

Economic Analysis of the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Proposed Rule



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List of Acronyms

The table below lists the acronyms used throughout this document.

List of Acronyms	
Acronym	Acronym Meaning
AFS	Air Facility System
ANCR	Annual Non-Compliance Report
BLS	Bureau of Labor Statistics
CAFO	Concentrated Animal Feeding Operation
CAMDBS	Clean Air Markets Division Business System
CDX	Central Data Exchange
CFR	Code of Federal Regulations
CGP	Construction General Permit
CIU	Categorical Industrial User
CROMERR	Cross Media Electronic Reporting Rule
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CWA	Clean Water Act
DMR	Discharge Monitoring Report
eDMR	Electronic Discharge Monitoring Report
ECHO	Enforcement & Compliance History Online
eGRID	Emission & Generation Resource Integrated Database
EIA	Energy Information Administration
eNOI	Electronic Notice of Intent
EO	Executive Order
EPA	U.S. Environmental Protection Agency
eProgram Report	Electronic Program Report
EQ	Exceptional Quality
ESA	Electronic Signature Agreement
FERC	Federal Energy Regulatory Commission
FR	Federal Register
FRS	Facility Registry System
GDP	Gross Domestic Product
GPRA	Government Performance and Results Act
HQ	Headquarters
ICIS	Integrated Compliance Information System
ICIS-NPDES	Integrated Compliance Information System-National Pollutant Discharge Elimination System
ICR	Information Collection Request
IDEA	Integrated Data for Enforcement Analysis
IPI	Industrial Production Index
IPT	Integrated Project Team
IT	Information Technology
LEW	Low Erosivity Waiver
MGD	Million Gallons per Day
MGP	Multi-Sector General Permit
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
MSW	Municipal Solid Waste
NAICS	North American Industry Classification System
NASS	National Agricultural Statistical Service
NEC	No Exposure Certification
NetDMR	Net-based Discharge Monitoring Report
NMP	Nutrient Management Plan
NODI	No Data Indicators
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
OECA	EPA's Office of Enforcement and Compliance Assurance
OEI	EPA's Office of Environmental Information
O&M	Operations and Maintenance

List of Acronyms	
Acronym	Acronym Meaning
OTIS	Online Tracking and Information System
OW	EPA's Office of Water
PART	Program Assessment Rating Tool
PCS	Permit Compliance System
POTW	Publicly Owned Treatment Works
PPI	Producer Price Index
QNCR	Quarterly Non-Compliance Report
RFA	Regulatory Flexibility Act
RIDE	Requisite ICIS-NPDES Data Elements
RNC	Reportable Noncompliance (according to EPA Policy and Guidance)
SASS	Semi-Annual Statistical Summary
SBA	Small Business Administration
SBREFA	Small Business Regulatory Enforcement Fairness Act
SIC	Standard Industrial Classification
SIU	Significant Industrial User
SNC	Significant Noncompliance (according to EPA Policy and Guidance)
SSCS	Sanitary Sewer Collection System
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
SUSB	Statistics of U.S. Businesses
USC	United States Code
USDA	United States Department of Agriculture
WENDB	Water Enforcement National Data Base
XML	eXtensible Markup Language

Executive Summary

ES.1 Purpose of the Proposed Rule

The proposed NPDES Electronic Reporting Rule will substitute electronic reporting for existing paper-based reports, saving time and resources for regulated entities and states, while improving compliance and better protecting the nation's waters. The proposed rule will require regulated entities and state and federal regulators to use existing, available information technology to electronically report data currently required by the NPDES permit program in lieu of filing written paper reports.

The proposed rule will require NPDES regulated entities to begin submitting certain data electronically one year after effective date of the rule, and will require authorized NPDES programs (states or EPA regions) to share with EPA a much larger percentage of the NPDES data they collect from regulated entities or generate during the course of administering the NPDES program locally.

The proposed rule will reduce the reporting burden currently borne by the states, improve overall facility compliance, allow better allocation and use of limited compliance and enforcement resources, and enhance transparency and public accountability by providing the public with timely information on potential sources of water pollution. When the rule is fully implemented it will result in improved water quality and significant cost savings for regulated entities, states, territories, tribes, and EPA.

This Economic Analysis (EA) quantifies the costs and savings of this proposed rule, while acknowledging many of the qualitative benefits that will result from its implementation. This proposed rule justifies itself on the basis of the savings/costs alone.

Historically, EPA and authorized states have focused on the largest or "major" facilities as a way of prioritizing resources for permitting, enforcement, and data reporting to EPA. Over time, there has been a growing recognition that other sources also impact water quality. Stormwater discharges, concentrated animal feeding operations, mines, and raw sanitary sewage overflows are all significant contributors to water quality impairment but are not currently considered "major" facilities under the NPDES program. The proposed rule improves data quality and availability for these significant sources, thereby providing the states and EPA with more complete and comparable data on a substantial majority of NPDES regulated entities, and allowing targeted actions to address the biggest water quality problems.

ES.2 Savings, Costs, and Benefits

EPA anticipates that the proposed rule will save money for states, tribes, and territories as well as EPA and NPDES regulated entities, while resulting in a more complete, accurate, and nationally-consistent set of data about the NPDES program. With full implementation, the anticipated annual net savings for states is \$28.7 million, \$1.2 million for regulated entities, and \$0.5 million for EPA Regions; annual costs to EPA are \$0.8 million¹. The State of Ohio's electronic reporting program for Discharge Monitoring Reports proves the potential benefits of electronic reporting.

¹ The stated savings numbers are discounted at 3%, which are first realized in full, four years after the effective date of the rule. Non-discounted values are \$32.3 million for states, \$1.4 million for regulated entities, and \$0.6 million for EPA Regions; annual costs to EPA are \$0.9 million.

Ohio's program resulted in a 99.9% adoption rate by regulated entities, increased data quality and improved environmental protection, while saving significant time and resources. Prior to electronic reporting Ohio needed five full time staff to support the DMR program. With eDMR Ohio reduced DMR staffing to less than one full time staff member.

Savings and Costs - Significant savings are anticipated once the final rule is fully implemented. There will, however, be initial investment costs associated with necessary changes to information technology and infrastructure. During the first 10 years after the rule is finalized it is expected to generate a net savings of roughly \$220.3 million at a 3% discount rate, or \$172.4 million at a 7% discount rate. Break-even should be achieved – i.e., cumulative savings will equal cumulative costs – approximately two years after the effective date of the final rule (See Figure ES-1 and Figure ES -2).

Figure ES-1: Electronic Reporting Costs/Savings Analysis – 3% Discount Rate

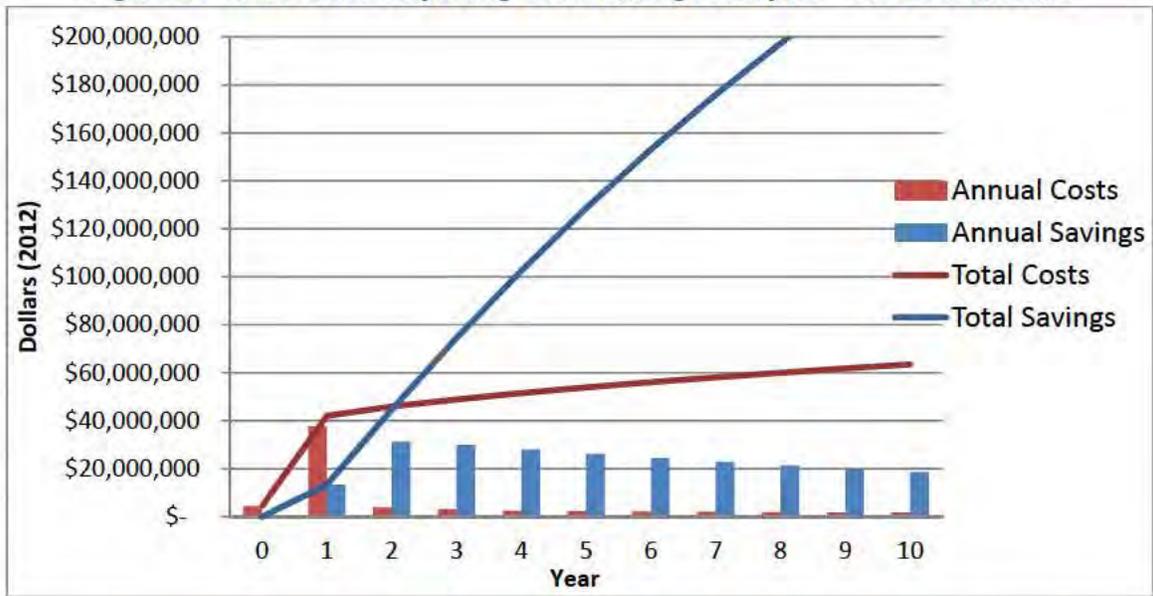
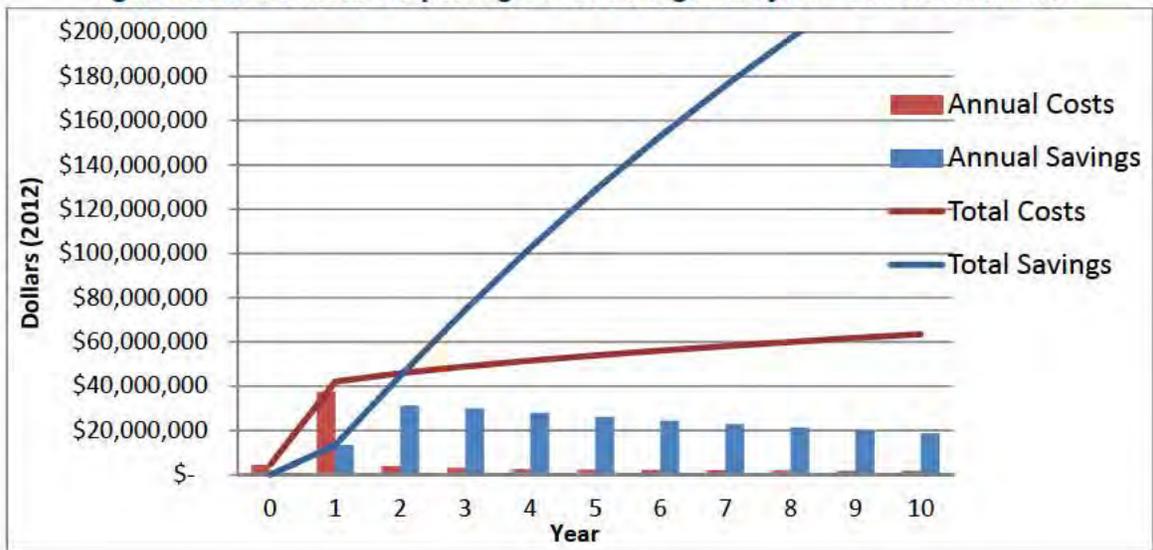


Figure ES-2: Electronic Reporting Costs/Savings Analysis – 7% Discount Rate



The proposed rule will essentially eliminate the need for authorized NPDES programs to enter data submitted by regulated entities into information systems, which accounts for most of the savings. Those savings are partially offset by data entry associated with the modified universe of facilities for which authorized NPDES programs will be required to provide facility and permitting data. EPA estimates that the overall labor burden for the states will fall by 60%, while the number of facilities for which comparable information is available will rise by several orders of magnitude.

The proposed rule will also reduce the need for paper and postage by authorized NPDES programs and regulated entities. In addition, the need for error checking of the data by authorized NPDES programs, and the need for regulated entities to revise and reenter data will be reduced.

Qualitative Benefits - Other anticipated benefits of the proposed rule include improved quality and accuracy of the data available to regulatory agencies and the public; more timely and expanded use of the data to identify, target, and address problems; quicker availability of the data for use; and increased accessibility and transparency of the data to the public. These benefits should allow states to shift precious resources from data management activities to activities more useful in solving water quality and noncompliance issues. This in turn will contribute to increased compliance, improved water quality, and a level playing field for the regulated community.

EPA will make this enhanced and improved data available to the public, as it does now with the existing data, to provide communities and citizens with the best available information on facility and government performance. Such data provides a powerful incentive to improve performance by giving government, regulated entities and the public ready access to complete compliance information. This incentive can serve to elevate the importance of compliance information and environmental performance within regulated entities, providing an opportunity for them to quickly address any noncompliance. More complete, accurate and timely data can provide the private sector and consumers with facility and company performance information. It provides regulators the ability to monitor and assess performance systematically and to quickly address significant issues that may be hidden in unmanageable paper reports, minimizing environmental and public health impacts. It creates an opportunity for two-way communication with regulated entities to immediately address data quality issues and to provide compliance assistance or take other action when potential problems are identified. Complete and accurate data also allows EPA to compare performance across authorized programs, leading to more effective national program management.

The proposed rule will also lighten the reporting burden currently placed on the states. Upon successful implementation, the proposed rule will provide states with regulatory relief from reporting associated with the Quarterly Non-Compliance Report (QNCR), the Annual Non-Compliance Report (ANCR), the Semi-Annual Statistical Summary Report (SASS), and the biosolids information required to be submitted to EPA annually by states.

Under the proposed rule, the resulting information flows will allow EPA and authorized NPDES programs to manage the NPDES program more efficiently. With electronic reporting, EPA and states will be able to use self-reported regulated entity data in near real time. Permitted facilities will have more control over how and when their data are added to the information systems, and will be able to use the data to identify and address issues before they become violations. Electronic reporting also improves data quality and allows for data sharing across federal and authorized NPDES program regulators using the Exchange Network – a network EPA built to foster data sharing between EPA and the states. Bringing the additional information about both

major and nonmajor regulated entities into ICIS-NPDES will allow authorized NPDES programs and EPA to better monitor and report on the status of the NPDES programs they administer.

Having data that are more current, comprehensive, and accurate will improve targeting of federal and state resources to the most serious water quality and compliance problems. Improved NPDES data can significantly improve EPA's knowledge of the regulated community; and that knowledge is essential for problem identification and for developing sound regulations, guidance, and policy. Regulated entities will benefit by knowing that the compliance information in EPA's data systems is timely and accurate, and by taking advantage of the on-line data quality tools to ensure that the data they submit is accurate.

ES.3 Major Factors Taken into Consideration in Estimating Savings and Costs

The following factors have the greatest impact on the savings and costs of the proposed rule:

- Cost of necessary changes to existing EPA and state data systems;
- States that have already begun developing electronic reporting (e.g., EPA estimates that 39 states are already using electronic DMR systems);
- Estimated universe of regulated entities;
- Number of regulated entities needing electronic signatures for electronic data entry;
- Changes in who enters the data;
- Frequency of various data reports;
- Data to be collected; and,
- Time required entering data into information systems.

ES.4 Key Acts and Regulations that Must be Addressed by the EA

Small Entity Analysis – As required by the Regulatory Flexibility Act, the proposed rule's likely impact on small entities was evaluated. For this analysis, a significant impact is defined as being equal to or greater than 1% of the revenue of small parent entities. The analysis concluded that the economic impact of the proposed rule will be less than 1% of revenue for all small parent entities.

Regulatory Planning and Review (EO 12866) – This EO requires additional analyses for rulemakings with an economic impact of \$100 million or more in any year. The Economic Analysis for this proposed rule indicates that the annual economic impact will be less than the \$100 million annual threshold, so the additional requirements are not applicable.

Unfunded Mandates Reform Act (UMRA) – This Act requires undertaking additional analyses for rulemakings that impose burdens of \$100 million or more in any year. The Economic Analysis for this proposed rule indicates the annual implementation costs will be less than the \$100 million threshold, so the additional requirements of the UMRA are not applicable.

ES.5 Key Steps for Implementation

Updating the NPDES information flow will allow states and EPA to each have a central repository of NPDES information and to readily share that information through the internet. The major activities necessary to update the way states share information with EPA are:

- State authorized NPDES program and EPA implementation of an electronic reporting system for submitting regulated entity and authorized NPDES program data;
- State authorized NPDES program certifying compliance with EPA's Cross-Media Electronic Reporting Regulation (CROMERR); and,
- State authorized NPDES program and EPA reconciling information submitted separately to state authorized NPDES program and EPA as required by CWA section 308 (will not be necessary three years after the effective date of the rule, after 308 reporting under this rule is suspended).

Regulated entities and authorized NPDES programs will need to make changes in order to use the updated data bases and reporting tools. The major activities required in order to use the updated system are:

- Regulated entity registration for user accounts CDX or state authorized NPDES program electronic system and submission of electronic signature agreements;
- Regulated entity training;
- Regulated entity submission of electronic notices of intent (NOIs), discharge monitoring reports (DMRs), and program reports; and,
- Authorized NPDES program electronic submission of programmatic Appendix A data to EPA.

Electronic reporting to EPA by regulated entities, separate from existing reporting to their respective authorized NPDES programs, will continue until the authorized NPDES program has an operational electronic reporting system. States will be able to adopt EPA's electronic reporting system or develop their own system.

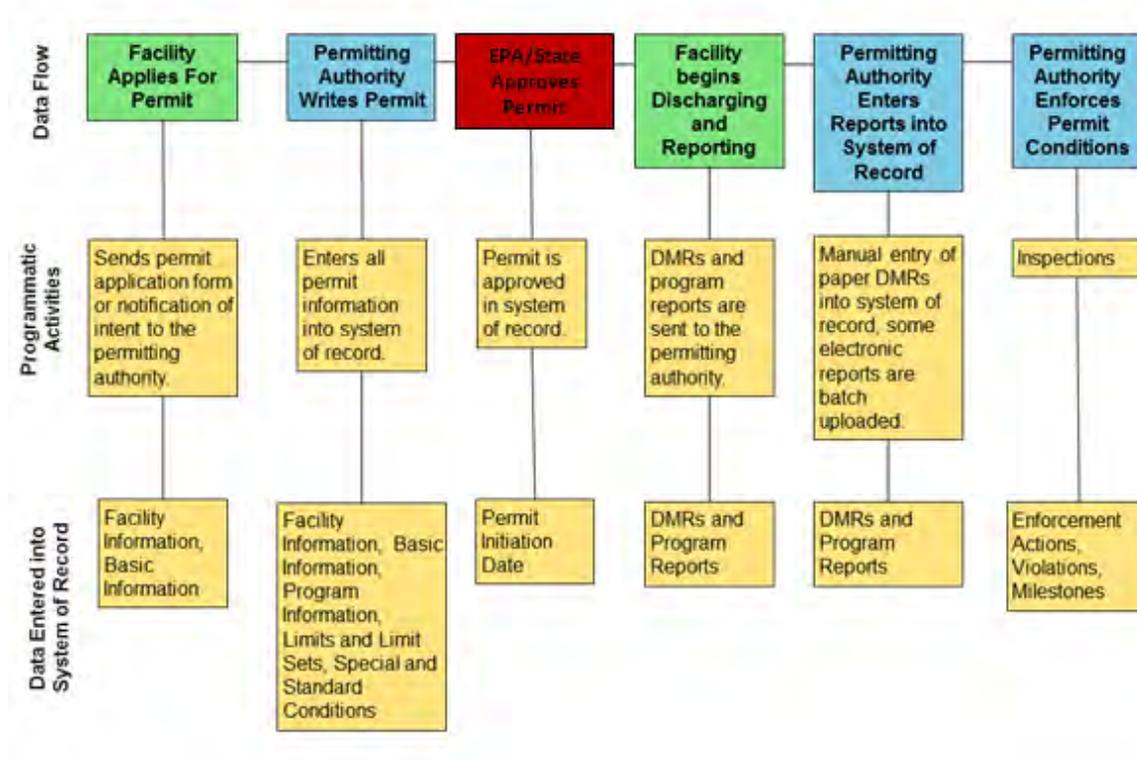
Section 1. – Background and Overview of the Economic Analysis of the NPDES Electronic Reporting Rule

1.1 Introduction

Through the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting proposed rule, EPA proposes to convert current paper reporting requirements to electronic. In doing so, EPA will establish a nationally consistent set of required information for the full scope of the NPDES program, thereby establishing the NPDES data that must be submitted to, or entered into, EPA's Integrated Compliance Information System (ICIS)-NPDES. EPA needs regulated entity-specific information in order to provide national program direction and oversight; to ensure that implementation and enforcement of the NPDES program, both nationally and locally, will effectively protect human health and the environment; and to facilitate public access to NPDES information. This proposed rule will also establish requirements that NPDES data be submitted to EPA electronically, either by regulated entities or authorized NPDES program, as appropriate, which will reduce the burden of data entry on states, tribes, and territories (hereinafter referred to as states) and EPA Regions. The rule does not require collection or reporting of any new data.

This report analyzes the economic impact of the electronic reporting proposed rule and presents the methodology, information sources, and detailed results of the Economic Analysis (EA). To understand the effects of the proposed rule, however, this section documents how the NPDES program currently operates and the existing information resources used to support the NPDES program. Figure 1-1 illustrates the current flow of NPDES data from responsible party (regulated entity, authorized NPDES program, EPA) into the data system. It also identifies the activities undertaken by each responsible party, as well as the type of data entered. Section 1.2 provides a description of the statutory and regulatory history of the NPDES program followed by a summary of existing NPDES reporting requirements and how the data have been and are being used (Section 1.3). The section concludes with a description of the proposed rule (Section 1.4) and lays out the organization of the remaining sections of the report (Section 1.5).

Figure 1-1: Current Flow of NPDES Data



1.2 Statutory and Regulatory History of the NPDES Program

1.2.1 Clean Water Act

In 1972, the Clean Water Act was signed in to law to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” (33 U.S.C. 1251(a)). Among its core provisions, the Clean Water Act prohibits the discharge of pollutants from a point source to waters of the United States except as authorized by a NPDES permit. The Clean Water Act establishes the NPDES program’s authority to regulate the discharges of pollutants to waters of the United States. EPA has issued comprehensive regulations implementing the NPDES program at 40 CFR §122.

States, may be authorized to administer the NPDES program through a process that is defined by the Clean Water Act §402 (b) and 40 CFR §123. The NPDES Program consists of various components, including: 1) NPDES Base Program for municipal and industrial facilities; 2) Federal Facilities; 3) General Permitting; 4) Pretreatment Program; and 5) Biosolids. States can adopt the NPDES Base Program and one or more of the other components as part of their authorization. States that want authorization to administer the NPDES program submit to EPA a letter from the Governor requesting review and approval, a Memorandum of Agreement (MOA), a program description, a statement of legal authority (also known as an “Attorney Generals Statement” or “AG Statement”), and supporting state laws and regulations. The process of authorization includes a public review and comment period, and a public hearing. If EPA disapproves the program, EPA remains the authorized NPDES program for that state. If EPA approves the program, the state assumes authorized NPDES program in lieu of EPA. A state may request and receive authorization to administer one or more of the NPDES Program components. After EPA approves the state’s proposed program(s), all new permit applications for the

program(s) would be submitted to the authorized states for NPDES permit issuance.² EPA, through its regional offices, retains authorized NPDES program for all programs not specifically authorized to the states.

EPA regulations require NPDES authorized NPDES programs to keep records and submit to EPA such information as the Agency may reasonably require to ascertain whether the program as implemented complies with the requirements of the Clean Water Act and EPA's regulations (40 CFR §123.43(d)). In addition, authorized NPDES programs are required to make available to EPA upon request any information authorized NPDES programs obtain or use in administering their NPDES programs (40 CFR §123.41(a)). Forty-six states and one territory have requested and received authority to administer one or more NPDES programs. As a result, EPA shares authorized NPDES program in varying degrees with 46 states and one territory and is the sole authorized NPDES program for four states, all of the tribes, and 15 territories.

1.2.2 1985 PCS Policy

Current regulations require state permit programs to “keep such records and submit to the Administrator such information as the Administrator may reasonably require.” See 40 CFR 123.43(d). To implement this and other regulations, EPA has issued guidance on the information to be submitted electronically to a national database. In particular, the 1985 PCS Policy Statement (as amended in 2007) and the PCS Quality Assurance Manual identify the timeliness, accuracy, completeness, and consistency expectations for state data entry into ICIS-NPDES. Both guidances were originally developed by EPA for use with PCS but were subsequently adapted and are still in effect for ICIS-NPDES.

The PCS Policy Statement supports sound management of the NPDES program nationally and ensures the program achieved the CWA’s environmental goals. The 1985 PCS Policy Statement specified that: 1) PCS would be the national data base of record for the NPDES program; 2) EPA Regions must use PCS directly; and 3) all NPDES authorized states, tribes and territories must either use PCS directly or develop and maintain and technology and protocols that transfer NPDES data to PCS. EPA also uses two mechanisms, a Memorandum of Agreement and CWA Section 106 Work Plan, for requiring data sharing between state NPDES programs and EPA.

1.2.3 1987 Water Quality Act and 2000 Wet Weather Water Quality Act

In response to growing concerns about stormwater issues, Congress passed the 1987 Water Quality Act which extended NPDES requirements to stormwater discharges. This action expanded the NPDES program to include stormwater discharges. In December 2000, Congress also amended the CWA with the “Wet Weather Water Quality Act.” These amendments added Section 402(q)(1) to require consistency with EPA’s Combined Sewer Overflow (CSO) Control Policy in permitting and enforcement activities, which effectively makes the CSO Control Policy law.

1.3 Summary of the NPDES Program Reporting Requirements

1.3.1 Current Status

Three major groups are required to fulfill different reporting requirements under the NPDES program:

² See the following EPA webpage for a current listing of NPDES program authorizations: <http://cfpub.epa.gov/npdes/statestats.cfm?view=specific>

- **NPDES regulated entities:** These are facilities that are regulated by one or more components of the NPDES program. Facilities that discharge pollutants to the waters of the United States and therefore are required: 1) to apply for permits under NPDES; and, 2) to regularly report self-monitoring information (e.g., testing of pollutant concentrations in wastewater discharges, program reports). POTWs that generate biosolids are regulated by the Biosolids Program (40 CFR 503) and industrial facilities that discharge to POTWs are regulated by the Pretreatment Program (40 CFR 403).
- **NPDES Regulatory Authorities:** These are the EPA Regions or authorized state, tribe, or territory responsible for administering the NPDES program within a given geopolitical unit (e.g., state).
- **U.S. EPA:** The U.S. EPA mission is to protect human health and the environment and maintains oversight across all components of the NPDES program. EPA is also responsible for reporting progress on the NPDES program to the U.S. Congress and the public.

This section describes the current roles and responsibilities of each group within the NPDES program.

Regulated Entities

EPA regulations, NPDES permits, and other control mechanisms normally include record-keeping and reporting requirements, and a variety of standard conditions. Record-keeping and reporting requirements often include preparation and submission to the authorized NPDES program of monthly discharge monitoring reports, which were traditionally paper documents.³ Additional reporting may include program reports as required by specific NPDES subprograms [e.g., CAFOs, pretreatment, biosolids, sewer overflows, and Municipal Separate Storm Sewer System (MS4)].

Authorized NPDES Programs

These are the EPA Regions or authorized state, tribe, or territory responsible for administering the NPDES program within a given geopolitical area. In some cases, a state may have been approved to administer certain NPDES programs, while the EPA regional office still manages the remaining subprograms or activities. The authorized NPDES program has several responsibilities, including: writing NPDES permits or control mechanisms; receiving reports from permitted facilities and entering their information into the data system; and performing the compliance and oversight activities prescribed in the NPDES Compliance Monitoring Strategy.⁴

EPA

EPA has primary responsibility for effectively and consistently implementing the NPDES program across the country, thus ensuring that the public health and environmental protection goals of the CWA are met. EPA's responsibilities include:

- Enforce the requirements of the CWA and the NPDES program;
- Identifying the universe of facilities covered by the NPDES program;
- Developing sound regulations, guidance and policy;

³ Some regulated entities may test their own samples and mail DMRs directly to the state. Other regulated entities will send samples to an independent laboratory for testing. Contract laboratories may send the DMR back to the regulated entity for signature and submission or submit directly to the authorized NPDES program.

⁴ <http://www.epa.gov/oecaerth/resources/policies/monitoring/cwa/npdescms.pdf>

- Conducting oversight of authorized states;
- Identifying the compliance status of facilities subject to NPDES regulations in a nationally consistent manner;
- Monitoring and reporting the status of implementing the CWA in watersheds throughout the nation;
- Identifying potential non-compliance problems and their associated environmental impacts to effectively target resources;
- Demonstrating results achieved to meet NPDES program goals, including the Government Performance and Results Act (GPRA) measures reported to Congress, under Goal 2 (Clean and Safe Water) and Goal 5 (Compliance and Environmental Stewardship);
- Responding to inquiries from Congressional members;
- Administering the NPDES programs (policy setting, permitting, compliance monitoring, inspections and enforcement) in those states and subprograms where states have not assumed responsibility; and,
- Informing the public about the permitting and compliance status of facilities in their communities.

To accomplish these goals, EPA uses and maintains the Integrated Compliance Information System – National Pollution Discharge Elimination System (ICIS-NPDES), a modernized system developed in 2005 to replace the legacy Permit Compliance System (PCS).

1.3.2 Regulated Entity Types

NPDES Permitted Facilities

The NPDES program groups NPDES permitted facilities in terms of major and nonmajor sources and whether they have coverage under an individual or general permit. NPDES permitted facilities designated as a major includes a Publicly Owned Treatment Works (POTWs) with designed discharge flows of greater than one million gallons per day (1 MGD) and active major industrial facilities scoring more than 80 for the six factors (toxicity, volume, conventional pollutants, public health impact, water quality, and proximity to coastal waters) on the “NPDES Permit Rating Work Sheet.”⁵ NPDES permittees that are not designated as majors are classified as nonmajors. General permits authorize discharges and establish operating and reporting requirements under the CWA for specific categories of dischargers (e.g., stormwater discharges from construction activities). Nearly all of the approximately 6,700 NPDES facilities designated as majors have individual permits. There are many more NPDES facilities designated as nonmajors than majors and most nonmajors have coverage under general permits (e.g., construction stormwater permits).

Under the proposed rule NPDES permittees would electronically submit their compliance monitoring data (e.g., DMRs, program reports). Some NPDES regulated entities have multiple NPDES compliance monitoring reporting requirements. For example, POTWs may submit the following compliance monitoring data to their authorized NPDES program:

- DMRs [40 CFR 122.41(1)(4)];
- Biosolids Annual Program Report [40 CFR 503];
- Pretreatment Program Annual Report [40 CFR 403.12(i)]; and
- Sewer Overflow Event Reports [40 CFR 122.41(1)(6) and (7)].

⁵ <http://www.epa.gov/npdes/pubs/owm0116.pdf>

The recipient of these compliance monitoring data depends on the NPDES authorization status of the state, tribe, or territory. For example, a POTW may send its DMRs to the state if it is authorized to implement the NPDES Base Program for municipal and industrial facilities and its Pretreatment Program Annual Report to an EPA Region if the state is not authorized to administer the pretreatment program.

Biosolids Facilities

Section 405 of the CWA sets the statutory framework for regulating sewage sludge (biosolids). EPA has established a protective regulatory framework to manage the use and disposal of biosolids at 40 CFR Part 503. Part 503 is a “self implementing” rule, which means that entities producing biosolids are regulated whether or not these requirements are included in a permit. Most facilities regulated by Part 503 also have an NPDES permit. Under the proposed rule NPDES regulated entities would electronically submit their Biosolids Annual Program Report [40 CFR 503].

Significant Industrial Users

POTWs receive wastewater from households (domestic waste), as well as from a wide variety of commercial and industrial facilities, referred to as industrial users (IUs). The types of IUs range widely, from small restaurants to hospitals to large and complex organic chemical manufacturers. EPA has further identified some IUs as categorical industrial users (CIUs), i.e., IUs subject to EPA’s pretreatment standards developed for particular industrial categories, and significant industrial users (SIUs), i.e., IUs that are either CIUs or discharge process wastewater above the thresholds set in 40 CFR 403.5. EPA has developed a comprehensive pretreatment program implemented through EPA Regions, state, tribes, territories, and POTWs to control IU discharges of pollutants that might pass through or interfere with POTW treatment processes or contaminate sewage sludge, thereby posing a threat to human health or the environment. Under the proposed rule the SIUs and CIUs in municipalities without an approved pretreatment program would electronically submit the following data: (1) Periodic reports on continued compliance for CIUs [40 CFR 403.12(e)]; and (2) Periodic reports on continued compliance for Non-CIUs [40 CFR 403.12(h)].

1.3.3 Expected Data

The 1985 PCS Policy defines the required data necessary to enable PCS to function as a useful operational and management tool for the NPDES program. The list of required data elements is called the Water Enforcement National Data Base (WENDB). The WENDB list of PCS data elements was extensively reviewed, underwent several additions based upon state participation, and currently contains 222 data elements. Values for many of the data elements are updated on the permit cycle (every five years). Values for other data elements are entered as an activity or event occurs (e.g., effluent monitoring, inspections, violations, enforcement actions). Each state’s data is now stored in ICIS-NPDES (all PCS data has been transferred to ICIS-NPDES, and PCS is no longer in operation). The list of WENDB data elements uses the major/nonmajor distinction to identify the data states are required to input into ICIS-NPDES. For example, states are required by the PCS Policy to input DMR data into ICIS-NPDES for majors but only encouraged to do so for nonmajors.

1.3.4 Regulated Entity Supplied Data

EPA requires regulated entities to submit information as part of their permit applications, notices of intent (NOIs), Notice of Termination (NOT); No Exposure Certifications (NECs); Low Erosivity Waivers (LEWs), discharge monitoring reports (DMRs), and program reports (e.g., CAFOs, pretreatment, biosolids, sewer overflow event reports, MS4 program reports). Some authorized NPDES programs give regulated entities the option to file one or more of these documents electronically; however, the majority of these data are currently submitted to the authorized NPDES program in paper form. For a complete listing of these data see NPDES Data Group Number 2 through 9 in Table 1 to Appendix A to 40 CFR 127.

Required Information for Facilities with Individual NPDES Permits and Significant Industrial Users

Most facilities with individual NPDES permits (major and nonmajor) submit DMRs [40 CFR 122.41(l)(4)] to their authorized NPDES program (often on a monthly frequency). Additionally, some individually permitted facilities are also required to submit program reports which include:

- Biosolids Annual Program Report [40 CFR 503]
- Concentrated Animal Feeding Operation (CAFO) Annual Program Reports [40 CFR 122.42(e)(4)]
- Municipal Separate Storm Sewer System (MS4) Program Report [40 CFR 122.34(g)(3) and 122.42(c)]
- Pretreatment Program Annual Report [40 CFR 403.12(i)]
- Sewer Overflow Event Reports [40 CFR 122.41(l)(6) and (7)]

Significant industrial user in municipalities without approved pretreatment programs must also submit bi-annual compliance reports 40 CFR 403.12(e) and (h)].

Required Information for Facilities with General NPDES Permits

EPA and authorized states, tribes, and territories issue general permits to cover multiple similar facilities under a single permit. Where a large number of similar facilities require permits, a general permit allows the authorized NPDES program to allocate resources in a more efficient manner and provide timelier permit coverage than would occur if individual permits had to be issued to each similar facility. States, tribes, and territories must seek EPA approval to administer general permits. EPA's regulations governing the General Permit Program are located at 40 CFR 122.28. EPA and authorized programs have issued over 700 general permits nationwide. Nearly all general permit covered facilities are classified as nonmajors.

After the final general permit has been issued, there are several general permit reports that facilities must submit to their authorized NPDES program, including:

- Notice of Intent (NOI) to discharge: This is the initial submission seeking coverage under a general permit [40 CFR 122.28(b)(2)(i) and (ii)];
- Notice of Termination (NOT): A request by the permittee to terminate their coverage under an existing permit (40 CFR 124.5);
- No Exposure Certification (NEC): A certification from a facility indicating that coverage under an existing stormwater general permit is not necessary due to certain facility-specific conditions [40 CFR 122.26(g)(1) and (4)]; and

- Low Erosivity Waiver (LEW): A certification from a facility indicating that coverage under an existing construction stormwater general permit is not necessary due to certain facility-specific or climate conditions [40 CFR 122.26(b)(15)].

It is important to note that EPA general permit regulations (40 CFR 122.28) do not require all general permit covered facilities to submit NOIs for all general permits issued by EPA and authorized state NPDES programs. Some general permits provide for automatic coverage. This means that neither EPA nor the authorized state, tribe, or territory programs will have information regarding exactly which facilities are regulated under these general permits.

General permits cover a wide range of facility types that range from the very large (e.g., offshore oil and gas facilities, seafood processors) to very small discharges. Discharges from facilities covered under general permits include a variety of pollutants, such as total suspended solids, biochemical oxygen demand, oil and grease, bacteria, nutrients, hydrocarbons, metals, and toxics.

Basic facility information for some facilities covered by general permits is currently required to be entered into ICIS-NPDES in accordance with the PCS Policy. Requirements to submit DMRs or program reports (e.g., Biosolids Annual Program Report, CAFO Annual Program Reports, MS4 Program Report, Pretreatment Program Annual Report) vary based on the type of general permit under which a facility is covered.

1.3.5 Authorized NPDES Program Supplied Data

NPDES permits are reviewed and potentially revised and reissued every five years. Basic facility data, basic permit data, and monitoring data are submitted by regulated entities to states on the NPDES application or renewal form. These are typically paper submissions. Authorized programs take these data and issue a new or revised permit (with permit limit sets⁶) and enter a portion of these facility and permit data into ICIS-NPDES. There are differing data entry requirements for majors and nonmajor facilities.

The authorized NPDES program is also responsible for tracking and logging compliance monitoring, violation, and enforcement action information into ICIS-NPDES. The authorized NPDES program is responsible for receiving and processing reporting information submitted by regulated entities (e.g., DMRs). When received in paper form, the authorized NPDES program must enter the required information into the NPDES system of record (ICIS-NPDES or a data system operated by the authorized NPDES program). There are differing ICIS-NPDES data entry requirements for major and nonmajor facilities.

Inspection, violation, and enforcement action information must be entered by the authorized NPDES program for major facilities as they occur. EPA's current goal is for 100% of major regulated entities to receive at least one Compliance Evaluation Inspection, Compliance Sampling Inspection, Performance Audit Inspection, Diagnostic Inspection, Compliance Bio-Monitoring Inspection, and/or Toxics Sampling Inspection every two fiscal years. EPA has set the goal that individual nonmajor permits be inspected at least once during the permit cycle. For a complete listing of these data see NPDES Data Group Number 1 in Table 1 to Appendix A to 40 CFR 127.

⁶ A limit set consists of the parameters against which a regulated entity's effluent is measured in order to determine whether the facility is in compliance with its permit.

1.3.6 Electronic Reporting

While electronic reporting is not currently required, there are tools regulated entities can use to file some reports electronically. For example, EPA's electronic Notice of Intent (eNOI) allows regulated entities in states where EPA is the authorized NPDES program to apply electronically for coverage under the Multi-Sector General Permit or the Construction General Permit.⁷ Similarly, EPA's NetDMR tool allows regulated entities to submit their discharge monitoring reports electronically. EPA estimates that 42 state authorized NPDES programs have adopted some form of electronic reporting for one or more of the NPDES program areas (e.g., NetDMR, eDMR, or eNOI systems). EPA is also developing a new tool for NOIs and other general permit forms and program reports, the NPDES e-Reporting Tool (NeT). EPA deployed the use of this new electronic reporting tool for the EPA Region 6 Western Gulf of Mexico general permit for offshore oil and gas. EPA plans to make this tool available to the states as part of the implementation for this rule.

