



# **NPDES Electronic Reporting Rule 40 CFR 127**



**CWA-NPDES**  
electronic reporting

2021 National Pretreatment Virtual Coregulator Meeting  
21 May 2021

# Overview of NPDES eRule



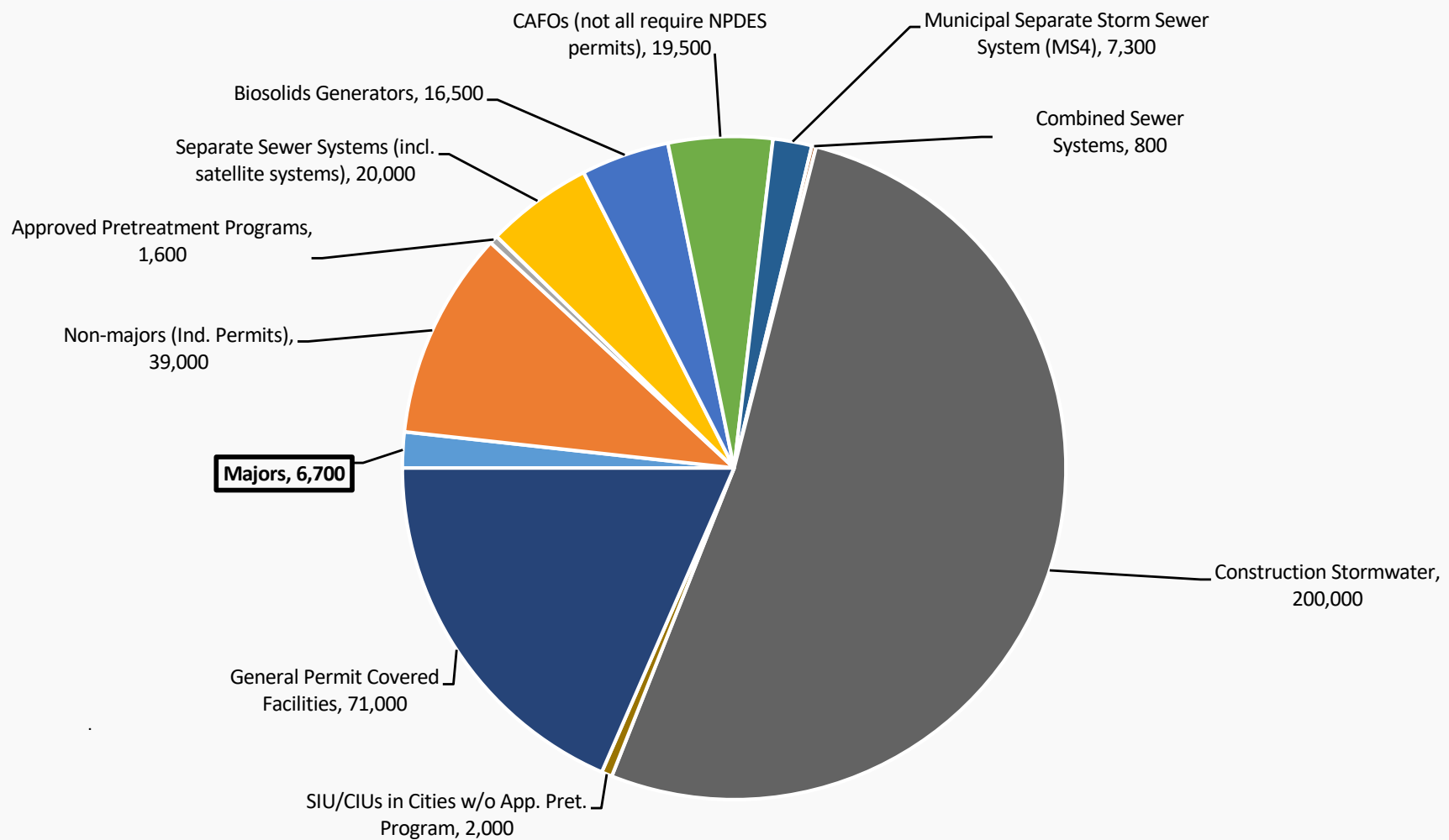
The 2015 NPDES Electronic Reporting rule (NPDES eRule) helps EPA and states clean up the nation's waters by:

- Shifting from paper to electronic reporting.
- Saving time and resources for the regulated community and for states that can be shifted to other program areas.
- Improving transparency, which serves to elevate the importance of data and environmental performance.
- Using technology to obtain more accurate, timely, complete, and consistent information about the NPDES program.



