

NPDES Electronic Reporting Rule Phase 2 Implementation Plan
Kansas Department of Health & Environment
Bureau of Water
December 16, 2016

Implementation Plan Purpose

On October 22, 2015, the Environmental Protection Agency (EPA) published the final National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule. This regulation requires the electronic reporting and sharing of Clean Water Act NPDES program information instead of the current paper-based reporting of this information.

The NPDES Electronic Reporting Rule allows states to determine what electronic reporting (eReporting) tools and systems work best for them and whether they would like to be the initial recipient of NPDES compliance monitoring data. EPA does not dictate the eReporting tools that a state may use. Rather, EPA sets performance requirements for states that wish to build their own electronic reporting tools. States also have the option of using and, if desired, customizing eReporting tools developed and maintained by EPA. A state, tribe, or territory designated as the initial recipient for a NPDES data group must submit an implementation plan (IP) to EPA for review to ensure the authorized NPDES program will meet the Phase 2 electronic reporting deadline. This plan must provide details (e.g., tasks, milestones, roles and responsibilities, necessary resources) to clearly describe how the program will successfully implement eReporting of Phase 2 data. This plan will not include electronic reporting of Discharge Monitoring Reports (DMRs).

In accordance with the final rule [40 CFR 127.26(h)], authorized NPDES programs must submit an IP to EPA by December 21, 2016, for EPA's review. EPA will inform the authorized NPDES program if the IP has enough detail to ensure successful implementation of eReporting for Phase 2 data. Completed IPs can be emailed to EPA using the following email address: NPDESReporting@epa.gov.

1. Overview/Executive Summary

The Kansas Department of Health & Environment (KDHE) currently utilizes an Oracle database to store all wastewater permit data, which includes the NPDES permitting information. The Oracle database has been designed to transmit the NPDES permitting data to EPA's ICIS-NPDES through an Exchange Network Node 2 deployed in a .net framework (Open Node 2). For over twenty years, KDHE's major NPDES permittees have been reporting to KDHE electronically by a program called e-DEEMERS. In 2010, the KDHE introduced Kansas Environmental Application Portal (KEAP) which received Cross-Media Electronic Reporting Rule (CROMERR) compliance approval by EPA July 1, 2010. In April 2016 KDHE introduced a new electronic Discharge Monitoring Report (eDMR) web-based system that is accessible to all NPDES permittees through the KEAP portal. The eDMR program addresses Phase 1 of the NPDES Electronic Reporting Rule. To date, KDHE has 450 NPDES facilities utilizing the eDMR web-based system. The KDHE's Bureau of Water, Technical Service Section's, Permit and Compliance Unit has been tasked with the submission of eReporting IP. The lead supervisor is Shelly Shores-Miller and she may be contacted at 785-296-2856 or by email at Shelly.Shores-Miller@ks.gov

2. Agency NPDES Universe

As of December 16, 2016 the KDHE has a total of 5,447 active (active or administratively continued) NPDES individual and general permits. The KDHE has 1,339 NPDES individual permits, which includes 57 major facilities (48 municipal, 8 industrial, and 1 federal) and 1,282 minor facilities. The table below shows the different NPDES permits, their permit type (individual or general) and the number of permits associate with each.

NPDES Permits Category	Permit Type	Number of Permits
Industrial Direct Discharge	Individual	318
Industrial Pretreatment	Individual	55
Publicly Owned Treatment Works (municipal wastewater)	Individual	456
Commercial (non-municipal sewage)	Individual	31
Wastewater permits for public water treatment plants	Individual	50
Federal Facilities	Individual	5
Concentrated Animal Feeding Operations	Individual	424
Hydrostatic Testing	General	51
Construction Stormwater	General	2,997
Small MS4 (urban area)	General	42
Small MS4 (outside-urban area)		19
Industrial Stormwater Activity	General	804
Concrete ready mix	General	190
Pesticide	General	5
Total		5,447

In addition to NPDES permits, the KDHE issues Kansas Water Pollution Control Permits for Non-Overflowing (Non-Discharge) facilities that do not discharge to waters of the state. The KDHE has 3,364 active (active or administratively continued) Non-Discharging permits. The permits for these facilities include conditions that require land application of wastewater and sludge to be applied at agronomic rates. These permits are not transmitted to the ICIS-NPDES database. The table below shows the different permit categories and the number of permits associate with each.