1.4 Description of the Proposed Rule

1.4.1 Statement of Need

Through this proposed rule, EPA seeks to improve the accessibility, timeliness, consistency, and accuracy of data from all facilities regulated by the NPDES program. This effort will provide the public, EPA, states, and regulated entities with better access to more timely, complete, and accurate NPDES data. The needs of these user groups for NPDES data are described in more detail below.

The Public

At present, the public has limited information regarding a substantial portion of the NPDES regulated universe. One of EPA's goals is to increase the transparency of its environmental programs and their results. This proposed rule supports that goal by improving the quality and availability of information regarding the compliance status of the nation's water dischargers and the enforcement responses taken by authorized NPDES programs and EPA. Electronic reporting by NPDES regulated entities will increase the timeliness, completeness, and accuracy of NPDES information made available to the public. It is expected that with these changes in place, the public can more effectively monitor and address local and national concerns regarding the state of the waters of the United States.

EPA

EPA has primary responsibility for ensuring the CWA's NPDES program is effectively and consistently implemented nationwide, thus ensuring that public health and environmental protection goals of the CWA are met. This proposed rule uses existing regulations to identify the information EPA needs to receive from NPDES regulated entities and authorized NPDES programs in order to effectively manage the national NPDES program, including permitting and enforcement.

Authorized NPDES Programs

Authorized NPDES programs are currently inundated with paper reports from regulated entities. They use valuable resources reviewing those submissions for errors, working with regulated entities to correct errors, and then entering the data into information systems. The time required

⁷ EPA is also the authorized NPDES program for other general permits, such as the Vessels General Permit and the Pesticides General Permit, that are not expected to be affected by the proposed rule.

for this effort delays the availability of the data, which can cause a violation to be reported, and makes it difficult for authorized NPDES programs to identify real violations and compliance issues in a timely manner.

Regulated Entities

NPDES regulated entities have an interest in ensuring that the information used by their authorized NPDES program and EPA is as accurate and timely as possible. Through electronic reporting, regulated entities can be more confident that their reports are received on time by the authorities and that their compliance status is characterized correctly.

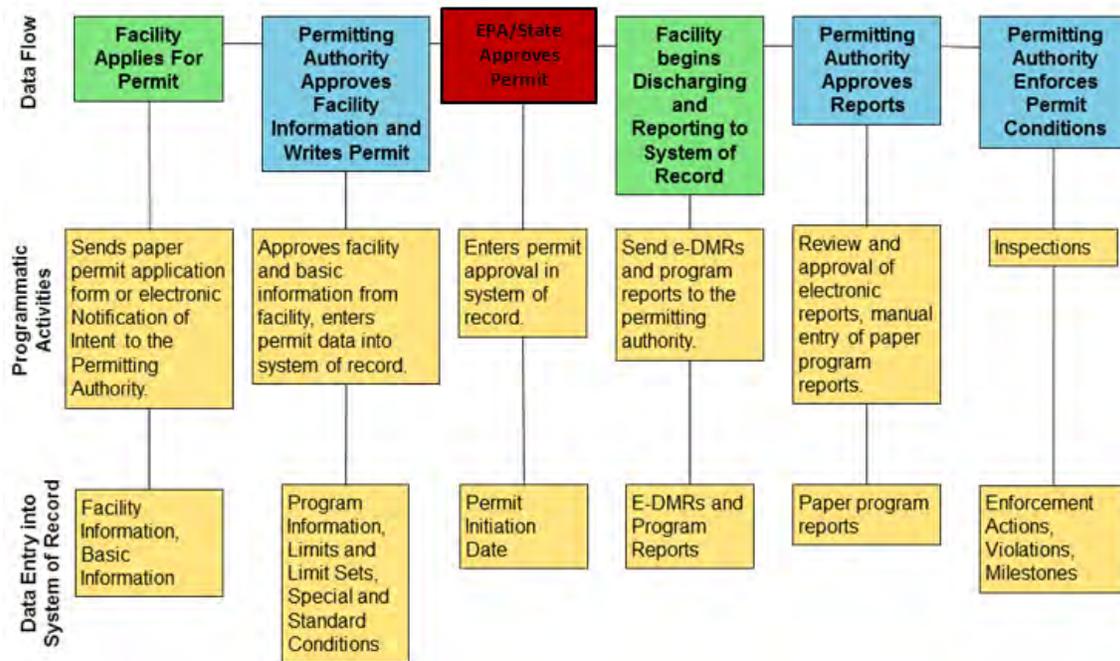
1.4.2 Changes to the NPDES Program under the Proposed Rule

This proposed rule will require regulated entities to submit certain information electronically to their respective authorized NPDES program.⁸ The proposed rule will also formalize what has been a gradual transition for NPDES data systems. As described above, EPA originally set out to collect the WENDB data fields. However, the WENDB data are only part of what regulated entities are required to submit to their authorized NPDES program. This rule relies on the transition from a 1980's data system limited to the WENDB data (PCS) to an modern database system (ICIS-NPDES) that will be able to manage a broader range of the data currently being reported by regulated entities. That larger data set is identified in Appendix A to 40 CFR 127. There are also 11 data elements that are currently system required that are not part of Appendix A. Both the Appendix A to 40 CFR 127 and additional system required data elements not in Appendix A to 40 CFR 127 are presented in Appendix A of this document, and collectively referred to as "Appendix A" throughout this report. This proposed rule also requires the same data to be submitted by authorized NPDES programs to EPA for both major and nonmajor facilities. These requirements are discussed in more detail in the sections below.

Figure 1-2 illustrates the flow of NPDES data from a responsible party (regulated entity, authorized NPDES program, or EPA) into the system of record following implementation of the proposed rule. It also identifies the activities undertaken by each responsible party as well as the type of data expected to be submitted to ICIS-NPDES when the requirement for electronic reporting is in place.

⁸A state may request and receive authorization to administer one or more of the NPDES Program components. Consequently, a state may be authorized to administer the core program but not the pretreatment program. In this example, DMRs would be electronically submitted to the authorized state and the Pretreatment Program Annual Report would be electronically submitted to EPA. The implementation schedule for the proposed rule also has NPDES regulated entities electronically sending their data directly to EPA in addition to any pre-existing paper-based reporting requirements until such time as electronic reporting is fully functional at the authorized NPDES program level.

Figure 1-2: Post Implementation Flow of NPDES Data



Programmatic Data from the Authorized NPDES Program

Between 2002 and 2007, EPA and the states worked to identify the data needed by authorized NPDES programs to successfully implement and manage the NPDES program. Critical data elements and their end-uses were discussed by:

- The state and EPA members of the PCS Steering Committee;
- The PCS Modernization Executive Council; and,
- The expanded PCS Steering Committee, including the Environmental Council of States (ECOS) and the Association of Clean Water Administrators (ACWA).⁹

These discussions led to the April 2007 issuance of a draft ICIS-NPDES Policy Statement that included the list of NPDES data authorized NPDES programs would report to EPA. EPA finalized a crosswalk from WENDB to ICIS-NPDES in December 2007.

Following receipt of numerous comments on the draft ICIS-NPDES Policy Statement from the states, EPA initiated a rulemaking to support a federal regulation requiring specific NPDES information from authorized NPDES programs.

Between 2008 and 2011, the focus of this rulemaking was expanded to consider how much of the NPDES information could reasonably be obtained electronically from authorized NPDES programs and NPDES regulated entities. EPA initiated an effort to carefully review data needs of various stakeholders, consider the types of information that would allow EPA to meet those needs, and then identify which reports should be submitted electronically. EPA also evaluated whether the information should be sought directly from the NPDES regulated entities or from the authorized NPDES program, acknowledging that for certain activities and responsibilities (such

⁹ Formerly Association of State and Interstate Water Pollution Control Agencies (ASIWPCA).

as permit issuance, inspections, compliance determinations, and issuance of enforcement actions), the authorized NPDES program would be the logical source of the required NPDES information.

In a series of technical analyses, EPA examined the feasibility of electronic reporting, existing regulatory data and reporting requirements, EPA priorities, and prepared preliminary estimates of savings and costs. These analyses informed the development of the proposed rule as well as the list of NPDES data elements required by the rule (identified in Appendix A to 40 CFR 127). The proposed rule requires that listed data elements, all of which are already required to be reported by regulated entities or authorized NPDES programs, be entered into ICIS-NPDES. The required data elements fall into the following data families:¹⁰

Facility and Permit Information: The Facility Data Family includes data such as name, street and mailing address of the regulated entity and a contact name. Several pieces of facility information will be required under the proposed rule to improve EPA's management of regulated entities. Tribal Land data will allow EPA to identify effluents being discharged into waters in Tribal lands. Affiliation information (e.g. the name of the site engineer) is required to ensure reported data comes from the appropriate employee or representative.

The Permit Data Family includes basic permit information, tracking of a permit's issuance, narrative permit conditions such as permit schedules, and permitted features (outfalls).

Data elements like DMR non-receipt tracking flags, RNC tracking flags, and applicable effluent guidelines have been added under the proposed rule to help EPA characterize and monitor a regulated entity's compliance with their permit requirements. Data elements have also been added to address changes in standardized industrial classification taxonomies. The WENDB used the Standard Industrial Classification (SIC) codes to designate a regulated entity's industrial sector. Because the federal government has adopted the North American Industrial Classification System (NAICS), EPA is now requiring use of NAICS codes. These changes will allow EPA to more effectively manage basic permit information for compliance and enforcement purposes.

Other permit data elements reflect expansion of the NPDES program. Permit data elements associated with new program areas are needed in order to manage and measure the environmental impact of operations and facilities now covered under the NPDES program. Both the size of the permitted site and the sources of the discharge, such as the number of animals in a feeding operation, will be reported. Wet weather components are included to manage stormwater run-off from impervious surfaces. CSO data elements are included to monitor for possible discharges of untreated human and industrial waste. Other elements, such as Control Authority ID Number tie treatment facility permits to the approved local pretreatment programs, if applicable.

The Facility and Permit Data Families are treated similarly throughout this analysis and are referred to as Facility Data Elements throughout this report.

¹⁰ A full list of the data elements in Appendix A to 40 CFR 127, as well as system required data elements not in Appendix A to 40 CFR 127, is provided in Appendix A of this document.

Discharge Monitoring Reports: The DMR Data Family includes effluent monitoring data provided by NPDES facilities. DMR information includes data elements regarding pollutant concentrations, wastewater flow, and other data about the effluent discharge.

Limits and Limit Sets: These data characterize limits and limit sets. Months of duration for a limit set, stay end date, reason for stay, enforcement action ID, eligibility for a burden reduction, and months a limit applies can be used to characterize and evaluate the appropriateness of effluent limits or stays of such limits.

Program Reports: The Program Reports Data Family includes program reports submitted for NPDES subprograms including: CAFOs, pretreatment, biosolids, sewer overflows, and MS4). Sewer overflows include sanitary sewer overflows, combine sewer overflows, and bypass events.

Compliance Monitoring: The Compliance Monitoring Activity Data Family documents compliance monitoring activities at permitted facilities. This family of data generally includes information associated with inspections such as inspection type, and dates associated with the inspection.

Compliance monitoring activity data allow EPA to track compliance monitoring of the regulated entity. Example data elements include: planned end dates, inspection methods, and improved locational information such as latitude and longitude associated with compliance monitoring activities. These compliance monitoring activity data elements improve the Agency's understanding of where environmental impacts take place.

Violations: The Violation Data Family includes data associated with violations such as single event, effluent, and compliance schedule violations.

Enforcement Actions: The Enforcement Action Data Family includes data regarding the enforcement action itself (e.g., documenting reason for deleting an action) as well as associated compliance schedules and penalties.

Existing CWA regulations define what data must be reported by regulated entities and authorized NPDES programs. The proposed rule does not change those requirements. Similarly, existing regulations define the universe of NPDES regulated entities, and the proposed rule does not change those definitions.

The major changes resulting from the proposed rule are that authorized NPDES programs will provide electronically to EPA more of the data they already collect for nonmajor (individual and general) permits, and data submitted by regulated entities will be received electronically by EPA and authorized NPDES programs.

Previously, most authorized NPDES programs provided EPA with comprehensive data on major regulated entities, but only basic facility information and compliance information was required for nonmajors. In addition, data from regulated entities was usually received in paper form and authorized NPDES programs were required to process those submissions and enter all of the data into their information systems.

Electronic Reporting and Data Flow

The proposed rule does not change the reports any regulated entity is required to submit, but it does require certain reports to be submitted electronically. The proposed rule will require regulated entities to electronically the following reports:

1. General Permit Reports

- Notice of Intent to discharge (NOI)
- Notice of Termination (NOT)
- No Exposure Certifications (NECs)
- Low Erosivity Waivers (LEWs)]

2. Discharge Monitoring Reports

3. Program Reports

- Biosolids Annual Program Report
- Concentrated Animal Feeding Operation (CAFO) Annual Program Reports
- Municipal Separate Storm Sewer System (MS4) Program Report
- Pretreatment Program Annual Report
- Significant Industrial User Compliance Reports in Municipalities Without Approved Pretreatment Programs
- Sewer Overflow Event Reports

These reporting requirements vary by permit type and subprogram, as presented in Table 1-1 below.

Table 1-1: Electronic Reporting Requirements by NPDES Subprogram			
NPDES Subprogram	General Permit Reports	DMR	Program Reports
Industrial and Stormwater			
Standard Industrial Dischargers	Yes ^a	Yes	No
Concentrated Animal Feeding Operations (CAFOs)	Yes ^a	Yes	Yes
MS4 and other Stormwater (Industrial and Construction)	Yes ^a	Yes ^b	Yes
Significant Industrial Users (SIUs) – in municipalities with State or EPA as Control Authority	No	No	Yes
POTWs (may have one or more of these subprograms)			
Biosolids	No	Yes	Yes
Pretreatment Program	No	Yes	Yes
Sewer Overflows - Combined Sewer Systems (CSSs) ^c	Yes ^a	Yes	Yes
Sewer Overflows - Sanitary Sewer Systems (SSSs) ^c	Yes ^a	Yes	Yes
^a Only general permit covered facilities ^b Only individual major or general multi-sector permit covered facilities ^c These POTWs also have the potential for bypass events and the related noncompliance reporting, which will be done electronically under this proposed rule.			

EPA information systems will need to be modified to receive and send these electronic reports. In addition, authorized NPDES programs will need to modify their existing data processing technology and software, or adopt those provided by EPA, to receive these reports. Authorized NPDES programs operating their own NPDES data systems will also need to establish data flows to send all of the required data, regulated entity generated as well as authorized NPDES program generated, to ICIS-NPDES.

1.5 Organization of the Report

This report examines the burden, costs, and savings to regulated entities, authorized NPDES programs, and EPA associated with the proposed rule. The remainder of this report is organized as follows:

- **Section 2:** Characterizes the permitted facility universe and the frequency of reporting.
- **Section 3:** Presents the regulated entity, authorized NPDES program and EPA activities that will be affected by the proposed rule.
- **Section 4:** Estimates the total burden and savings associated with the proposed rule.
- **Section 5:** Analyzes the impacts of the proposed rule on small entities.
- **Section 6:** Presents the benefits of the proposed rule.
- **Section 7:** Presents additional analyses conducted for the proposed rule.

Section 2. – Estimating the Permit Universe and Required Data Reporting/Submittal

2.1 Introduction

Estimating the burden and cost associated with the proposed rule requires knowledge of: 1) the universe of permit types affected by the proposed rule; as well as, 2) the required changes in the data flows between regulated entities and their authorized NPDES program and between authorized NPDES programs and EPA. These inputs are used to generate burden and cost estimates in Section 4, as shown in Figure 2-1. Rule requirements vary depending on the NPDES subprogram and type of permit. To estimate burden and cost, it is necessary to know:

- The entity responsible for generating the required data or data transfer. Some required data will be reported directly to EPA by permitted facilities. Other required data will be submitted to EPA by the authorized NPDES program (Reporting/submittal responsibilities are discussed in more detail in Section 3).
- How frequently the data are reported by the regulated entity or submitted by the authorized NPDES program. Facility reporting and the submittals of the authorized NPDES program are both referred to in terms of an annual reporting frequency. For instance, a report that is submitted every 5 years has an annual reporting frequency of 0.2, whereas a report that is submitted monthly has an annual reporting frequency of 12.

It is important to note that the universe addressed in this economic analysis is somewhat different than the universe discussed in the preamble to the proposed rule. In the economic analysis the term “universe” essentially refers to permits, whereas the same term in the preamble refers to facilities. The distinction is significant because it is possible for individual facilities to have multiple permits.

Figure 2-1: Inputs to Burden and Cost Estimates



2.1.1 Types of NPDES Permits

NPDES permits are issued to major and nonmajor facilities in the form of individual permits or general permits. Permit types are described in detail in Section 1. Permit types are summarized by subprogram in Table 2-1 (see Section 1.3.2 and 2.1.2 for a description of subprograms). Permit requirements may vary between individual and general permits, and between major and nonmajor facilities. For example, most individual major stormwater regulated entities are required to submit discharge monitoring reports (DMRs) on a monthly basis whereas individual nonmajor stormwater regulated entities generally do not. The cost analysis accounting for the differences between major and nonmajor permits; and between individual and general permits is described in the Sections 2.3 through 2.9.

Table 2-1: NPDES Regulated Entities and NPDES Permit Types by Subprogram				
Subprogram	NPDES Individual Majors	NPDES Individual Nonmajors	NPDES General Nonmajors	Other Mechanism
Industrial and Stormwater				
Standard Industrial Dischargers	✓	✓	✓	
Concentrated Animal Feeding Operations (CAFOs) ^a		✓	✓	
MS4 and other Stormwater (Industrial and Construction)	✓	✓	✓	
Significant Industrial Users (SIUs) – in municipalities with State or EPA as Control Authority				✓
POTWs (may have one or more of these subprograms)				
Biosolids ^b	✓	✓		
Pretreatment Program ^b	✓	✓		
Sewer Overflows - Combined Sewer Systems (CSSs) ^c	✓	✓	✓	
Sewer Overflows - Sanitary Sewer Systems (SSSs) ^c	✓	✓	✓	
^a Most CAFOs are classified as nonmajors ^b Most POTWs regulated by the biosolids and pretreatment regulations have individual NPDES permits. ^c These POTWs also have the potential for bypass events and the related noncompliance reporting, which will be done electronically under this proposed rule.				

2.1.2 NPDES Subprograms

Permit requirements vary according to which subprogram(s) are applicable to a facility's operations. See Section 1.3.2 for a complete description of these facilities. These reporting requirements vary by permit type and subprogram, as presented in Table 2-2 below.

Table 2-2: Electronic Reporting Requirements by NPDES Subprogram			
NPDES Subprogram	General Permit Reports	DMR	Program Reports
Industrial and Stormwater			
Standard Industrial Dischargers	Yes ^a	Yes	No
Concentrated Animal Feeding Operations (CAFOs)	Yes ^a	Yes	Yes
MS4 and other Stormwater (Industrial and Construction)	Yes ^a	Yes ^b	Yes
Significant Industrial Users (SIUs) – in municipalities with State or EPA as Control Authority	No	No	Yes
POTWs (may have one or more of these subprograms)			
Biosolids	No	Yes	Yes
Pretreatment Program	No	Yes	Yes
Sewer Overflows - Combined Sewer Systems (CSSs) ^c	Yes ^a	Yes	Yes
Sewer Overflows - Sanitary Sewer Systems (SSSs) ^c	Yes ^a	Yes	Yes
^a Only general permit covered facilities ^b Only individual major or general multi-sector permit covered facilities ^c These POTWs also have the potential for bypass events and the related noncompliance reporting, which will be done electronically under this proposed rule.			

Industrial and Stormwater Facilities

- Standard Industrial Dischargers:** This group includes industrial facilities that discharge directly to a surface water and have an NPDES permit. These facilities can be classified as majors or nonmajors and may have coverage under individual or general NPDES permits. Facilities with coverage under a general permit will submit one or more general

permit reports (e.g., NOIs, NOTs). Most of these facilities submit also DMRs on a regular frequency.

- **Concentrated Animal Feeding Operations (CAFOs):** This is the group of CAFOs that have an NPDES permit. Most of these facilities are classified as nonmajors and most have coverage under general NPDES permits. Facilities with coverage under a general permit will submit one or more general permit reports (e.g., NOIs, NOTs). A few but not many of these facilities submit also DMRs on an irregular frequency (e.g., unanticipated discharges due to large storm events). These facilities will also submit CAFO Annual Program Reports.
- **MS4 and other Stormwater (Industrial and Construction):** This group includes industrial facilities that discharge industrial or construction stormwater directly to a surface water and have an NPDES permit as well as municipalities that discharge urban stormwater under the Municipal Separate Storm Sewer System (MS4) program. Facilities with coverage under a general permit will submit one or more general permit reports (e.g., NOIs, NOTs, NECs, and LEWs). Most of the facilities classified as majors and facilities regulated by EPA's Multi-Sector General Permit submit DMRs on a regular frequency. Municipalities that discharge urban stormwater under the MS4 program also submit MS4 Program Report. Facilities classified as large and medium MS4 submit these reports on an annual basis and facilities classified as small MS4 submit these reports twice per five year permit term.
- **Significant Industrial Users (SIUs):** This group includes industrial facilities that discharge to POTWs without an approved pretreatment program. This means that EPA or the authorized state is the control authority. These facilities do not have NPDES permits but do have a control mechanism that is issued by the control authority (State or EPA). These facilities will submit periodic reports on continued compliance on a bi-annual frequency to their control authority {i.e., periodic reports on continued compliance for CIUs [40 CFR 403.12(e)] and periodic reports on continued compliance for non-CIUs [40 CFR 403.12(h)]}.

POTWs

POTWs have multiple reporting requirements and are broken out separately in this analysis. Additionally, this analysis separates POTWs by their collection system type: Combined Sewer Systems (CSSs) and Sanitary Sewer Systems (SSSs). This is done to help properly identify the burden associated with reporting sewer overflows (which include bypass events). POTWs that discharge directly to a surface water and have an NPDES permit. These facilities can be classified as majors or nonmajors and may have coverage under individual or general NPDES permits. Facilities with coverage under a general permit will submit one or more general permit reports (e.g., NOIs, NOTs). Most of these facilities submit also DMRs on a regular frequency. POTWs may submit the following compliance monitoring data to their authorized NPDES program.

- **Biosolids:** EPA's sewage sludge regulations (40 CFR 503) require certain POTWs to submit to the authorized state or EPA region an annual biosolids report. POTWs that must submit an annual report include POTWs with a design flow rate equal to or greater than one million gallons per day, POTWs that serve 10,000 people or more, and Class I sewage sludge management facilities. In general, Class I sewage sludge management facilities must report annually to the authorized NPDES program biosolids monitoring

data, quantity of biosolids managed, ultimate end use or disposal of the biosolids, end use or disposal location(s), and vector and pathogen reduction measures.

- **Pretreatment:** EPA has developed a comprehensive pretreatment program implemented through EPA Regions, state, tribes, territories, and POTWs to control industrial discharges of pollutants that might pass through or interfere with POTW treatment processes or contaminate sewage sludge, thereby posing a threat to human health or the environment. POTWs with approved pretreatment programs are required to submit to their approval authority (State or EPA) an annual report summarizing basic program information and implementation activities.
- **Sewer Overflow Event Reports - Combined Sewer Systems:** POTWs that have combined sewer systems (CSS) are designed to have combined sewer overflows (CSOs). CSO discharges from CSO permitted outfalls (dry or wet-weather) that constitute noncompliance are required to be reported under 40 CFR 122.41(l)(6) and (7). CSO discharges from CSO permitted outfalls (wet-weather) that do not result in noncompliance can be reported on DMRs [40 CFR 122.41(l)(4)(i)] at the frequency identified by the permit, and are subject to public notification requirements, one of the nine minimum measures under the CSO Control Policy. However, one of the nine minimum measures is to prohibit CSO discharges during dry weather. Therefore, EPA regulations require that these and other noncompliance events must be reported under 40 CFR 122.41(l)(6) and (7). For this analysis this sector also includes bypass events occurring at CSSs.
- **Sewer Overflow Event Reports - Sanitary Sewer Systems:** POTWs with separate sanitary sewer systems, unlike combined sewer systems, are designed to carry only domestic sewage. Sanitary Sewer Overflows (SSOs) are generally unplanned and can occur anywhere in a collection system, although generally they are due to excessive infiltration and inflow during and following wet weather events. SSOs, including those that do not reach waters of the United States, may be indicative of improper operation and maintenance of the sewer system and thus may violate NPDES permit conditions requiring proper operation and maintenance [40 CFR 122.41(e)]. These noncompliance events are required to be reported to the NPDES authorized NPDES program in compliance with EPA's standard permit conditions [40 CFR 122.41(l)(6) and (7)]. POTWs must provide an oral report within 24 hours for any overflow event that "may endanger health or the environment" and follow-up the oral report with a "written submission" within 5 days of the permittee's discovery of the overflow event [see 40 CFR 122.41(l)(6)]. All other overflows are required to be reported by the permittee with the next regularly scheduled monitoring report [40 CFR 122.41(l)(7)].

The recipient of these compliance monitoring data depends on the NPDES authorization status of the state, tribe, or territory. For example, a POTW may send its DMRs to the state if it is authorized to implement the NPDES Base Program for municipal and industrial facilities and its Pretreatment Program Annual Report to an EPA Region if the state is not authorized to administer the pretreatment program.

2.1.3 Required Data

As noted in Section 1, data that regulated entities and authorized NPDES programs are required to submit is defined in existing CWA regulations. To facilitate understanding of the proposed rule, all of those existing data requirements are consolidated in Appendix A. These data are categorized into the data families listed in Table 2-3, which are defined in Section 1. Table 2-3 also indicates whether it is the regulated entity or authorized NPDES program that initiates the data flow that is ultimately entered into ICIS-NPDES. For example, a regulated entity currently

“initiates” a data flow by reporting their DMR information to the authorized NPDES program, which then submits the required data to ICIS-NPDES.

	Regulated Entity Initiates Activity	Authorized NPDES program Initiates Activity
Permits	✓	
Limits		✓
Limit Sets		✓
Discharge Monitoring Reports (DMRs)	✓	
Program Reports	✓	
Compliance Monitoring		✓
Violations		✓
Enforcement Actions		✓

Note that only data elements associated with a related permit type and subprogram will be entered in any particular submission. For example, DMR data elements will not be entered for CAFO permits because CAFO facilities are not required to send DMRs. Additionally, some data elements are specific to only one subprogram, such as data elements required to be entered for CAFO program reports.

2.1.4 Organization of this Section

Section 2.2 summarizes the number of permits covered by each of the NPDES programs, and the analytical methods used to estimate the annual reporting frequency for each data family. Sections 2.3 – 2.9 present details regarding permit universe, permit type (e.g., major individual), as well as the annual reporting frequency for each data family in each subprogram’s data flow. For each subprogram, the number of permits by permit type is based on information available in EPA data systems or other relevant sources. The annual reporting frequency estimation methods and information sources for each data family are presented as well. Section 2.11 provides a summary of the permit universe and annual frequencies across all subprograms and permit types.

2.2 Summary of Permit Universe and Methods Used to Estimate Annual Frequencies for Required Reporting

The proposed rule potentially affects the data flows of most of the NPDES universe. The purpose of this section is to summarize the size of the potential universe and illustrate how the annual reporting frequencies were estimated (see Table 2-4). Detailed descriptions of how the estimated universe and annual reporting frequencies were calculated are presented by subprogram in Section 2.3– 2.9.

Table 2-4: Permit Universe and Annual Reporting Frequency Methods, by Subprogram

Data Family	Permit Type	Industrial and Stormwater				POTWs (may have one or more subprogram)			
		Standard Industrial Dischargers	CAFOs	MS4s and Stormwater	SIUs	Biosolids	Pretreatment	CSS POTWs	SSS POTWs
	Individual Majors	3,727	0	297	0	4,209	1,390	591	3,682
	Individual Nonmajors	38,926	2,782	6,300	20,630 ^a	694	109	199	9,955
	General Nonmajors	31,805	11,624	322,137	0	0	0	38	1,945
	Annual Reporting Frequency Based on:								
Permits	Permit Cycle	✓	✓	✓ ^b		✓	✓	✓	✓
	Accounted for by Another Subprogram					✓	✓		
	Other Method			✓ ^c					
Limits and Limit Sets	Required DMR	✓		✓ ^c		✓	✓	✓	✓
	No DMR		✓	✓ ^e					
	Other Method			✓ ^f					
DMRs	Required DMR	✓		✓ ^d		✓	✓	✓	✓
	No DMR		✓	✓ ^e					
	Other Method			✓ ^f					
Program Reports	Required Program Report		✓	✓ ^d	✓	✓	✓	✓	✓
	No Program Report	✓		✓ ^c					
	Other Method			✓					
Compliance Monitoring	Compliance Monitoring Strategy	✓	✓	✓					
	Inspection Data in ICIS-NPDES					✓	✓		
	Other Method							✓	✓
Violations	Annual Non-Compliance Report	✓							
	Violation Data in ICIS-NPDES		✓	✓		✓	✓	✓	✓
Enforcement Actions	Enforcement Action Data in ICIS-NPDES	✓	✓	✓		✓	✓	✓	✓

^a Not NPDES permitted
^b Major and nonmajor individual stormwater only
^c General construction and multi-sector stormwater only
^d Major individual stormwater only
^e Nonmajor individual stormwater and general construction stormwater only
^f General multi-sector stormwater only

2.3 Standard Industrial Direct Dischargers

Standard industrial direct dischargers include industrial facilities that discharge to a surface water. These facilities have been regulated since the inception of the NPDES Program.

2.3.1 Permit Universe

Major and Nonmajor Individual Permits

The number of major and nonmajor facilities operating under individual permits was estimated by querying ICIS-NPDES and PCS (the Office of Water’s system of record) for active major and nonmajor standard industrial dischargers.

Cooling Water Intakes and Thermal Variances

Under the proposed rule, EPA will require that certain permit data elements relating to cooling water intakes and thermal variances be reported to ICIS-NPDES for major regulated entities. Affected facilities are typically industrial facilities or power plants that use large volumes of cooling water from lakes, rivers, estuaries, or oceans (U.S. EPA, 2010c). Because information about these facilities will need to be reported, it was necessary to separately characterize the universe of NPDES regulated entities with cooling water intakes or thermal variances. It was assumed that this permit universe is a subset of the universe of standard industrial dischargers with a subprogram.

The NPDES Amendment of Final Regulations Addressing Cooling Water Intake Structures for New Facilities Federal Register Notice (67 FR 78947, December 26, 2002) provides a list of SIC and NAICS codes of entities likely to use cooling water intake structures to withdraw water from waters of the U.S. and that have or require a NPDES permit. To construct the universe of major permits for which cooling water intake data elements will need to be reported, ICIS-NPDES and PCS were queried for active major permits within these SIC and NAICS codes (U.S. EPA, 2011). The number of active major permits obtained from ICIS-NPDES and PCS was used as the count of regulated entities for which cooling water intake data elements must be reported. The number of regulated entities for which thermal variance data elements must be reported was provided by EPA's Office of Water, using national estimates from the EPA's 316b proposed rule.¹¹ The distribution of thermal variances was estimated at the state level using this distribution of cooling water intake facilities.

Nonmajor General Permits

EPA and state authorized NPDES programs may issue general permits for standard industrial direct dischargers. The number of facilities covered under general permits is based on the Office of Water's system of record, in August 2011. General permits with no reporting requirements (such as residential septic systems) were excluded from the analysis because they are not affected by the rule; this category also excluded general permits covered under other subprogram analyses (e.g., CAFOs) to avoid double counting costs and cost savings.

2.3.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual reporting frequencies described in this section apply to individual major, individual nonmajor and general nonmajor standard industrial dischargers.

Permits

Permit data must be entered into ICIS-NPDES for standard industrial dischargers. Permit data are entered with the permit cycle, once every five years, which translates to an annual reporting frequency of 0.2. The same annual reporting frequency is used for cooling water intake and thermal variances.

Limits and Limit Sets for Major and Nonmajor Individual Permits

All individual standard industrial dischargers must have limits and limit sets data entered into ICIS-NPDES. Limits and limit sets change according to the permit cycle, and therefore have an annual reporting frequency of 0.2.

¹¹ http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/qa_proposed.pdf

Limits and Limit Sets for Nonmajor General Permits

Limits and limit sets for nonmajor general standard industrial dischargers are set in the master permit, such that these data elements need not be entered for each regulated entity. Therefore, limit and limit sets data element have an annual reporting frequency of 0 for nonmajor general facilities.

DMRs

Most permits with DMR requirements must submit DMRs on a monthly basis. Therefore, DMRs have an annual reporting frequency of 12.

Program Reports

Program reports are only required for permits issued under one of the defined subprograms. By definition, this group of facilities is not related to a subprogram, so the “program report” requirement does not apply, which means the frequency for submitting the program report data is zero for this group of facilities.

Compliance Monitoring

Information was not available from ICIS-NPDES regarding the frequency of compliance monitoring reports for standard industrial dischargers. Therefore, the annual reporting frequency of inspections (0.2) established by the Compliance Monitoring Strategy was used (U.S. EPA, 2007a), resulting in an annual reporting frequency of 0.2.

Violations

Information was not available from ICIS-NPDES regarding the frequency of violations for standard industrial dischargers. For the purposes of estimating the frequency of authorized NPDES program data entry for violations it was assumed that the rate of violations among nonmajor individual permits (0.4), as documented in the Draft 2009 Annual Non-Compliance Report, would apply, resulting in an annual reporting frequency of 0.4.

Enforcement Actions

The estimated annual reporting frequency of enforcement actions is 0.11, which was estimated by:

1. Querying ICIS-NPDES¹² for the number of standard industrial dischargers.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number of formal and informal enforcement actions in a one-year period.
4. Dividing the average number of formal and informal enforcement actions by the number of permits to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data.

2.3.3 Summary

¹² Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

Table 2-5 summarizes the number of standard industrial dischargers and the annual frequencies for each required data family.

Table 2-5: Standard Industrial Dischargers Permit Universe and Annual Reporting Frequency			
	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	3,727 ^a	38,926	31,805
# Permits – Cooling Water Intakes and Thermal Variances	1,725	n/a	n/a
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2	0.2	0.2
Limits	0.2	0.2	0
Limit Sets	0.2	0.2	0
DMRs	12	12	12
Program Reports	0	0	0
Compliance Monitoring	0.2	0.2	0.2
Violations	0.4	0.4	0.4
Enforcement Actions	0.11	0.11	0.11
^a This number represents a subset of the 6,700 major permits. The remaining majors are POTWs accounted for under the SSS and CSS universe.			

2.4 Biosolids

The biosolids NPDES subprogram applies to those facilities that use or dispose of treated sewage sludge, also referred to as “biosolids.” Biosolids reporting criteria mostly apply to POTWs that ship their biosolids offsite for use as fertilizer, with the addition of some non-POTW facilities that produce and distribute biosolids. Furthermore, while some facilities generate biosolids, they are not required to report to EPA unless they ship the biosolids offsite. Therefore, the biosolids universe used in the analysis only represents those facilities that annually transfer biosolids offsite, which accounts for most biosolids reporting activity.

2.4.1 Permit Universe

Major and Nonmajor Individual Permits

It was necessary to estimate the universe of major biosolids facilities because EPA’s data systems do not contain permit information for all states. Eight states have approved biosolids programs, four of which have data in ICIS-NPDES (the Office of Water’s system of record). The universe of major and nonmajor biosolids facilities was estimated by:

1. Querying ICIS-NPDES for the number of biosolids facilities for the four approved states with data in the system.
2. Querying the same four states for the number of POTWs in each.
3. Determining the percent of POTWs with biosolids permit components (92%) in the four states.

4. Estimating the number of non-POTW biosolids programs in the nation. This number equals 2.5% of the biosolids-POTW universe.¹³
5. Querying ICIS-NPDES and PCS for the total number of POTWs in each state.
6. Applying the percentage of POTWs with biosolids approval to the number of POTWs for each state in the overall NPDES universe.
7. Calculating the number of non-POTW biosolids permits from previously calculated 2.5% and adding to the count of POTWs with biosolids requirements in their permit.

The number of major and nonmajor biosolids permits were calculated separately using the method described above.

Nonmajor General Permits

While nonmajor general biosolids permits exist, it was not possible to determine the exact number based on available data. Because the costs would not differ based on the individual versus general permit classification, it was assumed that all biosolids facilities are regulated under individual permits. Therefore, for the purpose of estimating potential costs, the universe of nonmajor general biosolids permits is zero.

2.4.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual reporting frequencies described in this section apply to both major and nonmajor biosolids facilities.

Permits

As biosolids facilities are a subset of POTWs, the annual reporting frequency for permit information is included in the analysis of the CSS and SSS subprograms. Therefore, the annual reporting frequencies for permit data elements for both major and nonmajor individual permits were set to 0. However, those permit data elements specific to the biosolids program were assumed to have an annual reporting frequency of 0.2, because they are assumed to be generated on the permit cycle.

Limits and Limit Sets

Biosolids facilities are POTWs or standard industrial dischargers regulated under other NPDES programs, such as SSSs. These facilities do submit DMRs with corresponding limits and limit sets, but the data entry and processing associated with those limits and limit sets are accounted for under the SSS, CSS or Standard Industrial Discharger universes. Therefore, biosolids facilities have no biosolids specific discharges, which means the frequency for submitting limit and limit set data is zero for this group of facilities.

DMRs

As stated above, biosolids facilities are SSSs, CSSs, or Standard Industrial Dischargers. These facilities do submit DMRs, but the data entry and processing associated with those reports are accounted for under the SSS, CSS or Standard Industrial Discharger universes. Biosolids facilities have no biosolids specific discharges, which means the frequency for submitting DMRs is zero for this group of facilities.

¹³ Based on an ICIS-NPDES query of biosolids facilities showed that 1,464 of 1,501 (97.5%) facilities were POTWs. Therefore, it was assumed that another 2.5% of the POTW-biosolids universe (37/1,464) were not POTWs.

Program Reports

Biosolids permits have an annual program report requirement, therefore the annual reporting frequency for program reports data is 1.

Compliance Monitoring

As stated above, all biosolids facilities are covered under SSS, CSS or Standard Industrial Discharger permits. Therefore the violation information associated with these facilities is accounted for under the SSS, CSS or Standard Industrial Discharger permit universes and, to prevent double counting, the reporting frequency for compliance monitoring is zero.

Violations

As stated above, all biosolids facilities are covered under SSS, CSS or Standard Industrial Discharger permits. Therefore the violation information associated with these facilities is accounted for under the SSS, CSS or Standard Industrial Discharger permit universes and, to prevent double counting, the reporting frequency for violations is zero.

Enforcement Actions

As stated above, all biosolids facilities are covered under SSS, CSS or Standard Industrial Discharger permits. Therefore the violation information associated with these facilities is accounted for under the SSS, CSS or Standard Industrial Discharger permit universes and, to prevent double counting, the reporting frequency for enforcement actions is zero.

2.4.3 Summary

Table 2-6 summarizes the number of biosolids regulated entities and the annual frequencies for each required data family.

