Transcript for Intro to Environmental and Compliance History Online (ECHO) Webinar: How do I Search For…?

June 23, 2020

Good afternoon and welcome to today's presentation. Before we get started, let's review a few housekeeping items. Audio is available for this presentation through your computer's mic and speakers or by telephone. Your 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. If you have a question during the presentation, please type it in to the questions box on the upper right-hand side of your screen. We will have dedicated time to answer questions during the presentation. If you're experiencing any technical difficulties, please contact us and we'll try to troubleshoot the issues. A recording of the presentation will be available on the ECHO website in the next week. And lastly, a survey will appear on your web browser at the end of the webinar, so please make sure to provide your comments and feedback to us. And with that, I'll pass it on to our first speaker Amanda Speciale.

Hi everyone, my name is Amanda Speciale and I work for Eastern Research Group supporting the ECHO website. I'd like to welcome you to the Introduction to ECHO series of webinars, which provide basic demonstrations of searching and navigating the ECHO website. Today we're going to demonstrate a collection of examples of the ECHO Facility Search, which address common questions from new and experienced users. Please feel free to submit any additional questions into the question box and we will leave some time to answer them at the end of the webinar.

Now, I would like to take a few moments to introduce everyone to ECHO to make sure we are all beginning from the same starting point. The U.S. Environmental Protection Agency (EPA) provides public access to its regulatory compliance and enforcement data through the Enforcement and Compliance History Online website, which we call ECHO.

Data included in ECHO indicate how a facility is regulated, when an inspection occurred, whether violations were found and whether any enforcement actions were taken.

ECHO presents the compliance history for more than one million EPA-regulated facilities. This includes three-year compliance status history and five-year inspection and enforcement history for Clean Air Act stationary sources, Clean Water Act permitted dischargers, Safe Drinking Water Act public water systems, and Resource Conservation and Recovery Act hazardous waste handlers. Data are reported by EPA and state and local environmental agencies. ECHO also includes EPA enforcement action data under other statutes.

ECHO itself is not a data system of record. ECHO pulls data weekly from several EPA program data systems, such as the Integrated Compliance Information System, the Resource Conservation and Recovery Act Information System, the Safe Drinking Water Information System, and the Facility Registry System. It also pulls select data from EPA's Envirofacts, including Toxics Release Inventory and Greenhouse Gas pollutant release data, which helps provide a more complete picture of facility activity.

The About the Data page on the ECHO website provides links to the data sources themselves, as well as specific information on when data are refreshed.

ECHO provides a number of features to help you access and understand environmental data, such as the Facility Search and Enforcement Case Search. You can use these tools to search for facilities that match specific characteristics of interest and then choose specific reports to view detailed environmental information.

We would like to remind you to enter any questions you have into the question box. We will have a question and answer session at the end of the presentation.

Okay, let's begin the live demonstration…

We will demonstrate how to use ECHO to answer common questions from ECHO users. Let's start on the homepage…

How do I search for a specific facility?
The first way to search for information about a facility is by using the "Quick Search" on the ECHO homepage. This takes you directly to a map and table of matching results. The homepage Quick Search is a fast and easy way to run an ECHO search if you know the name or ID of a facility of interest.

Alternatively, you can perform a search by clicking on the "All Data" link to bring up the full search form.

What if I cannot find a facility by name?
Facilities sometimes are known by different names, so it is helpful to try some search variations. There are some things you can try:

You can change the Active/Operating option from "Yes" to "Any"; The full search form automatically defaults to search only for facilities that are designated as Active, so removing this criterion will search all facilities in the ECHO system. This is a common reason why facilities do not show up in search results, so we always recommend trying this first.

Facilities may also go by different names or may be spelled differently than you expect. You can try to truncate the name to the first five or six letters.

If the facility has multiple words in the name, try searching by just one word.

You might also try searching by location only, for example, by ZIP code (or city and state) and see if the facility comes up in the results; or,

Type in the previous name of the company (if there has been a recent change).

How do I search by geographic location using Latitude and Longitude?
Start on Hazardous Waste Search, in the Geographic Location section, select "View More" This allows us to see additional search criteria options.

So for this example, let's search for Hazardous Waste facilities near Atlanta, GA using latitude and longitude.

As a note, you can also allow the site to use your location (for example by using the GPS on your mobile phone), and it will create a radius around that location.

The search results show a list of facilities and their locations on the map.

