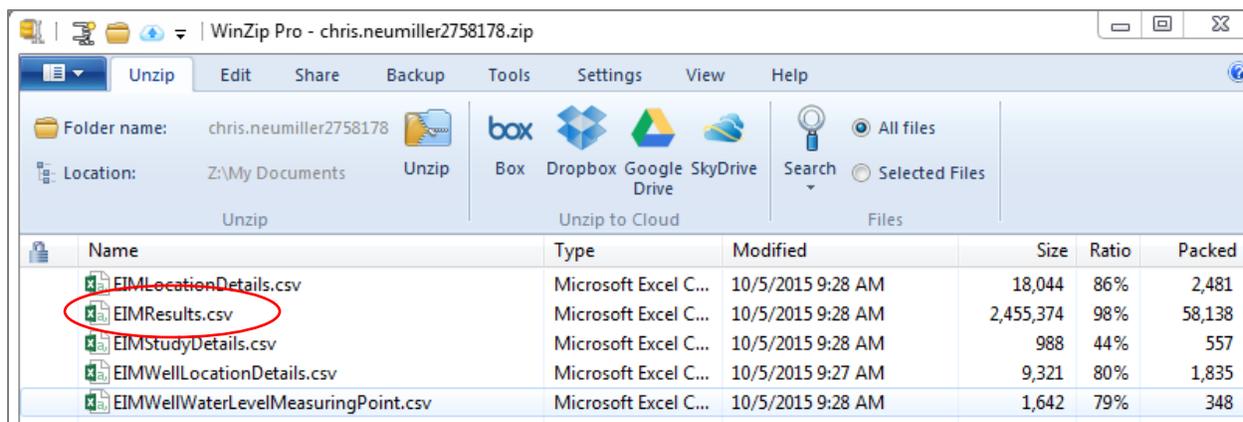


This will take you a page where you can save or open a ZIP file. Open it.

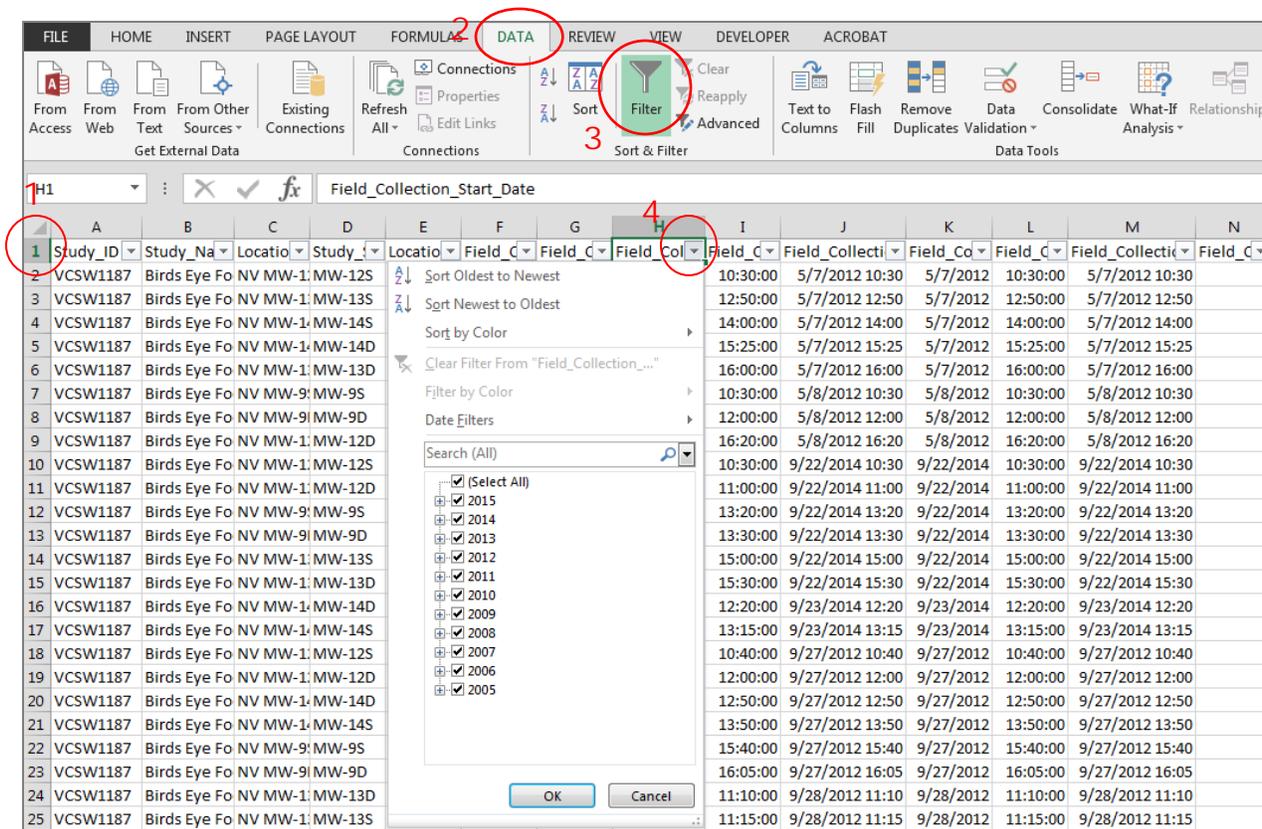


Step 4, cont.

In the ZIP file, double-click on **EIMResults.csv**.



Excel will open a spreadsheet. Filter the data by (1) clicking on row number 1, (2) selecting the DATA tab, and (3) selecting the Filter tool. You can now filter on (4) pertinent columns of data as shown below. This example is Field Collection Start Date (H), which shows the years that data were collected.



Go through your result data and check various details like detection limits vs result values, analytical methods, sample collection methods, bioassay results, etc. Once you get to this level, you will be sorting through a lot of information. The amount of time you spend on this step is up to you. Contact your EIM

Data Coordinator if you would like assistance. However, you should at a minimum understand how to download your data from EIM.

Step 5 – Email your EIM Data Coordinator

After checking your data, send a confirmation e-mail to your EIM Data Coordinator. Put the Study ID and Study Name in the Subject line of the email. **You do not need to notify the consultant/data submitter.**

<p>TCP Uplands Vacant, covered by Erica Fot</p>	<p>TCP Sediments and Bioassay Erica Fot Erica.Fot@ecy.wa.gov 360-407-6692</p>
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Once your EIM Data Coordinator receives your confirmation email, they will update the EIM Data Review Status to *Reviewed*.

Document Revision History

Revision Date	Revision No.	Summary of Changes	Reviser(s)
10/12/15	1.0	Original Document	JD, CN
10/19/16	1.1	Updated Data Coordinator contacts	CN