

# Verbatim Transcript for ECHO Webinar: Map Filter Demonstration

January 24, 2017

Good afternoon and welcome to a presentation on the Environmental Protection Agency's Enforcement and Compliance History Online website. Before we get started, let's review a few housekeeping items. Next slide please.

Audio is available for this presentation through your computer's mic and speakers or by telephone. A call-in number, as well as your access code is in the control panel box on the right-hand side of your screen. All attendees have been muted to minimize background noise. Next slide please.

If you have a question during the presentation, please type it into the questions box on the upper right hand side of your screen. We will have a dedicated time to answer questions at the end of the presentation. If you are experiencing any technical difficulties, please contact us and we will try to troubleshoot the issues. There will be some short polls during this presentation. We want to make sure that you select the appropriate multiple choice answer as they are presented when the polls display on the screen. In closing, the webinar will close with a short survey.

We just wanted to reiterate to you all to please make sure that the context of your questions are clear. We will be answering questions covering a range of topics. Feel free to reference any live examples or slide numbers that would help clarify your questions. Also, in order to make sure the webinar is useful for all attendees, we will not be addressing site-specific or individual problems during this session. Please be sure to use ECHO's Contact Us page for help with those questions. Today's presentation will include a live demonstration of the ECHO website, followed by a questions and answers session. Now, I would like to introduce Jessica Johnson of EPA's Office of Compliance to begin the presentation. Thank you.

Thank you. I am Jessie Johnson. I am a program analyst with the Enforcement, Targeting, and Data Division at EPA. I work on the team that puts together ECHO, keeps ECHO up-to-date, and puts on the trainings for ECHO. So today, we would like to introduce a new tool that we have been working on with the public and let you know what changes we have made. As usual for these presentations, I am going to start with a short introduction to what ECHO is so that for those of you who may not be familiar with our website. So, ECHO is the U.S. Environmental Protection Agency's website to provide access for compliance and enforcement data to the public. Our website can be accessed at the link on your screen, <https://echo.epa.gov>. You can use that website throughout the presentation or after the presentation. This website integrates data from major EPA information systems for public use.

Again, ECHO is EPA's public website to provide compliance information for regulated facilities, how the facilities are regulated based upon the Clean Air Act, Clean Water Act, Resource Conservation Recovery Act, and the Safe Drinking Water Act, when facilities were inspected, whether violations and environmental regulations were found, and whether any enforcement action was taken. The ECHO website also provides dashboards for overall enforcement and compliance status trends as well as bulk data sets for downloading.

ECHO contains three-year violation and five-year inspection and enforcement history for more than 800,000 EPA-regulated facilities. The data is from EPA and state, local, and tribal environmental agencies for the Clean Air Act stationary sources, Clean Water Act permitted discharges, Resource Conservation and Recovery Act hazardous waste handlers, and Safe Drinking Water Act public water systems. For further information and context, EPA inspection and enforcement data for other statutes like Emergency Planning and Community Right-to-Know Act, Federal Insecticide, Fungicide, and Rodenticide Act, and Toxic Substances Control Act are also included in our data set.

I'd like to talk quickly about the sources of ECHO data. So, ECHO extracts data from other EPA data systems on a weekly basis. Data comes into various national databases maintained by EPA sources. EPA state and local agencies and regulated entities all submit compliance and enforcement-related data. Once this information makes it into the national databases, ECHO picks it up, in weekly refreshes for most cases. This includes data systems such as the Integrated Compliance Information System, the Resource Conservation and Recovery Act Information System, the Safe Drinking Water Information System, which is extracted quarterly, not weekly, the Facility Registry System, and Envirofacts - the Toxics Release Inventory and Greenhouse Gas pollutant release data, for context. If you want to learn more about refresh needs or the data sources for ECHO data, you can go to the About the Data page on the ECHO website and find out more information about exactly when information is extracted and where the data originates.

ECHO provides various features. Our most used feature is facility searches. Through facility searches, we can search through all data, which is a cross-program search. You can also search specifically for air data, water data, hazardous waste data, and drinking water data. You can also on the ECHO website, use an EPA Enforcement Case Search, Comparative Maps and State Dashboards, which provide the national trends that I mentioned from the previous slide, and you can also use the Clean Water Act National Pollutant Discharge Elimination System Discharge Monitoring Report Pollutant Loading Tool.