What is a Hazardous Waste Facility?
It is a facility regulated under the Resource Conservation and Recovery Act (RCRA) Subtitle C Hazardous Waste Program. It is a facility which handles solid waste materials known to be hazardous (meaning that it is dangerous or capable of having a harmful effect on human health or the environment). The facility may generate, transport, treat, recycle, store, or dispose of hazardous materials.

What do the symbols on the map represent?
The flags or map pins indicate four pieces of information using the stripe color, body color, icon numbering and icon size.

Click on the Map Legend to learn what the symbols and colors represent.

Can I modify the criteria to further focus on an area?
Yes. The map initially displays results based on the search criteria entered. You can use the "Zoom to" feature to zoom in further on an area of interest, e.g., North Decatur, GA.

When the "Sync Map and Table" button is selected, as you adjust the zoom on the map the table will automatically update to display only the facilities currently visible on the map.

For our next example, let's search for a specific type of hazardous waste facility.

So, where are the Hazardous Waste Treatment, Storage, and Disposal Facilities or TSDFs in my state?
To answer this question, we need to specify the state and designation of the facilities we are interested in. Let's go back to the Hazardous Waste Search form and clear our previous search criteria

Under the Geographic Location section, select State = MD and under Facility Characteristics section, select the Universe of Operating TSDFs.

The results show TSDF facilities in the state of MD.

Alright, let's return to the homepage for our next example.

How do I find facilities with recently identified violations near my community using the map?
We can start our facility search using the map by clicking on "Map Any Facilities with Enforcement and Compliance Data." This is a nationwide map of all the ECHO facilities. We can specify criteria directly on this page to refine these results. So our question is, how do I find facilities with recently identified violations?

On the Current Search panel, check "Facilities with Significant Violations"

Data are clustered by state on the map, let's look at Arkansas.

Now we see pins for each facility. As indicated by the top stripe color on each pin, facilities may be regulated under one or more statutes. Let's use the some of the features in filter facilities panel on the right side. Let's look only at facilities with Air IDs (regulated under a CAA program).

When we use the Filter Facilities panel, the map and table dynamically update. You can choose whether to show only those facilities matching your criteria. If we uncheck "only show matches", we also see

those facilities that do not meet these criteria. They are "grayed out" or dimmed in the results table and map.

Our next question is…

How would I use ECHO to determine the facilities in my state that have been inspected recently by the state environmental agency?
Go to the All Data Facility Search.

Scroll to the Enforcement and Compliance section. Under Time Since Last Inspection choose "Within" 1 year and Agency = State.

In Geographic Location section, choose State = Virginia.

On the right panel, select "view results as data table." Note that selecting this option will return results only in a table and not display the map.

On the results page, we see the number of facilities with any inspection in the last year conducted by the state. Under customize columns, we have two additional columns of interest – "Days Since Last Inspection" or "Date of Last Inspection." We can check these to add them to the results table.

By sorting on "Days Since Last Inspection" we can see the facilities most recently inspected in Virginia by the state agency. To sort, you simply click on the column header.

How do I learn more information about a facility that appears in the facility search results?
Once on this page, click on the table row associated with the facility. The "Facility Summary" panel on the right side of the screen will expand.

Click on the Facility Name or "C" report icon to open the Detailed Facility Report (DFR). This is the first report you should look at for more information about a facility. We'll look at this report in a later example.

What do the icons under the "Reports" column mean?

These icons represent the reports available for a particular facility. To see the name of a report, you can hover your mouse over the icon or click on the "Reports Legend" button on the top right of the table to see an explanation for all types of ECHO reports.

Reports are specialized to display different environmental information. Generally, reports are specific to data from one environmental program, but some reports cover enforcement and compliance data across environmental statutes. Each report type is represented by an icon, so you may easily identify it throughout the ECHO website.

To learn more about the information in specific reports, we recommend viewing the recording of a webinar we gave earlier entitled, "Advanced ECHO Webinar: Reports." You can find it on the ECHO Training page.

Alright, let's start from the homepage for our next example, and click on the Water Facility Search.

The Water Facility Search looks for facilities that have a NPDES permit. Any point source that discharges pollutants to a water of the US is required to have a pollutant discharge permit.

How can I search on a partial permit number?
On the Water Facility Search, go to the Facility Characteristics section. The Facility ID number allows entry of partial ID numbers with at least two characters. Type a partial ID to return facilities with ID numbers that begin with the search term.

This can be particularly helpful to search for facilities covered under a NPDES general permit, because the permit numbers often have a standard naming convention.

