

Wastewater Pollution Data



This presentation reviews new online access to wastewater pollutant discharge data that allows for:

- better transparency of wastewater pollutant discharges;
- enhanced utility of these data; and
- improved data quality.

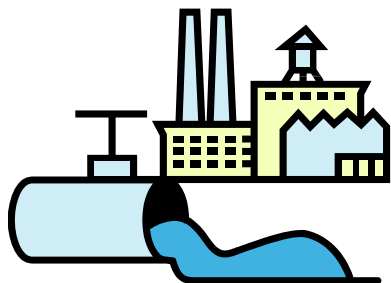
The information is being rolled out as part of the President's transparency initiative and the Agency's Clean Water Act Action Plan, which seeks to improve transparency of information and public knowledge about pollutant releases that may cause water impairments.

<http://www.epa.gov/compliance/civil/cwa/cwaenfplan.html>

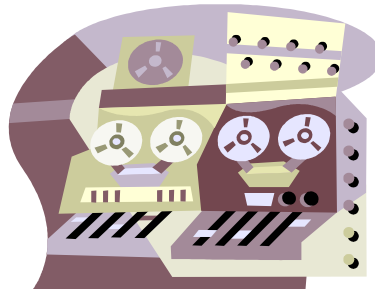


Current Management of DMR Data and Public Access

NPDES regulated facility samples wastewater and reports results on Discharge Monitoring Reports (DMRs) to State or EPA Region



EPA or State enter these DMR data into PCS/ICIS-NPDES *



DMR data are made available to public via EPA's website



* EPA policy currently only requires States and Regions to enter permit and DMR data on facilities identified as "Majors."

- EPA manages two separate databases for storing and managing NPDES data (including DMR data):
 - Permit Compliance System (PCS): Legacy system (15 States, phasing out in 12/2012); and
 - ICIS-NPDES: New system started in June 2006 (remaining States, Territories, & Tribes).
- EPA provides public access to data in PCS & ICIS-NPDES through ECHO (see URL below) and the new DMR Pollutant Loading Tool (see next slide).
 - http://www.epa-echo.gov/echo/compliance_report_water.html



New EPA Web Tool for Access to Wastewater Data

- In January 2012 EPA released a new web tool, DMR Pollutant Loading Tool, www.epa.gov/pollutantdischarges, for easier access to DMR data. This tool contains facility data for over 150,000 facilities with additional permit and DMR data for approximately 40,000 of these facilities for the years 2007 through 2010.
- Constructed to answer questions in an easy to use interface:
 - Who is the discharger of interest: [All, POTW, Industry (Type of Industry)]
 - What is the pollutant of interest: [All, Specific Pollutant, Pollutant Group]
 - Where is the discharge of interest: [Nationwide, Specific Location, Specific Watershed]
 - How much point source pollution is discharged?
- Displays or calculates pollutant loads (pounds) from DMR data.
 - Pollutant Discharge Concentration (mg/L) X Flow (Million Gallons per Day) X 8.34 (conversion factor).
- Significant implications for:
 - Better data for watershed modeling and pollution budgets (TMDLs),
 - Public access,
 - Enforcement targeting and compliance assistance (providing better sense of the importance of effluent discharges and permit limit violations), and
 - Developing effluent limits.



New EPA Web Tool for Access to Wastewater Data



The Loading Tool also allows users to search and review wastewater pollutant discharge data (annual amounts) reported by industrial facilities to EPA under EPA's Toxics Release Inventory (TRI) program.

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

Users can compare DMR and TRI wastewater pollution data for selected facilities.



New EPA Web Tool for Access to Wastewater Data

- There are two main audiences for the Loading Tool:
 - General Public (Concerned Citizens, Researchers) - Anyone who would like quick access to DMR data based on simple queries (who is discharging what pollutant and where and how much); and
 - Technical Users (NPDES Permit Writers, Watershed Modelers, Regulatory Agencies, Researchers, Enforcement Targeting).
- 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.