Pretreatment Program Annual Reports in one EPA Region (Region 9, 2009)

# Scope of NPDES eRule: NPDES-Regulated Entities



**Note:** The “General Permit Covered Facilities” category also counts facilities included in other categories (e.g., CAFOs).

# Reports and Data for Electronic Submissions



Existing NPDES Program Reporting		40 CFR
Data from NPDES Permittees	Discharge Monitoring Reports (DMRs) – Phase 1	122.41(l)(4)(i)
	General Permit Reports (NOI, NOT, NECs, LEWs) – Phase 2	122
	Biosolids Annual Program Reports – Phase 1 (EPA only) & Phase 2 (8 states w/ auth.)	503
	CAFO Annual Program Reports – Phase 2	122.42(e)(4)
	MS4 Program Reports – Phase 2	122.34(d)(3), 122.42(c)
	Pretreatment Program Annual Reports – Phase 2	403.12(i)
	Industrial User Compliance Reports in Municipalities Without Approved Pretreatment Programs – When EPA or State is Control Authority – Phase 2	403.12(e) & (h)
	Sewer Overflow/Bypass Event Reports (CSOs, SSOs, Bypass events) – Phase 2	122.41(l)(4), (6), (7), (m)
	CWA 316(b) Annual Reports (Federally Listed Threatened or Endangered Species) – Phase 2	40 CFR 125 Subpart J
Data from States	Require electronic reporting by NPDES-authorized states, territories, tribes, and Regions of <u>program implementation information</u> (permits, inspections, violations, and enforcement actions)	123.41 & 123.43
	Eliminate requirements for the annual state biosolids annual report, semi-annual statistical summary report, phase out state burden for ANCR and QNCR submissions, and rename and modify terms defining Category I and Category II noncompliance to reflect the new data sources	123.45, 501.21

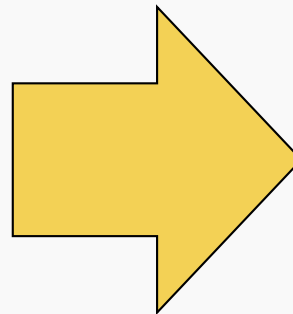
# Example Benefit of Electronic Reporting



Implementing NPDES electronic reporting can help automate violation detection. Below is an example from the biosolids annual report.



Before Electronic Reporting  
(Approximately 2,400 paper biosolids  
annual report submissions to EPA)



Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis)	If No Data, Select One Of The Following
Arsenic	= x ▾	75.01	Select an Option ▾
Cadmium	= x ▾	2	Select an Option ▾
Copper	= x ▾	1	Select an Option ▾
Lead	= x ▾	4	Select an Option ▾
Mercury	= x ▾	5	Select an Option ▾
Molybdenum	= x ▾	6	Select an Option ▾
Nickel	= x ▾	7	Select an Option ▾
Selenium	= x ▾	8	Select an Option ▾
Zinc	= x ▾	9	Select an Option ▾

▲ At least one parameter concentration exceeded its ceiling concentration limit.

"Facility land applied bulk sewage sludge or sold or gave away sewage sludge in a bag or other container when one or more pollutant concentrations in the sewage sludge exceeded a land application ceiling pollutant limit (see Table 1 of 40 CFR 503.13)" has been checked in the Noncompliance Reporting section.

Today  
(EPA's NeT-Biosolids automatically detects  
pollutant ceiling limit violations)



## Partnering with States: Implementation

### Phase 1 – DMR Submissions & Biosolids Reports (21 Dec 2016)

- EPA will continue to work with states to maintain their data sharing rates above 90% through:
  - Training and assistance for states to implement EPA's electronic reporting tools (NetDMR and NeT-Biosolids) and data exchange protocols.
  - Submission of Biosolids Annual Program Reports are in Phase 1 where EPA runs the Federal biosolids program (42 states and all territories and tribal lands).