For example, we searched on "DCR12" to see all facilities covered under a general permit for construction-related discharges in Washington, DC. This is the 2017 Construction General Permit issued by EPA.

How can I search for wastewater treatment plants or POTWs?

Go back to Water Facility Search form and clear the search criteria.

We often receive questions about how to search for wastewater treatment plants and wanted to share a few strategies, since users may define this universe of facilities differently.

One way to search for different types of facilities is to use industry classification codes. For the Water Facility Search, we recommend using SIC codes to search for particular industries. For example, SIC Code 4952 represents sewerage systems (establishments primarily engaged in the collection and disposal of wastes through a sewer system). Let's do a search for facilities in Maryland with this SIC code.

We can use Customize columns again to add some related fields - SIC Code, Facility Type, and Permit Components.

Facility Type gives you additional information about the sewerage system. It indicates the ownership type in EPA's source database. Facilities could be classified as publicly owned treatment works (POTWs), non-POTW, federal, or state. POTWs are sewerage systems owned by state, tribal, or municipal governments. Non-POTWs that have SIC code 4952 are typically smaller, privately-owned systems, serving schools or campgrounds, for example. [Hover over an example row]

Note: Permit Component is the third field that can identify POTWs.

Additionally, we offer two flow fields in Customize Columns.

Facility Design Flow and Actual Average Facility Flow. These are flows that were included on the facility's NPDES permit application.

Next example…

How do I search for drinking water systems with specific types of violations?
For this example, we'll use the Drinking Water Search Type. Let's search for larger drinking water systems with reporting violations. We can approximate the size of the system using the number of people served. Let's select 100,001 – 1,000,000" and "More than 1,000,000".

In the Enforcement and Compliance criteria, select "Monitoring and Reporting Violations".

The results show a list of systems that either failed to conduct regular water quality monitoring or did not submit monitoring results in a timely fashion to the drinking water environmental agency.

Select the Facility Name to view the DFR.

The DFR presents detailed enforcement and compliance information for a facility. It is organized into six sections, with the Facility Summary providing summary information for the main statutes available in ECHO.

Generally, when reading the report from top to bottom, information will flow from overall summaries to more detailed information, split out by each environmental program.

In the Enforcement and Compliance section, the "SDWA Violations and Enforcement Actions (5 Years)" table may have more detailed information on the monitoring and reporting violations we searched for.

While we are looking at the DFR, we want to point out the ability to report a data error using the button at the top of the report. If you suspect that there is an error in the data on the DFR, whether it's an incorrect date or facility address, etc., you can use this button to submit a report to EPA, where it will be reviewed and corrected if necessary.

Let's go to the Water Facility search for our next example…

How do I search for facilities releasing a specific pollutant?
We can use the water facility search to find facilities in Alabama that report wastewater discharges with Chlorine.

In the Pollutant section, type "chlorine" into the pollutant search box. The dropdown will automatically show matching values as you type.

Note: You can also search for specific pollutants or contaminants on the Air facility search and Drinking Water Facility search.

Let's select "Data Table" results view and click Search.

The results show facilities matching our criteria. To learn more about the specific pollutant discharge data, select the Effluent Charts Report ("E" report icon).

The Effluent Charts page presents dynamic charts and tables of permitted limits, reported releases and violations over time for Clean Water Act (CWA) wastewater dischargers.

On this page, select "Chlorine, total residual" from the summary grid.

On the chart, we can see the Chlorine concentrations reported over the last three years. The lines represent the numeric limits for chlorine in this facility's permit. The points represent discrete measurements of chlorine over time.

Let's go back to the All Data Facility Search for our next example.

How do I find facilities that report to the Toxics Release Inventory?
TRI tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. U.S. facilities in different industry sectors annually report how much of each chemical is released to the environment (air, water, or land disposal).

To be clear, chemical releases are not a measure of compliance. Including this information on ECHO provides context about the facility.

The "Pollutant" section of the Facility Search form has options to search for facilities reporting to TRI and by the amount of chemical released.

If you are interested in *any* facility that reported to TRI, use the All Data search.

If you are interested in a particular environmental release (air, water, land/hazardous waste), select one of these search types.

For example, let's search for Water Facilities that reported "direct" discharges, which are discharges to surface waters, such as rivers and lakes, over 10,000 pounds. Let's use the data table view.

On the results page, go to customize columns and select TRI Surface Water Releases column to view the pounds of chemicals released to surface waters in the most recent reporting year, 2018.

