
Introduction to the Modernized Water Pollutant Loading Tool

<https://echo.epa.gov/trends/loading-tool/water-pollution-search/>



ECHO Training
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Office of Enforcement
and Compliance
Assurance

Outline

- Quick overview of how EPA and states collect and manage wastewater sampling data from sewage treatment plants and industrial facilities.
- Overview and demonstration of a new EPA web tool for better access to these data.
- Questions and answers and demo of tool.



Wastewater Pollution Data



Under the Federal Clean Water Act (CWA), industrial facilities and sewage treatment plants are required to get a permit in order to discharge.

These CWA National Pollutant Discharge Elimination System (NPDES) permits require facilities to sample their wastewater, analyze the pollutants they are discharging, and report these results to states or EPA.



Wastewater Pollution Data



These wastewater pollution data are submitted on forms called "Discharge Monitoring Reports" or DMRs.

EPA policy requires states to enter these DMR data for some facilities into EPA's national data system.

EPA and states use DMR data to:

- Calculate permit effluent limits,
- Identify and target effluent limit violations, and
- Improve watershed modeling.



Wastewater Pollution Data



An important consideration in assessing the potential impact of pollutant discharges on human health and the environment is identifying the amount discharged (pounds per day), which can be reported or calculated from the DMR.



Wastewater Pollution Data



EPA also collects wastewater pollutant discharge data (annual amounts) from industrial facilities as part of the Toxics Release Inventory (TRI) program.

The current TRI toxic chemical list contains over 593 individually listed chemicals and 30 chemical categories.



New EPA Web Tool for Access to DMR Data



<https://echo.epa.gov/trends/loading-tool/water-pollution-search/>

EPA has a new web tool, DMR Pollutant Loading Tool, for easier access to DMR and TRI data (2007 to present).

EPA constructed this tool to answer questions in an easy to use interface:

- Who is the discharger of interest
- What is the pollutant of interest:
- When was the discharge:
- Where is the discharge of interest:
- How much point source pollution is discharged?



Wastewater Pollution Data



EPA designed the new tool for two main audiences:

- members of the general public (citizens, researchers) who would like quick and easy access to wastewater pollution data; and
- technical users (permit writers, watershed modelers, regulatory agencies).



DMR Pollutant Loading Tool – What’s New

The Loading Tool was published on EPA’s 40th birthday (2 December 2010) and has steadily grown into one of the Agency’s most popular tools.

EPA has modernized the Loading Tool to increase user access to data, improve search speed and performance, and streamline site maintenance.

EPA has also simplified the navigation:

- “Water Pollution Search” combines EZ Search, TRI Search, and Facility Search
- “Get Data” lists tools that generate data files for download, including Custom Search (a.k.a. Advanced Search)
- “Everyday Search” lists specialized features, such as the TRI/DMR Comparison Dashboard



DMR Pollutant Loading Tool – What’s New

- EPA designed the Loading Tool with different tabs (search interfaces) and result formats (webpage, CSV downloads) to best match the needs of these two audiences.

Water Pollution Search (beta)

Water Pollution Search Data Downloads Everyday Searches Resources

Select Search Type: DMR

Select Reporting Year: 2017

Help

1 Location or Watershed

- Nationwide
- Search by Location
 - ZIP Code
 - EPA Region: Select an EPA Region
 - View EPA regional map
 - State: Select a state

2 Pollutant

- All Pollutants
- Specify Pollutant
 - Pollutant Name(s): All Pollutant Names
 - Chemical Abstract Service (CAS) Number: All CAS Numbers

3 Industry

- All Point Sources
- Publicly Owned Treatment Works (POTWs)
- Industrial Point Sources (non-POTWs)
 - Point Source Category: All Point Source Categories
 - Industrial Sector ID (2-Digit SIC Code): All SIC Codes
 - SIC Code (Enter 4-digit codes)



DMR Pollutant Loading Tool – What’s New

Select Search Type:

[Help](#)

Select Reporting Year:

1 Location or Watershed

Nationwide

Search by Location

ZIP Code

EPA Region

[View EPA regional map](#)

State

County

City

Search by Watershed

ZIP Code

Watershed ID (2-Digit to 12-Digit HUC)