Non-Discharge Permits Category	Number of Permits
Commercial (non-municipal sewage)	138
Industrial	65
Municipal	271
Federal Facility	1
State Permitted Animal Feeding Operations	1,330
Certified Animal Feeding Operations (no pollution potential)	1,559
TOTAL	3,364

3. Current and/or Planned NPDES Data Systems and E-reporting Tools

As stated in section 1 of this document, the KDHE utilizes KEAP, a CROMERR approved portal which NPDES permittees use to access eDMR. In April 2016, the department initiated a new web-based system called eDMR for the submission of NPDES Discharge Monitoring Report (DMR) information. This system has helped streamline the management of DMR data by allowing the department to automatically acknowledge the receipt of DMRs, validate the DMR information, evaluate the data for compliance of the permit requirements and flow the DMR data into the department's Oracle database and to EPA's ICIS-NPDES database.

KDHE Current Electronic Systems:

- A. KEAP- Kansas Environmental Application Portal received Cross-Media Electronic Reporting Rule (CROMERR) compliance approval by EPA July 1, 2010. KEAP is a website portal for various KDHE environmental applications. This portal is a customized product of KDHE's Information Technology staff.
- B. KDHE-NPDES Oracle database- This system is the central database for NPDES permit information storage and data flow. The Oracle system is an internal database used for the storage and tracking of NPDES facility information, permit requirements, outfalls, parameter limits, Schedule of Compliances, facility descriptions, formal enforcement tracking, permit application tracking, inspection information, DMR requirements, DMR data storage and permit fee invoice tracking. The database also stores the information for the state non-discharging permits. KDHE district inspectors, permit writers, engineers and staff use this database in the daily workflow of managing Kansas's NPDES program.
- C. Open Node 2- Exchange Network Node 2 deployed in a .net framework- This is a Windsor based data exchange application designed to complete batch submissions to ICIS-NPDES. The KDHE utilizes this application to submit NPDES data in a daily automated process that pulls data daily from the NPDES Oracle database and submits the information to ICIS-NPDES. The automated information submissions are set on a time table to occur four days of the week. Each of the daily submissions contain separate NPDES data information (CAFO information, General Stormwater Permit information, Individual permit information and DMR data information). KDHE currently experiences numerous data transmission errors and works daily to maintain data flow, correct errors and evaluates the many inconsistencies in the data transmissions errors.
- D. eDMR- This system is a Kansas customized program created by KDHE Information Technology staff. The software retrieves the information housed in the NPDES Oracle database, customizes the permit requirements in a spreadsheet styled discharge monitoring report for the NPDES permittees to complete, authorize and submit to KDHE for review and approval. The software application is stored in the KEAP portal for CROMERR compliance purposes and allows the permittees to evaluate their submission data to the NPDES permit requirements, provide explanation for permit limit violations, and view parameter information that may fall out of the normal range reported and submit the information with an authorized signature. The system has been

programed to automatically calculate data for the permittee and can calculate annual rolling averages for permits that have nutrient limits. KDHE implemented the eDMR system in April 2016. Currently, KDHE has 450 NPDES DMR submitters utilizing this system or 45% of the KDHE NPDES discharging facilities (Industrial Direct Discharge, POTWs, Commercial, Federal and concrete ready-mix). KDHE plans to have 90% of NPDES facilities utilizing the eDMR system by June 2017.