Note that not all facilities report to the TRI Program. You can refer to the Results Guide for more detail about TRI and any of the information presented on this page.

Our next question is…

How do I search for releases of air pollutants?
Go to Air Facility Search, set State = Utah.

In the Pollutant section, let's select "Has EIS ID", Year = 2014, and NEI Emission Category = Particulate Matter (PM)

What is the NEI?
The National Emissions Inventory is a comprehensive and detailed estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from several sources. ECHO Facility Search includes data from stationary point sources, such as industrial or commercial facilities.

What is PM?
Particulate Matter is a mixture of small particles and liquid droplets in the air. PM can cause reduced visibility or haze in some parts of the country. Since they are small enough to inhale, exposure to PMs can lead to respiratory health issues.

On the results page, let's hide the table to see a larger map.

Let's add a layer to our map. Select Nonattainment Areas by Pollutant.

We can see several areas of nonattainment for PM (2.5 or 10 µm), which are the dark blue and dark green areas.

What is nonattainment?

An area in the U.S. that does not meet one or more of the National Ambient Air Quality Standards for six commonly found air pollutants, designated in the Clean Air Act. You can learn more about nonattainment areas on EPA's website.

State Air Dashboard

Another way to view Clean Air Act data is to look at the ECHO State Dashboards. ECHO has program-specific dashboards that visually depict enforcement and compliance data and support the EPA's transparency efforts.

To access the State Air Dashboard, navigate to Analyze Trends on the ECHO homepage and click "State Dashboards – Air".

The Air Dashboard allows users to track both facility and environmental agency performance over time related to administration of and compliance with environmental standards established by the Clean Air Act.

As a note, EPA recently redesigned this dashboard, as well as the Hazardous Waste dashboard.

We can see that the dashboard is organized in a structure logical to the scope and activities of federal compliance and enforcement programs. This includes interactive charts describing Facilities, Compliance Monitoring Activities, Violations, Enforcement Actions, and Penalties over the last ten federal fiscal years.

You may filter your search by geographic, agency, and facility characteristics. [Hover over filters]

This concludes our demonstration.

I pointed out a couple of help pages during this webinar, and I'll mention them again. ECHO has extensive help documentation. Look out for the help links here on the homepage and on each application page.

Furthermore, if you have a question that is not answered by the help pages, you can reach us using the Contact Us link, which is available at the top right of every ECHO page.

A recording of this webinar, as well as the presentation slides and transcript, will be posted to the ECHO Training page.

In addition, we recommend viewing our short video tutorials.

We recently published three new tutorials about how ECHO data sources are collected, refreshed, and displayed on the website.

We have included links to these help pages and to various other guidance pages in today's webinar slides.

Now let's take a look at your questions.

Thanks, Amanda. Our first question is, how often is data updated?

Data are typically updated weekly from most of the National Data Systems. One exception is for drinking water data. Those data are updated quarterly, or every 3 months. You can view the most recent refresh date on our About the Data page, which if you go back to the home page, you can get to from the help block on the home page.

Okay, thank you. Our next question is, does ECHO perform better when used with a specific web browser? I just tried with Internet Explorer, and it wasn't working, meaning it wasn't pulling up any results just a blank page. I switched over to Chrome, and it's working.

Sure, we recommend using Chrome or Firefox browsers, if those are available to you. Chrome is EPA's standard browser. We are aware of a bug in Internet Explorer that's causing the issue that was reported, and that bug will be fixed within the next week. So, you can use Internet Explorer as well, but we recommend using Chrome or Firefox, if those are available.

Okay, our next question is, is there a way to get DMR data for NPDES systems that go beyond three years?

Yes, so while the facility searches query data in the last three years. You could download data earlier than that by going to the Data Services tab on the home page and looking at the National Data Sets. In particular, for NPDES data, there is a number of datasets that you can download both nationwide or by state or territory back to the inception of the program.

Okay, thank you. Our next question is, where can I find an explanation of all of the columns when I select customize columns?

Sure. We have a results guide which describes all the customized columns on each results page, and we also have search results help pages which we have links to on the results page themselves. So, you'll see a results guide link right above the data table, and then usually we have the help icons on the top right of each page.

Okay. Our next question is, can you generate a list of all permitted MS4s in Texas?

Yes, you can use the Water Facility Search to search for MS4s, which are municipal separate storm sewer systems. If we could go to the Water Facility Search form; the way to search for these particular facilities is in the Facility Characteristics section, go to permit components, and there are two different values for MS4s in this list, "medium and large" or "small" MS4s. This will generate a list of NPDES permits that have these components. So, that's one way to identify MS4s.