You are here: [EPA Home](#) » [DMR Pollutant Loading Tool](#) [Share](#)

Discharge Monitoring Report (DMR) Pollutant Loading Tool

[Overview](#) | [EZ Search](#) | [Facility Search](#) | [Advanced Search](#) | [Search EPA Lookup Tables](#) | [User's Guides/Tech Documents](#)

Note: This tool is in beta-phase and undergoing continual development and testing. The tool uses discharge monitoring report (DMR) data from ICIS-NPDES and PCS to calculate discharge loads. EPA has verified the accuracy of the calculations, and has conducted a preliminary review of the tool output to verify the accuracy of the underlying DMR data used for the calculations. However, EPA's review of the underlying data has focused on the highest discharges and included a limited number of facilities. Due to the volume of data, additional errors exist. Please send an email to waterloadings@epa.gov with any comments or questions about the tool.

Overview

Loading Tool Search Tabs

The Discharge Monitoring Report (DMR) Pollutant Loading Tool is a new tool designed to help you determine **who is discharging, what pollutants they are discharging and how much, and where they are discharging**. The tool calculates pollutant loadings from permit and DMR data from EPA's Permit Compliance System (PCS) and Integrated Compliance Information System for the National Pollutant Discharge Elimination System (ICIS-NPDES). Pollutant loadings are presented as pounds per year and as toxic-weighted pounds per year to account for variations in toxicity among pollutants. The tool ranks dischargers, industries, and watersheds based on pollutant mass and toxicity, and presents "top ten" lists to help you determine which discharges are important, which facilities and industries are producing these discharges, and which watersheds are impacted.

Read on to learn more about:

- [How to Navigate the Tool](#)
- [Loading Tool Data Sources](#)
- [Data Scope and Limitations](#)
- [2010 Beta Release and Testing](#)

Then begin your search using the [EZ Search](#) or the [Advanced Search](#) interface. If you have additional questions or would like more information about the tool, you can access more detailed information in the [Users Guide/Tech Documents](#) tab.



DMR Pollutant Loading Tool – EZ Search

Select Reporting Year: 2010

1 Location or Watershed

Nationwide

Search by Location

Zip Code

EPA Region:

Select an EPA Region

[View EPA regional map](#)

OR

State

Select a State

City

County

Search by Watershed

Zip Code

Watershed ID (12-Digit HUC)

[Find 12-digit HUC on a map](#)

Major U.S. Watersheds:

Please Select a Watershed

2 Pollutant

All Pollutants

Specify Pollutant

Pollutant Name (or partial name)

Chemical Abstract Service Number (CAS)
(without dashes)

Pollutant Categories

- Metals
- Nitrogen
- Organic Enrichment
- Pathogen Indicators
- Phosphorus
- Priority Pollutants
- Solids
- Temperature
- Wastewater Flow

3 Industry

All Point Sources

Publicly Owned Treatment Works (POTWs)
Only

Industrial Point Sources (non-POTW)

Point Source Category:

All Point Source Categories

Industrial Sector ID (2-Digit SIC Code):

All SIC Codes

OR

Enter a Industrial Sector ID (4-digit SIC Code):

[SIC Code lookup](#)

2-digit NAICS code:

All NAICS Codes

If you would like more detailed information, try the [Advanced Search](#) »



