

ECHO Usability of Facility Searches

ECHO Governance Team Proposal – June 2022

Objective: The purpose of this document is to propose changes to [Enforcement and Compliance History Online](#) (ECHO) that address “better usability of ECHO facility searches” to enhance usability for both casual ECHO users and those who want more detailed information.

Background: Over a series of meetings, the ECHO Governance Team (EGT) discussed and agreed upon ways in which ECHO Facility Searches could be updated to increase usability of the searches and make them more user friendly to the public. To inform their recommendations, the team reviewed usage analytics of the ECHO Facility Search pages to help determine the top user needs.

Recommendations:

Home page

1. On the [Quick Search Page](#), the EGT proposes having the ‘Facility Name/ID’ as the default instead of ‘Location’. Heat maps showing user paths through ECHO show that most users click ‘Facility Name/ ID’ on the Quick Search Page.

ECHO Facility Search Forms

2. On the [ECHO Facility Search](#), in the “Choose a Search Type” dropdown, the terms “Water” and “Drinking Water” could be confusing to the public

- a. Proposed Changes:

- i. Change the definition of “Water” to “Wastewater/Stormwater/Biosolids” to distinguish from “Drinking Water”
- ii. Add in the abbreviations next to the ‘Search Type’ options. The drop-down options would appear as follows (with Drinking Water moved above the new definition of water):
 1. All Media Programs
 2. Air (CAA)
 3. Drinking Water (SDWA)
 4. Wastewater/Stormwater/Biosolids (CWA)
 5. Hazardous Waste (RCRA)
- iii. Change “Search Type” to “Search Media Program,” “Choose a Search Type” to “Choose a Media Program,” and in the ‘Search Criteria Selected’ field “Search Type” will change to “Media Program” and the default, “All Data” will be “All Media Programs” for consistency.

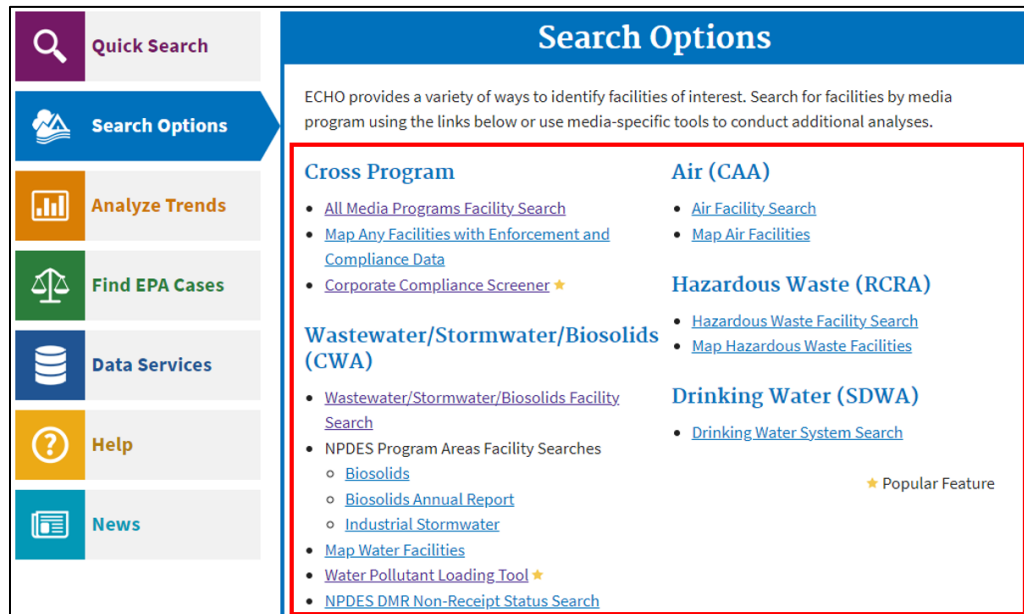
Note: These changes were implemented (see screenshot below) pending further comments.