Today, I am going to focus specifically on the ECHO Map Filter. This is a tool that we just released. This is a set of new features collectively called Map Filter that enhance interactions with facility search results. This tool allows you to start with a national map instead of a search form to conduct analyses and use interactive features, such as Zoom to a Current Location. This helps you isolate an area of interest. It also provides access to similar results. The data table is no longer limited to the number of aggregated results. It includes features to turn facilities on and off based on a variety of data themes, without returning to a search form as previously you needed to do from the map. The new tool also includes map layers with themes such as school locations or assessed waters that can be added to enhance visual analysis. The current version brings additional filtering capabilities for all data and water facilities into a simple map-based format. I'll break down each of these features that I have briefly discussed with you.

To answer a question I anticipate: why ECHO map filter? This is to respond to frequent user requests to do more visual analysis. It also facilitates cross-program analyses by combining multiple data themes into one view. We wanted to provide familiar filtering capabilities for facility searches that we've become accustomed to finding on popular travel, real estate, and shopping sites to make it a little more easier for our users. We also allow users to modify a search and filter results directly from the search results page, instead of returning to the search form. We are hoping this adds increased flexibility to choose results view preference. You can choose interactive map from the search form. You could also choose a data table only if that is how you prefer to view data.

Before we start the demo, we will enter our first poll question.

<Onscreen: Poll>

Ok, well thank you all so much again for attending, and a poll question will pop up on your screen. So, we just invite you to provide some of your feedback through the poll. We will go over some of the results in a second. Ok, I'm seeing that most of you have participated.

<Onscreen: Poll Results>

So, the results for why do you use ECHO is the vast majority of those attending today use it for work at 93 percent and seven percent of you all use it out of curiosity. Thank you all so much for your feedback.

Wonderful. Thank you. Hopefully the new map filter tool can assist you with your work and also fulfill some of your questions. So I just wanted to remind you before we go into the presentation, enter your questions into the chat box/questions box. We will have an answer for them at the end of the presentation. Again, feel free to use slide numbers or live examples to help us have context for questions. If you want to follow along the demo on your own computer, you can go ahead and go to [echo.gov](http://echo.gov).

This is the ECHO Home page. The ECHO Facility Searches have been updated with the new Map Filter feature, which can be accessed through any Facility Search. Once on the Home page, at [echo.epa.gov](http://echo.epa.gov), you can select Explore Facilities to access the features through the familiar Facility Search form. Or you can select Create Maps to take advantage of the new ability to start your search from a map. Today to start the presentation, we will start with Create Maps. Here, you can see there are four new links available from which to choose. Selecting any of the four links will return a national map of requested facilities and a table of data aggregated by state. You can use interactive components to drill down more on detailed data. I am going to first demonstrate some new features available for water facilities, then come back and show another example using new search form features.

The page is fully loaded now. So, as mentioned, results are initially displayed in clusters on the map. For a summary of information about clusters in the data table, until you get down to 500 facilities. I'd just like to point out some new important points for the side bar and for using the new map. When using the interactive map feature, there is a limitation on the number of results returned. Previously, results were limited to 600,000. You can see here that 201,064 facilities are returned. As shown, aggregated data are initially presented by state. This is the data table showing your states along with other columns with detailed information. The summary data can also be downloaded. You can download facility data of 100,000 or fewer results or aggregated data.

It also has Enforcement and Compliance criteria. These are common questions users often have about facilities. Then, we also have basic information about facilities displayed. As you manipulate the map, data in the table and counts on the side bar will update accordingly because the Sync Map and Table button is selected. If you keep the table static, you can unselect this button, and the table and map will not be synced automatically. You can control the map using a variety of controls. There is a zoom selection, so you can use the plus/minus controls to zoom. You can also use the wheel of your mouse to zoom in and out. Or, you can use the Zoom To box to select a state, city, or zip code.

You can also change your Basemap Options. Today I have topographic because I think it is a little bit clearer on other screens when I am doing the demonstration. You can open your Map Legends. These buttons were in the previous map as well, I just like to point them out. You can refine or modify your search results directly from the results page by using the data table, selecting a state or selecting Enforcement and Compliance criteria. Once you select the state, you can also select counties in that state. For starters, today I am going to start with the Enforcement and Compliance criteria -- if you don't have a particular state that you are wanting to explore.

So today, I am going to select Facilities with Current Significant Violations to start. This will bring down the aggregated data on the map and also the table. You can select multiple Enforcement and Compliance criteria. The next one I am going to select is Facilities with Formal Enforcement Actions Within the Past Five Years. The final one I am going to select is ones that also have Informal Enforcement Actions. This will bring my facilities down to 650.