### Phase 2 – General Permits and Program Reports (21 Dec 2025)

- EPA will continue to work with states to develop electronic reporting tools and data sharing protocols:
  - EPA is collaborating with states to build electronic reporting applications for states that elect to use EPA's NPDES Electronic Reporting Tool or "NeT."
  - Collaborating with states on the new NPDES Noncompliance Report (NNCR).

# Phase 1 Progress



## Federal Biosolids Annual Reports – 40 CFR 503 (EPA Biosolids Center of Excellence, Region 7)



2014

Before Electronic Reporting  
(Approximately 2,400 paper submissions)



2017

1<sup>st</sup> Year of Electronic Reporting  
(2,183 electronic submissions with  
640 paper submissions)

# Phase 1 Progress



## Federal Biosolids Annual Reports – 40 CFR 503 (EPA Biosolids Center of Excellence, Region 7)



2018

2<sup>nd</sup> Year of Electronic Reporting  
(2,245 electronic submissions with  
94 paper submissions)



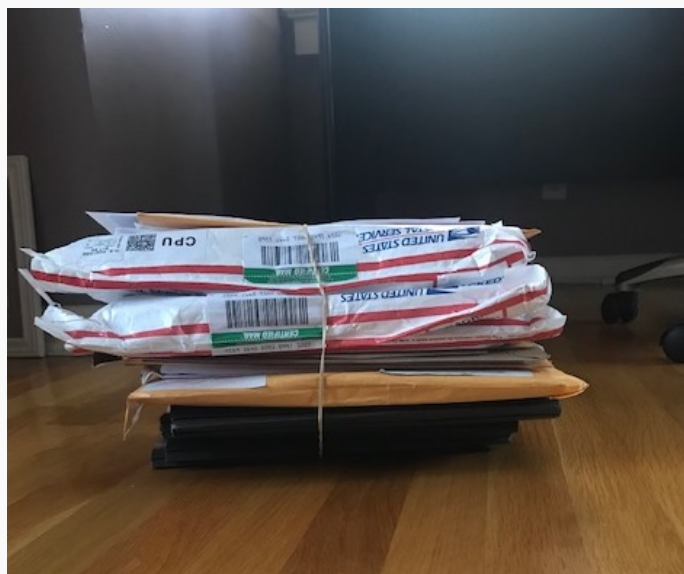
2019

3<sup>rd</sup> Year of Electronic Reporting  
(2,290 electronic submissions with  
52 paper submissions)

# Phase 1 Progress



## Federal Biosolids Annual Reports – 40 CFR 503 (EPA Biosolids Center of Excellence, Region 7)



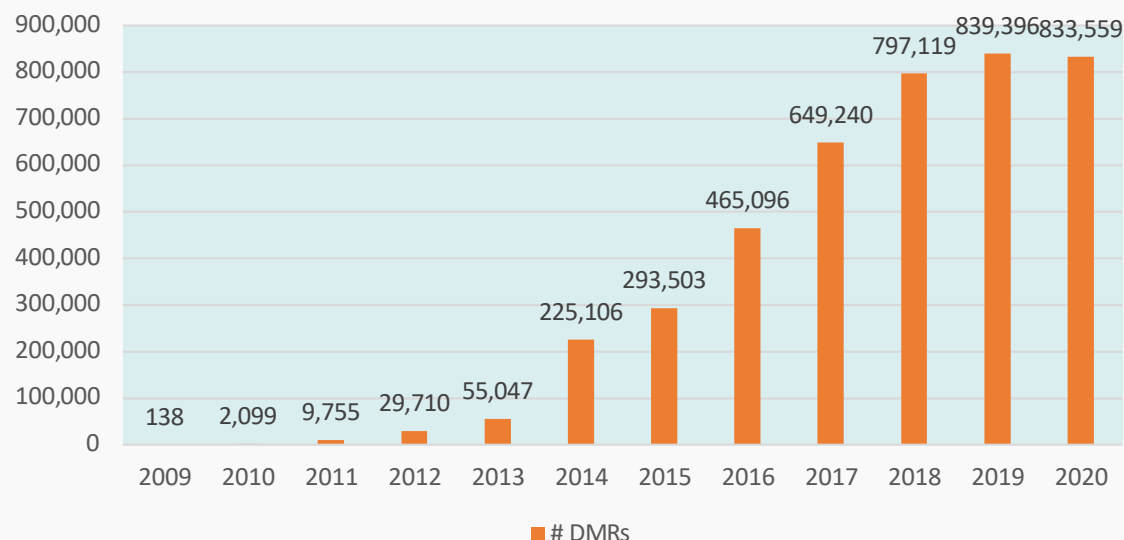
2020

4<sup>th</sup> Year of Electronic Reporting  
(2,260 electronic submissions with  
14 paper submissions)