3. On the [Search Options Page](#), the media options will be updated to match those on the search form (described above in number 3) for consistency.

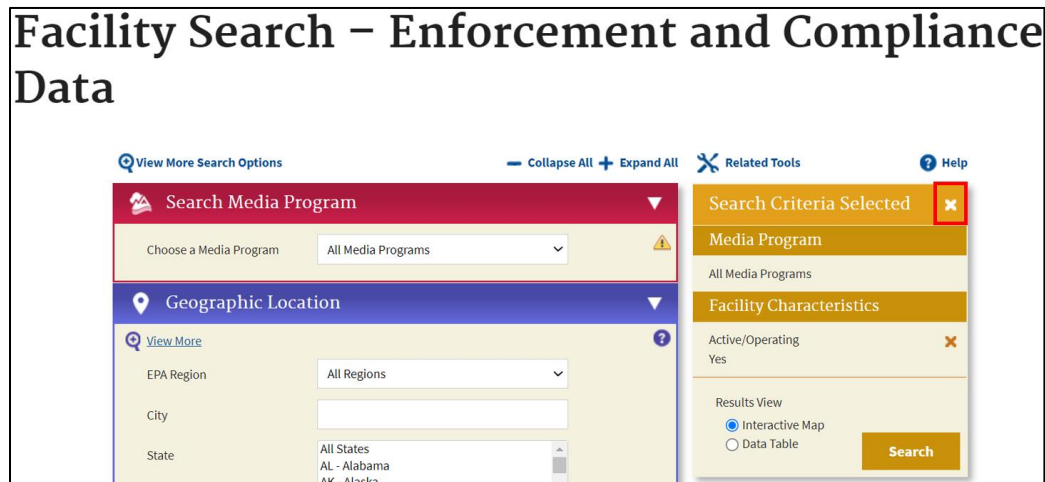
- a. Proposed Changes:
 - i. The “All Data Facility Search” under ‘Cross Program’ will change to “All Media Programs Facility Search”
 - ii. “Water” heading will change to “Water/Stormwater/Biosolids (CWA)”

1. "Water Facility Search" will change to "Wastewater/Stormwater/Biosolids Facility Search"
- iii. "Air" heading will change to "Air (CAA)"
- iv. "Hazardous Waste" heading will change to "Hazardous Waste (RCRA)"
- v. "Drinking Water" heading will change to "Drinking Water (SDWA)"

Note: These changes were implemented (see screenshot below) pending further comments.



4. On the [ECHO Facility Search](#), replacing the X (Clear All) with a 'Reset All' option that is more obvious for users when they want to start a completely new search.



5. On the [ECHO Facility Search](#), adding instructions explaining to users that they can add multiple search characteristics, which will subsequently appear in the search criteria box to the right, would be helpful for new users.

Facility Search – Enforcement and Compliance Data

The screenshot shows the 'Facility Search – Enforcement and Compliance Data' interface. It includes a 'Search Media Program' section with a dropdown menu set to 'All Media Programs'. Below it is the 'Geographic Location' section with fields for 'EPA Region' (set to 'All Regions'), 'City', and 'State' (with a list showing 'All States', 'AL - Alabama', and 'AK - Alaska'). On the right, a 'Search Criteria Selected' panel is highlighted with a red box. This panel lists 'Media Program' (All Media Programs) and 'Facility Characteristics' (Active/Operating: Yes). It also shows 'Results View' options: 'Interactive Map' (selected) and 'Data Table'. A 'Search' button is at the bottom right of this panel.

a. Proposed Changes:

- i. Add information icon to let users know they can select multiple options with the Ctrl key and language that they can view search criteria on the right
- ii. A tip on the ECHO Facility Search should be added to the help documentation as well

6. In the Geographic Location section of the [ECHO Facility Search](#), the “Near US-Mexico Border” and “Near US-Canada Border” selection seems unnecessary for public users.