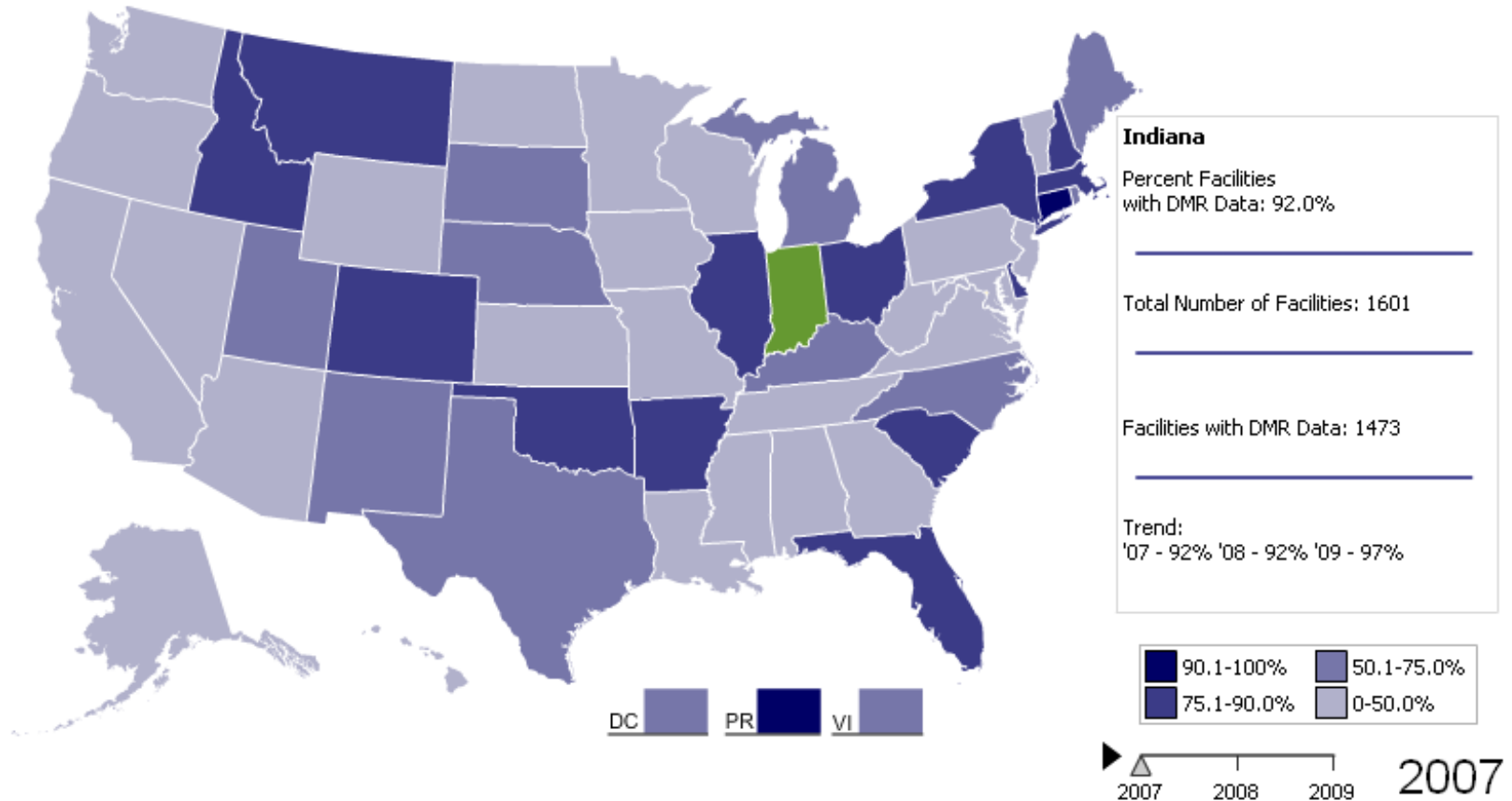
Office of Enforcement
and Compliance
Assurance

Loading Tool's Example Questions	Selection Criteria for EZ Search and TRI Search		
	Box 1: Location	Box 2: Pollutant	Box 3: Discharger Type
What facilities discharge the most wastewater pollution in Ohio?	X		
What are the top pollutants (pounds and toxic-pounds) discharged by facilities in Ohio?			
What industrial sectors discharge the largest amount of wastewater pollution in Ohio?			
What facilities nationwide discharge the most selenium in their wastewater discharge?		X	
What U.S. watersheds receive the largest amount of selenium from wastewater pollution?			
What industrial sectors discharge the largest amount of selenium in their wastewater pollution?			
What petroleum refineries discharge the most wastewater pollution nationwide?			X
What are the top pollutants (pounds and toxic-pounds) discharged by petroleum refineries nationwide?			
What U.S. watersheds receive the largest amount of wastewater pollution from petroleum refineries nationwide?			
What facilities in Ohio discharge the most selenium in their wastewater discharge?	X	X	
What industrial sectors in Ohio discharge the most selenium in their wastewater discharge?			
What petroleum refineries nationwide discharge the most selenium in their wastewater discharge?		X	X
What U.S. watersheds receive the largest amount of selenium from petroleum refineries?			
What petroleum refineries in Ohio discharge the most wastewater pollution?	X		X
What are the top pollutants (pounds and toxic-pounds) discharged by petroleum refineries in Ohio?			
What petroleum refineries in Ohio discharge the most selenium in their wastewater discharge?	X	X	X