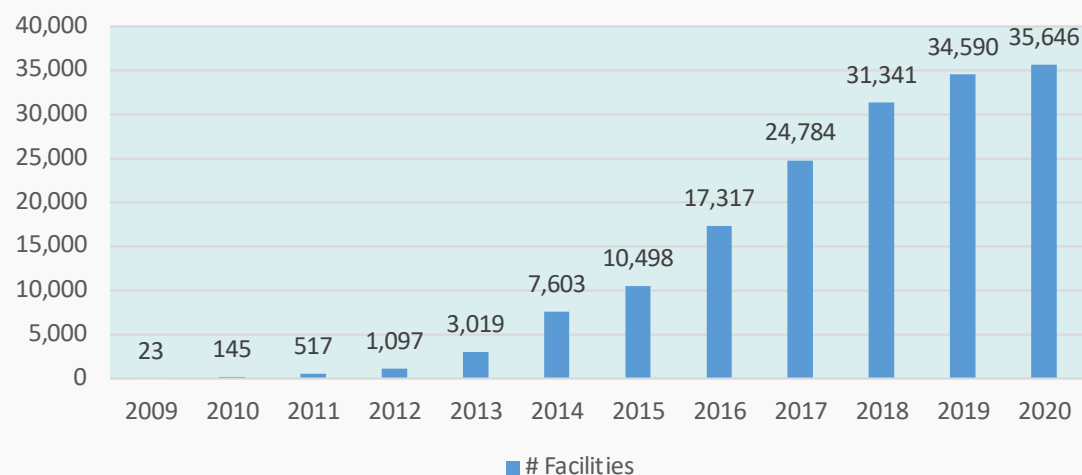
# Phase 1 Progress



Number of DMRs Submitted through NetDMR (in ICIS)



Facilities with DMRs Submitted through NetDMR (in ICIS)



- There is a dramatic increase in the use of NetDMR since promulgation of the NPDES Electronic Reporting Rule in 2015.
- This trend will continue as more and more facilities are trained and registered with NetDMR.
- States are also making tremendous progress in transitioning DMR filers to state electronic reporting tools and sharing these data with EPA.

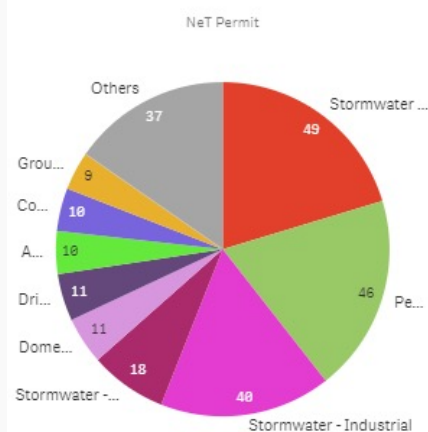
Source: EPA's national NPDES data system (ICIS-NPDES, 21 April 2021)

# Phase 2 Progress

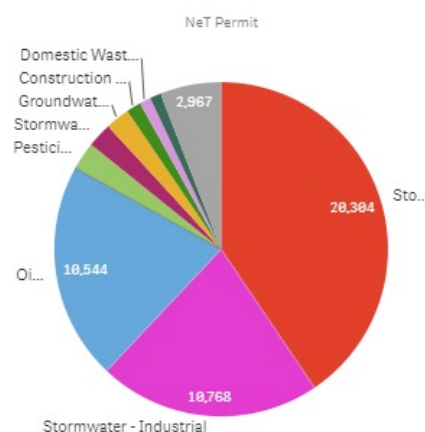


- Most of the general permit covered facilities are in a few categories:
  - Stormwater – Construction,
  - Stormwater - Industrial
  - Oil and Gas Extraction
- EPA has prioritized NeT development for these three categories.
- EPA also started NeT development for the aquaculture sector in accordance with the recommendation from the EPA-state General Permits and Program Report workgroup.