Facility Search – Enforcement and Compliance Data

This screenshot shows the 'Facility Search' interface with the 'Geographic Location' section expanded. The 'View More' link is highlighted with a red box. Below the 'State' dropdown, there are two new options: 'Near US-Mexico Border' and 'Near US-Canada Border', each with radio buttons for 'Any', 'Yes', and 'No'. These two options are also highlighted with red boxes. The 'Search Criteria Selected' panel on the right remains visible, showing the same search criteria as in the previous screenshot.

a. Proposed Changes:

- i. “Near US-Mexico Border” and “Near US-Canada Border” selection should be made an Advanced Search Criteria option and be included only when users hit ‘View More’

7. In the Facility Characteristics section of the [ECHO Facility Search](#), the search term “Restrict by Media” is confusing, as the definition of “media” is unclear.

Facility Search – Enforcement and Compliance Data

The screenshot shows the 'Facility Search – Enforcement and Compliance Data' interface. The 'Facility Characteristics' section is expanded, revealing search criteria for Facility Name, ID Number, SIC Code, and NAICS Code. The 'Restrict by Media' dropdown is highlighted with a red box, showing 'No Restrictions'.

a. Proposed Changes:

i. Change “Restrict by Media” to “Restrict by Program”

8. In the [ECHO Facility Search](#), the magnifying glass to “View More/ View Fewer” should only correspond to the section it is clicked for.

Facility Search – Enforcement and Compliance Data

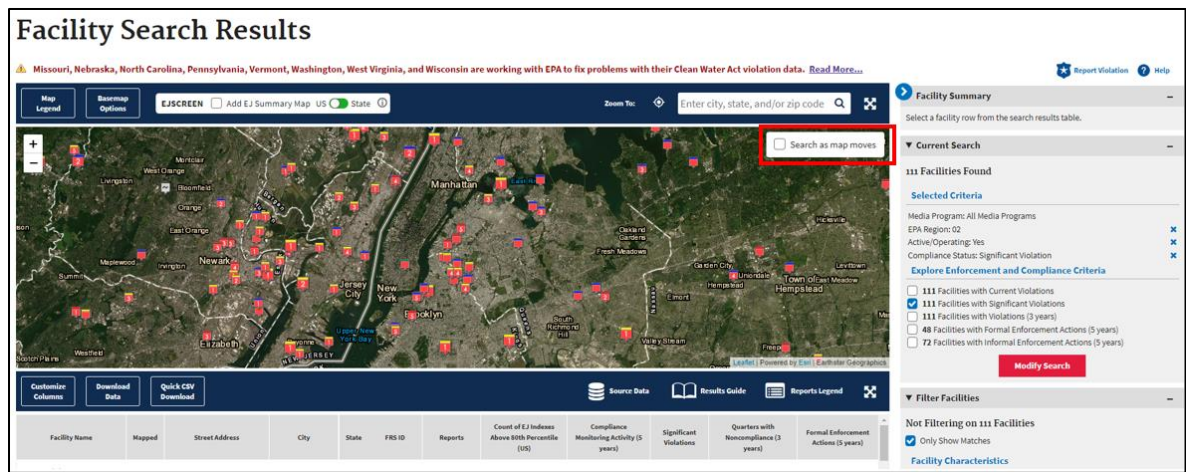
The screenshot shows the 'Facility Search – Enforcement and Compliance Data' interface. The 'Search Media Program' section is expanded, showing a dropdown for 'Choose a Media Program'. The 'View More' magnifying glass icon is highlighted with a red box.

a. Proposed Changes:

- The “View More/View Fewer” magnifying glass should only open or close options within the section where it is clicked
- The Demographic Profile section (now Community section) should always have three search options displayed and no magnifying glass to “View More/View Fewer”

Note: Due to recent Administration priorities, the ECHO team renamed the Demographic Profile section “Community,” made it display by default, and moved it up closer to the top of the form.