Remember, I said earlier that this stays at an aggregate level until you are down to 500 facilities. So, I am going to zoom my map in. Now, we are down to 256 facilities found. Now that we've zoomed in, you can start to see individual facilities. The facility-level data are now shown in the data table and additional filters can become available under the Filter Facilities tab. Enforcement and Compliance checkboxes modify your search whereas Filters and Layers that I am about to demonstrate will not change your search results, but rather what is displayed on the map and table. As you select these on and off, the table and map will change. I am going to minimize the yellow Current Search box so that we can see the filters on the screen. To limit our facilities that are displaying, I am going to go ahead and select Major Facilities Only. Notice that facility counts in the Filter panel update because ECHO is not only filtering Only Major Facilities, which tend to have a relatively higher pollutant discharge than other facilities. ECHO displays a comparison count indicating how many facilities are filtered out of the universe for your search results. So this shows you that we are now showing 98 out of 256 facilities on my search results. This adjustment happens with every filter you put in place. This is helpful because it allows you to see how many facilities fit this criteria and will help you decide if these are the filters you'd like to use for your exploration or not. So I can see on the Owner/Operators, that there are 0 federal for major facility types in this current search area. So I could go ahead and say that that was not a helpful filter to put on because it won't give me any facilities to look at. The filters that are provided on the side bar are the popular filters from the original search form. You can select however many you would like. I am go ahead and minimize the cranberry Filter Facilities box and open up the Customized Map Layers.

These various map layers that have been made available to you, please note that each map layer requires specific map scale for display. Layers are only available for selection if the map is zoomed into a sufficient scale. Zoom in further to enable selection of additional layers. We brought in various layers and made the Non-Attainment Areas by Pollutant. You can select an info box to get a legend. Because I have not zoomed in enough, there is no legend. You can see that we cannot select water layers now. We have Assessed Waters and it will tell me I need to zoom to 48 percent in order to activate the Assessed Waters. I will go ahead and show you that. My current zoom is 30 percent, 35, 39, 43, 48, and you can see that I can now select Assessed Waters. We also have the Total Maximum Daily Loads, Impaired Waters, and coming soon will be Water Quality Indexing. We've also included maps from EJSSCREEN Maps. This includes Demographic Indicators, Environmental Indicators, as well as Environmental Justice Indexes. Another layer we have included for context to help with your searches

are Schools and Hospitals. So this layer will show you where any school, particularly near a facility, but where any school is and any hospital is.

We've also added a new boundary layer. So, you can apply the Indian Country Boundaries or Federal Legislative District Boundaries. I am going to zoom back in and if I wanted to see the EJSCREEN Maps, this will show you the legend. Under Environmental Indicators, I am going to select the Water Discharger Proximity. This is the layer applied. You can see that it goes underneath your facility layer. This is so that you can see your facilities on top of the layer that you are applying.

I zoomed out a little too far, but I am going to zoom back into 30 percent so that we can see the EJSCREEN Map. Legends describing the symbology used in various layers is acceptable. You can also view the map legends or alter Basemap options. So, we have our map legends here that will show us the facilities. We can again, like I said before, change a Basemap or we can open the EJ Screen map layers and see the legends applied layer. I am going to go ahead and clear the layers right now. As I mentioned earlier, all page interactions dynamically update as you manipulate the map unless you freeze your table or counts.

To show you this, I am going to uncheck the Sync Map and Table and I am going to apply the Impaired Waters Map to zoom in and show you the changes in the table. So under Impaired Waters, I cannot select this layer until I have zoomed into 48 percent. We will go ahead and zoom in. I am zooming in randomly on the map. I am not looking into a particular state. This is just where I zoomed in at where I will apply the Impaired Waters layer. If you notice, while I was zooming in, the table did not change whereas before, the table showed facilities. So, if the table was synced to the map, it would currently have no facilities as there are no facilities in the current section of the map.

So, what I will say about adding the layers, it can be helpful to learn about an area surrounding the facility, as well as the facility itself. In particular, this layer illustrates water bodies that have been determined to be too polluted or otherwise degraded to meet state water quality standards. That is the idea of putting all of layers onto the map for you guys.

I am going to go ahead and find a facility and click on the facility pin. When the pin pops up, basic facility information related to components on the search results page are enabled, including: the map attribute bubble that displays a 3-year compliance status summary, that's what this graph is here, this summary is by quarter, as well as a link for driving directions; the related row in the data table is highlighted and positioned at the top of the table. The facility information panel also displays a close-up aerial view of the facility. From any of these features, you can access the Detailed Facility Report otherwise known as the DFR.

For this, I selected the name and it brought me to this Detailed Facility Report. In this presentation, I am not going to go over the Detailed Facility Report. We do have tutorials on our webpage about what the Detailed Facility Report contains. I am going to go ahead and go back to the Home page from here. I clicked the ECHO logo in the corner and that is how I was immediately returned to the Home page. From here, I am going to click Explore Facilities. This is how you previously got to your search form. I will show you how you can select the data table or the maps from your search form.