	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	4,209	694	0
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2 ^a	0.2 ^a	n/a
Limits	0	0	n/a
Limit Sets	0	0	n/a
DMRs	0	0	n/a
Program Reports	1	1	n/a
Compliance Monitoring	0	0	n/a
Violations	0	0	n/a
Enforcement Actions	0	0	n/a

^a Annual reporting frequency applies only to those permit data elements specific to the biosolids program. All other permit data elements are captured by CSSs and SSSs and have an annual reporting frequency of 0.

2.5 CAFOs

A Concentrated Animal Feeding Operation (CAFO) is an agricultural operation where a large number of animals are kept and raised in confined situations, and is defined based on the number

of animals at the facility. Animal waste and wastewater from CAFOs can enter water bodies from spills or breaks of waste storage structures. CAFOs are classified as point sources and are regulated under NPDES.

2.5.1 Permit Universe

Major Individual Permits

By definition, there are no major CAFO permits.

Nonmajor Individual and General Permits

Estimates of the number of CAFOs were provided by the Office of Water (OW), based on EPA's CAFO Proposed rule.¹⁴ The proposed rule states there are approximately 19,200 CAFOs nationwide, with as many as 75% intending to discharge and therefore needing a NPDES permit to operate. Estimates of the number of CAFOs per state were provided by OW; however the distribution between nonmajor individuals and nonmajor generals was unknown. A query of ICIS revealed 386 individual permit covered CAFO facilities and 1,613 general permit covered CAFO facilities. This ratio (386/1,613) was used to apportion OW's state-level estimates between individual and general permits.

2.5.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual reporting frequencies described in this section apply to both individual and general permit covered CAFO facilities.

Permits

Permit data elements will be entered with the permit cycle, once every five years, which translates to an annual reporting frequency of 0.2.

Limits and Limit Sets

Limits and limit sets are required for facilities that submit DMRs. CAFOs are generally not required to submit DMRs and so are not required to have the limits and limit sets data families entered into ICIS-NPDES. The annual reporting frequency for limits and limit sets is therefore 0.

DMRs

DMRs are generally not required for CAFOs; therefore the annual reporting frequency is zero.

Program Reports

CAFOs have an annual program report requirement, therefore the annual reporting frequency for program reports data is 1.

Compliance Monitoring

Information was not available from ICIS-NPDES regarding the frequency of compliance monitoring reports for CAFO permits. Therefore, the annual reporting frequency of inspections for such regulated entities (0.2) was taken from the Compliance Monitoring Strategy (U.S. EPA, 2007a), resulting in an annual reporting frequency of 0.2.

¹⁴ http://www.epa.gov/npdes/pubs/cafo_implementationstatus_9302010.pdf

Violations

The annual reporting frequency of violations is estimated to be 0.01 for both nonmajor individual and general CAFO permits, and was estimated by:

1. Querying ICIS-NPDES¹⁵ for the number of facilities with CAFO components in their NPDES permit.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of notices of violation in the past five years.
3. Dividing the number of notices of violation in the past five years by five to estimate the average number of notices of violation in a one-year period.
4. Dividing the average number of notices of violation by the total number of facilities with CAFO components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for violations data.

Enforcement Actions

The estimated annual reporting frequency of enforcement actions is 0.02 for both nonmajor individual and general CAFO permits, which was estimated by:

1. Querying ICIS-NPDES¹⁶ for the number of facilities with CAFO components in their NPDES permit.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number of formal and informal enforcement actions in a one-year period.
4. Dividing the average number of formal and informal enforcement actions by the number of permits with CAFO components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data.

2.5.3 Summary

Table 2-7 summarizes the number of CAFO regulated entities and the annual frequencies for each required data family.

¹⁵ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

¹⁶ *ibid*

	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	0	2,782	11,624
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	n/a	0.2	0.2
Limits	n/a	0	0
Limit Sets	n/a	0	0
DMRs	n/a	0	0
Program Reports	n/a	1	1
Compliance Monitoring	n/a	0.2	0.2
Violations	n/a	0.01	0.01
Enforcement Actions	n/a	0.02	0.02

2.6 CSSs

Combined sewer systems (CSSs) are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same collection system. Typically, CSSs transport all of their wastewater to a sewage treatment plant where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant(s). For this reason, combined sewer systems may be designed to overflow during peak inflow events and discharge excess combined wastewater directly to nearby streams, rivers, or other water bodies. These combined sewer overflows (CSOs) contain not only stormwater but also untreated human and industrial wastes, toxic materials, and debris. It is assumed that all states with NPDES authorized NPDES program will administer their CSS program. EPA administers the CSS program in the remaining states. POTWs that operate CSS can also have bypass events [40 CFR 122.41(m)] and are also required to report such events when sewage bypasses any portion of a treatment facility.

2.6.1 Permit Universe

Major and Nonmajor Individual Permits

In 2004, EPA submitted a Report to Congress that inventoried the Combined Sanitary Sewers and Sanitary Sewer Systems throughout the United States and characterized overflow events.¹⁷ The 2004 Report to Congress includes the number of combined sewer overflow events annually by state. In the proposed rule, the CSS permit universe is assumed to be equal to the number of CSSs in the 2004 report because program reports capturing CSO events and inspections are required at the CSS level. The distinction between major and nonmajor permit holders is not available in the 2004 Report to Congress. Data available in ICIS-NPDES suggests that 24% of CSSs are majors and the remaining 76% are nonmajors.

Note that one state, Pennsylvania, issues permits to CSSs under a general permit. In this analysis, it is assumed that all CSS permits in Pennsylvania are nonmajor general permits (Weiss, 2011). All nonmajor general CSS permits are assumed to have the same annual reporting frequencies as nonmajor individual permits.

¹⁷ http://cfpub.epa.gov/npdes/cso/demo.cfm?program_id=5

2.6.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual frequencies described in this section apply to both major and nonmajor CSS permits.

Permits

CSS permit data must be entered into ICIS-NPDES. Permit data are entered with the permit cycle, once every five years, which translates to an annual reporting frequency of 0.2.

Limits and Limit Sets

All CSS permits must have limits and limit sets data entered into ICIS-NPDES. Limits and limit sets change according to the permit cycle, and therefore have an annual reporting frequency of 0.2.

DMRs

Annual reporting frequencies are linked to the requirement that DMRs must be sent on a monthly basis. Therefore, DMRs have an annual reporting frequency of 12.

Program Reports

CSSs must submit a program report for every overflow and bypass event. Therefore, the estimated annual reporting frequency for program report data for CSOs was set as the number of overflow and bypass events divided by the number of CSS POTWs. Based on this calculation, the estimated annual reporting frequency is 12.57 for majors and nonmajors.

Compliance Monitoring

Compliance monitoring information must be entered for every CSO event, according to EPA Compliance Monitoring Strategy. Therefore, the estimated annual reporting frequency for compliance monitoring data for CSOs was set as the number of CSOs divided by the number of CSSs. Based on this calculation; the estimated annual reporting frequency is 11.22 for majors and nonmajors.

Violations

The estimated annual reporting frequency for violation data for major CSS facilities is 0.23. The estimated annual reporting frequency for violation data for nonmajor CSS facilities is 0.11. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES¹⁸ for the number of facilities with CSS components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of notices of violation in the past five years.
3. Dividing the number of notices of violation in the past five years by five to estimate the average number of notices of violation in a one-year period.
4. Dividing the average number of notices of violation by the total number of facilities with CSS components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for violations data elements. Annual reporting frequencies were calculated separately for majors and nonmajors.

¹⁸ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

Enforcement Actions

The estimated annual reporting frequency for enforcement action data for major CSS facilities is 0.36. The estimated annual reporting frequency for enforcement action data for nonmajor CSS facilities is 0.14. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES¹⁹ for the number of facilities with CSS components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number formal and informal enforcement actions in a one-year period.
4. Dividing the average number of formal and informal enforcement actions by the number of permits with CSS components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data. Annual reporting frequencies were calculated separately for majors and nonmajors.

2.6.3 Summary

Table 2-8 summarizes the number of CSS regulated entities and the annual frequencies for each required data family.

	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	591	199	38
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2	0.2	0.2
Limits	0.2	0.2	0.2
Limit Sets	0.2	0.2	0.2
DMRs	12	12	12
Program Reports	11.22	11.22	11.22
Compliance Monitoring	11.22	11.22	11.22
Violations	0.23	0.11	0.11
Enforcement Actions	0.36	0.14	0.14

2.7 Pretreatment

Publicly owned treatment works (POTWs) collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a sewer collection system, to the treatment plant. At the treatment plant, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage; however, most POTWs also receive wastewater from industrial users. The General Pretreatment Regulations establish responsibilities of the POTW to develop and implement local limits for industrial users (IUs)/dischargers to the sewer system to control

¹⁹ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

pollutants that may pass through or interfere with POTW treatment processes or that may contaminate sewage sludge. States may issue IU permits even though the IU discharges to the sewer collection system for further treatment at the POTW. POTWs with Approved Pretreatment Programs must administer a local program covering IUs and report to their authorized NPDES program about administering their pretreatment program.

2.7.1 Permit Universe

Major and Nonmajor Individual Permits

The current number of major and nonmajor POTWs with Approved Pretreatment Programs in each state was estimated by querying ICIS-NPDES and PCS (the Office of Water's system of record) for active major and nonmajor pretreatment facilities.

Nonmajor General Permits

There are no general permits for nonmajor POTWs with Approved Pretreatment Programs. Therefore, the universe for this category is zero.

2.7.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual frequencies described in this section apply to both major and nonmajor pretreatment permits.

Permits

As pretreatment facilities are a subset of POTWs, the annual reporting frequency for permit data is captured by the CSS and SSS subprograms. Therefore, the annual frequencies for both major and nonmajor individual pretreatment facilities were set to 0. However, those permit data elements specific to the pretreatment program were assumed to have an annual reporting frequency of 0.2, because they are assumed to be generated on the permit cycle.

Limits and Limit Sets

All pretreatment permits must have limits and limit sets data entered into ICIS-NPDES. Limits and limit sets change according to the permit cycle, and therefore have an annual reporting frequency of 0.2.

DMRs

Annual reporting frequencies are linked to the requirement that DMRs must be sent on a monthly basis. Therefore, DMRs have an annual reporting frequency of 12.

Program Reports

Pretreatment programs have an annual program report requirement; therefore the annual reporting frequency for program reports is 1.

Compliance Monitoring

The estimated annual reporting frequency for compliance monitoring data for major pretreatment facilities is 0.2. The estimated annual reporting frequency for compliance monitoring data for nonmajor pretreatment facilities is 0.17. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²⁰ for the number of facilities with pretreatment program components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of inspections in the past five years.
3. Dividing the number inspections in the past five years by five to estimate the average number of inspections in a one-year period.
4. Dividing the average number of inspections by the total number of facilities with pretreatment program components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for compliance monitoring data. Annual reporting frequencies were calculated separately for majors and nonmajors.

Violations

The estimated annual reporting frequency for violations data for major pretreatment facilities is 0.23. The estimated annual reporting frequency for violations data for nonmajor pretreatment facilities is 0.14. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²¹ for the number of facilities with pretreatment program components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of notices of violation in the past five years.
3. Dividing the number of notices of violation in the past five years by five to estimate the average number of notices of violation in a one-year period.
4. Dividing the average number of notices of violation by the total number of facilities with pretreatment program components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for violations data. Annual reporting frequencies were calculated separately for majors and nonmajors.

Enforcement Actions

The estimated annual reporting frequency for enforcement action data for major pretreatment facilities is 0.39. The estimated annual reporting frequency for enforcement action data for nonmajor pretreatment facilities is 0.22. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²² for the number of facilities with pretreatment information.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number of formal and informal enforcement actions in a one-year period.

²⁰ *ibid*

²¹ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

²² Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

4. Dividing the average number of formal and informal enforcement actions by the number of permits with pretreatment components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data. Annual reporting frequencies were calculated separately for majors and nonmajors.

2.7.3 Summary

Table 2-9 summarizes the number of pretreatment regulated entities and the annual frequencies for each required data family.

	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	1,390	109	0
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2 ^a	0.2 ^a	n/a
Limits	0.2	0.2	n/a
Limit Sets	0.2	0.2	n/a
DMRs	12	12	n/a
Program Reports	1	1	n/a
Compliance Monitoring	0.2	0.17	n/a
Violations	0.23	0.14	n/a
Enforcement Actions	0.39	0.22	n/a

^a Annual reporting frequency applies only to those permit data elements specific to the pretreatment program. All other permit data elements are captured by CSSs and SSSs and have an annual reporting frequency of 0.

2.8 SSSs

Sanitary Sewer Systems (SSSs) are sewers designed to collect and transport all domestic sewage that flows into them to a POTW. Properly designed, operated, and maintained SSSs are designed to prevent overflows. However, occasional unintentional discharges of raw sewage from municipal sanitary sewers occur in almost every system. These types of discharges are called sanitary sewer overflows (SSOs) and they contain untreated human and industrial wastes. It is assumed that all states with NPDES authorized NPDES program will administer their SSS program, and that EPA administers the SSS program in the remaining states. POTWs that operate SSS can also have bypass events [40 CFR 122.41(m)] and are also required to report such events when sewage bypasses any portion of a treatment facility.

2.8.1 Permit Universe

Major and Nonmajor Individual Permits

In 2004, EPA submitted a Report to Congress that inventoried the Combined Sanitary Sewers and Sanitary Sewer Systems throughout the United States and characterized overflow events.²³ The 2004 Report to Congress includes the number of sanitary sewer overflow events annually by

²³ http://cfpub.epa.gov/npdes/cso/demo.cfm?program_id=5

state. In the proposed rule, the number of POTWs that have SSOs is assumed to be equal to the number of SSSs in the 2004 report because program reports capturing SSO events and inspections are required at the SSO level. The distinction between major and nonmajor permit holders is not available in the 2004 Report to Congress. Data available in ICIS-NPDES suggests that 24% of SSSs are majors and the remaining 76% are nonmajors.

2.8.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual frequencies described in this section apply to both major and nonmajor POTWs with SSOs.

Permits

SSS POTW permit data must be entered into ICIS-NPDES. Permit data are entered with the permit cycle, once every five years, which translates to an annual reporting frequency of 0.2.

Limits and Limit Sets

All SSS POTW permits must have limits and limit sets data entered into ICIS-NPDES. Limits and limit sets change according to the permit cycle, and therefore have an annual reporting frequency of 0.2.

DMRs

All SSS POTWs must submit DMRs for their permitted dischargers to surface waters. Annual reporting frequencies are linked to the requirement that DMRs must be sent on a monthly basis. Therefore, DMRs have an annual reporting frequency of 12.

Program Reports

SSS POTWs must submit a program report for every overflow and bypass event. Therefore, the estimated annual reporting frequency for program report data elements for these POTWs was set as the number of overflow and bypass events divided by the number of SSS POTWs. Based on this calculation; the estimated annual reporting frequency is 2.70 for majors and nonmajors.

Compliance Monitoring

Compliance monitoring information must be entered for every SSO event, according to the EPA Compliance Monitoring Strategy. The 2004 Report to Congress characterizing CSSs and SSSs stated that there were 40,000 SSO events annually from a total of 15,582 SSS POTWs. Therefore, the annual reporting frequency for compliance monitoring data elements for SSSs was estimated as 40,000 SSO events annually divided by 15,582 SSS systems, or 2.57 annual reporting frequency.

Violations

The estimated annual reporting frequency for violation data for major SSS POTWs is 0.23. The estimated annual reporting frequency for violation data for nonmajor SSS POTWs is 0.11. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²⁴ for the number of facilities with SSS components.

²⁴ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate estimated from ICIS-NPDES was representative of the universe as a whole.

2. Of the facilities returned in #1, querying ICIS-NPDES for the number of notices of violation in the past five years.
3. Dividing the number of notices of violation in the past five years by five to estimate the average number of notices of violation in a one-year period.
4. Dividing the average number of notices of violation by the total number of facilities with SSS components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for violations data. Annual reporting frequencies were calculated separately for majors and nonmajors.

Enforcement Actions

The estimated annual reporting frequency for enforcement action data for major SSS facilities is 0.36. The estimated annual reporting frequency for enforcement action data for nonmajor SSS facilities is 0.14. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²⁵ for the number of facilities with SSS components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number of formal and informal enforcement actions in a one-year period.
4. Dividing the average number of formal and informal enforcement by the number of SSS permits to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data. Annual reporting frequencies were calculated separately for majors and nonmajors.

2.8.3 Summary

Table 2-10 summarizes the number of SSS regulated entities and the annual frequencies for each required data family.

	Individual Majors	Individual Nonmajors	General Nonmajors
# Permits	3,682	9,955	1,945
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2	0.2	0.2
Limits	0.2	0.2	0.2
Limit Sets	0.2	0.2	0.2
DMRs	12	12	12
Program Reports	2.57	2.57	2.57
Compliance Monitoring	2.57	2.57	2.57
Violations	0.23	0.11	0.11
Enforcement Actions	0.36	0.14	0.14

²⁵ ibid

2.9 Stormwater

The stormwater subprogram regulates stormwater discharges from three potential sources: municipal separate storm sewer systems (MS4s); construction activities; and industrial activities. MS4s collect stormwater runoff and are designated as Phase I and Phase II MS4s. The Phase I rule, issued in 1990, requires *medium* and *large* cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. The Phase II rule, issued in 1999, requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the authorized NPDES program, to obtain NPDES permit coverage for their stormwater discharges. Construction activity permits are for building sites that disturb more than 1 acre of land and therefore could have significant runoff from the site. Multi-sector General (a.k.a. Industrial) stormwater permits are for discharges from sites where material is stored or handled outside and therefore can pollute stormwater runoff. It is assumed that all States with NPDES authorized NPDES program will administer their stormwater program.

2.9.1 Permit Universe

Major MS4 Permits

By definition, the Phase 1 MS4s, which include large and medium cities, are the only major facilities in the stormwater program. The number of Phase 1 MS4s was obtained from EPA's Office of Water (Clark, 2011; Faulk, 2008).

Nonmajor MS4 Permits

For the purpose of estimating costs, it was assumed that all Phase 2 MS4s are nonmajor facilities. The number of Phase 2 MS4s was obtained from EPA's Office of Water (Clark, 2011; Faulk, 2008).

Nonmajor General Permits – Construction General Permit (CGP)

Operators of construction sites that are one acre or larger (including smaller sites that are part of a larger common plan of development) may be required to obtain authorization to discharge stormwater under a NPDES construction stormwater permit. The number of facilities covered by construction general permits was obtained from EPA's Office of Water (Clark, 2011; Faulk, 2008). Note that small construction facilities may file low erosivity waiver certifications in place of NOIs if the site has a low predicted rainfall and the rainfall erosivity factor (R factor) is less than 5 during the period of construction activity.

Nonmajor General Permits – Multi-Sector General Permit (MSGP)

Industrial sectors may require authorization under a NPDES industrial stormwater permit for stormwater discharges. The number of facilities covered by construction general permits was obtained from EPA's Office of Water (Clark, 2011; Faulk, 2008). As with the CGP, facilities conducting certain categories of industrial activity may file no exposure certifications in place of NOIs if their industrial materials and operations are not exposed to stormwater.

2.9.2 Annual Reporting Frequency by Data Family

Except where stated otherwise, the annual frequencies described in this section apply to major individual, nonmajor individual, and nonmajor general stormwater permits.

Permit Data for Major and Nonmajor MS4 Permits

MS4s permit data must be entered into ICIS-NPDES. Permit data are entered with the permit cycle, once every five years, which translates to an annual reporting frequency of 0.2.

Permit Data for Construction General Permits (CGP)

Permit data elements are entered both for construction facilities filing NOIs and for construction facilities filing low erosivity waivers. Data from EPA's NOI search tool from states with well-populated data was used to determine the number of NOIs received annually. The annual reporting frequency for permit data elements was estimated by combining the percentages of the CGP universe filing NOIs and low erosivity waivers annually, as follows:

1. Querying EPA NOI search tool for all CGP NOIs filed by year over the past five years by state.
2. Limiting data to just those states that are well populated with NOIs.
3. Estimating the average number of NOIs annually.
4. Summing #3 across states.
5. Dividing the result of #4 by the estimate of the total universe (4%).
6. Querying EPA NOI search tool for all low erosivity waivers filed in 2009.
7. Dividing number of low erosivity waivers filed in 2009 by the number of CGP NOIs to obtain the percentage of the CGP universe filing low erosivity waivers in one year (1%).
8. Summing the percentage of the total universe of construction sites filing NOIs in one year (4%) and the percentage of the total universe filing low erosivity waivers in one year (1%) to obtain the percentage of the total universe for which permit data elements must be entered in one year (5%).

The percentage calculated in step #8 represents the annual reporting frequency for permit data. The estimated annual reporting frequency for permit data elements for facilities covered under the CGP is 0.17.

EPA also accounted for facilities that terminate operations and need to submit a NOT by assuming that approximately 20% of all facilities with NOIs and LEWs would terminate operations per year. Thus, to account for NOTs, EPA increased permit data costs by 20%.

Permit Data for Multi-Sector General Permits (MSGP)

Permit data elements are entered both for industrial facilities applying for NOIs and for industrial facilities filing no exposure waivers. Data from EPA's NOI search tool from states with well-populated data was used to estimate the number of new multi-sector general permit NOIs filed each year. The annual reporting frequency for permit data elements was estimated by combining the percentages of the MSGP universe filing those documents annually, as follows:

1. Querying EPA NOI search tool for all MSGP NOIs filed by year over the past five years by state.
2. Limiting data to just those states that are well populated with NOIs.
3. Estimating average number of NOIs for each state.
4. Summing #3 across states.
5. Dividing the result of #4 by the estimate of the total universe (9%).
6. Querying EPA NOI search tool for all no exposure certifications filed in 2009.

7. Dividing number of no exposure certifications filed in 2009 by the number of MSGP NOIs to obtain the percentage of the total universe filing no exposure certifications in one year (9%).
8. Summing the percentage of the total universe filing NOIs in one year (9%) and the percentage of the total universe filing no exposure certifications in one year (9%) to obtain the percentage of the total universe for which permit data elements must be entered in one year (18%).

The percentage calculated in step #8 represents the annual reporting frequency for permit data. The estimated annual reporting frequency for permit data elements for facilities covered under the MSGP is 0.18.

EPA also accounted for facilities that terminate operations and need to submit a NOT by assuming that approximately 5% of all facilities with NOIs and NECs would terminate operations per year. Thus, to account for NOTs, EPA increased permit data costs by 5%.

Limits and Limit Sets for Major MS4 Permits

Limits and limit sets, where applicable, must be entered in ICIS-NPDES for major MS4 stormwater permits. Limits and limit sets change according to the permit cycle, and therefore have an annual reporting frequency of 0.2.

Limits and Limit Sets for Nonmajor MS4 Permits

Limits and limit sets are only required for facilities that submit DMRs. Nonmajor MS4 stormwater permits are not required to submit DMRs and so are not required to have the limits and limit sets data families entered into ICIS-NPDES, and therefore have an annual reporting frequency of 0.

Limits and Limit Sets for Construction General Permits (CGP)

Limits and limit sets are required for facilities that submit DMRs. CGPs are not required to submit DMRs and so are not required to have the limits and limit sets data families entered into ICIS-NPDES, and therefore have an annual reporting frequency of 0.

Limits and Limit Sets for Multi-Sector General Permits (MSGP)

Limits and limit sets for MSGPs are set in the master permit, such that these data elements need not be entered for each regulated entity. Therefore, limit and limit sets data element have an annual reporting frequency of 0 for MSGPs.

DMRs for Major MS4 Permits

Annual reporting frequencies are linked to the requirement that DMRs must be sent on a monthly basis. Therefore, DMRs have an annual reporting frequency of 12.

DMRs for Nonmajor MS4 Permits

DMRs are not required for nonmajor MS4s; therefore the annual reporting frequency is zero.

DMRs for Construction General Permits (CGP)

DMRs are not required for facilities covered under EPA CGPs. Although state reporting requirements could potentially be different, it is assumed that the annual reporting frequency is zero.

DMRs for Multi-Sector General Permits (MSGP)

DMRs are required for some facilities covered under the EPA-issued MGPs three times a year. Although state reporting requirements could potentially be different, it is assumed that the DMR annual reporting frequency is 3.

Program Reports for Major MS4 Permits

Major MS4 programs have an annual program report requirement, and therefore the annual reporting frequency is 1.

Program Reports for Nonmajor MS4 Permits

Nonmajor MS4s are required to send program reports in the second and fourth year of the permit cycle, and therefore the annual reporting frequency is 0.4.

Program Reports for General Permits (CGP and MSGP)

Program reports are not required for CGPs and MSGPs under the proposed rule, and therefore the annual reporting frequency is zero. Note, certain permits may require program reports but such requirements are permit-specific and not associated with requirements under the rule.

Compliance Monitoring

Information was not available from ICIS-NPDES regarding the frequency of compliance monitoring reports for stormwater permits. Therefore, the annual reporting frequency of inspections from the Compliance Monitoring Strategy was used (U.S. EPA, 2007a). The estimated annual reporting frequency for major and nonmajor individual permits is 0.2. The estimated annual reporting frequency for general construction and multi-sector permits is 0.05

Violations

The estimated annual reporting frequency for violation data elements for major facilities is 0.06. The estimated annual reporting frequency for violation data elements for nonmajor facilities is 0.01. The estimated annual reporting frequency for violation data elements for general facilities is 0.02. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²⁶ for the number of facilities with stormwater components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of notices of violation in the past five years.
3. Dividing the number of notices of violation in the past five years by five to estimate the average number of notices of violation in a one-year period.
4. Dividing the average notices of violation per year by the total number of facilities with stormwater components to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for violations data. Annual reporting frequencies were calculated separately for major, nonmajor, and general permits.

Enforcement Actions

The estimated annual reporting frequency for enforcement data elements for major individual permits is 0.12. The estimated annual reporting frequency for enforcement data elements for

²⁶ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

nonmajor individual permits is 0.01. The estimated annual reporting frequency for enforcement data elements for CGP and MSGP general permits is 0.02. These annual reporting frequencies were estimated by:

1. Querying ICIS-NPDES²⁷ for the number of facilities with stormwater components.
2. Of the facilities returned in #1, querying ICIS-NPDES for the number of formal and informal enforcement actions in the past five years.
3. Dividing the number of formal and informal enforcement actions in the past five years by five to estimate the average number of formal and informal enforcement actions in a one-year period.
4. Dividing the average formal and informal enforcement actions/year by the number of permits to estimate the annual reporting frequency.

The percentage calculated in step #4 represents the annual reporting frequency for enforcement action data. Annual reporting frequencies were calculated separately for major, nonmajor, and general permits.

2.9.3 Summary

Table 2-11 summarizes the number of stormwater regulated entities and the annual frequencies for each required data family.

Table 2-11: Stormwater Permit Universe and Annual Reporting Frequency				
	MS4 Majors	MS4 Nonmajors	General Nonmajors (CGP)	General Nonmajors (MSGP)
# Permits	297	6,300	100,000	222,137
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	0.2	0.2	0.17	0.18
Limits	0.2	0	0	0
Limit Sets	0.2	0	0	0
DMRs	12	0	0	3
Program Reports	1	0.4	0	0
Compliance Monitoring	0.2	0.2	0.05	0.05
Violations	0.06	0.01	0.02	0.02
Enforcement Actions	0.12	0.01	0.02	0.02

2.10 Significant Industrial Users (SIUs)

As discussed above for the pretreatment program, most POTWs receive wastewater from industrial users. For POTWs without an Approved Pretreatment Program, states or EPA regulate SIUs to POTWs.

2.10.1 Permit Universe

The current number of SIUs not covered under an Approved Pretreatment Program in each state was estimated by EPA based on available data from permitting authorities.

²⁷ Because ICIS-NPDES has a more specific permit component search capability, it was used to gather violation and enforcement data rather than PCS. It was assumed that the violation rate in ICIS-NPDES was representative of the universe as a whole.

2.10.2 Annual Reporting Frequency by Data Family

SIUs only have to submit program reports to the applicable authorized NPDES programs. This report is annual; therefore the annual reporting frequency for program reports is 1.

2.10.3 Summary

Table 2-12 summarizes the number of pretreatment and SIU regulated entities and the annual frequencies for each required data family.

	Individual Majors	Individual Nonmajors ^a	General Nonmajors
# Permits	0	20,630	0
Data Family	Annual Reporting Frequency	Annual Reporting Frequency	Annual Reporting Frequency
Permits	n/a	n/a	n/a
Limits	n/a	n/a	n/a
Limit Sets	n/a	n/a	n/a
DMRs	n/a	n/a	n/a
Program Reports	n/a	1	n/a
Compliance Monitoring	n/a	n/a	n/a
Violations	n/a	n/a	n/a
Enforcement Actions	n/a	n/a	n/a

^a Not NPDES-permitted facilities.

2.11 Summary

Table 2-13 shows the number of individual major, individual nonmajor, and general nonmajor permits under each subprogram.

Subprogram	Number of Permits		
	Individual Majors ^a	Individual Nonmajors	General Nonmajors
Industrial and Stormwater			
Standard Industrial Dischargers	3,727	38,926	31,805
CAFOs	0	2,782	11,624
Stormwater ^b	297	6,300	322,137
SIUs	0	20,630 ^c	0
POTWs (may have more than one subprogram)			
Biosolids	4,209	694	0
Pretreatment	1,390	109	0
CSSs	591	199	38
SSSs	3,682	9,955	1,945

^a Note that there are approximately 6,700 major facilities, which often have more than one NPDES component.
^b Phase 1 and 2 MS4 permits are included in the count of individual majors and individual nonmajors, respectively.
^c Not NPDES-permitted facilities.

As described in Figure 2-1, the universe numbers presented above are a major input into the cost analysis. Combining the frequencies and universes with the data entry and report processing costs (discussed in Section 4) determines the total savings and cost associated with the proposed rule.

Table 2-14 presents the annual frequencies by data family for each permit type under each subprogram. As the high frequency of DMR submission suggests, the majority of the savings come from electronic reporting of DMRs, as will be discussed in Section 4.

Table 2-14: Annual Reporting Frequency Summary by Data Family and Permit Type									
Subprogram	Permit Type	Annual Reporting Frequency							
		Permits	Limits	Limit Sets	DMRs	Program Reports	Compliance Monitoring	Violations	Enforcement Actions
Industrial and Stormwater									
Standard Industrial Dischargers	Individual Major	0.2	0.2	0.2	12	0	0.2	0.4	0.11
	Individual Nonmajor	0.2	0.2	0.2	12	0	0.2	0.4	0.11
	General Nonmajor	0.2	0	0	12	0	0.2	0.4	0.11
CAFOs	Individual Nonmajor	0.2	0	0	0	1	0.2	0.01	0.02
	General Nonmajor	0.2	0	0	0	1	0.2	0.01	0.02
Stormwater	MS4 Major	0.2	0.2	0.2	12	1	0.2	0.06	0.12
	MS4 Nonmajor	0.2	0	0	0	0.4	0.2	0.01	0.01
	General Nonmajor (CGP)	0.17	0	0	0 ^b	0	0.05	0.02	0.02
	General Nonmajor (MSGP)	0.18	0	0	3	0	0.05	0.02	0.02
SIUs	Nonmajors	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a
POTWs									
Biosolids	Individual Major	0.2 ^a	0	0	0	1	0	0	0
	Individual Nonmajor	0.2	0	0	0	1	0	0	0
Pretreatment	Individual Major	0.2 ^a	0.2	0.2	12	1	0.20	0.23	0.39
	Individual Nonmajor	0.2	0.2	0.2	12	1	0.17	0.14	0.22
CSSs	Individual Major	0.2	0.2	0.2	12	11.22	11.22	0.23	0.36
	Individual Nonmajor	0.2	0.2	0.2	12	11.22	11.22	0.11	0.14
	General Nonmajor	0.2	0.2	0.2	12	11.22	11.22	0.11	0.14
SSSs	Individual Major	0.2	0.2	0.2	12	2.57	2.57	0.23	0.36
	Individual Nonmajor	0.2	0.2	0.2	12	2.57	2.57	0.11	0.14
	General Nonmajor	0.2	0.2	0.2	12	2.57	2.57	0.11	0.14

^a Annual reporting frequency applies only to those permit data elements specific to the pretreatment or biosolids program. All other permit data elements are captured by CSSs and SSSs and have an annual reporting frequency of 0.

^b 1% of Stormwater Construction regulated entities have DMR requirements due to an enforcement action. These facilities need to submit DMRs to show they have returned to compliance and are assigned a frequency of 1.

References

- Clark, Jackie. 2011. Office of Water, U.S. EPA.
- Hudock, Andrew. 2010. Office of Enforcement and Compliance, U.S. EPA.
- Faulk, Jack. 2008. Office of Water, U.S. EPA.
- U.S. EPA. Water Permitting 101. Accessed September 20, 2010.
<<http://www.epa.gov/npdes/pubs/101pape.pdf>>
- U.S. EPA. 1990. New NPDES Non-Municipal Permit Rating System.
<<http://www.epa.gov/npdes/pubs/owm0116.pdf>>
- U.S. EPA. 2000. Stormwater Phase II Final Rule: Permitting and Reporting: The Process and Requirements. <<http://www.epa.gov/npdes/pubs/fact2-9.pdf>>
- U.S. EPA, 2003. Specific State Program Status.
<http://cfpub.epa.gov/npdes/statestats.cfm?program_id=45&view=specific>
- U.S. EPA, 2004. Report to Congress: Impacts and Control of CSOs and SSOs.
<http://cfpub.epa.gov/npdes/cso/cpolicy_report2004.cfm>
- U.S. EPA. 2007a. Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy for the Core Program and Wet Weather Sources.
<<http://www.epa.gov/compliance/resources/policies/monitoring/cwa/npdescms.pdf>>
- U.S. EPA. 2007b. EPA's Interim Significant Noncompliance Strategy for Clean Water Act Violations Associated with CSOs, SSOs, CAFOs, and Storm Water Point Sources ("Interim Wet Weather SNC Policy").
<<http://www.epa.gov/compliance/resources/policies/civil/cwa/wetweathernoncompliance-attach1.pdf>>
- U.S. EPA. 2008a. CAFO Rule Implementation Status – National Summary, Second Quarter 2008. Received from Nina Bonnelyke, U.S. EPA.
- U.S. EPA. 2008b. Conditional No Exposure Exclusion.
<<http://cfpub.epa.gov/npdes/stormwater/exposure.cfm>>
- U.S. EPA. 2008c. Small Construction Activity Waivers.
<<http://cfpub1.epa.gov/npdes/stormwater/waiver.cfm>>
- U.S. EPA. 2008d. Stormwater Basic Information.
<<http://cfpub.epa.gov/npdes/stormwater/swbasicinfo.cfm>>
- U.S. EPA. 2010a. Animal Feeding Operations.
<http://cfpub.epa.gov/npdes/home.cfm?program_id=7>
- U.S. EPA. 2010b. Combined Sewer Overflows.
<http://cfpub.epa.gov/npdes/home.cfm?program_id=5>

U.S. EPA. 2010c. Cooling Water Intakes (316b).
<<http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/basic.cfm>>

U.S. EPA. 2010d. EPA's Electronic Stormwater Notice of Intent (eNOI) Home Page.
<<http://cfpub.epa.gov/npdes/stormwater/enoi.cfm>>

U.S. EPA. 2010e. NPDES CAFO Rule Implementation Status – National Summary, Second Quarter 2010. <http://www.epa.gov/npdes/pubs/tracksum2Q10_publ.pdf>

U.S. EPA. 2010f. Pretreatment Program. <http://cfpub.epa.gov/npdes/home.cfm?program_id=3>

U.S. EPA. 2010g. Sanitary Sewer Overflows and Peak Flows.
<http://cfpub.epa.gov/npdes/home.cfm?program_id=4>

U.S. EPA. 2011. Online Tracking Information System (OTIS). <<http://www.epa-otis.gov/otis/>>

Weiss, Kevin. 2011. Office of Water, U.S. EPA.

Section 3. – Activities Affected by the Proposed NPDES Electronic Reporting Rule

3.1 Introduction

The proposed rule will update the way regulated entities, authorized NPDES programs, and EPA provide and share NPDES information. EPA and state authorized NPDES programs will update their IT systems so that regulated entities can electronically submit NPDES information, and EPA and the states can share the information. When the proposed rule is fully implemented, regulated entities will submit their information to their authorized NPDES program electronically.

Authorized NPDES programs will share that data with EPA, and will also share with EPA the data they generate. During the initial implementation period (within three years after the effective date of the rule), regulated entities in states where an electronic reporting system is not operational will be required to submit NOIs, DMRs, and program reports electronically to EPA, in addition to the reporting requirements set out in their permits.

After implementation, the proposed rule will produce significant annual savings. During implementation, the costs will exceed the savings, as described below. Table 3-1 identifies which entities incur costs and cost savings associated with the implementation phase and ongoing administration of the NPDES program under the proposed rule.

Table 3-1: Distribution of Savings and Costs of Proposed Rule			
	Regulated entity	Authorized NPDES program	EPA
Updating IT systems to share information		Cost	Cost
Electronic reporting to EPA during transition	Cost	Cost	Cost
Switching to electronic reporting systems	Savings/Cost	Savings/Cost	
Sharing NPDES information electronically		Savings	Savings

The activities necessary to update how regulated entities and state authorized NPDES programs submit information to and share information with EPA are:

- State authorized NPDES program and EPA implementation of an electronic reporting system for submitting regulated entity data;
- State authorized NPDES program and EPA implementation of an electronic reporting system for submitting authorized NPDES program data to EPA;
- State authorized NPDES program demonstrating their attorneys general accept electronic signatures in lieu of physical signature, thereby certifying compliance with EPA’s Cross Media Electronic Reporting Rule (CROMERR);
- State authorized NPDES program and EPA training webinars and reconciling information submitted separately to state authorized NPDES programs and EPA as required by CWA section 308;
- Authorized NPDES program entering newly shared data for all regulated entities; and,
- Modifying permits by authorized NPDES program (to require electronic submissions).

Regulated entities and authorized NPDES programs will need to make changes in order to use the updated data bases and reporting tools. The activities required to use the updated systems are:

- Electronic reporting to EPA by regulated entities whose authorized NPDES program does not have an adequate system for receiving NOIs, DMRs, and annual reports in electronic format;
- Regulated entity registration for user accounts in CDX or the state authorized NPDES program electronic system and submission of electronic signature agreements;
- Regulated entity training;
- Regulated entity submission of electronic NOIs, DMRs, and program reports; and,
- Authorized NPDES program electronic submission of programmatic Appendix A data to EPA.

When electronic submission is operational, regulated entities and authorized NPDES programs will experience ongoing savings from operational efficiencies. During the first two years (2014-2015), there will be costs associated with the initial development and implementation of electronic reporting for regulated entities and authorized NPDES programs, as well as submittal of programmatic data elements to ICIS-NPDES by the authorized NPDES program. This section outlines: 1) the activities required to establish electronic reporting systems, 2) the requirements of electronic reporting to EPA during the implementation period, and 3) ongoing savings and costs associated with preparing and sharing all required NPDES data.