Loading Tool – Contextual Information Provided

Completeness of Clean Water Act Discharge Monitoring Data by State - Universe Facilities



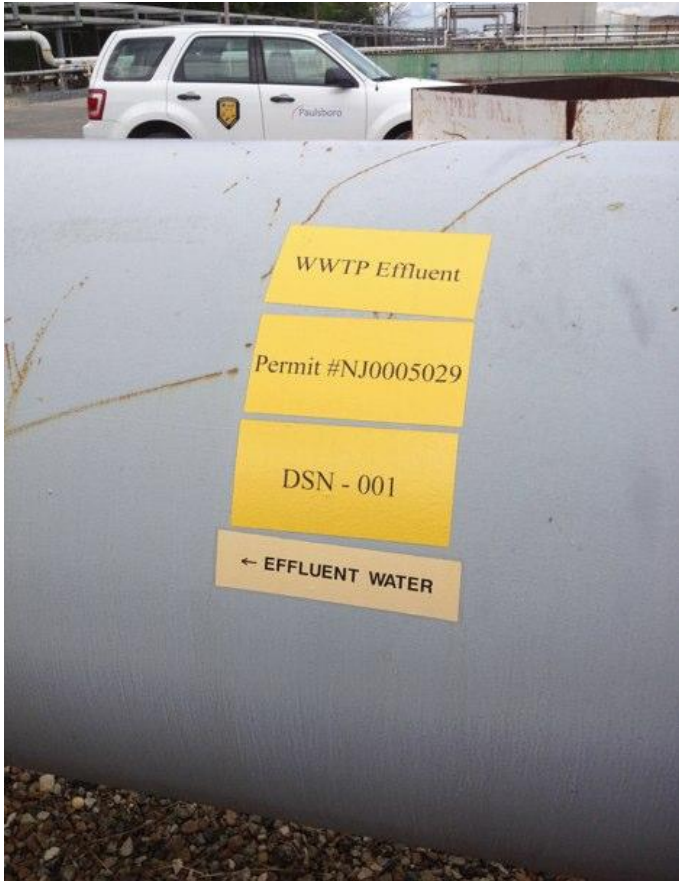
[Download Data](#)

Universe Facilities

Minor Facilities

Major Facilities

Enough talk...let's see a demonstration of the tool!



VALERO REFINING CO, PAULSBORO, NJ, 08066-

NPDES ID: NJ0005029
 FRS ID: 11002294569
 TRI ID(s): [08066MBLLCBILLI](#)
Click a TRI ID to view that facility's detail page.
 Facility Type: NON-POTW
 Permit Type: NPDES Individual Permit
 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: 39.838229
 Longitude: -75.24947
 Facility Design Flow (MGD):
 Actual Average Facility Flow (MGD): 11.3
 4-Digit SIC Code: 2911 - PETROLEUM REFINING
 NAICS Code: 032411 -
 Likely Point Source Category: 419 - Petroleum refining
[View Enforcement Compliance Report](#)
[View Effluent Discharge Charts](#)
[View Permit Limits](#)

Values highlighted in blue contain loads calculated using data that has been flagged as potential outliers or data errors.

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:

Top Pollutants by Pounds (DMR, 2010)

Pollutant Name	Total Pounds (lbs/yr)	Max Allowable Load (lbs/yr)
Solids, total dissolved	28,981,867	49,021,086
Chemical oxygen demand (COD)	2,772,303	
Solids, total suspended	597,519	1,589,506
BOD, 5-day, 20 deg. C	246,856	
Oil and grease per production	133,722	373,075
Phosphorus	59,945	
Ammonia as N	34,808	447,483

Top Pollutants by Toxic-Weighted Pounds (TWPE) (DMR, 2010)

Pollutant Name	Total TWPE (lbs-eq/yr)	Max Allowable Load (lbs-eq/yr)
Sulfide	2,407	17,465
Ammonia as N	38.6	497
Phosphorus	0	
Chromium	0	
Chromium, Hexavalent	0	1,512

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

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

...and the Loading Tool can provide answers!