Planned Projects

- A. Wastewater Permitting Mapping System - KDHE is currently working on a customized mapping system that allows KDHE staff access and view the NPDES permits, inspection reports and enforcement actions. The mapping system allows for KDHE staff to identify key features on a wastewater system such as outfall points, lagoon sequencing, plant treatment processes, receiving stream access points, water body classification and other water quality information unique to the facility location. KDHE plans to have this completed by March 2017.
- B. Enforcement Tracker- KDHE is working on an enforcement tracker that will track Schedule of Compliance, required actions in the formal enforcement actions and upload the information by batch transmission to ICIS-NPDES. KDHE plans to implement this process by October 2017.
- C. Web-Based Fee System- KDHE currently mails out annual NPDES permit fee invoices and receives payments by check or by credit card information (mail or phone). KDHE plans to establish a web-based fee system that would allow permittees to process their payment online. KDHE plans to have this completed by November 2017.
- D. Electronic Permitting System- KDHE currently mails prepopulated permit applications to the NPDES facilities for permit renewals and receives the signed documents by mail. KDHE has submitted an Exchange Network Grant application with plans to utilize the fund for the purchase of an Electronic Permitting System. KDHE has reached out to NPDES established Electronic Permitting vendors (Windsor & Enfotech) and has viewed the current systems available that could be customized to address the Phase 2 eReporting requirements and are acceptable with KDHE's work flow process. KDHE envisions a program that would collect and store all of Kansas's NPDES information, while allowing the facilities access to their NPDES file where they could upload reports, application and all other NPDES required information. The system would prompt the Permittee by email when permit fees are due, reports are due and permit applications needed to be completed for reissuance. Once these reports and applications are uploaded into the permittees file, the permit writer would be prompted that this action had been completed. Permittees could utilize these features to submit permit transfer and permit modifications which would track the work flow process. KDHE is dependent on the Exchange Network Grant for this project to achieve the desired outcomes.

In addition, this system would allow for the electronic submission of the following reports.

1. General Permit Reports – Including NOIs, NOTs, NOEs and LEWs; see 40 CFR 122.26(b)(15), 122.28, and 124.5
2. CAFO Annual Program Reports; See 40 CFR 122.42(e)(4)
3. Municipal Separate Storm Sewer System (MS4) Program Reports; See 40 CFR 122.34(g)(3) and 122.42(c)
4. Pretreatment Program Reports; See 40 CFR 403.12(i)
5. Significant Industrial User Compliance Reports in Municipalities without Approved Pretreatment Programs; See 40 CFR 403.12(e) and (h)
6. Sewer Overflows/Bypass Event Reports; See 40 CFR 122.41(l)(4), (l)(6) and (7), and (m)(3)
7. CWA section 316(b) Annual Reports; See 40 CFR 125, subpart J

Below is an estimated timeframe to complete the implementation of the electronic permitting system as submitted in the 2017 Exchange Network Grant Application Narrative and dependent on the 2017 Exchange Network Grant outcome:

Table 1. Goal, Outputs, Outcomes and Environmental Result		
Project Goal 1: Develop a web-based application that receives the NPDES eReporting Rule required information (Phase 2) from NPDES permittees, is compatible with the ICIS-NPDES system in a XML schema format and can upload the data via a batched system (Open		
Output	Scheduled Completion Date	Outcome – quantitative measure
1.1 Collaborate with EPA and other states on the development and design of ICIS-NPDES XML schema for NPDES eReporting Rule Phase 2	01/2017	Improved data quality for better management of the program and faster, comprehensive data sharing between KDHE and EPA
1.2 Write and publish a detailed request for proposals (RFP) to hire a contractor	10/2017	Better understanding of data management, agency requirements and EPA and KDHE program needs as well as a census of qualified applicants to implement Phase 2.

1.3 Evaluate the proposals and select an eligible contractor.	02/2018	Select an eligible and experienced contractor to create an efficient means of meeting the Phase 2 rules. The contractor either produces a product that can feed the data into the current NPDES Oracle system or produces a database that will incorporate all of BOW's current NPDES data. These data will need to be uploaded through an Open Node into ICIS-NPDES database.
1.4 Evaluate KDHE BOW internal data flow to assess what internal Oracle changes will need to be completed. Determine how the current NPDES Oracle data can self-populate the future applications to create a user-friendly web-based system for computer challenged permittees.	06/2018	Better understanding of the scope of work and what modifications will be necessary to move the new data into the current system. Make the determinations whether to move the data into a different software system or maintain and modify the current Oracle software system
1.5 Contractor develops web-based application for KDHE to receive NPDES eReporting Rule Phase 2 required information from permittees	12/2018	Contractor creates an application for beta testing with selected permittees
1.6 KDHE staff beta test the web-based application	01/2019	Creation of a robust e-reporting system for NPDES
1.7 Installation and implementation of new web-based application for NPDES	06/2019	Successfully implement the application for KDHE staff internally; system goes online
1.8 Initiate NPDES permittee training on filling out web-based NPDES forms	08/2019	Successfully implement application to the NPDES permittees; initiate Phase 2 e-reporting
1.9 Contractor develops, creates and implements XML schema data flow for the newly created data fields	11/2019	Populate EPA ICIS-NPDES with system and XML schema and uploaded data via a batched system
1.10 Establish administrative review and technical review automation and quality verification routines	01/2020	Quality assurance of data to be submitted to EPA