3.2 Updating the Reporting Process

Updating the NPDES information flow will allow state authorized NPDES programs and EPA to share information through the internet and have a central repository of NPDES information. Currently, NPDES information is managed in ICIS-NPDES.²⁸ Authorized NPDES programs use three methods to submit data to ICIS-NPDES:

- Direct Entry: Authorized NPDES programs using direct entry enter data into EPA data systems directly.
- Batch Upload: Authorized NPDES programs using batch upload employ their state system to track regulated entities and their own activities under the NPDES program. This NPDES information is periodically uploaded to EPA data systems.
- Hybrid: Authorized NPDES programs using hybrid approaches enter most data over the web, with the DMR component of the NPDES permit batch uploaded to EPA data systems periodically.

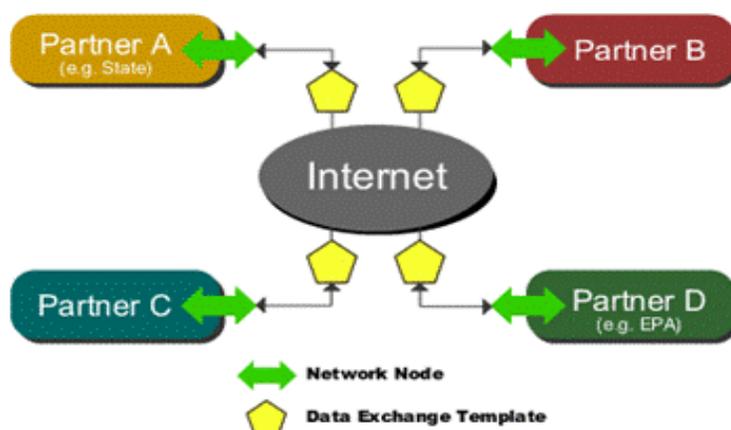
The proposed rule will require EPA and state authorized NPDES programs to capture all required data, establish electronic reporting systems, and for states to certify that their systems are CROMERR-compliant. The proposed rule does not preclude authorized NPDES programs from maintaining their own information systems. EPA expects that authorized NPDES programs will move all regulated entities to electronic reporting within three years of the effective date of the rule. This section discusses the changes required by the rule.

²⁸ EPA completed the migration of data from PCS to ICIS-NPDES for all states in 2013.

3.2.1 State Authorized NPDES program and EPA Implementation of a Data Exchange

To implement electronic reporting,²⁹ EPA and the state authorized NPDES programs will need to establish and operate an IT system organized so that state authorized NPDES program data systems and EPA's ICIS-NPDES operate as a coordinated CWA program management system that can work together. The system will use existing technology and standards from the National Environmental Information Exchange Network as a basis for the new data exchange. The Exchange Network allows network members to share environmental information over the internet in two directions. Figure 3-1 shows how states and EPA can access each other's information through the network.

Figure 3-1: The Exchange Network



Each state currently has a network node allowing states and EPA to access and share information over the internet. The proposed rule will leverage this capability to reduce the costs associated with data entry and transfer, ultimately improving access to NPDES information for program management.

State system modification costs depend on whether the state NPDES system already uses the Exchange Network. States that have a preexisting data flow with EPA only need to map the data elements to the appropriate fields in their own systems. EPA currently provides a downloadable tool that assists authorized NPDES programs in the mapping process. Authorized NPDES programs that do not use the Exchange Network will need to configure a full data flow. To facilitate these processes, EPA will offer webinars outlining the changes required by the rule and providing solutions for common problems.

Although regulated entities and authorized NPDES programs are both responsible for generating NPDES data, EPA is responsible for creating and maintaining electronic reporting tools, such as NetDMR, and the central repository of NPDES information – ICIS-NPDES. NetDMR and the electronic Notice of Intent (eNOI) systems already exist, but will need enhancement to

²⁹ This analysis defines IT implementation as the deployment and development of an electronic reporting system for submission of data from regulated entities to their authorized NPDES program and exchanges between authorized NPDES programs and EPA.

accommodate the all of the data defined in Appendix A, and to accommodate the higher submission volumes that will result from the proposed rule. EPA will also create a new electronic tool allowing regulated entities to submit their program reports online. Once these tools are implemented, EPA will incur operating and maintenance costs into the future.

State authorized NPDES programs may develop and operate their own reporting tools to meet rule requirements. Because EPA will offer national tools supporting each of the regulated entity submissions to permit authorities, state system changes are not required and therefore not considered a cost of the proposed rule.

3.2.2 Compliance with the Cross Media Electronic Reporting Rule

Authorized NPDES programs need to assure that the newly required electronic documents are legally equivalent to hardcopy documents by meeting the requirements of EPA's Cross Media Electronic Reporting Rule (CROMERR).³⁰ CROMERR requires authorized NPDES program Attorneys General to certify that their laws provide sufficient legal authority to implement electronic document receiving systems and enforce the affected programs using those documents in lieu of the hardcopy reports physically signed by the regulated entity. In addition, CROMERR requires documenting how the receiving system meets CROMERR criteria and any other documentation requested by the EPA Administrator that must be provided before the state authorized NPDES program can use electronic systems to receive regulated entities' information and to manage its own NPDES information.

3.2.3 Supplying Facility, Limit and Limit Set data

In order for the electronic system to properly route regulated entity information between state authorized NPDES programs and EPA, and to automate the comparison of DMR data to the limits and limit sets in the permit, authorized NPDES programs will need to share their facility information, limits and limit sets with EPA. Currently, much of the monitoring information for nonmajor permits is maintained on paper files or electronically in state computer systems and is not being passed to ICIS-NPDES. EPA does not have detailed information regarding the authorized NPDES program information systems, and whether or not they conform to the requirements of the proposed rule. For that reason, EPA assumes each authorized NPDES program will manually enter appropriately formatted limit and limit set information into the new system within one year of the effective date of the rule so that regulated entities will be able to use the system when the proposed rule requires them to sign up for electronic accounts during that time. In reality, many states may have already automated much of this data, in which case their costs will be less than estimated in this analysis.

3.3 Electronic Reporting to EPA during Transition

EPA has concluded that electronic reporting will be beneficial and encourages state authorized NPDES programs to adopt electronic reporting. EPA expects all state authorized NPDES programs to establish electronic systems or adopt EPA's systems two years after the effective date of the rule. During the two-year implementation period, EPA is requiring that regulated entities whose state authorized NPDES program does not have an electronic reporting system submit their NOIs, DMRs, and program reports electronically to EPA, and to the authorized NPDES program as provided in its permit. This will ensure that EPA has all data necessary to fulfill its obligations under the Clean Water Act while state authorized NPDES programs

³⁰ <http://www.epa.gov/cromerr/pdf/guide.pdf>

establish their own electronic systems, at which point electronic reporting to EPA ceases. This section describes the assumptions and cost sources associated with electronic reporting to EPA.

3.3.1 Regulated Entity Electronic Reporting to EPA

In states with authorized NPDES program but no electronic reporting system, regulated entities will be required to continue their current reporting to the state authorized NPDES program and, in addition, to electronically report to EPA. This requirement will stay in effect until the state authorized NPDES program implements an electronic reporting system meeting certain requirements. Therefore regulated entities will incur the costs of electronic reporting, but will not realize the savings from paper and postage reductions associated with electronic reporting, until the reporting to EPA is suspended.

3.3.2 EPA and State Authorized NPDES Programs' Reconciling Regulated entity Reports

Once electronic reporting to EPA is initiated, EPA and state authorized NPDES programs will need to confirm that the same information is received by both entities. Under the proposed rule, EPA and the state authorized NPDES programs will meet monthly to compare submissions and identify and resolve discrepancies. State authorized NPDES programs will begin realizing the savings from electronic reporting when they have adequate electronic systems in place.

3.4 Using the Updated System

The updated system will change the way information is shared by regulated entities, authorized NPDES programs, and EPA. These changes will increase the operational efficiency of the NPDES program by eliminating the need for authorized NPDES programs to transcribe paper reporting documents into the system of record and the manual comparison of facility DMRs to the limits and limit sets established in the permit. Furthermore, these changes will reduce the amount of coordination needed between state authorized NPDES programs and EPA to produce the annual NPDES reports required by 40 CFR 123.45(c). This section describes the assumptions and sources of savings and costs associated with using the updated systems.

3.4.1 Regulated Entity Registration and Notice of Intent

To use the electronic reporting system for eDMRs and eProgram Reports, individual regulated entities will need to set up accounts, either on the Central Data Exchange (CDX), EPA's node on the Exchange Network, or a similar data portal provided by their authorized NPDES program. To set up the account, regulated entities mail their authorized NPDES program an electronic signature agreement (ESA) stating that their electronic PIN number is the legal equivalent of their written signature. Facilities covered by a master general permit will continue using the existing eNOI reporting software. Table 3-2 shows the regulated entities' reporting tools used for each subprogram.

Table 3-2: Electronic Reporting Requirements (by NPDES Subprogram)			
NPDES Subprogram	eNOI	eDMR	eProgram Reports
Industrial and Stormwater			
Standard Industrial Dischargers	No	Yes	No
Concentrated Animal Feeding Operations (CAFOs)	Yes ^a	No	Yes
Stormwater	Yes ^a	Yes ^b	Yes ^c
SIUs	n/a	n/a	Yes ^d
POTWs			
Biosolids	No	Yes	Yes
Pretreatment	No	Yes	Yes
Combined Sewer Systems (CSSs)	No	Yes	Yes
Sanitary Sewer Systems (SSSs)	No	Yes	Yes
^a Only general permit covered facilities ^b Only individual major or general multi-sector permit covered facilities ^c Only individual permit covered facilities ^d Not NPDES-permitted			

3.4.2 Regulated Entity Training

NetDMR or authorized NPDES program eDMR systems are sufficiently complex that many regulated entities will need training to effectively use them. EPA currently offers an online training session explaining how to submit DMRs through the NetDMR tool. The training informs regulated entities about login procedures, uploading their DMR information, and how their designated testing laboratory can upload their DMR monitoring information directly into the NetDMR system. Experience with currently operating systems has shown that training is not necessary for submitting NOIs or program reports electronically, as these tools are less complicated.

3.4.3 Regulated Entity Discharge Monitoring and Program Report Submission

Currently, regulated entities submit most of their DMRs and program reports in hard copy through the mail. The authorized NPDES program receives these reports and, for major regulated entities, manually transcribes the DMRs and some data elements from the program reports into ICIS-NPDES or authorized NPDES program's system. The authorized NPDES program then archives the paper files.³¹ The proposed rule will require regulated entities to submit these reports electronically. Electronic reporting by regulated entities will eliminate paper and postage costs as well as the time required to physically transfer paper forms from regulated entities to the authorized NPDES program and then enter the required data into authorized NPDES program systems or ICIS-NPDES. Some EPA Regions and other authorized NPDES programs send pre-populated DMR forms to regulated entities. Under the proposed rule this activity will also be unnecessary and the associated paper and postage costs will be eliminated.

3.4.4 Additional Required Data from the Authorized NPDES Program

As discussed in Section 1, the proposed rule will increase the amount of data authorized NPDES programs are required to share electronically with EPA. The proposed rule requires authorized NPDES programs to enter into an electronic information system any of the data elements listed in Appendix A that are not submitted electronically by their regulated entities. This requirement will apply to major, nonmajor, and general permits. Some of this information was previously available

³¹ Currently, EPA requires program reports and DMRs to be collected, however there is no requirement for that information to be entered into an electronic data system. A number of states are maintaining paper filing systems for these reports.

from the regulated entity and was manually entered into ICIS-NPDES. Other information was previously submitted by the regulated entity in hardcopy form and stored at the authorized NPDES program until needed for compliance oversight or annual reporting to EPA. With electronic reporting, regulated entity information will electronically flow into the authorized NPDES program's data system, eliminating the need for manual data entry and resulting in savings to the authorized NPDES program. These savings might be partially offset by the need for authorized NPDES programs to enter programmatic information, such as: 1) regulated entity data previously stored in hardcopy form; or 2) compliance monitoring, inspection, or enforcement information that was not previously entered into ICIS-NPDES. The cost of submitting these data to ICIS-NPDES is partially mitigated by auto-populating specific fields, such as the date an electronic report is received.

For example, in order to compare DMRs to their permits' required limits, the authorized NPDES program will need to enter all limits and limit sets into ICIS-NPDES. Currently this information is only required for major permits. Under the proposed rule, this information will be required for all permit types. Individual permits will need their specific limits and parameters entered by the authorized NPDES program permit writer. For general permits, the task is simplified by bundled limit sets that permit writers can apply to all facilities covered by the same general permit. For example, offshore drilling general permits will be able to use all limit sets pertaining to that activity by selecting the bundled offshore drilling limit sets from a dropdown menu.

3.4.5 Replacing the Annual Non-Compliance Report, Quarterly Non-Compliance Report, and Semi-Annual Statistical Summaries with the New National Non-Compliance Report

Existing CWA regulations (40 CFR 123.45) require that authorized NPDES programs submit to EPA annual, quarterly, and semi-annual reports regarding the compliance status of regulated entities in their jurisdiction. To meet this requirement, state authorized NPDES programs submit their non-compliance information to the Regional Administrator, who submits them to EPA headquarters. Under the proposed rule, this information will be readily available to EPA directly from ICIS-NPDES, obviating the need for state authorized NPDES programs to compile and submit the information. Therefore, the proposed rule will eliminate this reporting requirement, resulting in savings for state authorized NPDES programs and EPA Regions. The proposed rule will also replace the annual, quarterly, and semi-annual reports with a National Non-Compliance Report that EPA headquarters will develop, resulting in savings for states, EPA Regions and EPA headquarters. EPA savings will be partially offset by the headquarters effort required to program and produce the new National Non-Compliance Report.

3.5 Summary

Following implementation, the rule will result in ongoing savings for both regulated entities and authorized NPDES programs due to the operational efficiencies of electronic reporting, reduced data errors, and eliminating postage and paper costs. Once authorized NPDES programs establish electronic reporting systems, there will be net savings driven by eliminating DMR and program report data entry, in addition to operational efficiencies from improved data quality and no longer having to mail, receive, or process paper reports.³² ICIS-NPDES and authorized NPDES program systems will be able to automatically compare all DMR monitoring information to the limits of the respective NPDES permits and flag non-compliance, thus simplifying EPA and authorized

³² Authorized NPDES programs will incur costs associated with additional compliance and enforcement data entry.

NPDES program compliance oversight and rapidly identifying noncompliance that may threaten the health of receiving waters. Establishing a single, authoritative repository of NPDES information, will eliminate the need for the recurring effort and cost of developing and publishing periodic non-compliance reports from authorized NPDES programs. EPA headquarters will incur ongoing costs of implementing and maintaining the IT infrastructure necessary for electronic reporting, as well as publishing the new National Non-Compliance Report. The methodology used to estimate these savings and costs is discussed in Section 4. The benefits of improved ICIS-NPDES information associated with this rule are presented in Section 6.

Section 4. – Estimating the Economic Impacts of the Proposed NPDES Electronic Reporting Rule

4.1 Introduction

This section describes how the savings and costs of the proposed rule were estimated. These savings and costs are experienced by regulated entities, authorized NPDES programs, and EPA headquarters. The estimates are used to calculate the total net savings of the proposed rule and to determine the impact of the rule on small businesses in Section 5. Estimates of the cost of the rule are developed for four categories: 1) implementation; 2) data entry; 3) submission processing; and 4) submission. To determine the impacts on each category, EPA solicited states, Regions, and program experts to identify the burden associated with the current data flow and reporting processes, and identify how these processes would change. The following sections discuss how the changes were monetized and the total savings and costs associated with the proposed rule.

Estimating the incremental savings and costs involved the following steps:

- Determine EPA and authorized NPDES program costs associated with updating the way NPDES information is shared;
- Determine authorized NPDES program savings and costs associated with changes in data entry of NPDES information;
- Determine authorized NPDES program savings associated with changes in processing of NPDES information;
- Determine regulated entity savings and costs associated with electronic submission of NPDES information; and,
- Determine other implementation costs for regulated entities and authorized NPDES programs required by or resulting from compliance with the proposed rule.

Section 4.2 shows the labor costs used in the analysis. Section 4.3 provides a description of costs associated with updating information sharing among authorized NPDES programs and EPA. Section 4.4 discusses the savings and costs associated with using the updated systems. Section 4.5 discusses EPA's planned implementation phase-in approach, as well as the savings/cost schedules and return on investment for the proposed rule.

The costs and savings associated with the proposed rule include:

- Updating the IT systems;
- Data processing needed for authorized NPDES programs to accept electronic reporting from NPDES regulated entities;
- Data entry for regulated entity electronic reporting to EPA until state authorized NPDES programs update their IT systems;
- Data processing needed to ensure the transfer of all required NPDES data from authorized NPDES programs into ICIS-NPDES;
- Reduced data entry for authorized NPDES programs once regulated entities enter data directly into the electronic systems;
- Elimination of paper mailing and processing of DMRs and permits; and
- Elimination of ANCR, QNCR, and SASS reports.

As shown in Table 4-1, savings and costs are incurred by regulated entities, authorized NPDES programs, and EPA.

Table 4-1: Distribution of Savings and Costs of Proposed Rule			
	Regulated Entity	Authorized NPDES program	EPA
Updating IT systems to share information		Cost	Cost
Electronic reporting to EPA during transition	Cost	Cost	Cost
Switching to electronic reporting systems	Savings/Costs	Savings/Costs	
Sharing NPDES information electronically		Savings	Savings

Two significant baseline assumptions are made for the savings and cost analysis. The first is that there is currently full compliance with existing data requirements. Although some authorized NPDES programs may already be submitting information beyond those requirements, it is not possible to accurately account for that additional information at this time. The second major assumption is to disregard the impact of existing state authorized NPDES program electronic reporting systems. EPA acknowledges that some states are currently using electronic reporting systems. However, those systems were developed prior to this proposed rule, so the development costs of those systems are not considered in the baseline conditions or analysis of the rule. These two baseline assumptions have the following effect on this analysis:

- Where authorized NPDES programs are reporting to ICIS-NPDES more data than is currently required, the analysis may overestimate incremental costs; and,
- Where regulated entities are already submitting electronically through state systems, the analysis may overestimate savings and implementation costs for both the regulated entity and authorized NPDES program.

4.2 Labor Costs

To estimate the cost associated with data entry, processing, and submission activities (Section 3), the analysis uses 2012 hourly wage rates for three job categories: managerial, programmer, and data clerk; each of which include fringe benefits and overhead. Average wage data for these categories are based on the Bureau of Labor Statistics' Employer Costs for Employee Compensation in December 2012, which has separate wage estimates for government and private sector workers.³³

The managerial labor rate is defined as the average hourly wages for staff who plan, direct, or coordinate electronic data processing, information systems, systems analysis, and computer programming. The programmer labor rate is defined as the average hourly wages for staff who convert project specifications and statements of problems and procedures to detailed logical flow charts for coding into computer language; develop and write computer programs to store, locate, and retrieve specific documents, data, and information; and may program web sites. The data clerk labor rate is defined as the average hourly wages for staff who compute, classify, and record numerical data to keep financial records complete; perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records; and may also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

³³ http://www.bls.gov/news_release/ecec.nr0.htm

The Bureau of Labor Statistics provides hourly wage and benefit rates (e.g., paid leave and insurance). Based on information provided by the chemical industry and chemical industry trade associations, an additional loading factor of 17% is applied to hourly wages and benefits for general overhead. (See Table 4-2).³⁴

Table 4-2: Deriving Loaded Hourly Costs		
Cost Components, by Job Category	2012 BLS Government Hourly Wage Rate	2012 BLS Industry Hourly Wage Rate
Managerial		
Hourly Wage	\$34.46	\$40.77
Benefits	\$16.55	\$17.95
Overhead	\$5.86	\$6.93
Managerial Fully Loaded Wage Rate Per Hour	\$56.87	\$65.65
Programmer		
Hourly Wage	\$34.09	\$33.18
Benefits	\$16.03	\$13.68
Overhead	\$5.80	\$5.64
Programmer Fully Loaded Wage Rate Per Hour	\$55.92	\$52.50
Data Clerk		
Hourly Wage	\$17.52	\$16.24
Benefits	\$11.45	\$7.20
Overhead	\$2.98	\$2.76
Data Clerk Fully Loaded Wage Rate Per Hour	\$31.95	\$26.20

4.3 Cost of Updated Information Sharing among Authorized NPDES Programs and EPA

As described in Section 3, implementing the proposed rule will require state authorized NPDES programs and EPA to establish an electronic reporting system. As shown in the data flow diagram in Section 1 (Figure 1-2), the data capture process begins with regulated entities submitting their data into the electronic system provided by their authorized NPDES program or EPA. Several state authorized NPDES programs³⁵ receive DMR information through state-operated eDMR systems that are different from EPA's NetDMR in that they only send regulated entity data to the state authorized NPDES program, whereas NetDMR sends regulated entity data to both the state authorized NPDES program and EPA.

As discussed in Section 3, authorized NPDES programs enter data into ICIS-NPDES using direct, hybrid, and batch methods. Direct users manage their programmatic information in ICIS-NPDES and use EPA's eNOI, NetDMR and eProgram Report electronic reporting tools to capture regulated entity submissions. Hybrid authorized NPDES programs use ICIS-NPDES for some information and batch upload their DMR information. Batch authorized NPDES programs manage their information in state systems, and batch upload all of their information to EPA. For these systems to accept electronic data from the regulated entities and transfer that information between EPA and authorized NPDES programs, alterations to both state and EPA IT systems are necessary. EPA will provide optional electronic reporting tools for regulated entities and

³⁴ Heiden Associates, *Final Report: A Study of Industry Compliance Costs Under the Final Comprehensive Assessment Information Rule*, Prepared for the Chemical Manufacturers Association, December 14, 1989.

³⁵ State authorized NPDES programs are the subset of all authorized NPDES programs where the state administers the NPDES program, as opposed to the EPA Region. Each state authorized NPDES program will have to update its system, whereas those states where the NPDES program is administered by the EPA Region will use the updated ICIS-NPDES.

authorized NPDES programs to use, and will provide a central repository housing all nationally required NPDES information. This section details the estimated implementation costs for authorized NPDES programs and EPA to set up this system.

4.3.1 Electronic Reporting Tool Implementation Costs

Before regulated entities can use the electronic reporting system, authorized NPDES programs and EPA will need to provide the necessary reporting tools. This section discusses the steps EPA will take to provide tools that can be adopted by each authorized NPDES program. This section does not discuss existing or possible alterations to individual authorized NPDES program e-reporting systems. The tools EPA will develop include augmented versions of the current eNOI and NetDMR systems, plus a new tool for submitting program reports electronically. Cost estimates for IT system modifications were derived by comparing the architecture of the current system against the requirements of the rule. Rule requirements involving capabilities not currently in place were identified and rough orders of magnitude (defined as the true value being within -25% and +75% of the estimated value) of the level of effort required to meet those requirements were developed. Table 4-3 presents EPA’s estimated cost of implementation and operation and maintenance (discussed further in Section 4.3.2) of the new tools.³⁶

Electronic Tool	Implementation	Annual Operations and Maintenance
eNOI	\$2,108,000	\$433,000
NetDMR	\$1,259,000	\$105,000
eProgram Reports	\$1,068,000	\$433,000
Total	\$4,435,000	\$971,000

Implementation costs for authorized NPDES programs will vary depending on whether the state is a batch user, whether the state has CROMERR approved systems, and what electronic tools the state currently uses. Batch system databases will need to be expanded to store all Appendix A data. Based on the ICIS-NPDES upgrade, EPA estimates that each additional data element will require approximately \$1,550 to add to the database and update the user interface screens for data entry. With 21 states adding approximately 208 data elements, the per state implementation cost is \$321,900 for a total of \$6.8 million dollars. This estimate is conservative as several states already manage some of the 208 data elements.

State implementation costs also vary based on whether the state has a CROMERR certified data system already in place. Certifying that the state system is CROMERR compliant requires the state Attorney General to review the applicable state laws to ensure that the electronic documents required under the rule are the legal equivalent to the hardcopy documents currently collected. The CROMERR Information Collection Request (ICR) estimates that cost to be approximately \$15,000 per state.³⁷ The total cost of CROMERR certification is \$150,000 dollars.

³⁶ Estimates taken from EPA’s DRAFT Clean Water Act Action Plan: Electronic Reporting Technical Evaluations, Prepared by Booz Allen, July 2010; escalated to 2012 dollars using the BLS Employment Cost Index for government workers

³⁷ <http://www.regulations.gov/search/Regs/contentStreamer?objectId=09000064800b0ee6&disposition=attachment&contentType=pdf>. This cost, which is based on labor, has been converted to 2012 dollars using the Employment Cost Index. <ftp://ftp.bls.gov/pub/suppl/eci.ecicois.txt>

After implementation, EPA envisions that regulated entities will use EPA or third party provided software (such as fillable PDFs) to simultaneously submit NOIs, DMRs, or program reports to both EPA and state authorized NPDES programs. Therefore, once data standards³⁸ are established for each data element, state authorized NPDES programs will need to reconfigure their exchange templates (a piece of computer software that matches fields in the state database to fields in ICIS-NPDES) to allow the new NPDES data to flow between the state system and ICIS-NPDES. EPA technical experts expect data element mapping to require 120 hours for reports over 40 data elements and 60 hours for reports under 40 data elements. Furthermore, for states already using NetDMR, EPA expects the data mapping to require only 40 hours as these state already have the basic data structure mapped. Note that states are not already using the federal eNOI and electronic program report systems, so there would not be similar reduced burdens. States will need to create one exchange template capable of handling all DMR data elements and a separate exchange template for NOIs and program reports for each subprogram for which the state is the authorized NPDES program. Therefore, individual state costs vary. The total cost to create all exchange templates is \$1.4 million dollars.

To ensure that state authorized NPDES programs are properly informed of the changes to the ICIS-NPDES system and the new data standards, EPA will develop and offer a 90-minute online training webinar for each phase of the implementation. The two webinars will require 100 hours total of EPA technical time to develop, at a total cost of \$5,000. State authorized NPDES programs will incur a cost of \$8,400 for the time required to attend the webinars (Phase 1 webinar attended by one clerk and one programmer and Phase 2 webinar attended by one clerk). As shown in Table 4-4, the total cost of state implementation is \$8.3 million dollars.

Cost Categories	Number of States	Unit Cost (\$)	Total Cost (\$)
Batch System States	21	\$321,900	\$6,760,000
CROMERR Certification	10	\$15,000	\$150,000
Data Mapping			\$1,373,000
System Update Costs Subtotal			\$8,284,000
Training Webinar			\$8,400
Total			\$8,292,000

4.3.2 Operations and Maintenance of the Updated System

As shown in Table 4-3, EPA will have ongoing annual costs to operate and maintain the necessary changes in the ICIS-NPDES system. Operations include accepting data from regulated entities, receiving data from authorized NPDES programs, and sending EPA data to the state authorized NPDES programs. Maintenance includes routine database refreshes, updates, and licensing. The annual cost of EPA activities newly required to support the rule are estimated at \$971,000.

4.3.3 Total Costs

The total state and EPA costs of updating the submission process, including implementation and operations and management are presented in Table 4-4. Specifically, state authorized NPDES

³⁸ Data standards ensure that reports collected by one system are in a format that every other system can recognize, shown in the diagram as the data exchange template. Once the standards are complete, state authorized NPDES programs and EPA will modify their IT systems to collect and share (send and receive) all of the required data through the exchange.

programs will incur approximately \$8.0 million dollars in implementation costs while EPA will incur \$4.4 million dollars for implementation. After implementation, EPA will spend \$971,000 annually to operate and maintain the electronic system. States currently operating their own systems will not have any operations or maintenance costs that are relevant to the rule.

	Implementation	Annual Operations and Maintenance
States	\$8,292,000	\$0
EPA	\$4,435,000	\$971,000
Total	\$12,727,000	\$971,000

4.4 Regulated Entity and Authorized NPDES Program Savings and Costs Associated with Using the Updated Systems

Implementing the updated submittal process will change regulated entity and authorized NPDES program activities resulting in both savings and costs. Authorized NPDES programs will make minor permit modifications³⁹, which will require the regulated entity to report electronically. Regulated entities will check an EPA website to determine if they are required to report to both EPA and the state authorized NPDES program.

Authorized NPDES programs will be required to electronically submit to EPA all data elements identified in Appendix A, including forwarding to EPA data the authorized NPDES programs receive electronically from regulated entities. As each authorized NPDES program implements e-reporting systems meeting the minimum requirements, the updated data system will change the flow of NPDES data from the regulated entities and authorized NPDES programs to EPA such that duplicate data entry is eliminated. This section presents the derivation of the costs of generating and transferring the required data in electronic format from regulated entities to authorized NPDES programs and from authorized NPDES programs to EPA.

4.4.1 Regulated Entity Registration and Training Costs

As described in Section 3, regulated entities will be required to submit electronic reports. Regulated entities will check an EPA website to determine if they need to report both to EPA and to the state authorized NPDES program, which depends on whether the state authorized NPDES program already has an electronic system in place that meets certain minimum requirements. Regulated entity managers will need five minutes to find the EPA website and review instructions on electronic reporting to EPA in their state. The regulated entity cost associated with checking the website is estimated at \$1.6 million dollars, based on the number of regulated entities and the industry managerial wage rate.

It is estimated that regulated entities using eNOI will spend 20 minutes (0.333 hours) registering for an electronic account in CDX. Regulated entities using eProgram Reports will spend 20 minutes registering for an electronic account in CDX and another 11 minutes (0.18 hours) to mail EPA an electronic signature agreement (ESA) to the authorized NPDES program. The estimated time required to complete the CDX registration and ESA application, as well as the cost to mail the ESA application, is based on estimates from the Electronic Pre-Manufacturing Notice

³⁹ <http://www.gpo.gov/fdsys/pkg/CFR-2009-title40-vol21/xml/CFR-2009-title40-vol21-sec122-63.xml>

Proposed rule.⁴⁰ In addition to CDX and ESA activities, it is assumed that regulated entities using NetDMR or state eDMR systems will engage in 1.7 hours of online training to familiarize themselves with the electronic reporting process for DMRs. This estimate is based on the length of EPA's NetDMR training, which is an online tutorial accessible on demand.⁴¹ As the CDX account and ESA cover all regulated entity reporting, regulated entities using NetDMR would be able to use eProgram Reports without additional CDX or ESA costs.

It was assumed that one managerial staff member and one technical staff member would complete CDX registration, an Electronic Signature Agreement, or NetDMR training based on the reporting requirements of the permitted facility. Each permitted facility is estimated to spend:

- 0.33 hours at a cost of \$39.38 to set up a CDX account for regulated entities who only use eNOI (manager and technical staff);
- 0.18 hours at a cost of 11.82 to submit an ESA (manager only) for regulated entities who use eProgram Reports; and,
- 1.7 hours at a cost of \$200.86 to take the NetDMR training for regulated entities that use NetDMR.

The possible electronic reporting requirements for each subprogram were presented in Table 1-1. Note that some subprograms have more than one requirement as permits in the same subprogram may have different reporting requirements (e.g. major vs. nonmajor).

The total cost of regulated entity registration and training is estimated by summing the number of regulated entities undertaking each activity multiplied by the cost of that activity. In addition, while single accounts could be used for multiple permits, this analysis conservatively assumes there will be one technical and one managerial account for each permit. Biosolids and pretreatment regulated entity implementation costs are an exception to this assumption for the following reasons. As described in Section 2, biosolids and pretreatment permits are issued to publicly owned treatment works (POTWs) for monitoring sewage sludge or for accepting industrial waste along with domestic sewage, respectively. All POTWs are either combined or sanitary systems for which implementation electronic submission cost estimates are made for all permit components. Therefore, the analysis does not assign separate implementation costs to biosolids and pretreatment and SIU subprograms.

It is not possible to simply multiply the per regulated entity cost by the subprogram universe to estimate total regulated entity registration and training costs due to the fact that reporting requirements differ within and across subprograms. For example, firm level data is available for construction stormwater facilities while other subprograms are conservatively assumed to have separate owners for each permit. Taking these factors into account, the total cost of regulated entity implementation is estimated at \$18.1 million dollars.

4.4.2 Data Entry Costs

The proposed rule will increase the amount of information authorized NPDES programs must share with EPA. As noted elsewhere, regulated entities are currently submitting all of their required data (WENDB and Appendix A to 40 CFR 127) to their respective authorized NPDES programs. Under the rule, more data will be shared with EPA through use of ICIS-NPDES. The increase in data flowing to ICIS-NPDES, coupled with electronic reporting, has the effect of

⁴⁰ Economic Analysis of the Premanufacture Notification Electronic Reporting Proposed Rule (U.S. EPA, 2008).

⁴¹ <http://www.epa.gov/netdmr/about/training.html>

decreasing the number of data elements authorized NPDES programs are required to enter into ICIS-NPDES from paper DMRs and program reports, while increasing the number of regulated entities for which compliance and enforcement data will be required. As shown in Figure 4-1, estimating data entry costs relies on combining the number of permits with the number of data elements, the frequency at which those elements are reported, data entry time per data element, and wage rates for authorized NPDES program staff entering the data elements. The number of permits and activity frequency are described in Section 2 and the incremental change in data elements for each permit type are in Table 4-6. Estimated data entry times were developed by surveying nine states with regard to the time requirements associated with entering various data elements. The following sections describe the state survey and the data crosswalk used to estimate the per data element time to each subprogram.

Figure 4-1: Estimating Data Entry Costs

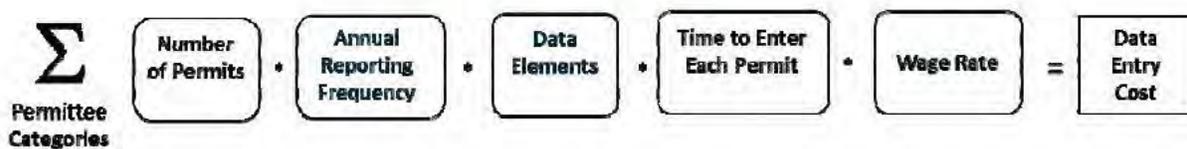


Table 4-6: Incremental Electronic Reporting Data Element Requirements by NPDES Subprogram				
NPDES Subprogram	Major	Nonmajor	Nonmajor General	Multi-Sector General
Industrial and Stormwater				
Standard Industrial Dischargers	22	63	35	
Cooling Water Intakes	28	28		
Thermal Variances	5	5		
Concentrated Animal Feeding Operations (CAFOs)		83	83	
Stormwater	42	65	-18 ^a	-10 ^a
POTWs				
Biosolids	5	10		
Pretreatment and Significant Industrial Users (SIUs)	32	80		
Combined Sewer Systems (CSSs)	47	101	73	
Sanitary Sewer Systems (SSSs)	35	89	61	

^a Data element requirements for stormwater general permits are negative because eNOI will allow data to flow directly into ICIS-NPDES, as opposed to being entered by hand.

State Survey

To characterize the cost of data entry, EPA surveyed nine states: four batch user states; two hybrid user states; and three direct user states. The states, listed in Table 4-7, were selected to provide a distribution across modes of submission (batch, hybrid, and direct) and size (based on numbers of NPDES permits). It is assumed that the unit burden estimates reported by these states are representative of what will be experienced by all states, territories, tribes, and EPA Regions to comply with the rule.

State	User Type
Maine	Batch
Minnesota*	Batch
Florida	Batch
Kentucky	Batch
Arkansas	Hybrid
Tennessee*	Hybrid
Hawaii	Direct
South Dakota	Direct
New York	Direct

*Represents user type at time of survey; user type has changed since the original survey.

The survey asked state representatives for the time required for the state to enter the information currently required for each data family described in Section 1 for the “typical” permit. The survey then presented the required data for each data family and asked how long it took to enter each of the data, again for the “typical” permit.

Data Entry Crosswalk

The time estimates collected in the state survey were first divided by the number of data elements in each data family to determine an average time per data family for each mode of ICIS-NPDES submission (batch, hybrid, and direct) and subprogram. These times were then averaged to determine the average data entry time per data element for each submission mode and subprogram. Finally, the average times were multiplied by state data clerk wage rates to determine the average state costs of data entry per data element. Table 4-8 displays the average data entry cost per data element by submission mode and subprogram.

NPDES User Type	Industrials and Stormwater						POTWs							
	Standard Industrial		CAFO		Stormwater		Biosolids		Pretreatment ^b		CSS		SSS	
	Min.	Cost	Min.	Cost	Min.	Cost	Min.	Cost	Min.	Cost	Min.	Cost	Min.	Cost
Batch	5.45	\$2.90	2.99	\$1.59	5.45	\$2.90	2.61	\$1.39	5.42	\$2.89	5.27	\$2.81	5.47	\$2.91
Direct	2.49	\$1.32	2.34	\$1.24	2.57	\$1.37	2.61	\$1.39	2.55	\$1.36	2.45	\$1.30	2.50	\$1.33
Hybrid	1.62	\$0.86	1.73	\$0.92	1.62	\$0.86	2.61	\$1.39	1.59	\$0.85	1.53	\$0.82	1.62	\$0.86

^a Only one surveyed state, South Dakota, is authorized to administer the Biosolids program. Therefore, their time estimates are used for all states.

^b Cost and burden for SIUs is the same as those for Pretreatment program.

Initial Data Entry

In order for the electronic system to route regulated entity DMRs and program reports correctly, authorized NPDES programs will have to populate ICIS-NPDES with all of the required facility identification information, limits, and limit sets. While much of this information is already available electronically through ICIS-NPDES, states will have to provide the data elements already required to be reported by permittees but not already in ICIS-NPDES in electronic format. Some states may already have the additional data elements available electronically. However, for the purpose of this analysis, EPA assumed that states would incur costs associated with entering the data into ICIS-NPDES electronically to ensure the data meets the new data standards. This assumption results in a conservative estimate, and actual costs will be less for

those authorized NPDES programs that have already entered this data into electronic systems. The cost of manual data entry is \$13.6 million dollars for state authorized NPDES programs and \$222,000 for EPA Regions.

Authorized NPDES Program Data Entry Costs

In this analysis, authorized NPDES program data entry costs are estimated by multiplying the number of programmatic data elements in each permit subprogram and permit type (major vs. nonmajor, individual vs. nonmajor general) by the average data entry cost for each mode of submission and subprogram. The total cost for each permit is then multiplied by the number of permits in that state. Next, total state costs are aggregated by authorized NPDES program to distinguish between state and EPA Region authorized NPDES programs. The annual costs associated with state authorized NPDES programs and EPA Regions entering the programmatic data is \$2.1 million dollars and \$314,000, respectively (Table 4-8). This estimate does not include the savings to authorized NPDES programs due to electronic reporting of NOIs, DMRs, and program reports received from the regulated universe.

Regulated Entity Costs for Electronic Reporting to EPA

EPA is proposing to phase in the electronic collection of NPDES program data on the following schedule.

Phase 1: EPA will electronically receive the basic facility and permit information from the authorized NPDES program, DMR information from all facilities, and NOIs from general permit covered facilities for Federally-issued general permits. EPA will also begin to electronically receive information from authorized NPDES programs regarding inspections, violation determinations, and enforcement actions.

Phase 2: EPA will electronically receive information from general permit covered facilities for state authorized NPDES program-issued general permits and program reports from all facilities.