Major U.S. Watersheds

Only include facilities that discharge:

- to impaired waterbodies
- pollutants potentially contributing to waterbody impairment
- to counties or watersheds with ESA-listed aquatic species

2 Pollutant

All Pollutants

Specify Pollutant

Pollutant Name(s)

Chemical Abstract Service (CAS) Number

Pollutant Categories

With calculated loadings:

- Nitrogen
- Phosphorus
- Organic Enrichment
- Solids
- Metals
- Clean Water Act Priority Pollutants
- CERCLA Hazardous Substances
- TRI Chemicals
- Radionuclides

Without calculated loadings:

- Pathogen Indicators
- Temperature
- Wastewater Flow
- General Radioactivity
- Color
- Whole Effluent Toxicity

Only include facilities with effluent limit exceedances

3 Industry

All Point Sources

Publicly Owned Treatment Works (POTWs)

Industrial Point Sources (non-POTWs)

Point Source Category

Industrial Sector ID (2-Digit SIC Code)

SIC Code (Enter 4-digit codes)

[SIC Code lookup](#)

2-digit NAICS code

Enter 2, 3, 4, 5, or 6-digit NAICS code(s)

4 Facility

Facility Name

Facility ID (NPDES, FRS, TRI, or CWNS)

Permit Type:

Major/Minor Indicator Any Major Minor

Only include facilities that:

- No Restrictions
- Link to TRI ID(s)
- DO NOT link to TRI ID(s)



Webinar Demo of Loading Tool



You have questions when you see a discharge....

Facility Information (DMR)

PAULSBORO REFINING CO LLC, PAULSBORO, NJ, 08066--

NPDES ID: NJ0005029
FRS ID: 110022294569
Other NPDES IDs associated with this FRS ID: None
TRI ID(s): 08066MBLLCBILLI
Click a TRI ID to view that facility's detail page.
Facility Type: NON-POTW
Permit Type: NPDES Individual Permit
Permit Effective Date: 07/01/2007
Permit Expiration Date: 06/30/2012
Major/Minor Indicator: Major
Permit Issuance: STATE OF NEW JERSEY
Approved Pretreatment Program: N/A
Combined Sewer Overflow (CSO) Outfall: N/A
County: GLOUCESTER

Congressional District: New Jersey's 1st District
Latitude: 39.8401
Longitude: -75.2574
Facility Design Flow (MGD):
Actual Average Facility Flow (MGD):
4-Digit SIC Code: 2911 - PETROLEUM REFINING
NAICS Code:
Likely Point Source Category: 419 - Petroleum refining
[View Enforcement Compliance Report](#)
[View Permit Limits](#)
[View Multi-Year Loading Report](#)

- Indicates value contains loads that are calculated using data that has been flagged as potential outliers or data errors.
- Indicates there was one or more exceedances of permit effluent limits for this pollutant sometime during the year. You can hover over the yellow flag to see the load over limit value.

View [Facility Loading Calculations](#) for this facility and reporting year. Examining these calculations will show you how the Loading Tool calculates annual pollutant discharges. These calculations can also help identify errors in the underlying discharge monitoring data.

Select Reporting Year: 2012 ▼

Top Pollutants by Pounds (DMR, 2012)

Pollutant Name	Total Pounds (lbs/yr)	Max Allowable Load (lbs/yr)
Solids, total dissolved	18,057,551	48,810,036
Chemical oxygen demand (COD)	1,138,600	
Solids, total suspended	220,641	1,082,229
BOD, 5-day, 20 deg. C	59,021	
Oil and grease	23,809	240,495
Phosphorus	13,143	
Chlorine produced oxidants	7,409	
Ammonia as N	2,597	445,556
Sulfide	177	6,211
Total phenols	57.1	

[Download All Data](#) [Compare to TRI](#)

Top Pollutants by Toxic-Weighted Pounds (TWPE) (DMR, 2012)

Pollutant Name	Total TWPE (lbs-eq/yr)	Max Allowable Load (lbs-eq/yr)
Sulfide	495	17,390
Chromium, Hexavalent	6.86	1,227
Ammonia as N	2.88	495
Chromium	0.32	

[Download All Data](#) [Compare to TRI](#)

...the Loading Tool can provide answers!