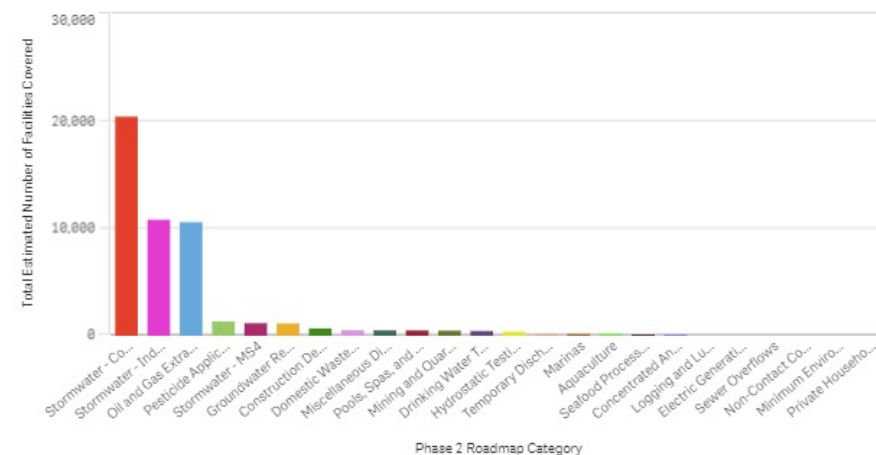
General Permit Counts by Roadmap Category



Facility Counts by Roadmap Category



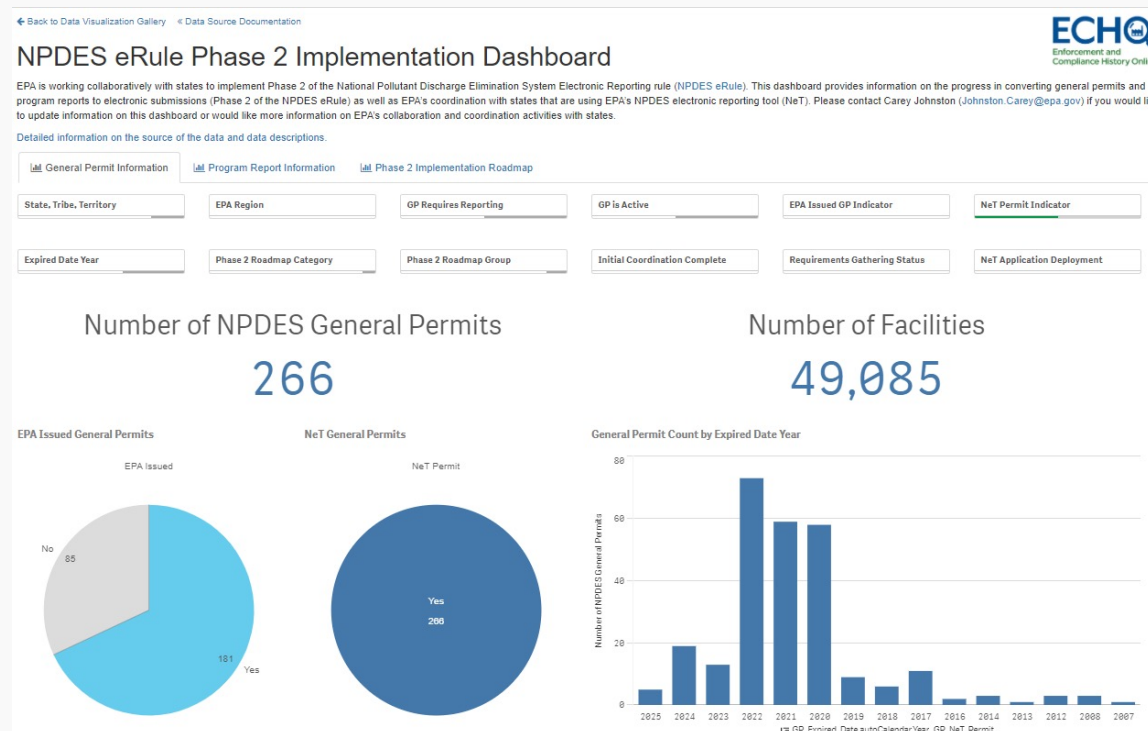
Facility Count by Roadmap Category



# Phase 2 Progress



- The NPDES eRule Phase 2 Implementation Dashboard provides EPA and states with a high-level tracking of EPA's Phase 2 implementation.
  - This dashboard provides an inventory of general permits and program reports and identifies for each general permit or program report if the state has elected to use EPA's NeT and deployment.
  - States will regularly share information with EPA to maintain the completeness and accuracy of this dashboard.