Regulated entity electronic reporting to EPA involves copying information from paper forms into an online web form provided by EPA. The copy and paste process is expected to take ten seconds per data element. The total time per report is calculated by multiplying the total number of Appendix A data elements on each report by ten seconds. Table 4-9 shows the total number of data elements per report by subprogram. The time estimate per report is multiplied by a private sector data clerk wage rate to determine the cost per report, which is then multiplied by the number of regulated entities affected and the frequency of submission. This calculation is made for DMRs and program reports for each subprogram. In the first year after the effective date of the rule, the cost of electronic reporting to EPA will be limited to Phase 1 information and is estimated at \$125,000 for regulated entities. The volume of electronic reporting to EPA will be at its highest two years after the effective date of the rule as all Phase 1 and Phase 2 information will be required electronically. The total cost of electronic reporting to EPA incurred by regulated entities is estimated to be \$400,000 during the second year after the effective date of the rule based on the assumption that 50% of state authorized NPDES programs that did not have electronic systems are expected to have implemented one after the first year of reporting Phase 1 data. Once the rule is fully implemented, all states will have electronic reporting systems and electronic reporting to EPA will cease. The total cost of electronic reporting to EPA by regulated entities is estimated at \$524,000.

# Data Elements	Industrial and Stormwater				POTWs			
	Standard Industrial	CAFO	Stormwater	SIUs	Biosolid	Pretreatment	CSS	SSS
DMR	11	n/a	11	n/a	n/a	11	11	11
Program Report	n/a	31	13	47	20	47	13	13

4.4.3 Reconciling Electronic Reporting to EPA

As stated above, some regulated entities will report electronically to EPA and as required by their permit to their authorized NPDES program for part of the time. Until all states have implemented electronic reporting systems meeting the proposed rule's requirements, to ensure the same information is reported to both EPA and the state authorized NPDES program during the implementation period, monthly hour-long reconciliation meetings will be held between each state authorized NPDES program and an EPA manager to review potential discrepancies. Therefore, EPA will need to meet with 24 state authorized NPDES programs in the first year after rule promulgation, at a cost of \$16,400 to EPA and \$16,400 to the states. In the second year after rule promulgation, half of the states that did not initially have electronic systems will have adopted them, decreasing the number of state meetings and therefore the cost by half.

4.4.4 National Non-Compliance Report

One reason EPA is moving forward with the proposed rule is to improve reporting on the efforts and efficacy of the NPDES program to the public and Congress. EPA will use the programmatic information from authorized NPDES programs to develop a National Non-Compliance Report that will replace the Annual and Quarterly Non-Compliance Reports and the Semi-Annual Statistical Summary. The National Non-Compliance Report will require 36 hours of EPA technical time and 4 hours of managerial time, for an annual cost of \$2,200.

4.4.5 Total Annual Processing, Submission and Data Entry Costs of Using the Updated System

This section outlines the cost of the rule after the implementation period. All IT modification costs have been accounted for and all regulated entities have completed their registration and training requirements. The costs shown in Table 4-10 include EPA headquarters' cost of operating and maintaining the updated system, and the recurring data entry cost incurred by authorized NPDES programs due to the programmatic data elements (the shift from WENDB to Appendix A and to having to enter information for nonmajor regulated entities). There are no ongoing data entry costs to regulated entities.

Data entry costs associated with programmatic data elements in eNOI and Program Reports data families are included in the eNOI and eProgram Reports costs. Data entry savings due to electronic reporting are discussed in the Section 4.4.7. As shown in Table 4-10, the annual data entry and operating costs of the updated system is \$3,236,000.

Table 4-10: Annual Cost of Data Entry and Operations for the Updated System after Implementation

Rule Components	EPA HQ O&M	EPA Regional Data Entry	State Data Entry	Total
eNOI	\$433,000			\$433,000
NetDMR	\$105,000			\$105,000
eProgram Reports	\$433,000			\$433,000
Required Programmatic Data		\$314,000	\$2,061,000	\$2,376,000
National Non-Compliance Report	\$2,200			\$2,200
Total for All Components	\$973,000	\$314,000	\$2,061,000	\$3,349,000

4.4.6 Total Costs of the Proposed Rule

As shown in Table 4-11, the cost of rule implementation to regulated entities is \$18.7 million, and costs to EPA and state authorized NPDES programs to implement electronic reporting are \$6.0 million and \$23.1 million, respectively. Note that these costs are phased and do not all occur at the same time (see Section 4.5).

Table 4-11: Implementation Costs of the Rule

Rule Components	EPA HQ	EPA Regional	State	Regulated entity	Total
eNOI Enhancements*	\$2,541,000		\$2,216,000		\$4,757,000
NetDMR Enhancements*	\$1,364,000		\$1,938,000		\$3,302,000
Permit Modifications\ Registration		\$33,000	\$891,000	\$16,525,000	\$17,449,000
Program Reports Enhancements*	\$1,501,000		\$2,417,000		\$3,918,000
Entering Permit Limits and Facility Data**		\$536,000	\$15,616,000	\$562,000	\$16,714,000
New National Non-Compliance Report	\$2,000				\$2,000
State and EPA Coordination	\$30,000		\$33,000	\$1,578,000	\$1,641,000
Total for All Components	\$5,438,000	\$569,000	\$23,111,000	\$18,665,000	\$47,783,000

*Includes upfront IT development and annual operation and maintenance.

**Includes initial data entry as well as ongoing data entry.

4.4.7 Submission and Processing Savings from Electronic Reporting

Regulated Entity Submission Savings

Once regulated entities establish their electronic accounts, they will experience savings due to the fact that they no longer have to mail their DMRs or program reports to the authorized NPDES program. Table 4-12 lists the components of mailing costs for regulated entities. Because the electronic reporting tools will include the ability to check for certain types of errors, the regulated entities will also see savings related to improved data quality and less need to revise and reenter their submissions. However, savings associated with improved data quality were not quantified in this analysis.

Cost Category	Cost
Page of Paper ^a	\$0.01
Envelope – Small ^b	\$0.05
Envelope – Large ^c	\$0.19
Postage – Small ^d	\$0.45
Postage - Large Envelope with 60 Pages inside ^d	\$2.12
Postage - Flat Rate Envelope ^d	\$5.15
a. Source: Office Depot brand standard white paper (May 2013)	
b. Source: Approximate average price of #10 Standard Security small envelopes from Office Depot (May 2013)	
c. Source: Approximate average price of large white 9" x 12" catalog envelopes from Office Depot (May 2013)	
d. Source: usps.com (as of end of year 2012)	

Specifically, regulated entities submitting program reports electronically will save on paper and postage. According to EPA program experts, the most expensive program reports, pretreatment program reports, average 100 pages. Pretreatment regulated entities will save \$6.15 annually due to electronic submission. At the other end of the spectrum, CAFO program reports average 1.5 pages, and require one standard size envelope and postage. CAFO regulated entities will save \$0.52 annually from electronic reporting. Standard industrial dischargers are not required to submit program reports and therefore will not experience any savings related to program reports. The total annual savings for all regulated entities submitting program reports electronically is \$38,000.

DMR submission savings are similar to program report savings except that the frequency of DMR submission is higher than that of program reports. According to EPA program experts, the average DMR is five pages long. DMRs are filled out by the regulated entity, sent to an independent laboratory, and then sent to the authorized NPDES program. Therefore, electronic DMR submission will save two standard envelopes, two first class stamps and five pages of paper, saving a total of \$1.05 per submission. Table 4-13 shows the cost associated with each submission for DMRs and program reports. As noted in Section 2, DMR submission rates vary from annual to monthly according to the subprogram and permit type.

NPDES Subprogram	DMR	eProgram Reports
Industrial and Stormwater		
Standard Industrial Dischargers	\$1.05	n/a
Concentrated Animal Feeding Operations (CAFOs)	n/a	\$0.52
Stormwater	\$1.05	\$0.52
SIUs	n/a	\$6.15
POTWs		
Biosolids	\$1.05	\$0.52
Pretreatment and Significant Industrial Users (SIUs)	\$1.05	\$6.15
Combined Sewer Systems (CSSs)	\$1.05	\$0.52
Sanitary Sewer Systems (SSSs)	\$1.05	\$0.52

Note that it is not possible to simply multiply the per regulated entity savings by the sub program universe to estimate total regulated entity submission costs savings due to the fact that reporting frequencies are different within and across subprograms. For example, major stormwater regulated entities submit DMRs monthly, multi-sector generals submit DMRs three times per year, and construction stormwater covered facilities do not have DMR reporting requirements.

Taking these factors into account, the total annual regulated entity savings from electronic DMR submission is \$713,000 for eNOIs and \$614,000 for eDMRs, totaling \$1,327,000 per year.

Authorized NPDES Program Processing Savings

Electronic submission will also create savings for authorized NPDES programs by eliminating the cost of processing incoming DMRs and program reports, mailing out pre-populated DMRs and by reducing data entry. Currently, authorized NPDES programs receive these reports in the mail, staff open and inspect them to ensure they are filled out correctly, enter their information into the state or EPA data system, and usually store them in a physical filing system. Excluding data entry, which is addressed in the next section, this process is estimated to take a data entry clerk 20 minutes per DMR⁴² and 7.5 minutes per program report.⁴³ Following rule implementation, those processing activities will be automated. As a result, authorized NPDES programs will save \$10.65 for every DMR and \$3.99 for every program report received electronically. The total savings from electronic processing of DMRs and program reports is \$13.8 million and \$503,000 for authorized NPDES programs and EPA, respectively.

EPA Regions and state authorized NPDES programs will also experience savings by no longer sending pre-populated DMR forms to regulated entities. Currently, EPA Regions and authorized NPDES programs mail DMR forms with regulated entity-specific limits to an estimated 50% of all NPDES regulated entities. Post proposed rule, electronic copies of DMR forms will be available to all regulated entities, making them universally available and eliminating the need to mail the forms out. Table 4-14 details the per permit savings from eliminating the preparation and mailing of pre-populated DMR forms.

Type of Savings	Annual Frequency	Number of Pages	Cost	Annual Savings per Permit
Paper	12	5	\$0.01	\$0.60
Envelopes	1	1	\$0.19	\$0.19
Postage	1	1	\$2.12	\$2.12
			Total	\$2.91

Finally, authorized NPDES programs will have reduced data entry requirements for DMRs and program reports due to the rule. As noted above, the authorized NPDES program enters information from the paper NOIs, DMRs, and program reports into the system. Following implementation of the rule, authorized NPDES programs will receive electronic NOIs, DMRs, and program reports from the regulated entities, eliminating the need for data entry. The annual savings is \$19.8 million dollars and \$344,000 for authorized NPDES programs and EPA, respectively.

Total Annual Savings after Full Implementation

Table 4-15 shows the aggregated annual savings estimated for regulated entities, states, and EPA Regions.⁴⁴ Regulated entities will save \$1.4 million dollars due to eliminating paper and mailing

⁴² No DMR processing savings are associated with the CAFO subprogram as CAFOs are not required to submit DMRs.

⁴³ Estimates provided by EPA Office of Compliance.

⁴⁴ Due to the complexity of the NPDES program, the total annual savings are not the sum of the unit savings multiplied by the total universe. Confounding elements include but are not limited to permit

costs for DMRs and program reports. State authorized NPDES programs will save \$19.8 million dollars on data entry and \$13.8 million dollars on DMR and program report processing. EPA Regions will save \$503,000 associated with no longer processing incoming DMRs and program reports or mailing out pre-populated DMRs. Annual savings associated with eliminating the Annual Non-Compliance Report and Quarterly Non-Compliance Reports as well as the Semi-Annual Statistical Summary (SASS) for state authorized NPDES programs and EPA are \$825,000 and \$36,000, respectively. Across all changes called for in the proposed rule, annual savings total \$865,000 for EPA, \$34,412,000 for states, and \$1,365,000 for regulated entities with a total annual savings of \$36,660,000.

Type of Savings	EPA	States	Regulated Entities	Total
Data Entry Savings ^a	\$344,000	\$19,760,000	\$0	\$20,104,000
Processing Savings	\$503,000	\$13,827,000	\$1,365,000	\$15,695,000
Eliminating the ANCR, QNCR, and SASS	\$36,000	\$825,000	\$0	\$861,000
Total	\$883,000	\$34,412,000	\$1,365,000	\$36,660,000

^aData entry costs associated with eDMR, eProgram Reports, and eNOI are presented in Table 4-16.

Table 4-16 presents the annual savings associated with each electronic reporting tool. Through the use of eNOI, EPA Regions, states and regulated entities will save \$375,000, \$16.8 million dollars, and \$713,000, respectively. NetDMR will save these groups \$447,000, \$16.5 million dollars, and \$614,000, respectively. eProgram Reports will save \$25,000, \$278,000, and \$38,000, respectively. The elimination of the ANCR, QNCR, and SASS will save EPA and the states \$36,000 and \$825,000, respectively.

Rule Components	EPA	States	Regulated Entity	Total
eNOI	\$375,000	\$16,831,000	\$713,000	\$17,919,000
NetDMR	\$447,000	\$16,478,000	\$614,000	\$17,539,000
eProgram Reports	\$25,000	\$278,000	\$38,000	\$341,000
Eliminating the ANCR, QNCR, and SASS	\$36,000	\$825,000	\$0	\$861,000
Total Savings	\$883,000	\$34,412,000	\$1,365,000	\$36,660,000

4.5 Summary: Implementation and Return on Investment

This section presents EPA's planned phase in approach and return on investment. EPA will need to have upgraded its electronic tools before the effective date of the rule to allow for authorized NPDES programs to begin rule implementation and meet the rule implementation deadlines. Regulated entities will be required to register for electronic reporting one year after the effective date of the rule. Electronic reporting requirements for Phase 1 information for NPDES regulated entities will also be required one year after the effective date of the rule. Phase 2 information reporting is required two years after the effective date of the rule. Other activities supporting these activities (e.g., monthly conference calls with EPA and States, attending webinar trainings, concurrent data reporting to EPA and State for regulated entities) are summarized in

universe overlap, varying reporting requirements based on the permit type, and the frequency of reporting. Supporting spreadsheets provide details on how these costs are aggregated.

State Costs	EPA Costs	Regulated entity Costs
<ul style="list-style-type: none"> Implementation of Electronic Tools Attend Webinars by EPA Monthly Conference Calls with EPA Phase 1 Data Entry, Initial Data Entry 	<ul style="list-style-type: none"> Implementation of Electronic Tools Develop and Attend Webinars by EPA Monthly Conference Calls with EPA Phase 1 Data Entry, Initial Data Entry 	<ul style="list-style-type: none"> Registration Checking EPA Website
<ul style="list-style-type: none"> Permit Modifications Monthly Conference Calls with EPA Phase 2 Data Entry 	<ul style="list-style-type: none"> Permit Modifications Monthly Conference Calls with EPA Phase 2 Data Entry 	<ul style="list-style-type: none"> Phase 1 Dual Reporting to EPA
<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Incorporate the New National Non-Compliance Report 	<ul style="list-style-type: none"> Phase 2 Dual Reporting to EPA

To estimate the discounted value of future costs, EPA guidance states that discount rates of 3% and 7% should be used for economic analyses. Table 4-18 and Table 4-19 show the flow of savings and costs over time using each discount rate. As can be seen in Table 4-18 and Table 4-19, the annual savings exceed annual costs two years after the effective date of the rule, with cumulative savings exceeding cumulative costs three years after the effective date of the rule, under both the 3% and 7% discount rates. As shown in Table 4-18, when using a 3% discount rate, the total annual savings four years after the effective date of the rule is \$32.6 million dollars and total annual cost is \$2.9 million dollars, yielding a net annual savings of \$29.6 million. As shown in Table 4-19, when using a 7% discount rate, the total annual savings of the rule is estimated at \$28.0 million, the total annual cost of the rule is \$2.5 million, yielding a net annual savings of \$25.5 million four years after the effective date of the rule.

Three years after the effective date of the rule, the rule will be fully implemented, and the annual cost of the rule only includes ongoing EPA operations and maintenance and the authorized NPDES programs' data entry for programmatic data elements. Table 4-18 and Table 4-19 display the full schedule of savings, costs, and net savings over a ten-year period using a 3% and a 7% discount rate, respectively. As shown in Table 4-18 using the 3% discount rate, the net savings over ten years is \$220.3 million dollars. In Table 4-19, which uses a 7% discount rate, the net savings over ten years is \$172.4 million dollars.

Year ¹	Annual Costs	Annual Savings	Cumulative Costs	Cumulative Savings	Net Savings
0	\$4,440,000	\$0	\$4,440,000	\$0	(\$4,440,000)
1	\$39,070,000	\$13,890,000	\$43,510,000	\$13,890,000	(\$29,620,000)
2	\$4,120,000	\$33,740,000	\$47,620,000	\$47,630,000	\$10,000
3	\$3,420,000	\$33,550,000	\$51,050,000	\$81,180,000	\$30,140,000
4	\$2,930,000	\$32,570,000	\$53,980,000	\$113,760,000	\$59,780,000
5	\$2,850,000	\$31,620,000	\$56,830,000	\$145,380,000	\$88,550,000
6	\$2,770,000	\$30,700,000	\$59,600,000	\$176,080,000	\$116,490,000
7	\$2,690,000	\$29,810,000	\$62,280,000	\$205,890,000	\$143,610,000
8	\$2,610,000	\$28,940,000	\$64,890,000	\$234,830,000	\$169,940,000
9	\$2,530,000	\$28,100,000	\$67,420,000	\$262,930,000	\$195,510,000
10	\$2,460,000	\$27,280,000	\$69,880,000	\$290,210,000	\$220,330,000

Note that numbers in table have been rounded to the nearest ten thousand.
1. Years after the effective date of the rule.

Table 4-19: Schedule of Savings and Costs (7% Discount Rate)					
Year ¹	Annual Costs	Annual Savings	Cumulative Costs	Cumulative Savings	Net Savings
0	\$4,440,000	\$0	\$4,440,000	\$0	(\$4,440,000)
1	\$37,610,000	\$13,370,000	\$42,050,000	\$13,370,000	(\$28,680,000)
2	\$3,810,000	\$31,270,000	\$45,860,000	\$44,640,000	(\$1,220,000)
3	\$3,100,000	\$29,930,000	\$48,960,000	\$74,570,000	\$25,610,000
4	\$2,520,000	\$27,970,000	\$51,480,000	\$102,530,000	\$51,060,000
5	\$2,360,000	\$26,140,000	\$53,830,000	\$128,670,000	\$74,840,000
6	\$2,200,000	\$24,430,000	\$56,030,000	\$153,100,000	\$97,070,000
7	\$2,060,000	\$22,830,000	\$58,090,000	\$175,930,000	\$117,840,000
8	\$1,920,000	\$21,340,000	\$60,010,000	\$197,270,000	\$137,260,000
9	\$1,800,000	\$19,940,000	\$61,810,000	\$217,210,000	\$155,400,000
10	\$1,680,000	\$18,640,000	\$63,490,000	\$235,850,000	\$172,360,000

Note that numbers in table have been rounded to the nearest ten thousand.
1. Years after the effective date of the rule.

Figure 4-2 and Figure 4-2 show the return on investment over a ten year period using 3% and 7% discount rates, respectively. Dollar values are reported on the y-axis and the number of years after the effective date of the rule on the x-axis. Annual costs are represented as red bars and annual savings as blue bars. The cumulative savings/costs are the sum of current and all prior year savings/costs. As shown on both graphs, the cumulative savings begin to outweigh the cumulative costs less than three years after the effective date of the rule. Using a 3% discount rate, the return on investment over the ten year period is 315%. Using a 7% discount rate, the return on investment over the same period is 271%.

Figure 4-2: Electronic Reporting Savings/Costs Analysis – 3% Discount Rate

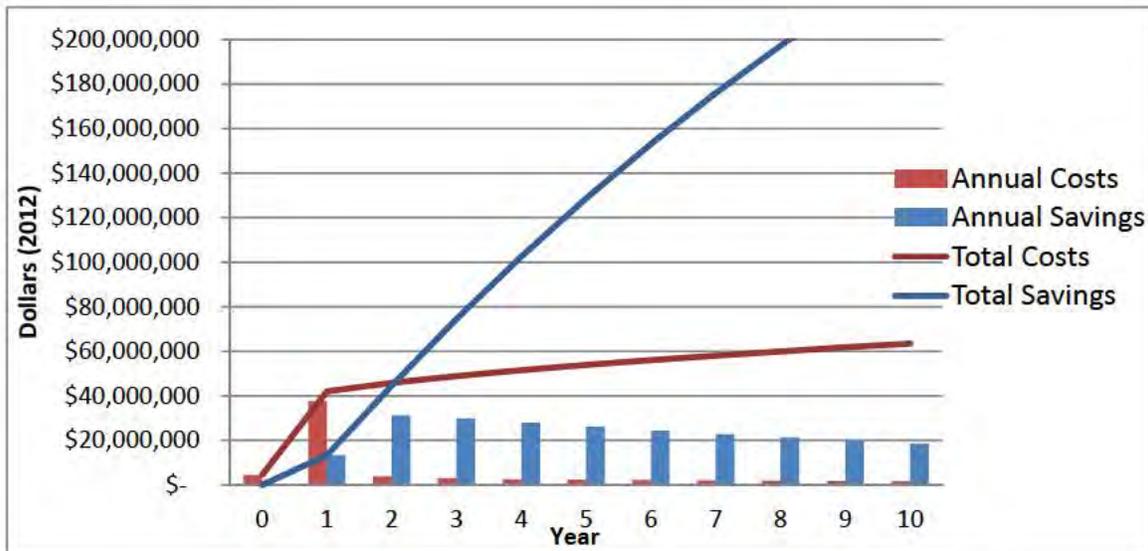
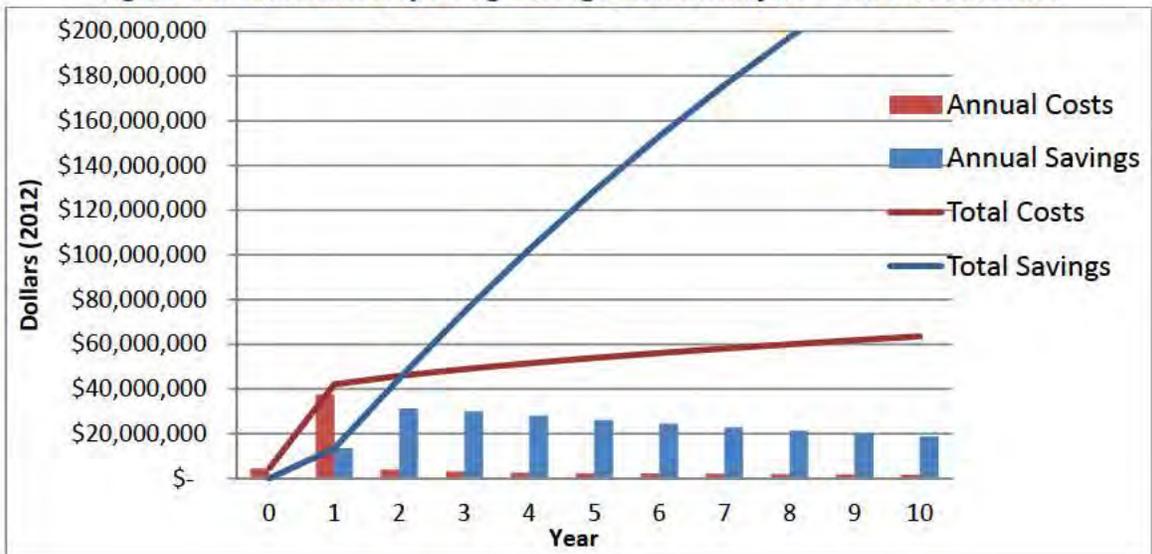


Figure 4-3: Electronic Reporting Savings/Costs Analysis – 7% Discount Rate



Section 5. – Small Entity Analysis

5.1 Introduction

This section addresses the potential impacts of the proposed rule on small entities, which are limited by definition to NPDES regulated entities.⁴⁵ As described in previous sections, affected regulated entities will experience both savings and costs due to the proposed rule. Specifically, they will incur costs to: 1) check the EPA website to determine whether they are subject to Section 308 reporting; 2) register with CDX or a similar data portal in order to transmit required data directly to ICIS-NPDES; 3) establish an electronic signature agreement in order to use the data portal; 4) participate in training on how to electronically report DMRs; and 5) electronically report NOIs, DMRs, and program reports to EPA until their authorized NPDES program has an electronic reporting system in place. Following rule implementation, regulated entities will realize savings through eliminating mailing paper documents, such as DMRs and other required reports, to the authorized NPDES program. Because the electronic reporting tools will include the ability to check for certain types of errors, the regulated entities will also see savings related to improved data quality and less need to revise and reenter their submissions. However, savings associated with improved data quality were not quantified in this analysis.

The small entity analysis considers the extent to which the total costs associated with the proposed rule represent a disproportionate burden on small entities. Section 5.2 outlines the Regulatory Flexibility Act (RFA) requirement for undertaking this analysis. Section 5.3 discusses the definitions of small entities used in this analysis. Section 5.4 describes the general methodology used to determine if the proposed rule results in significant economic impacts to a substantial number of small entities. Sections 5.5 through 5.8 calculate these impacts for different categories of NPDES regulated entities. Section 5.9 summarizes the results of the small entity analysis.

5.2 Impact on Small Entities

The Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. § 601 *et. seq.*) requires Federal agencies to assess the effects of regulations on small entities (including businesses, nonprofit agencies, and governments), and, in some instances, to examine alternatives to the regulations that may reduce adverse economic effects on significantly impacted small entities. Section 604 of the RFA, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, requires an agency to perform an initial and final regulatory flexibility analysis for a rule unless the Agency certifies under section 605(b) that the regulatory action will not have a significant economic impact on a substantial number of small entities. The RFA does not specifically define “a significant economic impact on a substantial number” of small entities.

5.3 Definitions of Small Entities

The RFA uses the definition of “small business” found in the Small Business Act, which authorizes the Small Business Administration (SBA) to define “small business” by regulation.

⁴⁵ While the proposed rule results in costs for regulated entities, states, and EPA, the small entity analysis addresses regulated entities only. By definition, states and EPA do not qualify as small entities. See section 5.3 for the definition of small entities.

SBA's definitions of “small business” vary by industry. This analysis uses the SBA’s definitions of small businesses for each industry which will likely be affected by the proposed rule.⁴⁶

To establish what constitutes a small business, SBA considers a number of economic and market characteristics that may allow a business of concern to exercise dominance in an industry. Size standards are based on criteria such as annual receipts or number of employees that represent a measure of these characteristics. These standards represent the largest size that a for-profit enterprise (together with its affiliates) may be and still qualify as a small business. In this analysis, the enterprise, together with its affiliates corresponds to the highest level domestic company in an individual entity’s corporate hierarchy, otherwise known as parent company.

The SBA small business size standards are expansive, classifying most businesses as “small.” For example, the default SBA size standard for manufacturing industries is 500 employees. According to information compiled for SBA by the Bureau of the Census, 277,572 of 281,644 manufacturing firms have fewer than 500 employees (USSBA, 2011). Therefore, at least 98.5 percent of manufacturing firms would be classified as small businesses according to the SBA definition.

The RFA defines “small governmental jurisdictions” as governments of cities, counties, towns, school districts, or special districts with a population of fewer than 50,000 people. Many small governmental jurisdictions operate publicly-owned treatments works (POTWs), which would be impacted by the requirements of the proposed rule. The POTW’s “parent” is typically considered to be the municipality operating the POTW. In this analysis, both small businesses and small government jurisdictions are referred to as small entities and the highest level of ownership is referred to as the parent entity.

5.4 Methodology Overview

As mentioned above, the RFA considers whether a rule will have a significant economic impact on a substantial number of small entities. This analysis uses annual cost impact percentages to measure potential impacts on small entities. The cost impact percentage is defined as annual compliance costs resulting from the proposed rule as a percentage of annual revenues or sales. For the purposes of determining small entity impacts, comparing annual compliance costs to annual revenue provides a reasonable indication of the magnitude of the regulatory burden relative to a commonly available and objective measure of a parent entity’s income. Where regulatory costs are less than 1% of a typical parent entity’s revenue the impacts of the regulation are likely to be minimal.

The compliance costs associated with the proposed rule include the one-time costs of checking the EPA website, registering with the Central Data Exchange (CDX), submitting an electronic signature agreement (ESA), and training of staff to electronically report DMRs. Additionally, compliance costs include electronic reporting to EPA and regular reporting to the authorized NPDES program for a period of up to two years while authorized NPDES programs establish their own electronic reporting systems. Table 5-1 summarizes these costs.⁴⁷ The specific costs a

⁴⁶ SBA's size standards can be found at:

http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf

⁴⁷ Regulated entities in states that already have electronic reporting systems in place or where EPA is the authorized NPDES program will not be subject to electronic reporting to EPA. In addition, regulated entities in states that develop electronic reporting systems in the first year will only be subject to electronic reporting to EPA for one year.

facility incurs will vary depending on the applicable permit requirements and type of permit under which a facility is covered.

Compliance Cost Type	Cost
Check EPA Website	\$5.47
CDX Registration	\$39.38
Electronic Signature Agreement (ESA)	\$11.82
Web Training for Electronically Reporting DMRs	\$200.86
Electronic reporting to EPA (per year)	\$0 - \$104.64

The proposed rule affects thousands of industry sectors (i.e., NAICS codes) including industrial, agricultural, commercial, and service sectors as well as local governments. The compliance activities and costs will vary among sectors depending on the permit requirements of individual facilities. It was not possible to conduct a detailed analysis for each sector individually. As a result, certain simplifying assumptions were made in the analysis of all sectors. For example, because EPA does not have information on each regulated entity, it was conservatively assumed that all facilities would incur the highest possible estimated compliance cost. A distinction is made, however, between POTWs and non-POTWs because the costs incurred by pretreatment facilities to submit program reports electronically to EPA are an order of magnitude higher than those incurred by the rest of the universe. While regulated entities are also expected to incur savings under the proposed rule from no longer mailing paper DMRs and program reports, these savings vary by subprogram and permit type (as opposed to by sector) and are small compared to the costs. Therefore, no savings were accounted for in the small entity analysis, although some regulated entities will likely receive some savings.

The per-facility compliance costs were annualized over ten years at 3% and 7% discount rates. This analysis estimates cost impact ratios in 2012 dollars and assumes the relationship between compliance costs and annual revenue in 2012 will be the same in future years. The annualized per-facility costs for each discount rate and phase-in scenario are presented in Table 5-2.

Permit Type	Total Annualized Compliance Cost	
	3% Discount Rate	7% Discount Rate
POTWs	\$40.39	\$44.51
Non-POTWs	\$30.49	\$34.19

This small entity analysis considers facilities in all of the industry sectors included in the NPDES permit universe. Based on querying EPA’s Facility Registry System (FRS) for the 6-digit NAICS codes of NPDES facilities, a total of 1,109 sectors were identified (U.S. EPA, 2010a).⁴⁸ The Online Tracking and Information System (OTIS) was then queried to count the number of facilities in ICIS-NPDES and PCS in each of these NAICS codes.

⁴⁸ FRS was also queried for SIC codes of NPDES facilities. SIC codes were converted to their corresponding NAICS codes based on the U.S. Census concordances file. Where a SIC code corresponded to more than one NAICS code, all applicable NAICS codes were included.

Employment and revenue data (necessary for the small entity analysis) available for each of these sectors varies; but fall into the general categories presented in Table 5-3 below. The categories were developed based on the small business definition and data sources used. Sector Category #1 includes all NAICS codes for which employment and revenue data are readily available from the U.S. Census Statistics of U.S. Businesses - the applicable small business threshold is based on either revenue or employment. Sector Category #2 includes municipalities - the small business threshold is defined in terms of population. Data from the U.S. Census of Governments was used to identify revenue. Sector Category #3 includes utilities - the definition of what constitutes a small business is based on the amount of electricity generated. Data from the Energy Information Administration data and annual electricity prices were used to estimate small entity impacts. Agricultural sectors, for which U.S. Department of Agriculture's Census of Agriculture data are used, are grouped together in Sector Category #4. Finally, Sector Category #5 includes miscellaneous sectors for which it was not possible to identify a source of revenue and employment data. Note that facilities falling into Sector Category #5 were not considered in this analysis because employment and revenue data are not readily available. However, these sectors, which include financial institutions, public administration (excluding municipalities), and telecommunications, contain very few NPDES regulated entities.⁴⁹

Sector Category #	Category Description	# NAICS Codes in Category	# Facilities in Category
1	Sectors covered by U.S. Census data ^a	1,012	116,959
2	Municipalities operating POTWs	1	17,412
3	Utility sectors with small business definitions based on electricity generation	6	1,038
4	Agricultural sectors not covered by U.S. Census data	42	12,061
5	Miscellaneous Sectors with no usable data in U.S. Census (e.g., non-utility non-agricultural sectors with no data available from U.S. Census)	48	3,311
n/a	Facilities with no industry sector identified in OTIS ^b	n/a	13,312
Total Number of NPDES Sectors		1,109	164,093
^a See Table 5-4 for more information about the types of industries included in Sector Category 1.			
^b See further discussion in Section 5.5.1.			

For each Sector Category listed in Table 5-3, different data sources were used to estimate relevant economic sizes, and then the impacts of the proposed rule on small entities. Although the data sources varied, the general methodology used to estimate the impacts on small entities across all sectors consisted of the following steps:

- Step 1: Identify the universe of affected NPDES facilities.
- Step 2: Characterize the relationships between facilities and their parents in the affected universe.
- Step 3: Estimate annual revenue of parent entities in the affected universe.
- Step 4: Identify small parent entities based on SBA definitions (see Section 5.2).

⁴⁹ Information in PCS and ICIS-NPDES indicates that facilities in these sectors make up less than 2% of the active NPDES facility universe. Note, however, that this percentage includes some municipalities operating POTWs classified in public administration sectors, which are considered in Section 0. The percentage of facilities not covered by this analysis falls below 1% if public administration sectors are excluded from the count.

- Step 5: Develop parent entity annualized cost estimates, based on the number of facilities per parent estimated in Step 2.
- Step 6: Calculate the parent entity cost impact ratio, defined as the annualized cost as a percentage of annual revenue, as a measure of regulatory burden.
- Step 7: Estimate the number and percentage of small parent entities with parent-level impact percentages in each of three categories: (1) less than 1% of annual revenue; (2) between 1% and 3% of annual revenue; and (3) greater than or equal to 3% annual revenue.

The specific assumptions and calculations used to estimate impacts for each category of facilities are described in more detail in the sections that follow. Section 5.5 considers the impacts on small entities in sectors for which information is available from the 2007 U.S. Census Statistics of U.S. Businesses (SUSB). Section 5.6 estimates the impacts on small municipalities operating POTWs. Section 5.7 estimates the impacts of the proposed rule on small parent entities operating electricity generation utility facilities. Section 5.8 characterizes the impacts on small parent entities in agricultural sectors.

It should be noted that fewer facilities are considered in the small entity analysis (164,093 unique facilities) than were estimated in Section 2 (434,008 unique facilities). Ideally, EPA would identify the parent company of each facility potentially affected by the proposed rule, determine the small entity status (small or not-small) of the parent entity, estimate compliance costs for each small parent entity, and then compare compliance costs to each small parent entity's annual revenue. However, due to the magnitude and diversity of facilities and sectors affected, this approach was not feasible. Because small entity status is based on industrial sector, the small entity analysis required data sources where industry sector (NAICS codes) of each facility could be identified. Although not a complete inventory of all potentially affected facilities, the universe of facilities currently in ICIS-NPDES and PCS was used.⁵⁰ The assumption is made that facilities affected by the proposed rule but not currently in ICIS-NPDES and PCS will experience small entity impacts similar to the facilities currently in ICIS-NPDES and PCS.

5.5 Census Sectors

The majority of NPDES sectors (1,012 of 1,109, or 91%) have revenue and employment data available from the U.S. Census Statistics of U.S. Businesses (SUSB) (U.S. Census Bureau, 2010c). The sectors with data available from SUSB are summarized in Table 5-4 below.

⁵⁰ Not all facilities covered by Concentrated Animal Feeding Operations (CAFOs) or stormwater general permits are currently in ICIS-NPDES or PCS. It was assumed that, on a per facility basis, the estimated impacts on those facilities with information in ICIS-NPDES would be representative of the impacts on all regulated entities subject to the same subprogram.

Table 5-4: Sectors with Information in SUSB		
2-Digit NAICS	NAICS Description	# 6-Digit NAICS Codes
11	Agriculture, Forestry, Fishing and Hunting	13
21	Mining, Quarrying, and Oil and Gas Extraction	29
22	Utilities	3
23	Construction	31
31-33	Manufacturing	463
42	Wholesale Trade	64
44-45	Retail Trade	67
48-49	Transportation and Warehousing	54
51	Information	23
52	Finance and Insurance	24
53	Real Estate and Rental and Leasing	22
54	Professional, Scientific, and Technical Services	38
55	Management of Companies and Enterprises	2
56	Administrative and Support and Waste Management and Remediation Services	37
61	Educational Services	15
62	Health Care and Social Service	39
71	Arts, Entertainment, and Recreation	25
72	Accommodation and Food Services	15
81	Other Services (Except Public Administration)	48
Total Number of NPDES Sectors with Information in SUSB		1,012

The SUSB provides annual data for U.S. business establishments by geography, industry, and enterprise size, covering all business establishments with paid employees. The data provided annually includes counts of establishments, firms, employees, and total receipts. The data available from the SUSB can therefore be used to identify the number of small parent entities affected under the proposed rule, construct annual revenue, and calculate cost impact ratios.

A sector's small business definition is based on either its annual revenue or the number of its employees, depending on the sector. The SUSB provides information tabulated by employment size or revenue size. For those sectors with revenue-based small business definitions, employment and revenue profiles were developed for each revenue size category. For sectors with employment-based small business definitions, profiles were developed for employment size categories. All tables and references in the sections below referring to revenue or employment size classes are mutually exclusive.

In a small entity analysis, compliance costs are estimated at the parent entity level, which requires aggregation of regulated entity costs to the parent entity level. However, it was not possible to identify the regulated entity to parent entity relationship for all affected sectors in this analysis due to the large number of potentially affected regulated entities overall. The SUSB data provide counts of both establishments and firms. Census defines an establishment as a single physical location where business is conducted or where services or industrial operations are performed; this definition corresponds to a facility or NPDES regulated entity. Census defines a firm as a business organization consisting of one or more domestic establishments in the same state and industry that are under common ownership or control. For the purposes of this analysis, it was assumed that a firm is equivalent to a parent entity.

Note that the estimates in this section were derived based on census data available at the NAICS-code level. Information from EPA data systems on individual NPDES facilities was used to construct the initial counts of NPDES permits by NAICS and SIC code. Thereafter, SUSB data were used to construct a distribution of NPDES facilities within the sector, which was then used

to calculate cost-impact ratios. The sections that follow discuss the method used to calculate the impacts on small parent entities, following the general method described in Section 5.4.