1.11 Create and implement flow data using State Node to Exchange Network Node mapped to ICIS-NPDES XML schema	04/2020	Successful data transfer from KDHE to ICIS- NPDES system, thereby completing compliance with Phase 2
Environmental Result: The results of achieving the above goal will provide new environmental information to support informed environmental decision-making for environmental professionals and provide a level of transparency for the public.		

4. Key Tasks for Updating Agency Data Systems and Data Transmission Systems for Phase 2 Data Groups

The key tasks were identified in Section 3, Planned Projects part D. of this document. The KDHE plans to purchase an off-the-shelf electronic permitting system that can be customized to integrate with KDHE’s current system, although, depending on the system’s capabilities, KDHE would consider migrating to a new NPDES data system overall. The new electronic permitting system is completely dependent upon receiving the Exchange Network Grant to achieve these outcomes. KDHE identified the timeframe for this process in Section 3, Planned Projects part D. above.

The KDHE plans on adding new formal enforcement data elements in 2017 but does not foresee adding additional elements until the customization of the electronic permitting system is completed. Due to the many upgrades ICIS-NPDES will need to complete to comply with Phase 2, KDHE will wait until ICIS-NPDES has been completely upgraded before planning the addition of new data elements. The KDHE is currently addressing all required data elements with the exception of the formal enforcement data elements which until recently, KDHE had not received the authorization to complete. At this time, KDHE does not plan on utilizing the EPA Net system. The KDHE plans to maintain the current data flow by utilizing the Exchange Network Open Node 2. At this time, the KDHE cannot predict specific milestones for the separate individual and general permit programs until the 2017 Exchange Network Grant outcome is completed. The KDHE does plan on completing the Phase 2 portion of the NPDES Electronic Reporting Rule by December 21, 2020.

5. CROMERR Compliance Status for Agency Electronic Reporting Systems

As stated in Section 1. Overview/Executive Summary, the KDHE introduced Kansas Environmental Application Portal (KEAP) in 2010 which received Cross-Media Electronic Reporting Rule (CROMERR) compliance approval by EPA July 1, 2010. All of KDHE’s current and foreseen web-based program systems will be under the KEAP program portal.

6. State Statutes, State Regulation/Administrative Rule, and NPDES Permit Update Estimated Completion Dates

KDHE will not need to update state statutes or regulations to comply with the NPDES Electronic Reporting Rule. In June 2016, the KDHE updated the NPDES Permits and the Standard Condition associated with the permits to reflect the regulatory requirements under the NPDES Electronic Reporting Rule. NPDES permits are brought up to date with the new NPDES Electronic Reporting Rule language as they are renewed.

7. Temporary and Permanent Waiver Approval Process

In April 2016, KDHE implement the NPDES Electronic Reporting Rule waiver process. KDHE has developed an NPDES Electronic Reporting Rule Waiver form that complies with 40 CFR 127.15 and 127.24, which states that permitted facilities may request a temporary waiver for up to five years or a permanent waiver from the NPDES Electronic Reporting Rule from the KDHE. The waiver requests must contain the facility name, permit number, facility address, contact information for either the owner, operator or authorized representative. The KDHE's NPDES Electronic Reporting Rule Waiver Form is located at: http://www.kdheks.gov/water/download/eReporting_Waiver_Request_Kansas.pdf

KDHE acknowledges three types of Waivers; Temporary, Permanent and Episodic. Permittees must apply for the Temporary and Permanent Waivers but the Episodic Waivers can be issued by KDHE in emergency situations. KDHE has established a review and approval process whereas, KDHE Bureau of Water, Technical Service Section staff are authorized to approve waiver requests and must review and notify the permittee within 90 days of receipt of the waiver request whether the request has been approved or rejected. The permittee will still be required to submit the DMR reports in a timely manner in paper format and KDHE staff will enter the data for electronic batch transmission to ICIS-NPDES. As of December 16, 2016, KDHE has received and approved three temporary waivers.