For this demonstration, I will just quickly select Hazardous Waste. I am going to go ahead and select a random zip code that has under 500 facilities. Then, you can see under Results View to select the Interactive Map, which will take you to a map similar to the one I just showed you, or Data Table. Just to show you, I am going to go ahead and select Data Table and search. Now that it is loaded, you can see that only a data table is presented. But, you still have access to additional Enforcement and Compliance search criteria, where you can modify your results and navigate to specific facilities in the data table. You can also select Modify Search and it will return you to the search form as before.

For now, Air, Drinking Water, and Hazardous Waste facility searches include search criteria checkboxes but not filters or program-specific map layers. Adding those features are on a wish list for future development. The search forms we've had on the site have not changed, we've only expanded options to allow you to customize your preferred results view: interactive map or data table. Like all of our tools in ECHO, we are always working to make these tools the most helpful to our users so if there is something that stood out to you as extremely helpful or maybe needing some adjustment or change please let us know by using the Contact Us feature. While I am on this page, I will go ahead and show you the Contact Us feature is linked on every page of the ECHO website.

With that, I am going to end the demo, ask another poll question, then we will enter the questions and answers session.

<Onscreen: Poll>

Thank you. We will just ask for your feedback one more time on "How often do you utilize ECHO?" Ok, here are some of our results.

<Onscreen: Poll Results>

A little more spread out. It looks like the majority of you rarely, maybe a few times a year utilize ECHO, followed by a couple times a month, then monthly and almost every day. Thank you all so much again for your feedback.

Thank you. I'd like to go ahead and start the questions and answers session. I will go ahead while we get set up for that and open up this slide with helpful links and contacts. Do we have any questions?

Our first question is, "why is it that the Drinking Water Facilities search only allows for data table results view and not a map?"

Hi, this is Rebecca Kane and I work with Jessie on the ECHO website. Before I start answering the question, I just wanted to note that this presentation that you see on your screen is available to download on the ECHO training page so that way you will be able to click through those links if you are interested.

To get back to the question about the drinking water map. Is that correct?

Yes.

So, the reason that ECHO doesn't display a map for the drinking water systems search is because ECHO doesn't have access to precise location data for public drinking water systems. We felt it was better to not try to map imprecise locations.

"What states do not have data on ECHO?" All state and local environmental agencies submit some data to the EPA national program data systems. So, you should be able to find data on facilities from all states. Sometimes, there are some problems with connecting state systems to EPA systems. In those cases, we try to document those when we hear about them, while the EPA works to fix them. There is a page if you click on the ECHO Home page under Resources, there is a page called Known Data Problems that would list out these situations.

"Where can you see the zoom level in the interactive map view?"

When Jessie was talking about having to zoom into a certain level and when she was saying where she was at, it is on the panel on the right side, above where you check the map layers. I think she is going to try and show us now.

I am going to pull it up.

I don't know if attendees have the webinar panel on their screen on the right side. You might have to collapse your control panel. That might be blocking part of your view. Alright, so that is collapsed. So you can see here, I've gone from the search to Customize Map Layers. It says right here Current Zoom: 13 percent. And then if you go down and you expand any of the layers it will tell you that you need to be at 48 percent. I think that is the only one that says it specifically. But, it will tell you that you need to zoom into 48 percent at least. You can zoom in closer if you'd like, but it needs to be at least 48 percent. Does that help?

I think that does answer the question. I think they weren't seeing where it says Current Zoom. Thanks.

"When a person continues to zoom in on a map, can you see actual roads?"

Yes. It depends on what base map you are using. Jessie, were you using the satellite imagery? The first one I was in was not using satellite imagery. But, you can zoom in and see roads with the satellite imagery base map. It does, like you said, depend on the base map you are using.

So you couldn't get a base map that looks like a map and you would zoom in and see roads or if you are using the satellite imagery, then it depends on how good the imagery is for that area. But, often you can see the roads. It is similar to using other mapping software on your phone, things like that.

We have no further questions.

Ok. Great, then if you think of any questions later, please use that Contact Us link that is on the top right of ECHO pages.

I also would like to let you know that if there were ECHO tools that we didn't go into detail about, you can use these links here: Training, Tutorials, Help Documentation, and also on the website go to About the Data and learn more about those tools. We will also be having another webinar about ECHO as a whole website on February 14th. So, keep track on the Training page for a link to register for that. With that, we are five minutes early, but I think that is ok. I think that I will let us get back to what we were doing and learn more about ECHO in the future. Thank you.

Thank you all so much. I just wanted to note really quickly that we are interested in your further feedback. There should be a survey that will pop up when the presentation concludes. Please do take a

moment to complete that short survey and that will be very helpful. Thank you all so much again for joining us today.