5.5.1 Identify Universe of Affected NPDES Facilities

Information in ICIS-NPDES and PCS was used to characterize the universe of affected NPDES facilities by 6-digit NAICS code. Counts of active NPDES regulated entities associated with each NAICS code and SIC code (where no NAICS was available⁵¹) were obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) system via the Online Tracking and Information System (OTIS) (U.S. EPA, 2010b). The following rules (in order of application) were used in assigning NAICS codes to facilities:

- Where a NPDES facility was associated with both a valid NAICS code and a valid SIC code, the NAICS code was chosen.
- Where a NPDES facility was associated with more than one valid NAICS or SIC code, the first NAICS or SIC code listed in the facility record was chosen.
- If a NPDES facility had a blank or invalid NAICS or SIC code associated with its NPDES permit, but had a NAICS or SIC code associated with another permit program in the facility record, it was assigned the NAICS or SIC code from the other permit program.
- If a NPDES facility had a blank or invalid NAICS or SIC code associated with its NPDES permit, and did not have a valid NAICS or SIC code associated with another permit program, it was excluded from the analysis (applies to 13,312 facilities, 7% of the total number of facilities).⁵²
- Where only a valid SIC code was available, the SIC code was mapped to its corresponding NAICS code based on the concordance file from U.S. Census.⁵³
- Where a SIC code mapped to more than one NAICS code, the NAICS code with the largest number of facilities in ICIS-NPDES and PCS was used.
- Where a SIC code mapped to more than one NAICS code, and the corresponding NAICS codes had an equal number of facilities in ICIS-NPDES and PCS, or all corresponding NAICS codes had zero facilities in ICIS-NPDES and PCS, if the corresponding NAICS codes were the same at the 4- or 5-digit level, the 4- or 5-digit NAICS code was used. Otherwise, the first NAICS code listed was used.

Based on this method, 166,058 NPDES facilities were matched to 808 sectors. Note that the number of sectors is fewer than the 1,109 originally identified in Section 5.4 because: 1) only one NAICS code was mapped to each SIC code rather than all corresponding NAICS codes; and 2) only active NPDES facilities were included in the counts by NAICS or SIC code. Note that impacts on facilities in NAICS codes corresponding to POTWs, utilities, and agriculture are discussed in Sections 5.6, 5.7, and 5.8, respectively, and are not included in the estimates presented in this section. Additionally, facilities in 48 non-agricultural non-utility NAICS codes for which information is not available from the SUSB are not considered in this analysis (see

⁵¹ The North American Industry Classification System (NAICS) has replaced the U.S. Standard Industrial Classification (SIC) system. However, for many NPDES facilities, only a SIC code is available in the facility record.

⁵² Note that many of the 13,312 facilities with no applicable NAICS or SIC code appear to be general permits. The assumption is made that facilities affected by the proposed rule with no industry sector identified in ICIS-NPDES or PCS will experience small entity impacts similar to the facilities currently in ICIS-NPDES and PCS.

⁵³ Available at http://www.census.gov/eos/www/naics/concordances/2002_NAICS_to_1987_SIC.xls

further discussion in Section 5.4). Facilities in these groups were excluded from the count of NPDES facilities, bringing the total to 116,959.

The total number of NPDES facilities in each SUSB employment or revenue size class (depending on the sector) was determined by multiplying the total NPDES facility count by the number of establishments in the particular revenue or employment size class and dividing by the total number of establishments in that NAICS/revenue or employment size class. The results are shown in Table 5-5 and Table 5-6 below.

Table 5-5: NPDES Facility Distribution by Employment Size Class	
Employment Size Class	# NPDES Facilities
0-4 employees	15,350
5-9 employees	6,509
10-19 employees	5,759
20-99 employees	9,072
100-499 employees	5,480
500+ employees	13,755
Total	55,988
Note: Numbers may not sum due to rounding.	

Table 5-6: NPDES Facility Distribution by Revenue Size Class	
Revenue Size Class	# NPDES Facilities
<100,000	7,739
100,000-499,999	17,373
500,000-999,999	8,343
1,000,000-2,499,999	8,697
2,500,000-4,999,999	4,380
5,000,000-7,499,999	1,841
7,500,000-9,999,999	1,018
10,000,000-14,999,999	1,180
15,000,000-19,999,999	743
20,000,000-24,999,999	507
25,000,000-29,999,999	335
30,000,000-34,999,999	300
35,000,000-39,999,999	259
40,000,000-44,999,999	267
45,000,000-49,999,999	200
50,000,000-74,999,999	629
75,000,000-99,999,999	414
100,000,000+	6,551
Total	60,971
Note: Numbers may not sum due to rounding.	

5.5.2 Characterize Facility-Parent Relationships

Compliance costs and impacts are estimated at the parent entity level, where a parent entity may own one or more facilities. Therefore, it was necessary to estimate the number of NPDES facilities per parent, which was done by dividing the number of establishments by the number of

firms in the SUSB data for each NAICS/employment or revenue size class combination. The distribution of permits derived in Section 5.5.1 was then divided by this number to obtain a count of NPDES parent entities for each NAICS/revenue or employment size class combination. The counts of parent entities and average number of facilities per parent are shown in Table 5-7 and Table 5-8 below.

Employment Size Class	# NPDES Parent Entities	Average # Facilities per Parent
0-4 employees	15,334	1
5-9 employees	6,471	1.01
10-19 employees	5,607	1.03
20-99 employees	7,830	1.16
100-499 employees	2,988	1.83
500+ employees	2,598	5.29
Total	40,828	1.37

Revenue Size Class	# NPDES Parent Entities	Average # Facilities per Parent
<100,000	7,735	1
100,000-499,999	17,353	1
500,000-999,999	8,316	1
1,000,000-2,499,999	8,563	1.02
2,500,000-4,999,999	4,204	1.04
5,000,000-7,499,999	1,696	1.09
7,500,000-9,999,999	883	1.15
10,000,000-14,999,999	969	1.22
15,000,000-19,999,999	566	1.31
20,000,000-24,999,999	358	1.42
25,000,000-29,999,999	244	1.37
30,000,000-34,999,999	154	1.95
35,000,000-39,999,999	139	1.86
40,000,000-44,999,999	113	2.36
45,000,000-49,999,999	96	2.08
50,000,000-74,999,999	271	2.32
75,000,000-99,999,999	147	2.82
100,000,000+	685	9.56
Total	52,492	1.16

5.5.3 Estimate Annual Revenue of Parent Entities

The SUSB data include the total annual receipts (defined as the revenue for goods produced, distributed, or services provided) for each NAICS/revenue or employment size class combination. The total annual revenue in SUSB was divided by the number of firms to determine average parent entity revenue for each NAICS/revenue or employment size class combination. In some cases total revenue was not provided in the SUSB data because doing so would disclose the operations of an individual establishment or firm, so it was necessary to extrapolate average revenue based on the available data. For sectors with revenue-based small business definitions, the midpoint of the revenue size class was substituted as the average revenue for the NAICS/revenue size class combination with missing data. For sectors with employment-based

small business definitions, the following method was used to estimate average revenue for those NAICS/employment size class combinations where revenue was not disclosed:

1. Calculate the percent difference between average revenue in adjacent employment size classes based on all NPDES NAICS codes populated with average revenue information in the relevant adjacent employment class sizes.
2. For the NAICS/employment size class combination with no average revenue data, multiply the average revenue of the adjacent employment size class in that NAICS code by the average percent difference between the two adjacent employment size classes across all NPDES NAICS codes to estimate the average revenue.
3. Where average revenue is available for both adjacent employment size classes, average the two estimated average revenue to obtain an average revenue for the missing NAICS/employment size class combination. Where average revenue is available for only one of the adjacent size classes, use the estimated average revenue based on the size class with data.

Because the SUSB data reflects 2007 annual revenue, it was necessary to inflate the revenue to current dollars using one of several indices. The Industrial Production Index (IPI) measures the amount of industrial output from certain industries and was used to inflate annual revenue in mining (NAICS 21), utility (NAICS 22⁵⁴), construction (NAICS 23), and manufacturing (NAICS 31-33) sectors to 2012 dollars (U.S. Federal Reserve, 2013). The Producer Price Index (PPI) measures the average change over time in selling prices received by domestic producers of goods and services (BLS, 2013a); the PPI for farm products was used to inflate agricultural sector (NAICS 11⁵⁵) revenue to 2012 dollars.⁵⁶ All other sectors (NAICS 42-81) were inflated based on the change in Gross Domestic Product (GDP) from 2007 to 2012, which is a measure of overall economic output (BEA, 2013).

5.5.4 Estimate Number of Small Parent Entities

As discussed in Section 5.3, the small business definition is based on annual receipts or the number of employees. Because the SUSB provides data broken down by employment and revenue size class, it was possible to identify the number of small firms in each sector. Note that where a small business definition fell in the middle of a size or revenue class, it was assumed that all parent entities in that revenue or employment size class were not small. For example, the small business definition for NAICS 213113 (Support Activities for Coal Mining) is \$7 million in annual revenue; therefore it was assumed that all parent entities in the \$5,000,000 to \$7,499,999 revenue size class were not small. Using this method, 49,828 (95%) firms in sectors with revenue-based small business definitions and 37,998 (93%) firms in sectors with employment based small business definitions are small entities, for a total of 87,826 small entities.

5.5.5 Estimate Parent Entity Compliance Costs

It was assumed that all parent entities would incur an annualized per-facility compliance cost of \$30.49 at a 3% discount rate or \$34.19 at a 7% discount rate (see Section 5.4). The parent entity will incur this cost once for each NPDES facility it operates. Therefore, the annualized per-facility compliance cost was multiplied by the number of facilities per parent entity (derived in Section 5.5.2) to obtain the total annualized compliance cost to the parent entity. This calculation was made separately for each small NAICS/revenue or employment size class combination.

⁵⁴ Except for electricity-generating utilities, discussed in Section 5.7.

⁵⁵ Except for NAICS 111 and 112, discussed in Section 5.8.

⁵⁶ Except for logging (NAICS 113310), which used PPI industry information for logging (BLS, 2013b).

5.5.6 Estimate Cost Impact Ratios

The cost impact ratios for small parent entities operating NPDES facilities were estimated by dividing the total annualized compliance cost for that NAICS/revenue or employment size class (estimated in Section 5.5.5) by the parent entity average annual revenue for the NAICS/revenue or employment size class (estimated in Section 5.5.3). Based on this calculation, using the 3% discount rate, all of the small parent entities in sectors with Census information are expected to incur cost impacts of less than 1% of annual revenue (Table 5-9). Similarly, using the 7% discount rate, all of the small parent entities in sectors with Census information are expected to incur cost impacts of less than 1% of annual revenue (Table 5-10). Because the impacts are less than 1% they are considered to be minimal and no further action is required.

Table 5-9: Estimated Impacts of Proposed Rule on Small Parent Entities of NPDES Facilities in Sectors with Census Information, 3% Discount Rate		
Cost-Impact Ratio Percentage	Small Parent Entity Count	% of Small Parent Entities
>3%	0	0%
1-3%	0	0%
<1%	87,826	100%
Total	87,826	100%

Table 5-10: Estimated Impacts of Proposed Rule on Small Parent Entities of NPDES Facilities in Sectors with Census Information, 7% Discount Rate		
Cost-Impact Ratio Percentage	Small Parent Entity Count	% of Small Parent Entities
>3%	0	0%
1-3%	0	0%
<1%	87,826	100%
Total	87,826	100%

5.6 Municipalities Operating Publicly-Owned Treatment Works (POTWs)

Publicly-owned treatment works (POTWs) are most often operated by the municipality in which the facility is located. Therefore, municipalities are considered to be the parent entity for POTWs. The U.S. Census of Governments was used to characterize municipal revenue (U.S. Census Bureau, 2005a and 2005b). It characterizes the scope and nature of the nation's state and local governments; provides authoritative benchmark figures of public finance and public employment; classifies local government organizations, powers, and activities; and measures federal, state, and local fiscal relationships. Information is available by level of government and category of governmental activity. The Census of Governments provides the following definitions of these government types (referred to collectively as "local governments" throughout this section):

- **Municipal governments:** Organized local governments authorized in state constitutions and statutes and established to provide government for a specific concentration of population in a defined area; includes those governments designated as cities, villages, boroughs (except in Alaska), and towns (except in the six New England states, Minnesota, New York, and Wisconsin).
- **Township governments:** Organized local governments authorized in state constitutions and statutes and established to provide general government for areas defined without

regard to population concentration; includes those governments designated as towns in Connecticut, Maine (including organized plantations), Massachusetts, Minnesota, New Hampshire (including organized locations), New York, Rhode Island, Vermont, and Wisconsin, and townships in other states.

- **County governments:** Organized local governments authorized in state constitutions and statutes and established to provide general government; includes those governments designed as counties, parishes in Louisiana, and boroughs in Alaska.

For some POTWs, the most applicable parent entity was a township or county rather than a municipality (see further discussion in Section 5.6.1 below). The sections that follow discuss the method used to calculate the impacts on small local governments operating POTWs, following the general method described in Section 5.4.

5.6.1 Identify Universe of Affected NPDES Facilities

Information in ICIS-NPDES and PCS was used to identify POTWs. The universe of affected POTWs was estimated by querying ICIS-NPDES for active facilities with a “POTW” permit component and PCS for active facilities classified in SIC code 4952 (Sewerage Systems).⁵⁷ These queries generated a list of 17,412 POTWs affected under the proposed rule.

In order to use the data available from the Census of Governments to construct municipal revenue and identify small municipalities, it was necessary to match each affected POTW to a local government on the Census list. As was discussed above, the U.S. Census provides data for municipalities, townships, and counties. The following order of preference was used to match POTWs to their corresponding Census local government:

- Compare the ICIS-NPDES or PCS city name as extracted by OTIS to the Census list of municipalities.
- Compare the city name from ICIS-NPDES or PCS to the Census list of townships.⁵⁸
- Compare the facility name from the OTIS facility report to the Census list of municipalities.
- Compare the facility name from ICIS-NPDES or PCS to the Census list of townships.⁵⁹
- Conduct internet searches on the facility name, city name, and/or ZIP code to match the facility to a Census municipality or township.⁶⁰
- Where no municipality or township match is possible, identify the corresponding Census County, based on the facility’s ZIP code.⁶¹

Using this method, 17,329 of the 17,412 (99.5%) POTWs were matched to a census municipality, township, or county (see Table 5-11 below). Of the remaining 83 facilities with no Census match, 74 are located in U.S. territories, and it is assumed that the distribution of impacts on these facilities is comparable to the overall distribution. The remaining 9 facilities could not be matched because the information in their OTIS facility reports was insufficient and were

⁵⁷ The POTW permit component flag is only available in ICIS-NPDES, so SIC 4952 was used to search for POTWs in PCS.

⁵⁸ Except for townships in the North Central Region (see explanation in Section 5.6.3).

⁵⁹ Ibid

⁶⁰ Ibid

⁶¹ In some cases, the city identified in the OTIS facility report corresponded to an unincorporated area not administered by a municipality or township, such that the county was the only local government applicable. In other cases, a POTW was operated by the county rather than a single municipality or township, so the corresponding county was the most appropriate match.

excluded from this analysis due to lack of data. The POTWs excluded from this analysis account for less than 1% of the total POTW universe, and are assumed not to affect the conclusions of the overall analysis.

	Facility Count	% of Universe
POTWs matched to a Census Municipality	14,978	86%
POTWs matched to a Census Township	864	5%
POTWs matched to a Census County	1,487	9%
POTWs not matched to a Census Municipality, Township, or County (Not Considered in Analysis)	9	0.1%
POTWs located in a U.S. Territory (Not Considered in Analysis)	74	0.4%
Total Number of POTWs Identified in ICIS-NPDES and PCS	17,412	100%
Note: Numbers may not sum due to rounding.		

5.6.2 Characterize Facility-Parent Relationships

Compliance costs are estimated at the parent entity level, where a parent entity may own one or more facilities. Therefore, it was necessary to consider municipalities, townships, or counties operating multiple POTW facilities. Because the universe derived in Section 5.6.1 is based on a unique list of facilities matched to individual local governments, it was possible to determine the number of POTW facilities operated by each municipality, township, and county. The 17,329 matched POTWs corresponded to a total of 11,972 unique local governments, with the majority (9,616, or 80%) operating only one POTW. For the remaining 2,356 local governments, the actual number of facilities per parent based on the data pulled from OTIS was used.

5.6.3 Estimate Annual Revenue of Parent Entities

Because the Census of Governments does not provide revenue data for individual municipalities, townships, or counties, it was necessary to develop a method to estimate these revenue based on available information. The Government Finance series in the 2002 Census of Governments provides information at the state level regarding the per capita revenue of municipalities, townships, and counties by population-size range (U.S. Census Bureau, 2005a; U.S. Census Bureau, 2005b). Note that for townships, U.S. Census only provides per capita revenue by population-size group for states in the Northeast Region (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont). For townships in the North Central Region (Illinois, Indiana, Kansas, Michigan, and Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin), per capita revenue were not available from Census. Therefore, the corresponding county was identified and used as the applicable local government for each affected POTW in these areas. There are no township local governments in states in regions other than the Northeast and North Central.

It was necessary to inflate the 2002 revenue to 2012 dollars. The Gross Domestic Product (GDP) inflation index, which is a measure of overall economic output, was used to inflate 2002 revenue to 2012 dollars. Note that this method may overstate current revenue because the GDP is a measure of overall economic output and does not correlate directly to government revenue; however it was considered the best available index to use in this situation.

To estimate the annual revenue for each affected municipality, township, and county, the per capita revenue was multiplied by the population. Population information was obtained from the U.S. Census 2009 Population Estimates (U.S. Census Bureau, 2010b).

5.6.4 Estimate the Number of Small Parent Entities

As discussed in Section 5.3, "small governmental jurisdictions" are defined as the government of a city, county, town, school district or special district with a population of fewer than 50,000 people. Therefore, any local government operating a POTW serving a population of 50,000 or fewer was considered "small" for the purposes of this analysis. In Section 5.6.2, the 2009 population of each affected municipality, township, and county was identified from U.S. Census. Based on this information, 11,106 of the 11,972 (93%) local governments operating POTWs are small.

5.6.5 Estimate Parent Entity Compliance Costs

It was assumed that all POTWs would incur an annualized per-facility compliance cost of \$40.39 at a 3% discount rate or \$44.51 at a 7% discount rate (see Section 5.4). The affected municipality, township, or county will incur this cost once for each POTW it operates. Therefore, the annualized per-facility compliance cost was multiplied by the number of POTWs per local government (derived in Section 5.6.2) to calculate the total annualized compliance cost for each local government affected under the proposed rule.

5.6.6 Estimate Cost Impact Ratios

The cost impact ratios for small municipalities, townships, and counties operating POTWs were estimated by dividing the total annualized compliance cost for that entity (estimated in Section 5.6.5) by the annual revenue of the local government (estimated in Section 5.6.3). Based on this calculation, at a 3% discount rate, all 11,106 of the small local governments affected by the proposed rule are expected to incur a cost impact of less than 1% of annual revenue (Table 5-12). Similarly, at a 7% discount rate, all 11,106 of the small local governments affected by the proposed rule are expected to incur a cost impact of less than 1% of annual revenue (Table 5-13). Cost impacts of less than 1% are considered to be minimal, and no further action is required.

Cost-Impact Ratio Percentage	Small Local Government Count	% of Small Local Governments
>3%	0	0%
1-3%	0	0%
<1%	11,106	100%
Total	11,106	100%

Cost-Impact Ratio Percentage	Small Local Government Count	% of Small Local Governments
>3%	0	0%
1-3%	0	0%
<1%	11,106	100%
Total	11,106	100%

5.7 Utilities

For six utility sectors, the small business definition is based on electricity generation rather than employment or annual revenue. Therefore, for these sectors, it was necessary to use an alternate method to determine the impacts of the proposed rule on small entities. The six sectors with small business definitions based on electricity generation are:

- 221111 Hydroelectric Power Generation
- 221112 Fossil Fuel Electric Power Generation
- 221113 Nuclear Power Generation
- 221119 Other Electric Power Generation
- 221121 Electric Bulk Power Transmission and Control
- 221122 Electric Power Distribution

The Energy Information Administration (EIA) maintains monthly and annual data on electricity generation and fuel consumption for U.S. power plants in its EIA-923 database. This information was used to identify small entities and to construct annual revenue of small utility companies owning operations with NPDES permits. Subsequent sections outline the method used to calculate the impacts on small electric utilities, following the general method described in Section 5.4.

5.7.1 Characterize the Universe of Affected NPDES Facilities

The universe of NPDES utility facilities was developed by identifying those power plants listed in the EIA-923 database with NPDES permits. Identification was made by querying the Facility Registry System (FRS) for all EPA-regulated entities with information in EIA databases (based on the Emissions & Generation Resource Integrated Database (eGRID) and the Clean Air Markets Division Business System (CAMDBS) facility linkages) (U.S. EPA, 2010a). This list was then limited to NPDES facilities by using the FRS IDs of the EIA-linked facilities to identify those with a NPDES permit. This method yielded a total of 1,609 EIA power generating locations with NPDES permit IDs.

However, not all power plants in EIA databases are classified as a utility according to their primary NAICS code. For example, a manufacturing facility may generate electricity on site, but would be identified by a manufacturing NAICS code as its primary industrial classification. The impacts of the proposed rule on electricity generation facilities with primary industrial classifications other than those listed above, were therefore already analyzed in Section 5.5. To eliminate these facilities from the list of NPDES utility facilities, only those facilities with a utility NAICS or SIC code in their NPDES permit record were included in the universe, unless another program system (e.g., the Air Facility System (AFS)) classified the facility in a utility NAICS. Based on these assumptions, a total of 1,174 utilities with NPDES permits were considered in this part of the analysis.

The Federal Energy Regulatory Commission (FERC) defines a major utility in 18 CFR §101 as having, in each of the last three consecutive years, sales or transmission service exceeding one million megawatt-hours of total sales, 100 megawatt-hours of sales for resale, 500 megawatt-hours of power exchanges delivered, or 500 megawatt-hours of wheeling for others (deliveries plus losses). FERC defines a nonmajor utility as those utilities not classified as major with total sales in each of the last three consecutive years of 10,000 megawatt-hours or more. Therefore, any utility NPDES facility not meeting the FERC definition of a major or nonmajor utility was assumed to have its primary industrial classification in a different NAICS code and was not

included in the universe. Based on the FERC definitions of major and nonmajor utilities, the universe was narrowed to 1,016 facilities, as is shown in Table 5-14 below.

Utility Universe	# Facilities
EIA Power Plants with NPDES IDs	1,609
With Utility NAICS Code in EPA Records	1,174
Meets FERC Definition of a Utility	1,016

5.7.2 Characterize Facility-Parent Relationships

The EIA-923 database also provides information about the operator of every utility in the database. It was assumed that the “operator” was the parent entity for the utility universe. Based on this information, it was possible to characterize the facility-parent relationship for every utility facility. The 1,016 utility facilities corresponded to 541 parents, of which 395 parents (73%) operate only one facility. For the remaining 146 parents, the actual number of facilities per parent based on the EIA data was used.

5.7.3 Estimate Annual Revenue of Parent Entities

As stated above, the EIA-923 database provides information about the annual electricity generation of each power plant in the U.S (EIA, 2009). The EIA also provides information about the average retail price of electricity to ultimate customers by end-use sector, by state, on a monthly basis (EIA, 2013). Annual electricity generation and price were combined to generate an estimate of annual revenue. Specifically, a national average of 9.65 cents per kilowatt-hour, or \$96.50 per megawatt-hour (December 2012) was multiplied by the total electricity generation per parent to construct annual revenue for each parent entity.

For 69 utilities, information was not available from the EIA-923 database regarding annual electricity generation. However, the Form EIA-860 Annual Electric Generator Report provides information on the operational status of generators at electric plants owned and operated by electric utilities and non-utilities. Of the 69 utility facilities with no electricity generation data, 64 were either retired, out of service, under construction, or planned at the time of this analysis. Because these facilities were not currently operational, they were not included in the universe of affected regulated entities and were not included in the small entity analysis. Of the remaining five utilities with no data, information about electricity generation was available for one facility from the 2007 EIA-923 database. No information was available for the remaining four facilities with no electricity generation data. However, the utilities with missing data account for 0.4% of the NPDES utility facility universe, and are assumed not to affect the conclusions of the overall analysis. Therefore, annual revenue was estimated for 947 facilities corresponding to 472 parent entities. The number of facilities per parent ranged from 1 to 19.

5.7.4 Estimate the Number of Small Parent Entities

Small utilities are defined as those businesses primarily engaged in the generation, transmission, and/or distribution of electric energy for sale with the total electric output for the fiscal year not exceeding 4 million megawatt-hours. Based on this definition, and aggregating the individual facility net generation to the parent level, 341 of the 472 (72%) utility parent entities meet the definition of being a small parent entity.

5.7.5 Estimate Parent Entity Compliance Costs

It was assumed that all utilities would incur an annualized per-facility compliance cost of \$30.49 at a 3% discount rate or \$34.19 at a 7% discount rate (see Section 5.4). The affected parent entity will incur this cost once for each NPDES utility facility it operates. Therefore, the annualized per-facility compliance cost was multiplied by the number of utility operations per parent (derived in Section 5.7.2) to calculate the total annualized compliance cost for each utility parent entity affected under the proposed rule.

5.7.6 Estimate Cost Impact Ratios

The cost impact ratios for small parent entities operating NPDES utility facilities were estimated by dividing the total annualized compliance cost for each entity (estimated in Section 5.7.5) by their annual revenue (estimated in Section 5.7.3). Based on this calculation, at a 3% discount rate, all of the 341 small utility parent entities affected under the proposed rule are expected to incur a cost impact of less than 1% of annual revenue (Table 5-15). Similarly, at a 7% discount rate all of the 341 small utility parent entities affected under the proposed rule are expected to incur a cost impact of less than 1% of annual revenue (Table 5-16). Cost impacts of less than 1% are considered minimal, and no further action is required.

Cost-Impact Ratio Percentage	Small Parent Count	% of Small Parent Entities
>3%	0	0%
1-3%	0	0%
<1%	341	100%
Total	341	100%

Cost-Impact Ratio Percentage	Small Parent Count	% of Small Parent Entities
>3%	0	0%
1-3%	0	0%
<1%	341	100%
Total	341	100%

5.8 Agriculture

Forty-two agricultural sectors were identified as potentially affected under the proposed rule. The term “farming” includes all agricultural activities in the affected sectors, ranging from egg production to aquaculture. Data for these sectors are available from the USDA’s Census of Agriculture (USDA, 2007). The Census of Agriculture is conducted by the National Agricultural Statistical Service (NASS) every five years, and provides a complete count of U.S. farms including data on income and expenditures, land use and ownership, and production practices.

The readily available data on revenue and economic class⁶² distributions from the Agricultural Census summarizes most of the affected 42 sub-sectors at a 4-digit NAICS level, with the Cattle Ranching and Farming industry disaggregated to 6-digit NAICS levels. Revenue and economic class data at the 6-digit level were requested from USDA's Statistics Division for the Poultry and Egg Production sector (NAICS 1123) to meet the analytical needs of this analysis.

For the agricultural sector, SBA sets size standards for small businesses by annual revenue assigned at the 6-digit NAICS sub-sector level. SBA's size standards differ from the revenue cutoff generally recognized by USDA, which has defined \$250,000 in gross sales as its cutoff between small and large family farms (USDA, 2010a).

With two exceptions (Cattle Feedlots and Chicken Egg Production sub-sectors), current SBA standards define a "small business" within the agricultural sector as an operation generating average revenue of less than \$0.75 million per year. The Cattle Feedlots sub-sector (NAICS 112112) has a small business definition of \$2.5 million per year. Within the Poultry and Egg Production sector, the Chicken Egg Production sub-sector (NAICS 112310) has a small business definition of \$12.5 million per year.

5.8.1 Identify Universe of Affected NPDES Facilities

Information in ICIS-NPDES and PCS was used to characterize the universe of affected NPDES facilities by NAICS code. Following the rules identified in Section 5.5.1, 12,061 facilities were matched to 42 6-digit NAICS codes. Table 5-17 summarizes the distribution of NPDES facilities across NAICS codes.

⁶² Economic class data are the classification of farms by the sum of market value of agricultural products sold and government payments (revenue). For example, one economic class classification is the number of farms with average annual revenue between \$25,000 and \$49,999. According to the Agricultural Census, government payments consist of payments received from the Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), or Conservation Reserve Enhancement Program (CREP) plus government payments received from Federal, State, and local programs other than the CRP, WRP, FWP, and CREP, and Commodity Credit Corporation loans.

NAICS	NAICS Description	# NPDES Facilities
1111	Oilseed and Grain Farming	173
1112	Vegetable and Melon Farming	9
1113	Fruit and Tree Nut Farming	10
1114	Greenhouse, Nursery, and Floriculture Production	35
1119 ^a	Sugarcane, Hay, and all Other Crop Farming	27
1121	Cattle Ranching and Farming	
112111	Beef Cattle Ranching and Farming	59
112112	Cattle Feedlots	3,339
112120	Dairy Cattle and Milk Production	3,208
1122	Hog and Pig Farming	1,826
1123	Poultry and Egg Production	
112310	Chicken Egg Production	399
112320	Broilers and Other Meat Type Chicken Production	1,512
112330	Turkey Production	29
112340	Poultry Hatcheries	24
112390	Other Poultry Production	574
1124	Sheep and Goat Farming	26
1125 ^b	Animal Aquaculture and other Animal Production	811
Total Number of NPDES Agricultural Facilities		12,061

^a Includes data on the following NAICS: 11193, 11194, and 11199.
^b Data are combined with NAICS 1129: Other Animal Production.

5.8.2 Characterize Facility-Parent Relationships

In a small entity analysis, compliance costs are estimated at the parent entity level, where a parent entity may own one or more facilities. For the purposes of this analysis, it was assumed that a farm is the rough equivalent of a facility. According to the 2008 USDA report titled Million-Dollar Farms in the New Century (USDA, 2008), in 2006 only 1.4% of U.S. farms identified themselves as part of a larger firm or corporation, thus, for the purpose of this analysis, it was assumed that all facilities in the agricultural sector are parent entities with single locations.

5.8.3 Construct Annual Revenue of Parent Entities

Agricultural Census data includes revenue (presented as the sum of total market value of agricultural products sold and government payments) tabulated by economic class and NAICS level. The total revenue of each economic class was divided by the number of farms in the economic class to estimate average revenue per economic class for each NAICS level.

Because the Census data reflects 2007 annual revenue, it was necessary to inflate the revenue to current dollars. The Producer Price Index (PPI) measures the average change over time in selling prices received by domestic producers of goods and services (BLS, 2013a). The agricultural sector revenue was inflated to 2012 dollars based on the PPI commodity information for farm products.

5.8.4 Identify Small Parent Entities

As mentioned above, in this analysis it was assumed that all facilities in the agricultural sectors are their own parent (i.e., single location). The distribution of small parent entities was estimated using the Agricultural Census data on the number of farms within each economic class. Farms with income of less than \$10,000 were not considered in this analysis as it is likely that these

farms have alternate sources of income and therefore cannot be considered in this small entity analysis with operations for which farming is the primary income source. In fact, USDA's Economic Research Service identifies these farms as small noncommercial entities that "exist independently of the farm economy because their operators rely heavily on off-farm income" (USDA, 2010b).

The percentage of farms with revenue below the small business threshold was then applied to the universe of NPDES facilities to estimate the number of affected NPDES facilities that are small parent entities as shown in Table 5-18.

Table 5-18: NPDES Facility Distribution by NAICS Code				
NAICS	USDA NAICS Description	NPDES Facilities (#)	Small NPDES Facilities (#)	Small NPDES Facilities (%)
1111	Oilseed and Grain Farming	173	147	85%
1112	Vegetable and Melon Farming	9	7	82%
1113	Fruit and Tree Nut Farming	10	9	90%
1114	Greenhouse, Nursery, and Floriculture	35	29	84%
1119 ^a	Sugarcane, Hay, and all Other Crop Farming	27	26	95%
112111	Beef Cattle Ranching and Farming	59	57	97%
112112	Cattle Feedlots	3,339	3,105	93%
112120	Dairy Cattle and Milk Production	3,208	2,502	78%
1122	Hog and Pig Farming	1,826	895	49%
112310	Chicken Egg Production	399	399	100%
112320	Broilers and Other Meat Type Chicken	1,512	287	19%
112330	Turkey Production	29	5	17%
112340	Poultry Hatcheries	24	5	19%
112390	Other Poultry Production	574	511	89%
1124	Sheep and Goat Farming	26	25	97%
1125 ^b	Animal Aquaculture and other Animal Production	811	754	93%
Total Number of NPDES Agricultural Facilities		12,061	8,763	73%
^a Includes data on the following NAICS: 11193, 11194, and 11199.				
^b Data are combined with NAICS 1129: Other Animal Production.				
Note: Farms with revenue of less than \$10,000 are not included in this analysis.				

5.8.5 Calculate Parent Entity Compliance Costs

It was assumed that all parent entities would incur an annualized per-facility compliance cost of \$30.49 at a 3% discount rate, or \$34.19 at a 7% discount rate (see Section 5.2). The parent entity will incur this cost once for each NPDES facility it operates. For agricultural sectors, it was assumed that all agricultural entities are single locations; therefore the per-facility annualized compliance cost was apportioned once to each parent entity.

5.8.6 Estimate Cost Impact Ratios

The cost impact ratios for small parent entities were estimated by dividing the annualized compliance cost, (derived in Section 4.4.1), by the average revenue in each economic class for each NAICS code. The percent of small farms experiencing impacts of less than 1%, between 1% and 3%, and greater than 3% was then applied to the universe of small NPDES agricultural facilities to estimate the distribution of impacts within the affected agricultural sector. Based on this calculation, at a 3% discount rate, all of the 8,763 of the small parent entities in the affected agricultural sectors are expected to incur a cost impact of less than 1% of annual revenue (see Table 5-19). Similarly, at a 7% discount rate, all of the 8,763 of the small parent entities in the affected agricultural sectors are expected to incur a cost impact of less than 1% of annual revenue (Table 5-20). Cost impacts of less than 1% are considered minimal and no further action is required.

Table 5-19: Estimated Impacts of Proposed Rule on Small Parent Entities of NPDES Agricultural Facilities, 3% Discount Rate

NAICS	USDA NAICS Description	Cost Impact of <1%		Cost Impact Between 1 and 3%		Cost Impact of >3%	
		#	%	#	%	#	%
1111	Oilseed and Grain Farming	147	100	0	0	0	0
1112	Vegetable and Melon Farming	7	100	0	0	0	0
1113	Fruit and Tree Nut Farming	9	100	0	0	0	0
1114	Greenhouse, Nursery, and Floriculture Production	29	100	0	0	0	0
1119 ^a	Sugarcane, Hay, and all Other Crop Farming	26	100	0	0	0	0
112111	Beef Cattle Ranching and Farming	57	100	0	0	0	0
112112	Cattle Feedlots	3,105	100	0	0	0	0
112120	Dairy Cattle and Milk Production	2,502	100	0	0	0	0
1122	Hog and Pig Farming	895	100	0	0	0	0
112310	Chicken Egg Production	399	100	0	0	0	0
112320	Broilers and Other Meat Type Chicken Production	287	100	0	0	0	0
112330	Turkey Production	5	100	0	0	0	0
112340	Poultry Hatcheries	5	100	0	0	0	0
112390	Other Poultry Production	511	100	0	0	0	0
1124	Sheep and Goat Farming	25	100	0	0	0	0
1125 ^b	Animal Aquaculture and other Animal Production	754	100	0	0	0	0
Total Number of NPDES Agricultural Facilities		8,763	100	0	0	0	0

^a Includes data on the following NAICS: 11193, 11194, and 11199.

^b Data is combined with NAICS 1129: Other Animal Production.

Note: The estimated impacts on entities in the agricultural sector does not include a potential adjustment for residential/lifestyle and retirement farms.

Table 5-20: Estimated Impacts of Proposed Rule on Small Parent Entities of NPDES Agricultural Facilities, 7% Discount Rate

NAICS	USDA NAICS Description	Cost Impact of <1%		Cost Impact Between 1 and 3%		Cost Impact of >3%	
		#	%	#	%	#	%
1111	Oilseed and Grain Farming	147	100	0	0	0	0
1112	Vegetable and Melon Farming	7	100	0	0	0	0
1113	Fruit and Tree Nut Farming	9	100	0	0	0	0
1114	Greenhouse, Nursery, and Floriculture Production	29	100	0	0	0	0
1119 ^a	Sugarcane, Hay, and all Other Crop Farming	26	100	0	0	0	0
112111	Beef Cattle Ranching and Farming	57	100	0	0	0	0
112112	Cattle Feedlots	3,105	100	0	0	0	0
112120	Dairy Cattle and Milk Production	2,502	100	0	0	0	0
1122	Hog and Pig Farming	895	100	0	0	0	0
112310	Chicken Egg Production	399	100	0	0	0	0
112320	Broilers and Other Meat Type Chicken Production	287	100	0	0	0	0
112330	Turkey Production	5	100	0	0	0	0
112340	Poultry Hatcheries	5	100	0	0	0	0
112390	Other Poultry Production	511	100	0	0	0	0
1124	Sheep and Goat Farming	25	100	0	0	0	0
1125 ^b	Animal Aquaculture and other Animal Production	754	100	0	0	0	0
Total Number of NPDES Agricultural Facilities		8,763	100	0	0	0	0

^a Includes data on the following NAICS: 11193, 11194, and 11199.

^b Data is combined with NAICS 1129: Other Animal Production.

Note: The estimated impacts on entities in the agricultural sector does not include a potential adjustment for residential/lifestyle and retirement farms.

5.9 Summary

Small entity impacts were estimated for the following sectors:

- Industrial sectors;
- POTWs operated by municipalities;
- Electricity generating utilities; and,
- Agricultural sectors.

Of these sectors, no entities are expected to incur a cost impact of 1% or greater associated with the annualized compliance costs resulting from the proposed rule. These results are summarized in Table 5-21 and Table 5-22. Based on the assumption that facilities affected by the proposed rule but not currently in ICIS-NPDES and PCS are similar to those facilities that are in ICIS-NPDES and PCS, no small entity impacts above 1% are expected due to the proposed rule.

Category of Sector Description	Cost Impact of <1%		Cost Impact Between 1 and 3%		Cost Impact of >3%	
	#	%	#	%	#	%
Sectors covered by U.S. Census data	87,826	100	0	0	0	0
Municipalities operating POTWs	11,106	100	0	0	0	0
Utility sectors	341	100	0	0	0	0
Agricultural sectors	8,763	100	0	0	0	0
Total	108,036	100	0	0	0	0

Note: The estimated impacts on entities in the agricultural sector does not include a potential adjustment for residential/lifestyle and retirement farms.

Category of Sector Description	Cost Impact of <1%		Cost Impact Between 1 and 3%		Cost Impact of >3%	
	#	%	#	%	#	%
Sectors covered by U.S. Census data	87,826	100	0	0	0	0
Municipalities operating POTWs	11,106	100	0	0	0	0
Utility sectors	341	100	0	0	0	0
Agricultural sectors	8,763	100	0	0	0	0
Total	108,036	100	0	0	0	0

Note: The estimated impacts on entities in the agricultural sector does not include a potential adjustment for residential/lifestyle and retirement farms.

