

ATTACHMENT ONE

DOW Data Management System Needs

The document is organized into the following sections, each of which lists the information system needs.

- Permitting
 - Domestic and Industrial
 - Oil and Gas
 - Mining
 - Stormwater
 - Cruise Ship
 - Seafood Processing
 - Engineering Plan Review
- Compliance and Enforcement
 - Inspection
 - Compliance Reporting
 - Enforcement
- Program Support
 - Invoicing
 - Water Quality Standards and Restoration (WQSAR)
- How a Custom off the Shelf System(COTS) will benefit DOW

Permitting

Domestic and Industrial

- Online applications to be filled out by the permit applicant with data inherited where possible from prior submissions.
- Automated flow of online application information to the system of record.
- Capture of all data elements pertinent to the domestic and industrial permit program in DEC, not only those related to compliance with the CWA. This would include data for mixing zones that currently cannot be stored in any system.
- Automated generation and saving of permit documents and correspondence to system of record. This includes the management of boilerplate text that is common to multiple permits.
- Full integration of information downloaded from ICIS with information in the system-of-record if ICIS will remain the system-of-record for certain data elements (e.g., DMRs).
- Comprehensive reports containing all data captured from the regulated community, as well as information downloaded from ICIS.
- Ad hoc reporting capability.
- Automated correspondence to regulated community informing them of certain deadlines (e.g., 180-day renewal reminder).
- Notifications to DEC staff of upcoming or late submittals.

Oil and Gas

- Comprehensive reports containing all data captured from the regulated community, as well as information downloaded from ICIS-NPDES.
- Ad hoc reporting capability.
- There is a desire to provide spatial access to data about permitted facilities to both DOW staff and the public.
- System should provide automated notifications to permittees informing them of deadlines for renewals or compliance reporting.
- System should provide automated notifications to DOW staff of upcoming or late submittals.

Mining

- An improved invoicing process that integrates the current data management system and the billing system without the need for intensive reconciliation efforts and without the possibility of missed permit fees.
- Electronic capture of all permit information
- Automatic generation of permit documents, replacing the current labor-intensive process.
- Improved reporting and data access, due to improved data entry by flowing information from the application as well as better reporting options.

Stormwater

- The system should provide a mapping interface to allow them to accurately locate their discharge points.
- The system should allow an applicant to view the location of impaired water bodies in relation to their project.
- The system should allow an applicant to view nearby existing authorizations on a map before allowing a new facility to be created through a submission so users would be more likely to select an existing, correct facility before creating a new one.
- The system should ideally include a reconciliation tool to allow duplicate facilities to be identified and resolved.
- The new system could possibly include integration with the LexisNexis identity validation tool offer through shared services by US EPA to automate the process of confirming a new user's identity and potentially allowing electronic signature approval to be automated.
- Comprehensive reports containing all data captured from the regulated community
- System should support upload of large attachment files.

Cruise Ships

The following capabilities should be provided by the future information system:

- The system should provide a consolidated source of information for the entire cruise ship program including information on registrations, authorizations, BMPs, monitoring reports, and DMRs.
- The system should provide comprehensive data access and reporting to allow effective oversight and management of the program.

- The system should support online reporting for all types of compliance reports and monitoring data submissions. The system should also enable the Section to collect air emissions data electronically.
- The system should enable automated generation of authorizations and other correspondence. This includes the management of boilerplate text that is common to multiple documents.
- The system should include an automated interface to the agency billing system to eliminate the need for manual reconciliation of data.

Seafood Processing

The following capabilities should be provided by the future information system:

- The system should provide a mapping interface to allow the applicant to accurately locate their current or proposed discharge points.
- As is the case with the currently public Seafood Facility GIS resource, the system should allow an applicant to view the location of impaired water bodies and other natural resources sensitive areas, and offer the ability to compare these sites in relation to their proposed discharge points.
- Comprehensive reporting functions should be developed to provide easy access to information about facilities, permits, authorizations and compliance data that is compatible with e-Reporting data flows.
- The system should support automatic generation of draft authorization documents.
- The system should provide support for electronic database submission and acceptance of all application and compliance report types that are received by the Section.
- The system should include an automated interface to the agency billing system to eliminate the need for manual reconciliation of data.
- The system should support:
 - The tracking of incomplete applications and violations identified during permit file review,
 - A means to track permitting pending actions where staff is waiting on information to be submitted by the permittee, milestones of the applicants submitting information,
 - A means to accurately track and refer violations to the Compliance section,
 - A means to track permittee compliance assistance/follow-up actions taken by DEC Permitting staff.

Engineering Plan Review

The following capabilities should be provided by the future information system:

- Merge all content of the current Plan Tracker, SEPTS, and the Access database into one unified system.
- Online forms to capture all information for 24-hour notifications, conventional septic tank system registrations, and engineering plan requests. This online submittal portal should also allow upload documents such as engineering reports and plans.
- Automated processes to import information captured from online forms into the system of record.
- Document generation for the various approval documents.
- System-generated notifications for when DOW must respond to the applicant.
- Automatic correspondence emailed to applicants when additional information is still needed or when reports are due.
- Online payment that captures all fees at the time the application is submitted (where possible), thus alleviating the need for manual invoicing and fee collection processes.

- A system to link facility plan reviews with the current data management system information for domestic and industrial permittees to ensure Plan Review has been completed and applicant has applied for any required permits.
- A public side that allows them to see the progress of a plan review including viewing documents that were submitted with the application.