Office of Enforcement and Compliance Assurance

Additional Slides

- Questions, comments, training requests on the Loading Tool should be directed to:

Carey A. Johnston, P.E.
U.S. EPA, Office of Compliance
ph: (202) 566 1014
johnston.carey@epa.gov



DMR Pollutant Loading Tool – EZ Search

Specifying Location (Standard)

1 Location or Watershed

Nationwide

Search by Location

Zip Code

EPA Region:

[View EPA regional map](#)

OR

State

City

County

Search by Watershed

Zip Code

12-Digit HUC

[Find 12-digit HUC on a map](#)

Major U.S. Watersheds:

Callouts:

- Enter a 5-Digit Zip Code (e.g., 20004)
- Select the Region of Interest
- Select EPA Region from map
- Select the State, Territory, or Tribe of Interest
- Enter City Name (must also select a state)
- Enter County Name (must also select a state)



DMR Pollutant Loading Tool – EZ Search

Specifying Location (by watershed)

1 Location or Watershed

Nationwide

Search by Location

Zip Code

EPA Region:
Select an EPA Region

OR

State
Select a State

City

County

Search by Watershed


Zip Code

12-Digit HUC

Find 12-digit HUC on a map

Major U.S. Watersheds:
Please Select a Watershed

Click on the map to find a 12-digit HUC



Zip code retrieves matching HUC12 watershed(s)

HUC12 watershed number (if known)

HUC12 watershed number (pick off map)

Major U.S. watershed (e.g., Chesapeake Bay)



DMR Pollutant Loading Tool – EZ Search

Specifying Pollutant

2 Pollutant

All Pollutants

Specify Pollutant

Pollutant Name (or partial name)

Chemical Abstract Service Number (CAS)
(without dashes)

Pollutant Categories

- Metals
- Nitrogen
- Organic Enrichment
- Pathogen Indicators
- Phosphorus
- Priority Pollutants
- Solids
- Temperature
- Wastewater Flow

Enter full or partial pollutant name (e.g., nitr). Loading Tool will return a list of pollutants that contain the specified text string.

Enter the Chemical Abstract Service Number (CAS) (without dashes) for the pollutant of interest (e.g., 7439976).

Select one pollutant category from the list. The Loading Tool output will provide the aggregated load for the selected category.



DMR Pollutant Loading Tool – EZ Search

Specifying Type of Discharger

3 Industry

- All Point Sources**
- Publicly Owned Treatment Works (POTWs) Only**
- Industrial Point Sources**
 - Point Source Category:
 - 2-Digit SIC Code:
 - OR
 - Enter a 4-digit SIC Code:
 - [SIC Code lookup](#)

Industrial Category Rankings

[Top Industrial Dischargers of Toxic Pollutants](#)

Select this button to see discharges for publicly-owned wastewater treatment facilities

Select this button to only see discharges for industrial facilities.

To narrow Industrial Point Sources search:
Select a Point Source Category; or
Select a 2-digit SIC Code; or
Enter a 4-digit SIC Code.

Click to view industrial category rankings from EPA's most recent Annual Review of Existing Effluent Limitations Guidelines for the Effluent Guidelines Program Plan.



EZ Search: “Who discharges the most nitrogen in Chesapeake Bay watershed?”