References

- U.S. Bureau of Economic Analysis (BEA), U.S. Department of Commerce. 2013. National Income and Products Accounts Table, Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. <<http://www.bea.gov/index.htm>>
- U.S. Bureau of Labor Statistics (BLS). 2013a. Producer Price Index-Commodities: Farm Products. Series ID WPU01. <<http://www.bls.gov/ppi/data.htm>>
- U.S. Bureau of Labor Statistics (BLS). 2013b. Producer Price Index Industry Data: Logging. Series ID PCU113310113310. <<http://www.bls.gov/ppi/data.htm>>
- U.S. Census Bureau. 2005a. 2002 Census of Governments: Government Finance: Finances of County Governments: 2002. Vol 4, No. 3, Issued February 2005. <<http://www.census.gov/prod/2005pubs/gc02x43.pdf>>
- U.S. Census Bureau. 2005b. 2002 Census of Governments: Government Finance: Finances of Municipal and Township Governments: 2002. Vol 4, No. 4, Issued April 2005. <<http://www.census.gov/prod/2005pubs/gc02x43.pdf>>
- U.S. Census Bureau. 2010a. Federal, State, & Local Governments: Definitions. <<http://www.census.gov/govs/definitions/index.html>>
- U.S. Census Bureau. 2010b. Population Estimates: Incorporated Places and Minor Civil Divisions: All Places: 2000 to 2009. <<http://www.census.gov/popest/cities/SUB-EST2009-4.html>>
- U.S. Census Bureau. 2010c. Statistics of U.S. Businesses (SUSB). <<http://www.census.gov/econ/susb/>>
- USDA, 2007. Census of Agriculture 2007. <http://www.agcensus.usda.gov/Publications/2007/Full_Report/index.asp>
- USDA, 2008. Hoppe, Robert A., P. Korb, and D. Banker. *Million-Dollar Farms in the New Century*, Economic Information Bulletin No. 42, U.S. Department of Agriculture, Economic Research Service, December 2008.
- USDA, 2010a. Hoppe, Robert A., and David E. Banker. *Structure and Finances of U.S. Farms: Family Farm Report, 2010 Edition*. EIB-66, U.S. Department of Agriculture, Economic Research Service, July 2010. <http://www.ers.usda.gov/Publications/EIB66/>
- USDA, 2010b. Hoppe, Robert A., James M. MacDonald, and Penni Korb. *Small Farms in the United States: Persistence Under Pressure*, EIB-63, U.S. Department of Agriculture, Economic Research Service, February 2010.
- U.S. Energy Information Administration (EIA), U.S. Department of Energy. 2008. Form EIA-860 Database Annual Electric Generator Report. <<http://www.eia.doe.gov/cneaf/electricity/page/eia860.html>>

U.S. Energy Information Administration (EIA), U.S. Department of Energy. 2009. Form EIA-923 Database. <http://www.eia.doe.gov/cneaf/electricity/page/eia906_920.html>

U.S. Energy Information Administration (EIA), U.S. Department of Energy. 2013. Table 5.6.A.: Average Retail Price of Electricity to Ultimate Consumers by End-Use Sector, by State, December 2012 and 2011. <
http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_06_a >

U.S. EPA. 2010a. Facility Registry System (FRS).
<http://www.epa.gov/enviro/html/fii/fii_query_java.html>

U.S. EPA. 2010b. Online Tracking and Information System. <<http://www.epa-otis.gov/otis/>>

U.S. Federal Reserve. 2013. Table 4: Industrial Production Indexes: Market and Industry Group Summary Federal Reserve Statistical Release: Industrial Production and Capacity Utilization. <
<http://www.federalreserve.gov/releases/g17/current/table4.htm> >

U.S. SBA. Office of Advocacy. 2006. Statistics – All Industries by NAICS Codes, 2006: Employer Firms & Employment by Employment Size of Firm by NAICS Codes.
http://www.sba.gov/advo/research/us06_n6.pdf. Downloaded on March 6, 2009.

U.S. SBA. 2008. Table of Small Business Size Standards Matched to North American Industry Classification System Codes.
http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf.
Downloaded on January 19, 2010.

Section 6. – Benefits

6.1 Introduction

EPA has concluded that the proposed rule will facilitate a reduction in pollution to our nation's waters. More timely, consistent, and accurate data will improve targeting of our federal and state resources to the most serious water quality and compliance problems. Furthermore, EPA expects that because obtaining facility-specific information electronically is more efficient than current reporting, data entry, and other work processes, significant savings will be realized by regulated entities, authorized NPDES programs, and EPA. Specifically, updating the submittal process by implementing electronic reporting is expected to reduce data entry costs for authorized NPDES programs and reduce paper and mailing costs for regulated entities and EPA Regions. It will also help reduce data entry errors, which will reduce the need for processing corrections and reentering data. Additionally, improved NPDES information will be available throughout the U.S. because authorized NPDES programs will be required to enter the required data into ICIS-NPDES for both major and nonmajor NPDES regulated entities. The electronic information flow will allow EPA and authorized NPDES programs to manage the NPDES program more efficiently. The public will benefit through increased access to more complete and timely NPDES information. This section discusses the benefits associated with operational efficiency gains that EPA, authorized NPDES programs, regulated entities, and the public will experience as a result of the proposed rule, as well as improved NPDES information and better implementation of EPA programs.

6.2 Savings due to Electronic Reporting

As discussed in Section 4, the proposed rule is expected to result in overall savings. Post implementation, regulated entities will avoid paper and mailing costs as a result of switching to electronic reporting, and will save time on data entry as a result of the built in error detection tools. Authorized NPDES programs will experience reduced costs of data entry and processing of paper forms due to the updating of the reporting process. Note that the savings presented in this section are the total gross savings that regulated entities and authorized NPDES programs are projected to experience due to the proposed rule. Net savings - savings remaining after all costs are accounted for - are presented in Section 4.

6.2.1 Processing Savings

Electronic reporting will eliminate paper and mailing costs associated with DMRs, NOIs, and program reports for regulated entities. This change is expected to produce annual savings of \$1.4 million dollars to regulated entities following rule implementation. Additionally, use of electronic versions of pre-populated DMR forms and eliminating processing of paper DMRs and permits will save state authorized NPDES programs and EPA Regions \$13.8 million dollars and \$503,000⁶³ annually, respectively.

6.2.2 Data Entry (NOIs, DMRs, and Program Reports) Savings

With existing paper submissions, authorized NPDES programs must manually enter information submitted by regulated entities either into their own data system, which is then transferred to ICIS-NPDES, or directly into ICIS-NPDES. Under the proposed rule, information submitted

⁶³ Note that while some states may also be providing pre-populated DMR forms to regulated entities, it was not possible to accurately characterize this activity for this analysis.

electronically by regulated entities will flow directly into the data system of the appropriate authorized NPDES program, or into ICIS-NPDES, at the option of the authorized NPDES program.⁶⁴ Additionally, some data elements will be pre-populated in ICIS-NPDES (e.g., permit status, limit type). These submission updates will substantially reduce the data entry costs associated with information from NOIs, DMRs, and program reports. However, authorized NPDES programs will still be responsible for entering the data elements they generate (e.g., permit data elements, compliance monitoring data elements).

Estimated data entry savings to authorized NPDES programs and EPA Regions following rule implementation are \$19.8 million dollars and \$344,000 annually, respectively, due to electronic reporting.

6.2.3 Eliminating ANCR, QNCR, and SASS

The proposed rule will also eliminate regulatory requirements for authorized NPDES programs to submit the Annual Non-Compliance Report (ANCR) the Quarterly Non-Compliance Report (QNCR), and the Semi-Annual Statistical Summary Report (SASS), as these activities will be completed based on the information already in the system. States and EPA Regions are expected to save \$825,000 and \$36,000, respectively, due to elimination of the ANCR, QNCR, and SASS.

6.2.4 Total Savings

In total, regulated entities, states, and EPA Regions are expected to experience \$36.1 million dollars in annual savings due to the proposed rule, as summarized in Table 6-1.

Type of Saving	EPA Regions	States	Regulated Entities	Total
Data Entry Savings ^a	\$344,000	\$19,760,000	\$0	\$20,104,000
Processing Savings	\$503,000	\$13,827,000	\$1,365,000	\$15,695,000
Elimination of the ANCR, QNCR, and SASS	\$36,000	\$825,000	\$0	\$861,000
Total	\$883,000	\$34,412,000	\$1,365,000	\$36,660,000

^a Data entry savings are limited to NOIs, DMRs, and program reports. Authorized NPDES programs will still be responsible for entering the data elements that they generate.

6.3 Improved NPDES Information

EPA has concluded the proposed rule will deliver more timely, consistent, and accurate information to EPA's data system. These changes will result in access to better NPDES information for all stakeholders, which in turn will improve understanding and awareness of the provision and distribution of information about NPDES covered discharges. The newly available information will improve the ability of EPA, authorized NPDES programs, and the public to make well-informed decisions relating to the NPDES program. For example, as a result of the proposed rule, complete information describing effluent discharges and the applicable limits and limit sets will be available in ICIS-NPDES for major and nonmajor permits. Prior to the proposed rule complete information was only required to for major permits.

Currently, the public has limited information regarding a substantial portion of the NPDES regulated universe (e.g., discharge monitoring data and permit limits and limit sets are not

⁶⁴ In states with no electronic reporting systems during the implementation phase, data will flow from regulated entities directly into ICIS-NPDES.

required to be entered into EPA data systems for nonmajor regulated entities). Access to more complete and more accurate NPDES data will provide the public with a greater understanding of the sources of water pollution in their communities. The public will also benefit from greater transparency regarding the compliance status of the dischargers and the enforcement responses taken by the states and EPA. Electronic reporting by NPDES regulated entities will also increase the timeliness of the information available to the public.

Improved NPDES data can significantly improve EPA's knowledge of the regulated community; such knowledge is essential in problem identification and in the development of sound regulations, guidance, and policy. In addition, the information will reflect the performance of state NPDES programs in achieving the goals and objectives of the CWA. A critical aspect of EPA's ability to oversee NPDES programs is adequate data with which to manage authorized NPDES programs. Previously, EPA could not ensure this oversight due to insufficient information. By requiring electronic reporting by NPDES regulated entities and the additional compliance information generated by the authorized NPDES program, EPA will receive timely and reliable data for overall management and oversight.

Regulated entities will benefit by knowing that the information in EPA's data systems characterizing their permitted entities is timely and accurate. Through electronic reporting, regulated entities can be more confident that their reports are received and acknowledged in a timely manner, and the reduced need for manual data entry by the authorized NPDES program will ensure that reported information and compliance status are being characterized correctly. Because the electronic reporting tools will include the ability to check for certain types of errors, the regulated entities will also see savings related to improved data quality and less need to revise and reenter their submissions.

6.4 Improved Efficiency of EPA Programs

EPA has concluded the most efficient way to obtain NPDES data is to obtain it directly from the sources that generate the data, such as the regulated entities and authorized NPDES programs. Electronic reporting also improves data quality and allows for data sharing across federal and authorized NPDES program regulators using the Exchange Network. With electronic reporting, EPA and authorized NPDES programs will be able to use self-reported regulated entity data in real time. Additionally, EPA and states will be able to use computer aided tools to compare self-monitoring data with permit limits to assess compliance.

The additional information that will be available about NPDES regulated entities under the proposed rule will allow EPA and authorized NPDES programs to more efficiently manage their programs. For example, EPA will be better able to identify the causes of water impairment based on the readily available discharge monitoring data and discharge limits. The additional information about both major and nonmajor regulated entities will also allow authorized NPDES programs and EPA to better monitor and report on the status of the NPDES programs they administer.

The expanded information available in ICIS-NPDES could also provide baseline information for possible pollution trading schemes. Because DMRs for both majors and nonmajors will now be required to be entered into ICIS-NPDES, more information characterizing the baseline loadings in U.S. waterways will be available. Potential pollution trading programs might be able to use this information to develop novel ways of improving overall water quality.

The list of required data elements (found in Appendix A) includes several data elements specific to certain subprograms covered by the NPDES program. Regulated entities already submit these subprogram-specific data; however, authorized NPDES programs will now be required to share the data with EPA. This information will improve the efficiency of the various NPDES subprograms. For example, biosolids regulated entities submit biosolids disposal data (land application, incineration, etc.). With this more complete information, EPA will be able to identify which methods of biosolids disposal are being used and could integrate this information into nutrient management plans for land disposal. Similarly, effluent discharges from significant industrial users (SIUs) will be electronically entered into ICIS-NPDES (currently, this information is submitted via paper directly to POTWs and is not entered into ICIS-NPDES), allowing POTWs to more efficiently manage their pre-treatment programs based on reported SIU discharges to the treatment works.

6.5 Conclusion

This analysis estimates that regulated entities, authorized NPDES programs, and EPA Regions will experience a total savings of \$36.7 million dollars annually following rule implementation. No attempt was made here to monetize the benefits of improved NPDES information or improved efficiency for EPA programs due to the wide range of beneficiaries and the nature of the associated benefits. However, EPA has concluded that electronic reporting advances EPA's goal of protecting human health and the environment. EPA has also concluded that converting to electronic reporting will improve facility compliance by increasing the availability of compliance information to all audiences, thereby incentivizing regulated entities, authorized NPDES programs, and EPA to deliver on the goal of full compliance. In addition, it will allow EPA and authorized NPDES programs to reduce the time and resources spent on technology issues, and focus on environmental policy and goals.

Section 7. - Additional Analyses

7.1 Executive Order 12866

Under Executive Order 12866, entitled *Regulatory Planning and Review* (58 FR 51735, October 4, 1993), this action is a “significant regulatory action” under §3(f) of the Executive Order because it may raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

7.2 Paperwork Reduction Act (PRA)

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number [XXXX.XX].

EPA is proposing this regulation to better utilize current technology to ensure that facility-specific information under the Clean Water Act’s (CWA) National Pollutant Discharge Elimination System (NPDES) program is submitted to EPA on a nationally timely, consistent, accurate, and complete basis for national program management, oversight, and transparency. This regulation will require that most of this NPDES information be submitted electronically by the regulated entities; this information will be supplemented by required information regarding NPDES implementation activities by EPA, states, territories, and tribes authorized to implement the NPDES program.

The projected burden and cost of the regulation are summarized in Table 7-1. Consistent with the Information Collection Request (ICR), these estimates reflect the net burden and cost to regulated entities and States over the first three years following promulgation of the rule. These costs are related to implementation and include training, one-time provision of facility information to EPA, data reconciliation, and data entry for States. The implementation costs and burdens change into savings and burden reductions in two years after the effective date. Once the rule is fully implemented (four years after the effective date of the rule), net annual savings are expected to be \$28.7 million for states and \$1.2 million for regulated entities (based on 3% discount rate).

Table 7-1: Projected Burden and Cost over the First Three Years of the Proposed Rule

Unit of Analysis	Affected Entity	
	Regulated Entities	States
Average Annual Number of Respondents (# of affected entities) ¹	233,166	47
Average Annual Number of Responses (# of Permits for which entity must submit information x annual frequency of response)	187,114	1,069,905
Frequency of Response (range)	1 – 36	1 -36
Average Annual Burden (hours)	108,201	-298,493
Average Annual Cost	\$6,249,803	-\$17,758,888
Average Annual Burden per Respondent	0.46 hrs	-6,351 hrs
Average Annual Burden per Response	0.58 hrs	-0.28 hrs
Average Annual Cost per Respondent	\$26.80	-\$377,848
Average Annual Cost per Response	\$33.40	-\$16.60

1. The average annual number of regulated entity respondents is based on the following: In the first year regulated entities must check the EPA website, and some may incur savings associated with paper mailings. In the second year, some regulated entities must dual report to EPA and some may incur savings associated with paper mailings. In the third year, fewer regulated entities must dual report to EPA and a greater number incur savings associated with paper mailings.

7.3 Regulatory Flexibility Act (RFA)

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA's) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is the government of a city, county, town, school districts, or special districts with a population of less than 50,000 people; or (3) a small organization that is any "not-for-profit enterprise which is independently owned and operated and is not dominant in its field." Note that under the RFA definition, States and tribal governments are not considered small governmental jurisdictions. For the detailed analysis of small entity impacts see Section 5.

After considering the economic impacts of today's proposed rule on small entities, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this proposed rule are small businesses (e.g., industrial sectors, electricity generating facilities, and agricultural sectors) and small governmental jurisdictions (e.g., POTWs operated by municipalities). EPA has determined that 108,036 small entities (100% of the small entities considered in this analysis) will experience an impact of less than 1% of revenues.

Note that fewer facilities are considered in the small entity analysis than were estimated as the affected universe for the proposed rule (see Section 2). Due to the magnitude and diversity of facilities and sectors affected by this rulemaking, it was not possible to conduct a detailed analysis of parent entity-specific impacts. Because small entity status is based on industrial sector, the small entity analysis required data sources where industry sector (NAICS codes) of

each facility could be identified. Although not a complete inventory of all potentially affected facilities, the universe of facilities currently in ICIS-NPDES and PCS was used. The assumption is made that facilities affected by the proposed rule but not currently in ICIS-NPDES and PCS will experience small entity impacts similar to the facilities currently in ICIS-NPDES and PCS.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. In fact, this rule creates annual savings for small entity analyses through elimination of mailing and postage costs.

EPA continues to be interested in the potential impacts of the proposed rule on small entities and welcomes comments on issues related to such impacts.

7.4 Unfunded Mandates Reform Act (UMRA)

This rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. In order to determine the burden on States, the workgroup conducted an economic analysis of potential costs. The analysis examined implementation using various options including the potential burden to state governments. Preliminary indications suggest that the rule will not only cost states and local governments well below the threshold of \$100 million, it will actually result in savings. Thus, this rule is not subject to the requirements of Sections 202 or 205 of UMRA.

Additionally, this rule is not subject to the requirements Section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. Although this rule will impose electronic reporting requirements on small governments such as municipalities and tribes, EPA does not expect these impacts to be substantial or unique sufficient to meet the UMRA standards. According to EPA's Interim Small Government Agency Plan, actions have a significant impact if the cost is above \$100 million. As stated above, EPA does not expect this rule to exceed that threshold. Additionally, the guidance states that an action uniquely affects small governments if it disproportionately affects small governments, requires the hiring of experts, require sophisticated or expensive equipment, or require training. EPA does not expect this rule will have these requirements. Moreover, this rule will not require purchase of sophisticated or expensive equipment, nor will it require significant training (any required training will be offered by the agency). Thus this rule is not subject to Section 203.

7.5 Executive Order 13132 – Federalism

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

According this Executive Order, EPA may not issue an action that has federalism implications (e.g., imposes substantial direct compliance costs that are not required by statute) unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by

state and local governments, or EPA consults with state and local officials early in the process of developing the proposed action.

EPA has concluded that this action may have federalism implications because it will impose electronic reporting requirements on states to provide certain NPDES information to EPA. Federalism implications are defined as substantial direct effects on states or local governments (individually or collectively), on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. However, this action will not impose substantial direct compliance costs on state or local governments, nor will it preempt state law. Thus, the requirements of Sections 6(b) and 6(c) of the Executive Order do not apply to this action.

Consistent with EPA policy, and as described in Sections VI.A. and B. of this preamble, EPA nonetheless consulted with state and local officials⁶⁵ and representatives of state and local governments⁶⁶ early in the process of developing the proposed action to permit them to have meaningful and timely input into its development. As described in those preamble sections, EPA provided significant opportunities for such consultation in public meetings, webinars, a state working group, and in a meeting on September 15, 2010 specifically linked to notifications and consultations required under this Executive Order. This meeting was attended by 11 state and local government officials and organizations. EPA received useful feedback in these meetings, with support for the concept of electronic reporting, comments on the feasibility of various implementation options, and interest in developing details of how the rule would be implemented.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and state and local governments, EPA specifically solicits comment on this proposed rule from state and local officials. EPA will continue to consult with state and local officials throughout the process of developing the proposed action to permit them to have meaningful and timely input into its development. In addition to stakeholder outreach, EPA will contact elected representative as well as appropriate organizations to ensure compliance with this executive order.

7.6 Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not impose requirements not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

⁶⁵ Note: “State and local officials” are defined narrowly under E.O. 13132 as “elected officials of State and local governments or their representative national organizations.” For purposes of E.O. 13132, OMB defines representative national organizations as: National Governors Association, National Conference of State Legislatures, U.S. Conference of Mayors, National League of Cities, Council of State Governments, International City/County Management Association, National Association of Counties, County Executives of America, and National Association of Towns and Townships. As a policy matter, EPA also includes the Environmental Council of the States in this list. As noted in the Agency Guidance, for actions that have federalism implications, but do not impose substantial direct compliance costs or preempt State or local law, at a minimum you should consult with each of these organizations.

⁶⁶ “Representatives of State and local governments” include non-elected officials of State and local governments and any representative national organizations not listed in the previous footnote.

EPA has concluded that this action may have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. Although no tribes have currently received approval for an authorized NPDES program, this rule will impose electronic reporting requirements on tribal facilities and on facilities operating on tribal lands.

EO 13175 may apply to this action, and therefore, consistent with EPA policy to promote communications between EPA and the tribes, EPA consulted with tribal representatives in developing this rule via conference calls and webinars with the National Tribal Caucus and National Tribal Water Counsel in November 2010. For additional information, see Section VI.B. of this preamble. No concerns were raised during those consultations.

In addition, EPA mailed information to 563 tribes regarding an opportunity to participate in two additional tribal outreach efforts in December 2010. Again, during these conference calls, no concerns were raised by participants during those consultations.

EPA specifically solicits additional comment on this proposed action from tribal officials.

7.7 Executive Order 13045 – Children’s Health

Executive Order 13045, “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997), requires that federal agencies examine the impacts of each regulatory action on children for any economically significant regulation (as defined by Executive Order 12866) that the agency has reason to believe may disproportionately affect children. The proposed rule is not subject to EO 13045, because it does not establish an environmental standard intended to mitigate health or safety risks, nor does it otherwise have a disproportionate effect on children. Furthermore, the proposed rule is not economically significant.

7.8 Executive Order 13211 – Energy Supply, Distribution, or Use

This action is not a “significant energy action” as defined in Executive Order 13211, entitled *Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use* (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

7.9 National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rule involves environmental monitoring or measurement. Consistent with the Agency’s Performance Based Measurement System (“PBMS”), EPA proposes not to require the use of specific, prescribed analytic methods. Rather, the Agency plans to allow the use of any method that meets the prescribed performance criteria. The PBMS approach is intended to be more flexible and cost-effective for the regulated community; it is also intended to encourage

innovation in analytical technology and improved data quality. EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified.

Enforcement and Compliance Data Standard, Standard No.: EX000026.2, July 30, 2008.

This data standard should be used in this regulation because it identifies and defines the major areas of enforcement and compliance information that could be used for the exchange of data among environmental agencies and other entities. The purpose of the standard is to provide a common lexicon, so that information about functionality similar activities and/or instruments can be stored and to provide and receive data in a clearly defined and uniform way.

EPA proposes to use the following data standards which were developed by the Exchange Network Leadership Council (ENLC). The ENLC identifies, prioritizes, and pursues the creation of data standards for those areas where information exchange standards will provide the most value in achieving environmental results. The EDSC involves Tribes and Tribal Nations, state and federal agencies in the development of the standards. More information about ENLC is available at www.exchangenetwork.net.

Permitting Information Data Standard, Standard No.: EX000021.2, January 6, 2006.

This data standard should be used in this regulation because it specifies the key data groupings necessary for the consistent identification of information pertaining to permits of interest to environmental information exchange partners. This data standard provides a minimum set of data, which needs to be reported for permitting information such as permit name, number, type, organization or facility name and affiliation type.

Facility Site Identification Data Standard, Standard No.: EX000020.2, January 6, 2006.

The purpose of this data standard is to identify a facility of environmental interest. This data standard should be used in this regulation because it provides for the unique identification of facilities regulated or monitored by US EPA, Tribes and States. Each facility is assigned a unique factory identification number, which identifies information for the facility specified. This standard provides and describes data groupings that are used to exchange facility site identification data and information. This standard helps US EPA, Tribes, and States integrate and share facility information across multiple information systems, programs, and governments.

Contact Information Data Standard, Standard No.: EX000019.2, January 6, 2006.

This data standard should be used in this regulation because it provides information regarding the source of contact. This standard offers data groupings that are used to describe a point of contact, address, and communication information. For example, the data grouping "Point of Contact" subdivides to lower levels such as individual, Affiliation, and Organization. These intermediate data groupings are further defined at the elemental levels with Name, Title, Code, and Prefix.

Representation of Date and Time Data Standard, Standard No.: EX000013.1, January 6, 2006.

This data standard should be used in this regulation because it provides and describes data groupings that are used for exchange of Date and Time data and information. The standard provides information on the high level, intermediate and elemental representation of date and time data groupings.

Latitude/Longitude Data Standard, Standard No.: EX000017.2, January 6, 2006.

This data standard should be used in this regulation because it establishes the requirements for documenting latitude and longitude coordinates and related method, accuracy, and description data for all places used in the data exchange transaction. Places include facilities, sites,

monitoring stations, observations points, and other regulated or tracked features. This standard describes data elements and data grouping that are used to exchange latitude/longitude data and information. The purpose of the standard is to provide a common set of data elements to use for recording horizontal and vertical coordinates and associated metadata that define a point on the earth.

SIC/NAICS Data Standard, Standard No.: EX000022.2, January 6, 2006.

This data standard should be used in this regulation because it provides a common set of data groupings to specify a way to classify business activities, including industry classifications, product classifications, and product codes. This data standard provides information on business activity according to the Standard Industrial Classification (SIC) and North American Industrial Classification System (NAICS).

7.10 Executive Order 12898 – Environmental Justice

Executive Order (EO) 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629 (Feb. 16, 1994)), establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the U.S.

EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not adversely affect the level of protection provided to human health or the environment.

The rule will not create any new reporting requirements; it will simply require reports be submitted electronically, which will in turn support and enhance compliance assurance to the benefit of minority and low-income populations. Enhanced monitoring, reporting and record-keeping requirements can help maximize the use of existing statutory and regulatory authority to assess and ensure compliance to protect adversely affected populations. Moreover, electronic reporting promotes transparency, giving the public more and improved information about sources of water pollution in their communities thereby increasing minority and low-income populations' opportunities for meaningful involvement.

Appendix A – List of Data Elements in Appendix A to 40 CFR 127 and System Required Data Elements not in Appendix A to 40 CFR 127

The proposed rule will increase the number of data elements that authorized NPDES programs are required to enter into ICIS-NPDES from the 222 in the Water Enforcement National Data Base (WENDB) to the 438 data elements in Appendix A to 40 CFR 127 (see Section 1). A full list of these data elements is presented in Table A- below. There are also 11 data elements that are currently system required that are not part of Appendix A. These data elements are presented in Table A-2 below.

Table A-1: Appendix A to 40 CFR 127		
Area	Sub-Area	Data Element Name
Facility	Facility	Facility Type of Ownership
Facility	Facility	Facility Site Name
Facility	Facility	Facility Site Address
Facility	Facility	Facility Site City
Facility	Facility	Facility Site State
Facility	Facility	Facility Site Zip Code
Facility	Facility	Facility Site Tribal Land Indicator
Facility	Facility	Facility Site Longitude
Facility	Facility	Facility Site Latitude
Facility	Facility	Facility Site Source Map Scale Number
Facility	Facility	Facility Site Horizontal Accuracy Measure
Facility	Facility	Facility Site Horizontal Collection Method
Facility	Facility	Facility Site Horizontal Reference Datum
Facility	Facility	Facility Site Reference Point
Facility	Facility	Facility Individual Affiliation Type Code
Facility	Facility	Facility Individual First Name
Facility	Facility	Facility Individual Last Name
Facility	Facility	Facility Individual Title
Facility	Facility	Facility Individual Organization
Facility	Facility	Facility Individual Street Address
Facility	Facility	Facility Organization Formal Name
Facility	Facility	Facility Individual City
Facility	Facility	Facility Individual State
Facility	Facility	Facility Individual Zip
Facility	Facility	Facility Individual E-Mail Address
Facility	Facility	Facility Organization Street Address
Facility	Facility	Facility Organization City
Facility	Facility	Facility Organization State
Facility	Facility	Facility Organization Zip Code
Facility	Basic Permit Information	NPDES ID
Facility	Basic Permit Information	Master General Permit Number
Facility	Basic Permit Information	Permit Type
Facility	Basic Permit Information	Permit Issue Date
Facility	Basic Permit Information	Permit Effective Date
Facility	Basic Permit Information	Permit Modification/Amendment Date
Facility	Basic Permit Information	Permit Expiration Date
Facility	Basic Permit Information	Permit Termination Date
Facility	Basic Permit Information	Permit Major/Minor Status Indicator
Facility	Basic Permit Information	Permit Major/Minor Status Start Date
Facility	Basic Permit Information	Permit Application Total Design Flow
Facility	Basic Permit Information	Permit Application Total Actual Average Flow
Facility	Basic Permit Information	Complete Permit Application/NOI Received Date
Facility	Reissuance Priority Permits Indicator	Permit Application/NOI Received Date

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Facility	Reissuance Priority Permits Indicator	Permit Status
Facility	Reissuance Priority Permits Indicator	Master General Permit Industrial Category
Facility	Reissuance Priority Permits Indicator	Permit Issuing Organization Type
Facility	Reissuance Priority Permits Indicator	DMR Non-Receipt
Facility	Reissuance Priority Permits Indicator	Reportable Noncompliance Tracking
Facility	Reissuance Priority Permits Indicator	Applicable Effluent Limitations Guidelines
Facility	Reissuance Priority Permits Indicator	Permit Compliance Tracking Status
Facility	Reissuance Priority Permits Indicator	Permit Compliance Tracking Status Start Date
Facility	Reissuance Priority Permits Indicator	RNC Status Quarter
Facility	Reissuance Priority Permits Indicator	RNC Status Year
Facility	Associated NPDES Permit Information	RNC Status (Manual)
Facility	Associated NPDES Permit Information	Associated NPDES ID Numbers
Facility	Associated NPDES Permit Information	SIC Codes
Facility	Associated NPDES Permit Information	NAICS Codes
Facility	Associated NPDES Permit Information	Regulated entity Street Address
Facility	Associated NPDES Permit Information	Regulated entity Organization Formal Name
Facility	Associated NPDES Permit Information	Regulated entity Zip Code
Facility	Associated NPDES Permit Information	Regulated entity City
Facility	Associated NPDES Permit Information	Regulated entity State
Facility	Biosolids	Average Annual Dry Biosolids Production
Facility	Biosolids	Average Annual Amount of Exceptional Quality (EQ) Product Distributed and Marketed
Facility	Biosolids	Average Annual Amount of Land Applied Biosolids
Facility	Biosolids	Average Annual Amount of Incinerated Biosolids
Facility	Biosolids	Average Annual Amount of Biosolids Co-Disposed in MSW
Facility	Biosolids	Average Annual Amount of Biosolids Surface Disposal
Facility	Biosolids	Average Annual Amount of Biosolids Otherwise Managed
Facility	Biosolids	Biosolids Management Facility Type
Facility	CAFO	Facility CAFO Flag
Facility	CAFO	Facility Animal Types
Facility	CAFO	Facility Annual Average Total Number
Facility	CAFO	Facility Annual Average Total Number (Unhoused Confinement)
Facility	CAFO	Permit/NOI CAFO Waste Type
Facility	CAFO	Permit/NOI Status of the CAFO Waste
Facility	CAFO	Permit/NOI 12-Month Amount of CAFO Waste
Facility	CAFO	Total Number of Acres for Land Application Covered by the Nutrient Management Plan
Facility	CAFO	Facility Manure Containment or Storage Containment Type Code
Facility	CAFO	Facility Manure Annual Average Total Capacity
Facility	Stormwater	Permit Required by Residual Designation
Facility	Stormwater	Residual Designation Determination Date
Facility	Construction Stormwater	Entire Construction Project Size
Facility	Construction Stormwater	Estimated Construction Project Start Date
Facility	Construction Stormwater	Estimated Construction Project End Date
Facility	Construction Stormwater	Low Erosivity Waiver Date
Facility	Industrial Stormwater	Total Industrial Activity Area
Facility	Industrial Stormwater	Total Impervious Industrial Activity Area
Facility	Industrial Stormwater	No Exposure Certification Authorized Date
Facility	MS4	MS4 Permit Class
Facility	MS4	MS4 Public Education Program
Facility	MS4	MS4 Measurable Goals Associated With Public Education Program
Facility	MS4	MS4 Public Involvement and Participation Program
Facility	MS4	MS4 Measurable Goals for the Public Involvement and Participation Program
Facility	MS4	MS4 System Map
Facility	MS4	MS4 Prohibition Enforcement
Facility	MS4	MS4 Detecting Non-Stormwater Discharges
Facility	MS4	MS4 Public Education: Illegal Discharges

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Facility	MS4	MS4 Construction Runoff Ordinance
Facility	MS4	MS4 Erosion and Sediment Controls
Facility	MS4	MS4 Construction Site Waste
Facility	MS4	MS4 Construction Site Review
Facility	MS4	MS4 Public Information
Facility	MS4	MS4 Site Inspections And Enforcement
Facility	MS4	MS4 Controls For Stormwater From New Development And Redevelopment
Facility	MS4	MS4 Stormwater Ordinance For New Development And Redevelopment
Facility	MS4	MS4 Maintenance Of BMPs
Facility	MS4	MS4 Runoff From Municipal Operations
Facility	MS4	MS4 Additional Measures
Facility	MS4	MS4 Measurable Goals for Additional Measures
Facility	CSS & SSS	Name of Collection System
Facility	CSS & SSS	Owner Name of Collection System
Facility	CSS & SSS	Owner Type of Collection System
Facility	CSS & SSS	Permit Number for Collection System
Facility	CSS & SSS	Population of Collection System
Facility	CSS & SSS	Percentages of Collection System Types
Facility	CSS	Complete and Implement a Long-Term CSO Control Plan
Facility	CSS	Nine Minimum CSO Controls Developed
Facility	CSS	Nine Minimum CSO Controls Implemented
Facility	CSS	Long-Term Control Plan (LTCP) Required
Facility	CSS	Enforcement Mechanism for the LTCP
Facility	CSS	LTCP Submitted
Facility	CSS	LTCP Approved
Facility	CSS	LTCP Approval Date
Facility	CSS	Actual Date Completed LTCP and CSO Controls
Facility	CSS	Enforceable Schedule to Complete LTCP and CSO Controls
Facility	CSS	Other CSO Control Measures with Compliance Schedule
Facility	CSS	Approved Post-Construction Compliance Monitoring Program
Facility	Pretreatment & SIUs	Pretreatment Program Required Indicator
Facility	Pretreatment & SIUs	Pretreatment Program Approved Date
Facility	Pretreatment & SIUs	Approval Authority Name
Facility	Pretreatment & SIUs	Program Modification Date for Required Pretreatment Streamlining Changes
Facility	Pretreatment & SIUs	Program Modification Date for Optional Pretreatment Streamlining Changes
Facility	Pretreatment & SIUs	Program Modification Type for Optional Pretreatment Streamlining Changes
Facility	Pretreatment & SIUs	Significant Industrial User Name
Facility	Pretreatment & SIUs	Significant Industrial User Address
Facility	Pretreatment & SIUs	Significant Industrial User City
Facility	Pretreatment & SIUs	Significant Industrial User State
Facility	Pretreatment & SIUs	Significant Industrial User Zip Code
Facility	Pretreatment & SIUs	Significant Industrial User Subject to Local Limits
Facility	Pretreatment & SIUs	Significant Industrial User Subject to Local Limits More Stringent Than Categorical Standards
Facility	Pretreatment & SIUs	Industrial User Subject to Categorical Standards
Facility	Pretreatment & SIUs	Applicable Categorical Standards
Facility	Pretreatment & SIUs	Significant Industrial User Process Wastewater Flow Rate
Facility	Pretreatment & SIUs	Type of Significant Industrial User Process Wastewater Flow
Facility	Pretreatment & SIUs	Significant Industrial User Non-Process Wastewater Flow Rate
Facility	Pretreatment & SIUs	Type of Significant Industrial User Non-Process Wastewater Flow
Facility	Pretreatment & SIUs	Industrial User Causing Problems at POTW
Facility	Pretreatment & SIUs	Receiving RCRA Waste
Facility	Pretreatment & SIUs	Receiving Remediation Waste
Facility	Pretreatment & SIUs	Control Authority Name
Facility	Pretreatment & SIUs	Control Authority NPDES Permit Number
Facility	Cooling Water	Type of Facility

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Facility	Cooling Water	Number of Cooling Water Intake Structures
Facility	Cooling Water	Location Type for Cooling Water Intake Structure
Facility	Cooling Water	Distance Offshore for Submerged Cooling Water Intake Structure
Facility	Cooling Water	Significant Navigation or Waterbody Use Type Near The Intake Entrance
Facility	Cooling Water	Mean Intake Water Depth
Facility	Cooling Water	Intake Well Depth
Facility	Cooling Water	Debris Loading
Facility	Cooling Water	Impingement Control Technology In-Place
Facility	Cooling Water	Entrainment Control Technology in-Place
Facility	Cooling Water	Percentage of Intake for Cooling Purposes
Facility	Cooling Water	Design Intake Flow for Cooling Water Intake Structure
Facility	Cooling Water	Actual Intake Flow for Cooling Water Structure
Facility	Cooling Water	Average Reported Intake Flow for Cooling Water Intake Structure
Facility	Cooling Water	Maximum Through Screen Velocity
Facility	Cooling Water	Average Through-Screen Velocity
Facility	Cooling Water	Percentage of Mean Annual Flow Withdrawn
Facility	Cooling Water	Verification Monitoring Plan Submission Date
Facility	Cooling Water	Source Water Physical Data Submission Date
Facility	Cooling Water	Cooling Water Intake Structure Data Submission Date
Facility	Cooling Water	Source Water Biological Characterization Data Submission Date
Facility	Cooling Water	Percentage of Design Intake Flow over Tidal Cycle – Tidal River or Estuary Facilities
Facility	Cooling Water	Waterbody Type
Facility	Cooling Water	Canal/Fish Return Length
Facility	Cooling Water	Track II Comprehensive Demonstration Study Submission Date
Facility	Cooling Water	Design and Construction Technology Plan Submission Date
Facility	Cooling Water	Source Water Baseline Biological Characterization Data Submission Date
Facility	Cooling Water	New Facilities – Alternative Requirements Provision Request Approval Date
Facility	Thermal Discharge	Thermal Variance Unit
Facility	Thermal Discharge	Thermal Variance Granted
Facility	Thermal Discharge	Thermal Variance Value
Facility	Thermal Discharge	Thermal Variance Date
Facility	Thermal Discharge	Thermal Variance Study Date
Facility	Permit Data Elements	Description
Facility	Permit Data Elements	Narrative Condition Number
Facility	Permit Data Elements	Schedule Date
Facility	Permit Data Elements	Actual Date
Facility	Permit Data Elements	Report Received Date
Facility	Permit Data Elements	Event
Facility	Permit Data Elements	Application Design Flow (MGD)
Facility	Permit Data Elements	Application Actual Average Flow (MGD)
Facility	Permit Data Elements	Permitted Feature ID
Facility	Permit Data Elements	Type
Facility	Permit Data Elements	Receiving Waterbody Name for Permitted Feature
Facility	Permit Data Elements	Permitted Feature Longitude
Facility	Permit Data Elements	Permitted Feature Latitude
Facility	Permit Data Elements	Permitted Feature Source Map Scale Number
Facility	Permit Data Elements	Permitted Feature Horizontal Accuracy Measure
Facility	Permit Data Elements	Permitted Feature Horizontal Collection Method
Facility	Permit Data Elements	Permitted Feature Horizontal Reference Datum
Facility	Permit Data Elements	Permitted Feature Reference Point
Limit Set	Limit Set	Limit Set Designator
Limit Set	Limit Set	Type
Limit Set	Limit Set	Default Months Limit Set Applies
Limit Set	Limit Set	Initial Monitoring Date