See: [https://edap.epa.gov/public/extensions/eRule\\_Phase2/eRule\\_Phase2.html](https://edap.epa.gov/public/extensions/eRule_Phase2/eRule_Phase2.html)

# NPDES eRule Dashboards



- EPA has developed a set of dashboards to help EPA Regional and state staff identify issues related to the conversion to electronic reporting and the related data sharing requirements.
- These dashboards are available through EPA's Enforcement Compliance History Online (ECHO) website.
  - See: <https://echo.epa.gov/trends/data-viz?filters=erule>.
- You will need to log into “ECHO Gov” for access to some of these dashboards. (Note: ECHO Gov is a resource for EPA and states)
- Unless otherwise noted in the documentation, data are updated each weekend from EPA's national NPDES data system (ICIS-NPDES).



# EPA-State Collaboration (Technical Papers)



- As part of Phase 2 implementation, EPA and states collaborated via technical workgroups to define the reference values, business rules, and other data standards for the minimum set of NPDES program data (App. A, 40 CFR 127).
- EPA-state technical workgroups include: Biosolids, Pretreatment, Sewer Overflows, Concentrated Animal Feeding Operations, Stormwater (Urban, Industrial, and Construction), CWA Section 316, and General Permits.
- These workgroups produced technical papers that are now posted on the NPDES eRule website.
- EPA and states should use the technical papers as a basis to identify and define the data that must be collected and shared and to support development and deployment of electronic reporting tools and data sharing protocols (XML schemas).

See: <https://www.epa.gov/compliance/npdes-ereporting>



# Next Round of Phase 2 NeT Development



- EPA will work with Regions and states on the following sectors:
  - Biosolids annual report (program report) for SD, TX, and UT (under development now)
  - Pesticide Application (general permit and permit-specific annual report)
  - Stormwater – MS4 (general permit and program report)
  - Groundwater Remediation and Dewatering (general permit)
  - Sewer Overflow/Bypass Report (program report)
- These categories meet one or more of the following criteria:
  - Include EPA general permits and program reports
  - Cover large number of facilities
  - Include program reports
  - Have interested EPA Regional and state partners who are willing to invest time and resources to facilitate requirements gathering and testing
  - Potential for re-use of existing NeT applications
- EPA will also re-issue its industrial stormwater general permit (MSGP) and this may require changes to NeT-MSGP.
- Update to EPA's Roadmap for NeT develop is available on its website.  
<https://www.epa.gov/compliance/npdes-ereporting>

# Improved Access to Pretreatment Data



- Implementation of the final rule will allow states, EPA, and the public to more readily answer the following questions (and more!):
  - Number and names of POTWs with approved pretreatment programs;
  - Number and names of industrial users (IUs) in cities without pretreatment programs inspected or sampled during a time period (not just as part of audits);
  - Number of significant industrial users (SIUs) and categorical industrial users (CIUs) in approved pretreatment programs and number without control mechanisms
  - Number and name of IUs in cities without pretreatment programs that are in compliance/not in compliance with their monitoring/reporting requirements;
  - Number of SIUs discharging to POTWs with pretreatment programs that are not inspected or sampled annually by the CA;
  - Number and names of IUs that have been issued enforcement actions including the type of enforcement (SNC publication, AO, APO), who issued it (EPA, state, POTW), and any dollar amounts;
  - Number and names of POTWs that are late in submitting local limits reevaluations.

# NeT and ECHO Demo



[Demo of NeT-Biosolids  
and Integration with ECHO]

# For more information...



EPA Region 8 Annual Pretreatment  
Reports (2014)

Questions, comments, suggestions  
should be directed to:

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Thanks!