9. On the [Facility Search Results](#), the syncing of the map and data table should be unchecked to avoid accidental zooming/ scrolling.



- a. Proposed Changes:
 - i. The “Sync Map and Table” selection should be left unchecked as the new default
 1. Default to the Data Table but provide an option to revert to Map View with a warning that if more than 500 facilities are listed, the table data will summarize
 - ii. Suggest adding a collapse feature for the map to make the data table more prominent.
 1. This has been implemented on other ECHO tools, but not deployed yet

Note: Change i was implemented pending further comments.

Water Facility Search form:

10. On the [ECHO Water Facility Search](#) with no Water Program Area selected, the defaults should be revised for clarity.

- a. Proposed Changes:
 - i. The new defaults should be the following:
 1. Permit Status = Effective, Expired, Administratively Continued
 - a. Remove= Pending, Retired
 2. Permit Type = NPD - NPDES Individual Permit, GPC – General Permit Covered Facility
 - a. Remove= UFT – Unpermitted Facility

11. On the [ECHO Water Facility Search](#), the Permittee Name should be one of the available search criteria.

Facility Search – Enforcement and Compliance Data

a. Proposed Changes:

- i. Permittee Name should be added as a separate search option from Facility Name

Drinking Water System Search form:

12. For the [Drinking Water System Search](#) under the Enforcement and Compliance search section, the site visit types are Inspection and Non-Inspection. There is also a separate Sanitary Survey Section under this tab. The distinction between Inspection and Sanitary Survey may be confusing to the public user since sanitary surveys are a type of inspection.

Facility Search – Enforcement and Compliance Data

a. Proposed Changes:

- i. The “Site Visit Type” drop down should be organized as follows:
 1. Any Site Visits
 2. Sanitary Surveys and Inspections
 3. Other Site Visits
- ii. “Site Visit Type” search option should come before the dates on the search form

- iii. The “Sanitary Surveys” search options would be deleted, except for significant deficiencies which would open up when “Sanitary Surveys and Inspections” is selected as the site visit type

Note: These changes were implemented but we are still taking comments.

NPDES Monitoring Data Download (under Water Pollutant Loading Tool, Data Downloads):

- 13. The [NPDES Monitoring Data Download](#) search form can be improved for usability as DMRs are one of the most frequent Public Information Requests. The search is limited and not intuitive especially when someone is trying to find information for a region or multiple locations with the same owner.

The screenshot shows the 'NPDES Monitoring Data Download' page. At the top, there is a navigation bar with links: 'Water Pollution Search', 'Data Downloads' (highlighted), 'Everyday Searches', 'Resources', and 'Help'. Below this is a 'Search Criteria' box with a blue header. Inside the box, there are two sections: 'Monitoring Period' and 'Facility Identification'. The 'Monitoring Period' section has a label 'Monitoring Period Date Range' followed by a date range 'Apr. 2018 → Mar. 2022'. The 'Facility Identification' section has a label 'NPDES ID' followed by a text input field. Below the 'Search Criteria' box, there are two orange buttons: 'Download Formatted Excel File' and 'Download CSV File'.

- a. Proposed Changes:
 - i. “Monitoring Period Date Range” will move inside the blue ‘Search Criteria’ box.
 - ii. The “Monitoring Period Date Range” selector should be an obvious drop-down to adjust the date range. Right now, the date range does not look like it can be adjusted.
 - iii. The search inputs for NPDES ID should be case-insensitive
 - iv. “NPDES ID” should be changed to “EPA NPDES ID” and the following text should go next to that title to clarify what the EPA NPDES ID is:
 - 1. ‘This is a nine-character code starting with the 2-letter state abbreviation, followed by 7 digits (example: GA0123456) used to uniquely identify a permitted NPDES facility. The EPA NPDES ID may be different than the State NPDES ID for a facility. If you do not know the EPA NPDES ID, click [here](#) to search for it.’

Note: Change i was implemented pending further comments.