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Limit Set	Limit Set	Initial DMR Due Date
Limit Set	Limit Set	Number of Report Units
Limit Set	Limit Set	Number of Submission Units
Limit Set	Limit Set	Limit Set Status Start Date
Limit Set	Limit Set	Status
Limit	Limit	Monitoring Location
Limit	Limit	Season Number
Limit	Limit	Start Date
Limit	Limit	End Date
Limit	Limit	Change of Limit Status Indicator
Limit	Limit	Stay Type
Limit	Limit	Stay Start Date
Limit	Limit	Stay End Date
Limit	Limit	Reason for Stay
Limit	Limit	Stay Limit Value
Limit	Limit	Limit Type
Limit	Limit	Enforcement Action ID
Limit	Limit	Final Order ID
Limit	Limit	Modification Effective Date
Limit	Limit	Modification Type
Limit	Limit	Parameter
Limit	Limit	Months
Limit	Limit	Value Type
Limit	Limit	Quantity Units / Concentration Units
Limit	Limit	Statistical Base Code
Limit	Limit	Optional Monitoring Flag
Limit	Limit	Qualifier
Limit	Limit	Value
Compliance Monitoring Activity	Compliance Monitoring Activity	Permitted Feature Identifier
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Activity Actual End Date
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Activity Planned End Date
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Activity State
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Activity
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Type
Compliance Monitoring Activity	Compliance Monitoring Activity	Bio-Monitoring Inspection Method
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Category
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Action Reason
Compliance Monitoring Activity	Compliance Monitoring Activity	Was this a State, Federal or Joint (State/Federal) Inspection?
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Agency Type
Compliance Monitoring Activity	Compliance Monitoring Activity	Law Sections Violated
Compliance Monitoring Activity	Compliance Monitoring Activity - Biosolids	Deficiencies Identified Through the Biosolids Inspection
Compliance Monitoring Activity	CAFO	Animal Type
Compliance Monitoring Activity	CAFO	Total Number of Animals
Compliance Monitoring Activity	CAFO	Total Number of Animals in Unhoused Confinement
Compliance Monitoring Activity	CAFO	Animal Maximum Capacity
Compliance Monitoring Activity	CAFO	Containment Type
Compliance Monitoring Activity	CAFO	Containment Total Capacity
Compliance Monitoring Activity	CAFO	CAFO Designation Date
Compliance Monitoring Activity	CAFO	Designation Reason
Compliance Monitoring Activity	CAFO	Is the Animal Facility Type a CAFO?
Compliance Monitoring Activity	CAFO	Did Facility Make a No Discharge Certification?
Compliance Monitoring Activity	CAFO	Is an NMP Being Implemented?
Compliance Monitoring Activity	CAFO	Is an NMP Being Updated Annually?
Compliance Monitoring Activity	CAFO	Land Application BMP Type
Compliance Monitoring Activity	CAFO	Mortality Disposal Method
Compliance Monitoring Activity	CAFO	Monitoring Well Data Availability
Compliance Monitoring Activity	CAFO	Storage Type
Compliance Monitoring Activity	CAFO	Storage Total Capacity Measure
Compliance Monitoring Activity	CSS & SSS	Sewer Overflow Longitude
Compliance Monitoring Activity	CSS & SSS	Sewer Overflow Latitude

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Compliance Monitoring Activity	CSS & SSS	Type of Sewer Overflow
Compliance Monitoring Activity	CSS & SSS	Sewer Overflow Cause
Compliance Monitoring Activity	CSS & SSS	Duration of Sewer Overflow event (hours)
Compliance Monitoring Activity	CSS & SSS	Sewer Overflow Discharge Volume
Compliance Monitoring Activity	CSS & SSS	Failure to Submit Sewer Overflow Incident Report
Compliance Monitoring Activity	Pretreatment	Legal Authority Status and Deficiencies
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority to Enforce Against Pass-Through or Interference
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority to Submit Required Reports Within 30 Days
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority To Meet Compliance Schedule Milestone Dates Within 90 Days
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority to Issue or Reissue Control Mechanisms
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority To Inspect or Sample
Compliance Monitoring Activity	Pretreatment	Failure of the Control Authority to Enforce Pretreatment Standards and Reporting Requirements
DMRs	DMRs	Permitted Feature
DMRs	DMRs	Limit Set
DMRs	DMRs	Parameter Code
DMRs	DMRs	Monitoring Location
DMRs	DMRs	Monitoring Period End Date
DMRs	DMRs	NODI
DMRs	DMRs	Value
DMRs	DMRs	Concentration Units/ Quantity Units
DMRs	DMRs	Value Received Date
DMRs	DMRs	Value Type
DMRs	DMRs	Qualifier
Program Reports	Program Reports	Date Report Received
Program Reports	Program Reports	Start Date of Reporting Period
Program Reports	Program Reports	End Date of Reporting Period
Program Reports	Program Reports	Regulatory Section(s) Requiring the Program Report
Program Reports	Biosolids	Treatment Processes
Program Reports	Biosolids	Biosolids Class
Program Reports	Biosolids	Biosolids Volume Amount
Program Reports	Biosolids	Management practice
Program Reports	Biosolids	Sampling and analytical methods
Program Reports	Biosolids	Biosolids Receiving Site Name
Program Reports	Biosolids	Biosolids Receiving Site Street Address
Program Reports	Biosolids	Biosolids Receiving Site City
Program Reports	Biosolids	Biosolids Receiving Site State
Program Reports	Biosolids	Biosolids Receiving Site Zip Code
Program Reports	Biosolids	Biosolids Receiving Site Latitude
Program Reports	Biosolids	Biosolids Receiving Site Longitude
Program Reports	Biosolids	Biosolids Monitored Parameter
Program Reports	Biosolids	Biosolids Monitored Parameter Concentration
Program Reports	Biosolids	Biosolids Monitored Parameter Units
Program Reports	Biosolids	Actual Measured Cumulative Pollutant Loading Rate
Program Reports	Biosolids	Actual Measured Annual Application Rate
Program Reports	Biosolids	Disposition of incinerator ash
Program Reports	CAFOs	Animal Types
Program Reports	CAFOs	Total Number
Program Reports	CAFOs	Total Number of Animals in Unhoused Confinement
Program Reports	CAFOs	CAFO Waste Type
Program Reports	CAFOs	Amount of CAFO Waste
Program Reports	CAFOs	Status of the CAFO Waste
Program Reports	CAFOs	Total Number of Acres for Land Application Covered by the Nutrient Management Plan
Program Reports	CAFOs	Total Number of Acres Used for Land Application
Program Reports	CAFOs	Discharges During Year from Production Area
Program Reports	CAFOs	Discovery Dates of Discharges from Production Area

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Program Reports	CAFOs	Duration of Discharge from Production Area
Program Reports	CAFOs	Approximate Volume of Discharges from Production Area
Program Reports	CAFOs	Whether NMP Approved or Developed by Certified Planner
Program Reports	CAFOs	Actual Crop(s) Planted for Each Field
Program Reports	CAFOs	Actual Crop Yield(s) for Each Field
Program Reports	CAFOs	Concentration Units/ Quantity Units
Program Reports	CAFOs	Nitrogen Content of the CAFO Waste Type
Program Reports	CAFOs	Phosphorus Content of the CAFO Waste Type
Program Reports	CAFOs	Method for Calculating Maximum Amounts of Manure, Litter, and Process Wastewater
Program Reports	CAFOs	Description of the Field Location
Program Reports	CAFOs	Latitude of the Center of the Field Location
Program Reports	CAFOs	Longitude of the Center of the Field Location
Program Reports	CAFOs	Calculated Maximum Amount of That CAFO Waste to Be Land Applied to that Field
Program Reports	CAFOs	Actual Amount of That CAFO Waste Applied to that Field
Program Reports	CAFOs	CAFO Waste Type Applied to That Field
Program Reports	CAFOs	Pollutant Parameter Measured in the Soil Test, under the Narrative Rate Approach
Program Reports	CAFOs	Amount of That Pollutant Parameter Removed, under the Narrative Rate Approach
Program Reports	CAFOs	Nitrogen Amount of Any Supplemental Fertilizer Applied
Program Reports	CAFOs	Phosphorus Amount of Any Supplemental Fertilizer Applied
Program Reports	MS4s	MS4 Reliance on Other Government Entities
Program Reports	MS4s	Unique Number for Each Municipality Covered Under MS4 Permit
Program Reports	MS4s	Listing of MS4 Permit Components
Program Reports	MS4s	Identified Measurable Goal for Each MS4 Permit Component Status and Assessment of Implementing MS4 Components in Permit
Program Reports	MS4s	Number of Notice of Violations
Program Reports	MS4s	Number of Administrative Fines
Program Reports	MS4s	Number of Stop Work Orders
Program Reports	MS4s	Number of Civil Penalties
Program Reports	MS4s	Number of Criminal Actions
Program Reports	MS4s	Number of Administrative Orders
Program Reports	Pretreatment	SNC Published in Newspaper Flag
Program Reports	Pretreatment	SNC with Pretreatment Schedule Flag
Program Reports	Pretreatment	Date of Most Recent Adoption of Technically Based Local Limits
Program Reports	Pretreatment	Date of Most Recent Technical Evaluation & or Local Limits
Program Reports	Pretreatment	Local Limits Pollutants
Program Reports	Pretreatment	POTW Discharge Contamination Indicator (Program Report)
Program Reports	Pretreatment	POTW Biosolids Contamination Indicator (Program Report)
Program Reports	Pretreatment	Removal Credits Application Status
Program Reports	Pretreatment	Date of Most Recent Removal Credits Approval
Program Reports	Pretreatment	Removal Credits Pollutants
Program Reports	Pretreatment	Industrial User Name (Program Report)
Program Reports	Pretreatment	Industrial User Address (Program Report)
Program Reports	Pretreatment	Industrial User City (Program Report)
Program Reports	Pretreatment	Industrial User State (Program Report)
Program Reports	Pretreatment	Industrial User Zip Code (Program Report)
Program Reports	Pretreatment	Industrial User SIU Flag
Program Reports	Pretreatment	Industrial User Control Mechanism Flag
Program Reports	Pretreatment	Industrial User Control Mechanism Expiration Date
Program Reports	Pretreatment	Industrial User Subject to Categorical Standards and Type (Program Report)
Program Reports	Pretreatment	Applicable Categorical Standards (Program Report)
Program Reports	Pretreatment	Industrial User Subject to Local Limits (Program Report)
Program Reports	Pretreatment	Industrial User Subject to Local Limits More Stringent Than Categorical Standards (Program Report)
Program Reports	Pretreatment	SNC with Pretreatment Standards (Program Report)

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Program Reports	Pretreatment	SNC with Reporting Requirements (Program Report)
Program Reports	Pretreatment	SNC with Other Control Mechanism Requirements (Program Report)
Program Reports	Pretreatment	Number of Quarters in SNC
Program Reports	Pretreatment	Number of Industrial User Inspections
Program Reports	Pretreatment	Number of Industrial User Sampling Events
Program Reports	Pretreatment	Number of Industrial User Violation Notices
Program Reports	Pretreatment	Administrative Orders Issued to IUs (Program Report)
Program Reports	Pretreatment	Civil Suits Filed Against IUs (Program Report)
Program Reports	Pretreatment	Criminal Suits Filed Against IUs (Program Report)
Program Reports	Pretreatment	Industrial User Cash Civil Penalty Amount Assessed
Program Reports	Pretreatment	Industrial User Cash Civil Penalty Amount Collected
Program Reports	Pretreatment	Industrial User POTW Discharge Contamination Indicator (Program Report)
Program Reports	Pretreatment	Industrial User Biosolids Contamination Indicator (Program Report)
Program Reports	Pretreatment	Industrial User Process Wastewater Flow Rate (Program Report)
Program Reports	Pretreatment	Type of Significant Industrial User Process Wastewater Flow (Program Report)
Program Reports	Pretreatment	Significant Industrial User Non-Process Wastewater Flow Rate (Program Report)
Program Reports	Pretreatment	Type of Significant Industrial User Non-Process Wastewater Flow (Program Report)
Program Reports	Pretreatment	Industrial User Removal Credits Flag
Program Reports	Pretreatment	Industrial User Removal Credits Pollutants
Program Reports	Pretreatment	Industrial User Reduced Reporting Flag
Program Reports	Pretreatment	Non-Significant Categorical Industrial User (NSCIU) Certification to Control Authority
Program Reports	Pretreatment	Control Authority Budget Resources
Program Reports	CSS and SSS	Sewer Overflow Longitude (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Sewer Overflow Latitude (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Type of Sewer Overflow (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Sewer Overflow Cause
Program Reports	CSS and SSS	Date of Sewer Overflow Discovery (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Duration of Sewer Overflow event (hours) (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Sewer Overflow Discharge Volume (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Receiving Waterbody Name for Permitted Feature (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Dry or Wet Weather Occurrence for Sewer Overflow
Program Reports	CSS and SSS	Corrective Actions Taken or Planned for Sewer Overflows (Sewer Overflow Event Report)
Program Reports	CSS and SSS	Type of Potential Impact of Sewer Overflow Event (Sewer Overflow Event Report)
Violation	Violation	Violation Code
Violation	Violation	Agency Identifying the Single Event Violation (SEV)
Violation	Violation	Single Event Start Date
Violation	Violation	Single Event End Date
Violation	Violation	RNC Detection Code
Violation	Violation	RNC Detection Date
Violation	Violation	RNC Resolution Code
Violation	Violation	RNC Resolution Date
Enforcement Action	Enforcement Action	Enforcement Action Identifier
Enforcement Action	Enforcement Action	Enforcement Action Name
Enforcement Action	Enforcement Action	Enforcement Action Type
Enforcement Action	Enforcement Action	Law Sections Violated
Enforcement Action	Enforcement Action	Programs Violated
Enforcement Action	Enforcement Action	Violation Code
Enforcement Action	Enforcement Action	Violation Date

Table A-1: Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Enforcement Action	Final Orders	Final Order Type
Enforcement Action	Final Orders	Violation Code
Enforcement Action	Final Orders	Violation Date
Enforcement Action	Final Orders	Final Order Issued/ Entered Date
Enforcement Action	Penalty	Cash Civil Penalty Amount Assessed
Enforcement Action	Penalty	Cash Civil Penalty Amount Collected
Enforcement Action	Compliance Schedule	Compliance Schedule Number
Enforcement Action	Compliance Schedule	Schedule Descriptor
Enforcement Action	Compliance Schedule	Schedule (Start) Date
Enforcement Action	Compliance Schedule	Actual Date
Enforcement Action	Compliance Schedule	Report Received Date
Enforcement Action	Compliance Schedule	Schedule Event
Enforcement Action	Compliance Schedule	Milestones/ Sub-activities
Enforcement Action	Compliance Schedule	Sub Activity Type
Enforcement Action	Compliance Schedule	Actual Date

Table A-2: System Required Data Elements not in Appendix A to 40 CFR 127

Area	Sub-Area	Data Element Name
Facility	Permit Data Elements	Recurring or Non-Recurring Event
Facility	Permit Data Elements	Date Based
Facility	Permit Data Elements	Recurring: Frequency
Facility	Permit Data Elements	Recurring: Number of Occurrences
Facility	Permit Data Elements	Recurring: End Date
Limit	Limit	Eligible for Burden Reduction
Compliance Monitoring Activity	Compliance Monitoring Activity	Federal Statute
Compliance Monitoring Activity	Compliance Monitoring Activity	Programs
Compliance Monitoring Activity	Compliance Monitoring Activity	Compliance Monitoring Activity Name
Compliance Monitoring Activity	Compliance Schedule	Frequency
Compliance Monitoring Activity	Compliance Schedule	Number of Occurrences or End Date

Appendix B – List of States by Data Entry Type

There are three different methods state authorized NPDES programs utilize to submit data into ICIS-NPDES or PCS: Direct Entry, Batch Upload and a Hybrid of the two approaches (see Section 3).

- Direct Entry authorities enter data into EPA’s ICIS-NPDES or PCS system directly.
- Batch systems use their own state system to track regulated entities and their own activities under the NPDES program. This NPDES information is periodically uploaded to EPA’s ICIS-NPDES or PCS systems.
- Hybrid systems enter most data over the web, with the DMR component of the NPDES permit batch uploaded to EPA’s ICIS-NPDES or PCS systems periodically.

Table B-1 lists each state, tribe, and territory with its associated data entry type.

Table B-1: States by Data Entry Type	
State	Data Entry Type
AL	Batch
AK	Direct
AS ^a	Direct
AZ	Batch
AR	Hybrid
AT ^a	Direct
CA	Direct
CO	Direct
CM ^a	Direct
CT	Direct
CZ ^a	Direct
DE	Batch
DC	Direct
FL	Batch
GA	Direct
GE ^a	Direct
GU ^a	Direct
GM ^a	Direct
HI	Direct
ID	Direct
IL	Hybrid
IN	Direct
IA	Batch
KS	Batch
KY	Batch
LA	Direct
ME	Batch
MD	Direct
MA	Direct
MI	Hybrid
MN	Hybrid
MS	Direct
MO	Batch
MT	Direct
NE	Direct
NV	Batch
NH	Direct
NJ	Direct
NM	Direct
NN ^b	Direct

Table B-1: States by Data Entry Type

State	Data Entry Type
NY	Direct
NC	Direct
ND	Batch
OH	Batch
OK	Direct
OR	Batch
PA	Batch
PR ^a	Direct
RI	Direct
SC	Direct
SD	Direct
SR ^b	Direct
TN	Batch
TT ^a	Direct
TX	Hybrid
UT	Direct
VT	Batch
VI ^a	Direct
VA	Batch
WA	Batch
WV	Batch
WI	Direct
WY	Batch

^a This area is a territory.

^b This area is a tribe.

Source: Kadish, Rochele.
2013. Office of Enforcement
and Compliance, U.S. EPA.

Appendix C – NPDES Program Management Information (PMI) Survey

This survey was originally developed to support an earlier version of this proposed rule (known as the Program Management Information Proposed Rule) that did not include electronic reporting. Certain elements of the earlier proposed rule, however, are relevant to the current NPDES Electronic Reporting Rule (ERR). Specifically, the time required of state personnel to enter NPDES data elements, as collected in the attached survey, is relevant to calculating the data entry burden to states under the ERR rule.

NPDES Program Management Information (PMI) Survey

This survey contains the following three sections:

- A description of the new data elements covered by the proposed PMI proposed rule and questions relating to data entry activities that states undertake to provide NPDES data.
- Additional questions related to other activities such as QA/QC, training, and program management that states undertake to provide NPDES data.
- Definitions of terms used in this survey.

C.1 SECTION 1: Description of New Data Elements and Data Entry Questions

In order to better protect human health and the environment, the EPA has expanded the information collected for NPDES. Under the proposed NPDES PMI Rule, new data elements (listed below in Table C-2, Table C-4, Table C-6, Table C-8, Table C-10, and Table C-12, and Table C-14) will be added to the following data families: facility, permit, compliance monitoring activity, discharge monitoring reports (DMRs), violation, program reports, and enforcement action. In addition, certain information will now be reported for new subprograms including Biosolids, Concentrated Animal Feeding Operation (CAFO), Sanitary Sewer Overflow (SSO), Combined Sewer Overflow (CSO), Storm Water Management (SWM), and Pretreatment.

As a starting point for this analysis, we would like you to consider the amount of time it takes your state to enter the Water Enforcement National Data Base (WENDB) data elements. For the purposes of this analysis, we are assuming that your state enters all of the currently required WENDB data elements. Please respond accordingly by providing time estimates by data family in Table C-1, Table C-3, Table C-5, Table C-7, Table C-9, Table C-11, and Table C-13. Considering the new data elements listed below, please provide estimates of the additional time your state will spend per data family to enter the new data required by the proposed NPDES PMI Rule in Table C-2, Table C-4, Table C-6, Table C-8, Table C-10, and Table C-12, and Table C-14. For majors and nonmajors, please include the amount of time to conduct research on the required data and the amount of time to locate the data in your files as costs associated with data entry. Note: Under the proposed NPDES PMI rule, all data elements for nonmajor permits will be required for data entry.

The following sections are organized by data element families. Please answer the questions below to the best of your ability.

Facility Data Element Family

The Facility Data Element Family generally includes data elements such as name and address of the facility, and contact name. Several pieces of facility information will be required to improve the EPA's management of facilities. Tribal Land is required so that the EPA can identify effluent discharges in Tribal nations. Affiliation information is required to ensure reported data comes from the appropriate employee or representative.

Table C-1: WENDB Facility Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB facility data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> 60 - 90 minutes
	<input type="checkbox"/> 90 - 120 minutes
	<input type="checkbox"/> >120 minutes
	<input type="checkbox"/> Not Applicable

Table C-2: New Facility Data Elements	
Data Family Sub-Area	Data Element Name
Basic Info	Tribal Land
Non Government Contacts	Affiliation type
Non Government Contacts	Individual Title
What is the average amount of time your state would spend entering these new facility data elements for a typical permit?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> > 60 minutes
	<input type="checkbox"/> Not Applicable

Permit Data Element Family

The Permit Data Element Family generally includes basic permit information, tracking of a permit's issuance, narrative permit conditions such as permit schedules, permitted features (outfalls), permit limit sets, and permit limits. Data elements like DMR non-receipt tracking flags, RNC tracking flags, and applicable effluent guidelines have been added to help EPA characterize and monitor a facility's compliance with their permit requirements. Data elements have also been added to address changes in industrial codes. Under the WENDB requirements, Standard Industrial Classification (SIC) codes were used to designate a facility's industrial sector. Since then, the North American Industrial Classification System (NAICS) has been adopted to more accurately represent commercial activities. These changes will allow the EPA to more effectively manage basic permit information for compliance and enforcement purposes.

Other permit data elements have been added to represent the expanded NPDES program. The required permit data elements are designed to effectively measure the environmental impact of

new facility types covered under the CWA. Both the size of the permitted site and the cause of the discharge, such as the number of animals in a feeding operation, will be reported. Wet weather components are included to manage stormwater run-off from impervious surfaces. CSO data elements are included to track possible discharges of untreated human and industrial waste. Other elements, such as Control Authority ID Number tie treatment facility permits to the approved local pretreatment programs.

Additional data elements have been added to characterize permitted features, their limit sets, and limits. Actual flow and design flow contain information on the volume of effluent a permitted feature can be expected to accommodate. Months of duration for a limit set, stay end date, reason for stay, enforcement action ID, eligibility for a burden reduction, months, and qualifier all capture information that can be used to characterize and justify effluent limit or stays of such limits. These new permit data elements allow EPA to better monitor compliance and enforcement of the NPDES program.

Table C-3: WENDB Permit Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB permit data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> 60 - 90 minutes <input type="checkbox"/> 90 - 120 minutes <input type="checkbox"/> >120 minutes <input type="checkbox"/> Not Applicable

Table C-4: New Permit Data Elements	
Sub-Area	Data Element Name
Basic Info	DMR Non-Receipt
Basic Info	RNC
Basic Info	Application Effluent Limit Guideline
Basic Info	NAICS Codes
Biosolids	Amount EQ Product Distribute and Market
Biosolids	Amount Land Applied
Biosolids	Amount Incinerated
Biosolids	Amount Codisposed in a MSW Landfill
Biosolids	Amount Surface Disposal
Biosolids	Amount Managed Other Methods
CAFO	Designation Reason
CAFO	Designation Date
CAFO	Solid Manure or Litter Generated
CAFO	Solid Manure or Litter Transferred
CAFO	Liquid Manure or Wastewater Generated
CAFO	Liquid Manure or Wastewater Transferred
CAFO	NMP Developed Date
CAFO	CAFO Classification
CAFO	Animal : Type
CAFO	Animal : Other
CAFO	Total Number
CAFO	Containment : Type
CAFO	Containment : Total Capacity
CAFO	Storage : Type
CAFO	Storage : Other
CAFO	Days of Storage
CAFO	Storage Total Capacity Measure
Storm Water	State Water Body Name
Storm Water Construction	NOT Termination Date
Storm Water Construction	Entire Project Size
Storm Water Industrial	NOT Termination Date
Storm Water Industrial	No Exposure Date
Storm Water MS4	MS4 Permit Class
Storm Water MS5	Receiving MS4 Name
CSO	CSS population Served
CSO	Percent of Collection System Combined
CSO	Name of CSS Satellite Collection System
CSO	Permit ID of CSS Satellite Collection System
Pretreatment	Pretreatment Program Approved Date
Pretreatment	Control Authority NPDES ID
Pretreatment	SSCS Population Served
Pretreatment	Length of SSCS
Narrative Condition/Permit Schedules	Description
Basic Info	Application Design Flow
Basic Info	Application Actual Average Flow
Basic Info	Default Months Limit Set Applies
Basic Info	Stay End Date
Basic Info	Reason for Stay
Basic Info	Enforcement Action ID
Basic Info	Eligible for Burden Reduction
Basic Info	Months
Basic Info	Qualifier

Table C-4: New Permit Data Elements	
Sub-Area	Data Element Name
What is the average amount of time your state would spend entering the data for this data family?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

Compliance Monitoring Activity Data Element Family

The Compliance Monitoring Activity Data Element Family is designed to document compliance monitoring activities at facilities with CAFO, CSO, SSO, and pretreatment permit components. This family of data generally includes information associated with inspections such as inspection type, information characterizing the NPDES facility, and dates associated with the inspection.

New compliance monitoring activity data elements have been added to allow EPA to track compliance monitoring activities and monitor activities associated with non-point sources of pollution. Some examples of these data elements are planned end dates, inspection methods, and improved locational information such as latitude and longitude. These new compliance monitoring activity data elements improve the Agency's understanding of where environmental impacts take place.

Table C-5: WENDB Compliance Monitoring Activity Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB compliance monitoring activity data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> 60 - 90 minutes <input type="checkbox"/> 90 - 120 minutes <input type="checkbox"/> >120 minutes <input type="checkbox"/> Not Applicable

Table C-6: New Compliance Monitoring Activity Data Elements	
Sub-Area	Data Element Name
Basic Info	Compliance Monitoring Activity Planned End Date
Basic Info	Bio-Monitoring Inspection Method
Basic Info	Compliance Monitoring Action Reason
CAFO	Designation Reason
CAFO	Animal Type
CAFO	Animal Type: Other
CAFO	Animal Total Number
CAFO	Containment Type
CAFO	Containment Total Capacity
CAFO	Containment Other
CAFO	CAFO Classification
CAFO	CAFO Designation Date
CAFO	Solid Manure or Litter Generated
CAFO	Solid Manure or Litter Transferred
CAFO	Liquid Manure or Wastewater Generated
CAFO	Liquid Manure or Wastewater Transferred
CAFO	NMP Developed Date
CAFO	NMP Last Updated Date
CAFO	Is the Animal Facility Type a CAFO
CAFO	Storage: Type
CAFO	Storage: Other
CAFO	Days of Storage
CAFO	Storage Total Capacity Measure
CSO	Permitted Feature ID
CSO	Location Street Address
CSO	Longitude
CSO	Latitude
CSO	CSO Overflow Event Date
Pretreatment	Pass-through/Interference Indicator
SSO	Location Street Address
SSO	Longitude
SSO	Latitude
SSO	SSO Event Date
What is the average amount of time your state would spend entering these new compliance monitoring activity data elements for a typical permit?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

Discharge Monitoring Reports (DMR) Data Element Family

The DMR Data Element Family generally includes self-monitoring effluent data provided by NPDES facilities. This new information is required to assist EPA with the review of effluent discharges. A new data element has been added for concentration and quantity units which can be used by EPA to interpret reported effluent values. Several other data elements have been added to characterize a facility's treatment and disposal of biosolids.

Table C-7: WENDB DMR Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB DMR data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> 60 - 90 minutes
	<input type="checkbox"/> 90 - 120 minutes
	<input type="checkbox"/> >120 minutes
	<input type="checkbox"/> Not Applicable

Table C-8: New DMR Data Elements	
Sub-Area	Data Element Name
Basic Info	Concentration Units/Quantity Units
Biosolids – Incinerator	Compliance With National Emission Standard for Beryllium
Biosolids – Incinerator	Compliance With National Emission Standard for Mercury
Biosolids - Land Application Site	Pollutant Table Met
Biosolids - Land Application Site	Does Facility Certify Pathogen Reduction for Land Application
Biosolids - Land Application Site	Does the Facility Certify Vector Attraction Reduction for Land Application
Biosolids - Surface Disposal	Does Facility Certify Pathogen Reduction for Surface Disposal
Biosolids - Surface Disposal	Does Facility Certify Attraction Reduction for Surface Disposal
What is the average amount of time your state would spend entering these new DMR data elements for a typical permit?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

Violation Data Element Family

The Violation Data Element Family includes data associated with violations such as single event, effluent, and compliance schedule violations. Two new data fields have been added concerning single event violations that allow EPA to track the timing and duration of these violations. The Agency may use this information to estimate the scale of possible environmental impacts and the efficiency of efforts to return a facility to compliance.

Table C-9: WENDB Violation Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB violation data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> 60 - 90 minutes
	<input type="checkbox"/> 90 - 120 minutes
	<input type="checkbox"/> >120 minutes
	<input type="checkbox"/> Not Applicable

Table C-10: New Violation Data Elements	
Sub-Area	Data Element Name
Basic Info	Single Event Start Date
Basic Info	Single Event End Date
What is the average amount of time your state would spend entering these new violation data elements for a typical permit?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

Program Reports Data Element Family

The Program Reports Data Element Family generally includes program reports submitted for NPDES subprograms such as CAFOS, CSOs, and approved local pretreatment facilities. These data elements include locational information such as latitude and longitude for CSOs that improve the Agency's understanding of where environmental impacts take place.

Table C-11: WENDB Program Reports Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB program report data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> 60 - 90 minutes
	<input type="checkbox"/> 90 - 120 minutes
	<input type="checkbox"/> >120 minutes
	<input type="checkbox"/> Not Applicable

Table C-12: New Program Reports Data Elements	
Sub-Area	Data Element Name
Biosolids	Report Coverage End Date
Biosolids	Number of Report Units
CAFO	Animal Type
CAFO	Animal Other
CAFO	Total Number
CAFO	Discharges During Year from Production Area
CAFO	Solid Manure or Litter Generated
CAFO	Liquid Manure or Wastewater Generated
CAFO	Solid Manure or Litter Transferred
CAFO	Liquid Manure or Wastewater Transferred
CAFO	Does the Facility have an NMP developed or approved by a certified planner
CAFO	Total number of Acres identified by NMP
CAFO	Total number of acres used for land application in past 12 months
CSO	Permitted Feature ID
CSO	Location Street Address
CSO	Longitude
CSO	Latitude
Pretreatment	Pass-through/Interference Indicator
Pretreatment	Local Limits Pollutants
Pretreatment	Removal Credits Application Status
Pretreatment	Date of Most Recent Removals Credits Application
Pretreatment	Removal Credits
What is the average amount of time your state would spend entering these new program reports data elements for a typical permit?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

Enforcement Action Data Element Family

The Enforcement Action Data Element Family generally includes data regarding the enforcement action itself as well as associated compliance schedules and penalties. A new enforcement action data element has been added to document reasons for deleting enforcement actions. This data element enables EPA to improve its data management practices for enforcement action records.

Table C-13: WENDB Enforcement Action Data Elements	
	Estimated Time to Enter Currently Required WENDB Data Elements
Please indicate the average amount of time your state spends entering WENDB enforcement action data elements for a typical permit (Assuming your state is entering all of the required WENDB data elements)?	<input type="checkbox"/> < 1 minute
	<input type="checkbox"/> 1 - 5 minutes
	<input type="checkbox"/> 5 - 10 minutes
	<input type="checkbox"/> 10 - 15 minutes
	<input type="checkbox"/> 15 - 20 minutes
	<input type="checkbox"/> 20 - 30 minutes
	<input type="checkbox"/> 30 - 40 minutes
	<input type="checkbox"/> 40 - 60 minutes
	<input type="checkbox"/> 60 - 90 minutes
	<input type="checkbox"/> 90 - 120 minutes
	<input type="checkbox"/> >120 minutes
	<input type="checkbox"/> Not Applicable

Table C-14: New Enforcement Action Data Elements	
Sub-Area	Data Element Name
Basic Info	Reason for deleting Enforcement Action
What is the average amount of time your state would spend entering these new enforcement action data elements for a typical permit?	<input type="checkbox"/> < 1 minute <input type="checkbox"/> 1 - 5 minutes <input type="checkbox"/> 5 - 10 minutes <input type="checkbox"/> 10 - 15 minutes <input type="checkbox"/> 15 - 20 minutes <input type="checkbox"/> 20 - 30 minutes <input type="checkbox"/> 30 - 40 minutes <input type="checkbox"/> 40 - 60 minutes <input type="checkbox"/> > 60 minutes <input type="checkbox"/> Not Applicable

C.2 SECTION 2: Questions Related to Other State Activities

In this section, EPA requests information on other activities that states undertake to provide NPDES data.

Note: Please use the following information to convert reporting time into Full Time Equivalents (FTEs).

- 1 hour every week equals 0.025 FTEs (assuming a 40 hour work week)
- 1 day every week equals 0.20 FTEs (assuming an 8 hour work day)
- 1 week every month equals 0.25 FTEs (assuming a 40 hour work week with 30 days in each month)
- 1 month every year equals 0.08 FTEs (assuming 30 days in each month and 365 days in a year)

1) Roughly how much will your state spend to Quality Assure/Quality Control the new data elements in your NPDES Information System? Keep in mind that reporting on nonmajors is required under the NPDES PMI rule. Please quantify in terms of quarterly FTEs and/or contract dollars.

2) Roughly how much training will it take to familiarize data entry staff with the new data elements? Please quantify in terms of quarterly FTEs and/or contract dollars.

3) On an average quarterly basis, what level of effort (FTEs and/or contract dollars) will be expended on program management for the following subprograms:

CAFOs: _____
SSOs: _____
CSOs: _____
SWMs: _____
Pretreatment: _____
Biosolids: _____

4) On an average quarterly basis, how much time does your state spend entering DMR data into your NPDES Information System for a typical permit?

5) What is your estimate of the number of nonmajors in your state?

6) On an average quarterly basis, how much time (FTEs and/or contract dollars) does your state expend on the management of DMR data for your NPDES Information System?

7) Will there be an increased cost to maintain your state system with the additional data elements and the requirement that nonmajors enter their data into your NPDES Information System? If yes, please quantify these costs in terms of average quarterly FTEs and/or contract dollars. (Note: This does not apply to Direct Entry states)

8) Will your state's NPDES Information System need upgrades to submit data to the EPA? If so, how much will these upgrades cost in terms of quarterly FTEs and/or contract dollars? (Note: This does not apply to Direct Entry states)

9) When your state has aggregated all of their data into a cohesive NPDES Information System, will your state realize any savings and/or efficiencies? If yes, please explain and quantify the savings in terms of quarterly FTEs and/or contract dollars.

10) The proposed NPDES PMI Rule may possibly remove regulatory requirements for submitting the Quarterly Non-Compliance Report (QNCR), the Annual Non-Compliance Report (ANCR) and the Semi-Annual Statistical Summary. Please provide an estimate of how much your state spends preparing each of these reports in terms of quarterly FTEs and/or contract dollars.

QNCR: _____
ANCR: _____
Semi-Annual Statistical Summary: _____

C.3 SECTION 3: Definitions of Terms

Authorized State or Tribe

For the purposes of this presentation, an authorized State or Tribe is a State or Tribal government which has received NPDES authorized NPDES program from EPA.

Batch data entry

Batch data entry in ICIS-NPDES is the transmission of eXtensible Markup Language (XML) data files through the Central Data Exchange into ICIS-NPDES. States with their own systems would transfer their data to ICIS-NPDES through this electronic data transfer process.

Direct data entry

This refers to manual data entry by key punching, often in the case where the State, Tribe or EPA Region is using PCS or ICIS-NPDES as their primary NPDES data management system.

Direct User State or Tribe

In a NPDES program implemented by an authorized State or Tribe which will use ICIS-NPDES to manage the NPDES program, direct users manually enter data into ICIS-NPDES through the keyboard into web screens.

Hybrid State or Tribe

In a NPDES program implemented by an authorized State or Tribe which will use ICIS-NPDES to manage the NPDES program, hybrid users manually enter some of the data (usually non-DMR data) into ICIS-NPDES through the keyboard into web screens. They also electronically transfer the rest of the data (usually DMR data) into ICIS-NPDES; this electronic method of data entry will likely increase, especially with the availability of eDMR (electronic DMR) tools, such as NetDMR.

ICIS

The acronym ICIS stands for the Integrated Compliance Information System, developed by EPA to serve as a national multi-media data system.

Major

A major facility is defined as follows: a major municipal facility has a flow of 1 million gallons per day or greater, a service population of 10,000 or greater or a significant impact on water quality; industrial facilities are considered major facilities based on a rating system that allocates points in various categories, including flow, pollutant loadings and water quality factors. EPA Regions, States and Tribes also have the discretion to identify other facilities as major facilities due to environmental concerns.

Nonmajor

The universe of facilities regulated under the NPDES program that are not “major” facilities. Nonmajor facilities can also be referred to as “minor” facilities, although this does not denote a less important status.

PCS

The acronym PCS stands for the Permit Compliance System, which served as the national database of record for the NPDES program since 1985.

Program components

Program components refer NPDES permit requirements associated with particular program areas. In ICIS-NPDES, a group of data elements are available to users to track program-specific data on Publicly-Owned Treatment Works (POTWs), Combined Sewer Overflows (CSOs), Sanitary Sewer Overflows (SSOs), Pretreatment, Biosolids, Stormwater, and Concentrated Animal Feeding Operations (CAFOs).

Single event violation

A Single Event Violation is a violation of a NPDES permit or regulatory requirement that is observed or determined by the authorized NPDES program (EPA Region or authorized State/ local/ tribal government), and is distinct from violations that are system-generated (e.g., effluent limit violations arising from DMR submission, DMR non-receipt or compliance schedule violations). An unauthorized bypass or discharge, a violation detected during an inspection, a narrative violation description reported on a DMR, and a pretreatment violation are examples of Single Event Violations.

WENDB

The acronym WENDB stands for the Water Enforcement National Data Base data elements, identified as the required data elements in the Permit Compliance System (PCS), which served as the national database of record for the NPDES program since 1985.

Wet weather sources

These are non-traditional NPDES sources which include storm water runoff from industrial and municipal sectors, discharges from concentrated animal feeding operations (CAFOs), and overflows from combined and sanitary sewer systems (CSOs, SSOs, bypass events). Such sources have been a program priority for EPA’s enforcement and compliance program since 1998.