Okay. Can you search enforcement cases by pollutant?

Yes. If we go to the Enforcement Case Search form and go to Case Attributes. Okay, at the very bottom, we have one search criterion for keywords, and it's searching on the pollutant field by keyword. Enforcement Case Search will return any cases that have this particular keyword matched to that field.

Okay, our next question is, about NPDES and drinking water is it possible to create and save a batch of facilities in several states?

So, for the facility searches, there's no way to or we don't have current functionality to save a search, but what we recommend you do if you have a search you need to run regularly is just separately save

your criteria or save your list of either facility names or preferably facility ideas and that way you can copy and paste your list of facilities into the search form and quickly regenerate your search.

Okay, thank you. Our next question is, I have a couple of questions about retrieving only federal facilities. What is the difference between all agencies and no restrictions? Also, under federal agency what is the result if I click on the "and/or" federal facility in FRS?

Can we go to the All Data Search form? Okay, view more. Okay, so the question here is about the federal agency search criteria, so no restrictions means were not searching on this field at all or just searching for all facilities, regardless if they are associated with a federal agency. If we select all agencies, we would be selecting any facility associated with any of the agencies identified in this list, or you can select a specific federal agency from the list. The "and/or" button gives you the option to also search on a separate field which is federal facility in FRS, and what this is doing is because there are different fields in different data systems that identify what is a federal facility and since ECHO is combining different data sets, we want to give our users the option to search the widest possible criteria to define your set of federal facilities. So, if you do "and/or" logic here, you're going to get any facility associated with a federal agency or facilities that are identified as federal in FRF, and it just gives more flexibility to our users in terms of searching across fields and datasets.

Okay. The next question is, can you show us the drinking water data set?

So, we have the drinking water search type. Which is here, and then you can search specifically for public water systems on the drinking water search. Then the source system for this for the drinking water is called SDWIS that's the national program database, and we have a little bit more information about that on our About the Data page.

Thank you. The next question, is can wildcards be used in searches?

So, in our in the facility search when searching on a name, we provide different logic. Go back to the All Data Search. We provide different logic to search by name, which kind of gives that similar functionality as to adding a wild card to a particular term. So, we recommend selecting or changing the logic here to go with your name search.

 Okay. Next question is, is it possible to download emissions data for research from ECHO, for example lead emissions in a state, or are there other resources for such purposes?

Sure, our National Data Downloads page has download files for different programs, and this includes emissions. So, if we could go back to the home page and if we could go to National Datasets. So in particular, for air stationary sources, we offer an Air Emissions Data set which is a combination of air emissions from four different programs, and then we also have discharge data or DMR data for NPDES facilities that are discharging to surface waters.

Okay, it looks like those are all the questions we've received thus far. We'll pause for a moment to see if any other questions come in.

We have a question. How can you fix erroneous data?

So, we have a feature to report potential data errors on some of our ECHO reports. We briefly showed that on top of the Detailed Facility Report. We'll highlight that again. So, we have a Report Data Error

button above here, and this button is also available on some of the other reports in ECHO, such as the affluent charts. So it allows you to specifically report a potential error or outlier about the information in ECHO and that information is then routed to an EPA or state data steward for them to evaluate and update the information if appropriate in the source data system. Once that information is corrected, then after the next data refresh, the corrected information will flow into ECHO. We also have a great video tutorial about the reporting error process that we recommend reviewing if you're interested in updating or correcting data.

Okay thank you. We also have a follow-up question, on the federal facility search, can you show how to get the broadest criteria again? Thank you.

Sure. Okay, if we could go to All Data search form. Okay, so we're going to the facility characteristics section, and make sure to select view more. So if we wanted the broadest set of facilities identified with a federal facility or federal agency with they would select all agencies from the list box, and then also check Federal Facility in FRS, and then select the OR button, so that means that they have at least one or the other criteria are met.

Okay, Thank you. It looks like that's all the time we have for questions today.

Great, thank you Eva and Olivia. This is Madeline LaPatra and I conduct training and outreach for ECHO at the EPA. On behalf of all of us involved with this training, we thank you for participating in this webinar. If you think of any additional questions about using ECHO, please feel free to contact us using the contact us link in the top right of any ECHO page. I also wanted to remind you that a brief survey will open up as soon as this webinar ends. We would really appreciate your feedback. Thank you again and I hope you have a great week.