Select Reporting Year: 2010

1 Location or Watershed

Nationwide

Search by Location

Zip Code:

Select a State:

City:

County:

Search by Watershed

Zip Code:

Watershed ID (12-Digit HUC):

[Find 12-digit HUC on a map](#)

Major U.S. Watersheds:

2 Pollutant

All Pollutants

Specify Pollutant

Pollutant Name (or partial name):

Chemical Abstract Service Number (CAS) (without dashes):

Pollutant Categories

- Metals
- Nitrogen
- Organic Enrichment
- Pathogen Indicators
- Phosphorus
- Priority Pollutants
- Solids
- Temp
- Waste

3 Industry

All Point Sources

Publicly Owned Treatment Works (POTWs) Only

Industrial Point Sources

Point Source Category:

Industrial Sector ID (2-Digit SIC Code):

[SIC Code lookup](#)

2-Digit NAICS code:

EZ Search Results

[View Map of Matching Facilities](#)

Search criteria:
Major watershed = San Francisco AND Pollutant name Like 'selenium' AND All industries

Search statistics:

	Total Count	Majors	Minors	With Facility Info Only	With DMR Data	With Permit Limits
Counts of facilities:	24	24	0	0	24	8

Top SIC Discharges (2007)

4-Digit SIC Code	SIC Description	Avg Conc (mg/L)	Max Conc (mg/L)	Total Pounds (lbs/yr)	Total TWPE (lbs-eq/yr)	Avg Flow (MGD)
2911	PETROLEUM REFINING	0.0204	0.044	1,366	1,530	13.2
4952	SEWERAGE SYSTEMS	0.0015	0.032	828	927	19.3
4911	ELECTRICAL SERVICES	0.00025				
3312	BLAST FURN/STEEL WORKS/ROLLING	0.000046				

(1) Select “Chesapeake Bay Basin” from “Major U.S. Watersheds” menu

(2) Select “Nitrogen” under “Pollutant Categories”

(3) Use the default selection of “All Point Sources” in this box.

Search

Click “Search” to see the top industry sectors and facilities

Click on “Download All Data” to save results in a CSV file.

If you would like more detailed information, try t

EZ Search: “What petroleum refinery discharges the most pollution in EPA Region 6?”

1 Location or Watershed

Nationwide

Search by Location

Zip Code:

EPA Region: **06**

[View EPA regional map](#)

OR

State:

City:

County:

Search by Watershed

Zip Code:

12-Digit HUC:

[Find 12-digit HUC on a map](#)

Major U.S. Watersheds:

Please Select a Watershed:

2 Pollutant

All Pollutants

Specify Pollutant

Pollutant Name (or partial name):

Chemical Abstract Service Number (CAS) (without dashes):

Pollutant Categories

- Metals
- Nitrogen
- Organic Enrichment
- Pathogen Indicators
- Phosphorus
- Priority Pollutants
- Solids
- Temperature
- Wastewater Flow

3 Industry

All Point Sources

Publicly Owned Treatment Works (POTWs) Only

Industrial Point Sources

Point Source Category:

2-Digit SIC Code:

OR

Enter a 4-digit SIC Code: **2911**

[SIC Code lookup](#)

Industrial Category Rankings

Top Industrial Dischargers of Toxic Pollutants

[View Map of Matching Facilities](#)

Search If you would like more detailed information, try the [Advanced Search](#) >

(1) Select “06” from the “EPA Region” menu

(2) Use the default selection of “All Pollutants”

(3) Enter the 4-digit SIC code for the petroleum refining sector (2911)

Click “Search” to see the largest pollutant discharges (in pounds and toxic-weighted pounds) from petroleum refineries in EPA Region 6

Search statistics:

	Total Count	Majors	Minors	With Facility Info Only	With DMR Data	With Permit Limits
Counts of facilities:	81	44	37	27	52	52

Pollutant Name	Total Pounds
Solids, total dissolved	118,157,259
Chemical oxygen demand (COD)	43,361,922
Solids, total suspended	30,967,666
Carbon	17,928,406
Oil and grease per production	8,361,655
Sulfate	5,978,942
BOD, 5-day, 20 deg. C	4,625,788
Chloride	3,757,818
Ammonia	1,693,982
Sodium chloride	1,112,869

Pollutant Name	Total TWPE
Sulfide	89,603
Cyanide	
Selenium	
Lead	
Chlorine	
Benzo[a]pyrene	
Ammonia	1,880
Zinc	1,689
Fluoride	1,652
Benzo[a]anthracene	1,364

[Download All Data](#) [Download All Data](#)

Click on “Download All Data” to save results in a CSV file.