## Appendix – Data Elements Applicable to Pretreatment

# Data Elements Applicable to Pretreatment



**Table 2: Required NPDES Program Data**

Data Name	Data Description	CWA, Regulatory (40 CFR), or Other Citation	NPDES Data Group Number (see Table 1)
<b>Pretreatment Information on NPDES Permit Application or Notice of Intent (this includes permit application data required for all new and existing POTWs [40 CFR 122.21(j)(6)] [Note: These data will be added or updated through the Annual Pretreatment Program Report, see 40 CFR 403.12(i), as needed. It is also important to note that the 'Associated NPDES ID Number' identifies the receiving POTW's NPDES permit number for each industrial user.]</b>			
Pretreatment Program Required Indicator	The unique code/description that describes whether the permitted municipality is required to develop or implement a pretreatment program (in accordance with 40 CFR 403).	122.28(b)(2)(ii), 122.44(j)	1
Pretreatment Program Approval or Modification Date	The date the pretreatment program was approved or substantially modified. This data element can be system generated by carrying forward the most recent date (approval or modification). The date must be provided in YYYY-MM-DD format where YYYY is the year, MM is the month, and DD is the day.	122.28(b)(2)(ii), 403.8(a) and (b), 403.11	1
Pretreatment Program Modification Type	The unique code describing the type of substantial modification to a POTW Pretreatment Program, which includes the initial start of a pretreatment program.	122.28(b)(2)(ii), 403.8(a) and (b), 403.11, 403.18	1
Industrial User Type	The unique code/description that identifies the type of each industrial user discharging to a POTW [e.g., Significant Industrial User (SIU), Standard Categorical Industrial Users (CIU), Non-Significant Categorical Industrial User (NSCIU), and Middle Tier Categorical Industrial User (MTCIU)]. This data element is at the permit or control mechanism level and is required for each SIU, CIU, NSCIU, and MTCIU. This data element also applies to SIUs and CIUs that discharge non-domestic wastewater by truck, rail, and dedicated pipe or other means of transportation to one or more POTWs.	122.21(j)(6), 122.28(b)(2)(ii), 122.44(j), 403.12(i)	1,2,7

# Data Elements Applicable to Pretreatment



## Basic Facility Information

The following basic facility information will be collected on all POTWs as well as all SIU/CIUs. These data are collected during the NPDES permit application process.

Approved pretreatment programs can also update these data for their SIU/CIUs when these approved programs submit their program report [40 CFR 403.12(i)].

- Facility Type of Ownership
- Facility Site Name
- Facility Site Address
- Facility Site City
- Facility Site State
- Facility Site Zip Code
- Facility Organization Formal Name
- Facility Contact Affiliation Type
- Facility Contact First Name
- Facility Contact Last Name
- Facility Contact Title
- Facility Contact E-Mail Address

# Data Elements Applicable to Pretreatment



## Basic Permit Information

The following permit information will be collected on all POTWs as well as all SIU/CIUs. These data are collected during the NPDES permit application process.

Approved pretreatment programs can also update these data for their SIU/CIUs when these approved programs submit their program report [40 CFR 403.12(i)].

- NPDES ID
- Permit Type
- Permit Component
- Permit Effective Date
- Permit Modification/Amendment Date
- Permit Expiration Date
- Permit Termination Date
- Permit Status
- Permit Issuing Organization Type
- SIC Code(s) or NAICS Code(s)
- SIC/NAICS Primary Code Indicator
- Permittee Organization Formal Name
- Permittee Mailing Address
- Permittee City
- Permittee State
- Permittee Zip Code
- NPDES Data Group Number

# Data Elements Applicable to Pretreatment



## Permit Limit Information

EPA Regions and approval authorities will also need to share the following information for SIU/CIUs where EPA or the state is the control authority.

These data are collected during issuance of a control mechanism and are used to support electronic filing of the semi-annual compliance monitoring data [40 CFR 403.12(e) & (h)].

- Narrative Conditions and Permit Schedules Information (6 data elements)
- Permitted Feature Information (3 data elements)
- Limit Set Information (10 data elements)
- Limit Information (23 data elements)
- Electronic Reporting Waiver Information (2 data elements)

Approved pretreatment programs have the option to electronically collect and share these data for the SIU/CIUs that they control.

# Data Elements Applicable to Pretreatment



## Pretreatment Specific Information

The following basic facility information will also be collected on all POTWs and all SIU/CIUs.