KDHE accepts three types of Waivers;

- A. Temporary Waivers – Temporary waivers are good for five years from the approval date and may be extended upon reapplication by the permittee. A Temporary waiver must clearly state the need or reason for the waiver and be signed by an authorized representative. Temporary Waivers are only approved if the permittee states that the permittee is unable to comply with the NPDES Electronic Reporting Rule for the following reasons.
 - The permittee's Internet connection is not fast enough to upload documents to comply with NPDES Electronic Reporting Rule.
 - The permittee does not have a computer for routine business functions to comply with the NPDES Electronic Reporting Rule.
 - The permittee does not have an Internet connection; or
 - "Other" which is determined on a case by case bases
- B. Permanent Waivers – Permanent waivers will be issued and approved for permittees that own or operate NPDES permitted facilities and do not utilize modern technologies due to religious beliefs. Upon permit renewal, the permit writer will be required to confirm that the permanent waiver is still required by the permittee. An approved permanent waiver is not transferrable.
- C. Episodic Waiver- Episodic waivers cannot last more than 60 days. Episodic waivers are issued immediately by KDHE staff without the need for waiver submission by the permittee. These waivers are strictly for permittees in emergency situation. Emergencies would consist of large scale power outages greater than 96 hours, floods,

tornadoes, other natural disasters or catastrophic circumstances beyond the control of the facilities. KDHE will make the determination if an episodic waiver is warranted in these cases and must receive the hardcopy (paper) submissions.

8. Outreach and Training

The KDHE has been completing outreach training to permittees in the use of KEAP and eDMR for the last three years. The KDHE presented the eDMR software and the KEAP authorization process at numerous conferences and conventions. In addition, TSS staff have demonstrated the software at State Certified Operator classes and testing sites. TSS staff created a guidance manual for the eDMR and KEAP programs and mails the manuals to permittees that are not currently on eDMR with their renewed permit. The KDHE plans to continue this training process when the Electronic Permitting program is implemented.

9. Alternative Options

The KDHE's primary Plan A is to utilize an off-the-shelf electronic permitting program that can be customized to adhere KDHE's current programs. If this is unsuccessful, an alternative Plan B would be to attempt to contract with our State's IT staff to add a simplified program to our current process and our last choice, Plan C, would be to utilize EPA's Net permitting software.

10. Obstacles to Rule Implementation

The KDHE, Bureau of Water, Technical Service Section is a very small Section within a large agency and carries a large work load for a limited amount of full time staff. In addition, this Section does not receive any funding sources and relies strictly on grants, such as the recently applied for Network Exchange Grant. The KDHE's current IT staff are being centralized within the State's Administrative Department and our permitting staff have less access to knowledgeable IT assistance. The potential obstacles to KDHE complying with NPDES Electronic Reporting Rule are the ability to fund the projects and have the staff available to devote the time need to complete the projects. Nevertheless, KDHE is committed to accomplishing the goals and objectives needed to comply with the NPDES Electronic Reporting Rule in a manner that is proactive for KDHE and supportive to our NPDES permitting community.

11. Implementation Plan Reassessment

The Electronic Reporting Implementation Plan will be updated yearly each December to document the accomplishments that had been completed in the previous year and outline goals and objectives for the forthcoming year. KDHE has quarterly meeting with EPA staff to inform and discuss our current objectives and accomplishments toward the implementation of Phase 1 of the NPDES Electronic Reporting Rule. As the Phase 1 eReporting objectives are completed, these meetings will be directed toward Phase 2 eReporting goals. KDHE has been and will continue to be committed to completing the tasks needed to comply with the NPDES Electronic Reporting Rule Phase 2 by December 2020.