EZ Search – Facility Page

Facility Information

NORTHEAST WPCP, PHILADELPHIA, PA, 19137

NPOES ID: PA0026669
 FRS ID: 110001076978
 TRI ID:
 CWNS ID: 42000094001
 Facility Type: POTW
 Permit Type: NPOES Individual Permit
 Major/Minor Indicator: Major
 County: PHILADELPHIA
 Congressional District: Pennsylvania's 3rd District

Latitude: 39.99128
 Longitude: -75.055081
 Facility Design Flow (MGD): 210
 Actual Average Facility Flow (MGD):
 4-Digit SIC Code: 4952 - SEWERAGE SYSTEMS
 NAICS Code: 221320 -
 Likely Point Source Category:
 View Enforcement Compliance Report
 View Effluent Discharge Charts

Basic facility information, including location, program ID's, industrial classification, and links to EPA's ECHO website

Top Pollutants by Pound (2007)	
Pollutant Name	Total Pounds
BOD, carbonaceous, 20 day, 20 C	17,038,191
Nitrogen	8,912,506
Ammonia	7,728,598
Solids, total suspended	6,941,325
BOD, carbonaceous, 05 day, 20 C	5,296,392
Nitrogen, nitrate dissolved	1,105,786
Nitrite nitrogen, dissolved (as N)	672,416
Phosphorus	472,514
Chlorine	230,128
Iron	185,007

Top Pollutants by Toxic-Weighted Pounds (2007)	
Pollutant Name	Total TWPE
Chlorine	115,069
Ammonia	8,579
Copper	4,749
Lead	2,657
Nitrite nitrogen, dissolved (as N)	2,155
Zinc	1,441
Iron	1,026
Nitrogen, nitrate dissolved	826
Lindane	201
Tetrachloroethylenes	98.5

Top ten pollutant discharges in pounds and top ten pollutant discharges in toxic-weighted pounds.

Download All Data

Download All Data

Map showing facility location



Receiving Water Information

Waterbody Name (from GNIS): Delaware River
 Waterbody Number (REACH Code): 02040202000077
 Watershed Number(12-Digit HUC): 020402020405
 Listed for Impairment? Yes

Receiving Water Information including an indicator for whether receiving stream is on EPA's 303d list of impaired waters.

CWNS Treatment Information

The following information comes from EPA's 2008 CWNS. The CWNS Factsheet provides additional information on this POTW.

Current Treatment in Place: Activated Sludge Process & Modifications, Pretreatment, Sedimentation

Current Advanced Treatment in Place (unchecked boxes means treatment not present):

BOD Removal Nutrient Removal
 Ammonia Organic Removal Nitrogen Removal
 Metal Removal Phosphorus Removal

Residents Served: 965,611
 Non-Residents Served: 271,906

Wastewater treatment information from CWNS

NPOES Program Information

[View State Program Information](#)
[View EPA Regional Program Information](#)

Links to EPA Region and State Program websites

[Back to Facility Search](#)

[Report DMR Error](#)



Loading Tool – Other Search Interfaces

Facility Search

Facility name ← Enter a full or partial facility name

State ← Use this alone to generate a list of facilities by State, or use in combination with facility name to limit facility search to a particular State.

NPDES ID

FRS ID

TRI ID

CWNS ID

← If known, enter any one of the following Program ID's:

- 9-character NPDES ID (e.g., DC0000094);
- 12-character FRS ID (e.g., 110001136271);
- 15-character TRI ID (e.g., 20019BNNNG3400B); or
- 11-digit CWNS ID (e.g., 11000001003).

Many More Options with the Advanced Search

Select Level of Detail for Loadings Output:

Loading Calculation Options

Set Non-Detects Equal to:

Zero | ½ Detection Limit | Detection Limit

Estimation Function:

Parameter Grouping Function:

Nutrient Aggregation Function:

Timeframe

Year:

Monitoring Period Range Start

Monitoring Period Range End