- These data are collected during the NPDES permit application [Part 122.21(j)(6)] and the NPDES permitting authority will share these data with EPA's NPDES data system (ICIS-NPDES).
- These data can also be updated by approved pretreatment programs with each pretreatment program report submission [40 CFR 403.12(i)].

### Data Elements for POTWs

- Pretreatment Program Required Indicator
- Pretreatment Program Approval or Modification Date
- Pretreatment Program Modification Type
- Receiving RCRA Waste
- Receiving Remediation Waste
- Control Authority Identifier

### Data Elements for SIU/CIUs

- Industrial User Type
- Applicable Categorical Standards
- Significant Industrial User Wastewater Flow Rate
- Significant Industrial User Subject to Local Limits
- Significant Industrial User Subject to Local Limits More Stringent Than Categorical Standards
- Industrial User Causing Problems at POTW
- Receiving POTW ID

# Data Elements Applicable to Pretreatment



## EPA and State Compliance Monitoring Activity Data

The following information will be generated by EPA and state staff during their compliance monitoring activities (e.g., inspections).

### Deficiencies Identified Through the Pretreatment Compliance Monitoring

This is the unique code/description that identifies each deficiency in the POTW's authorized pretreatment program for each pretreatment compliance monitoring activity (e.g., inspections, audits) by the regulatory authority.

The values for this data element will distinguish between noncompliance and significant noncompliance (SNC). These unique codes include:

- (1) failure to enforce against pass through and/or interference;
- (2) failure to submit required reports within 30 days;
- (3) failure to meet compliance schedule milestones within 90 days;
- (4) failure to issue/reissue control mechanisms to 90% of SIUs within 6 months;
- (5) failure to inspect or sample 80% of SIUs within the past 12 months; and
- (6) failure to enforce standards and reporting requirements.

# Data Elements Applicable to Pretreatment



## Pretreatment Program Report [40 CFR 403.12(i)]

The following information will be electronically submitted by the approved pretreatment program (at least annually).

- SNC Published
- SNC with Pretreatment Enforceable Compliance Schedule Status
- Local Limits Adoption Date
- Local Limits Evaluation Date
- Local Limits Pollutants
- POTW Discharge Contamination Indicator (Program Report)
- POTW Biosolids or Sewage Sludge Contamination Indicator (Program Report)
- Industrial User Control Mechanism Status
- Industrial User Control Mechanism Effective Date
- Industrial User Control Mechanism Expiration Date
- SNC with Pretreatment Standards or Limits (Program Report)
- SNC with Pretreatment Standards or Limits Pollutants (Program Report)
- SNC with Reporting Requirements (Program Report)
- SNC with Other Control Mechanism Requirements (Program Report)
- Listing of Months in SNC

# Data Elements Applicable to Pretreatment



## Pretreatment Program Report [40 CFR 403.12(i)]

The following information will be electronically submitted by the approved pretreatment program (at least annually).

- Number of Industrial User Inspections by Control Authority
- Number of Industrial User Sampling Events by Control Authority
- Number of Required Industrial User Self-Monitoring Events
- Actual Number of Industrial User Self-Monitoring Events
- Types of Industrial User Enforcement Action
- Number of Industrial User Enforcement Actions
- Industrial User Cash Civil Penalty Amount Assessed
- Industrial User Cash Civil Penalty Amount Collected
- Industrial User POTW Discharge Contamination Indicator (Program Report)
- Industrial User Biosolids or Sewage Sludge Contamination Indicator (Program Report)
- Industrial User Wastewater Flow Rate (Program Report)
- Middle-Tier Significant Industrial User Reduced Reporting Status
- Non-Significant Categorical Industrial User (NSCIU) Certification Submitted to Control Authority
- Notification of Changed Discharge Submission

# Data Elements Applicable to Pretreatment



## SIU/CIU Compliance Monitoring Reports [40 CFR 403.12(e) & (h)]

The following information will be electronically submitted by the SIU/CIUs in municipalities without approved pretreatment programs (when EPA or State is Control Authority).

These submissions are similar to DMRs and will be submitted at least semi-annually.

- Limit Set Designator
- Parameter Code
- Monitoring Location Code
- Limit Season Number
- Monitoring Period End Date
- No Data Indicator (NODI)
- Value
- Quantity or Concentration Units
- Value Received Date (as determined by State or EPA)
- Value Type
- Value Qualifier
- Industrial User Wastewater Flow Rate