Compliance and Enforcement

Inspections

The following capabilities should be provided by the future information system:

- The system should include an inspection planning component that can be used to streamline the process of identifying the facilities to be inspected during a given FFY based on the dates of prior inspections and other factors.
- The system should support the tracking of violations identified during inspections and informal enforcement actions that are taken in response to those violations.
- The system should be fully Web enabled and accessible from outside the DEC network environment. Certain data and functions in the current data management system are now available through the new Water Solution Web interface but other functions are only available through the current data management system Windows application interface, and all functionality is only available within the DEC network.
- The system should provide a consolidated repository of all information needed to support the APDES program, including the data currently managed separately in the current data management system and ICIS-NPDES, as well as applications, permits, compliance reports, and other documents.
- The system should provide improved access to data and reporting when compared to the existing systems. Reporting capabilities should include support for data analysis and the provision of key program performance metrics.
- A dashboard should be included for inspectors to be able to easily view their schedule of inspections, the timing for any required compliance actions, and other key activities and responsibilities.
- Document generation capabilities should be provided to allow inspection reports and cover letters to be pre-populated with information from the database about the facility, the permit, the inspection, any violations, and other information.
- The system should be able to track logistical information about inspections, including the time taken and other expense information.
- Although of less importance, the ability to record inspection observations in the field using mobile devices would also potentially be valuable.
- The system should be able to track all types of compliance monitoring activity conducted by DOW staff, including regular and complaint inspections, and compliance assistance visits.
- All data managed in the local system should be automatically reported to ICIS-NPDES with no need for manual data management in the EPA system.

Compliance Reporting

The following capabilities should be provided by the future information system:

- The new system must support electronic submission of all types of required program reports and notices of non-compliance.

- Information collected online via OASys should be automatically flowed into the current data management system to alleviate the need for having to manually key in these submissions.
- All data managed in the local system should be automatically reported to ICIS-NPDES with no need for manual data management in the EPA system. This would not necessarily need to extend to the detailed program report information.
- The system should provide improved access to data and reporting when compared to the existing systems. Reporting capabilities should include support for data analysis and the provision of key program performance metrics.
- A dashboard should be provided to be able to easily view the schedule of expected reports for each permit as well as the status of the report.

Enforcement

The following capabilities should be provided by the future information system:

- The new system should support comprehensive tracking of all types of enforcement actions, penalties, and associated compliance schedules. The system should also be able to record discussions with the facility.
- The system should provide improved access to data and reporting when compared to the existing systems.
- A dashboard should be included for enforcement officers to be able to easily view the status of their enforcement actions and the schedule for any required compliance actions.
- Document generation capabilities should be provided to allow enforcement documents to be created and pre-populated with information from the database about the facility, the permit, the inspection, any violations, and other information.
- All data managed in the local system should be automatically reported to ICIS-NPDES with no need for manual data management in the EPA system.
- The system should include automated notifications to both agency staff and the facility for scheduled compliance submittals or actions.
- The system should provide a consolidated repository of all enforcement related information, including the data currently managed separately in the current data management system and ICIS-NPDES, as well as the enforcement documents currently managed in WPC (electronic file folder system).
- Security must be provided to ensure that only certain staff can see an enforcement action until it has been issued.
- Provide a status update via reports on the current status of tracked enforcement actions.

Program Support

Invoicing

The following capabilities should be provided by the future information system:

- The new system should be able to support two-way integration with the agency CRITTS system. This would allow information about responsible parties and fee schedules to be exchanged automatically, thereby eliminating the potential for mistakes or omissions in data entry.
- The new system should provide enhanced access to data and reporting capabilities, allowing permitting and compliance staff to easily see the status of invoicing and payments.

- The new system should provide better support for the management of the fee schedule across permits types and billing periods.

Water Quality Standards and Restoration

The following capabilities should be provided by the future information system:

- The system needs to have the ability to track the accurate location of outfalls and monitoring points, as well as the specific receiving water body (minimum HUC12). The system should also be able to track mixing zone polygons when defined by the permit writer.

How a Custom off the Shelf System (COTS) will benefit DOW

An existing commercial off the shelf (COTS) solutions are available which can meet many and perhaps all of DOW's needs for the new system. Where an existing solution is unable to meet DOW's needs entirely "out of the box", a modified off the shelf (MOTS) solution might be suitable.

This implementation approach would require DOW to review these and other existing commercial solutions and select the solution with the closest match to the program needs, which would then be implemented and configured, and customized where appropriate and feasible.

DOW will issue a competitive RFI for possible solutions to include the defined business requirements. DOW would perform a gap analysis of the proposed solutions against the business requirements defined during this project, before selecting the desired solution.

During the selection process, DOW would need to ensure that the selected product would be able to satisfy the business requirements and also support the key data management areas that DOW has defined for the new system.

- Centralized Entity and Facility Management Integration
- Centralized Invoicing
- Compliance and Enforcement Management Integration
- Data Management
- Discovery Management
- Document Management Integration
- Mobile Technology
- Online Portal for Applicants and Regulated Community
- Online Public Portal
- Permit and Authorization Administration
- Plan Review and Tracking
- Reporting to EPA

Most of the commercially available solutions should be able to support these areas, although it will be important during the selection process to ensure that the products have sufficient focus on the unique needs of environmental regulatory programs, and especially the EPA reporting requirements.

The primary advantage to a COTS implementation is time to delivery. It should generally be possible to rapidly install and configure the right solution, with migration of data from existing agency systems likely to be the most significant workload. A COTS implementation should be much quicker than any solution requiring substantial new development work to take place. The exception to this generalization would be if significant customization is required for the selected product. If this approach is selected, DOW should attempt to ensure that the fit between business needs and the chosen solution is as close as possible, in order to minimize the need for customization.