NPDES Water Quality Permitting Program Evaluation

Submitted to:

Oregon Legislative Assembly

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December 2016

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

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Executive Summary

The 2015 Oregon Legislature directed the Oregon Department of Environmental Quality to hire an outside consultant to evaluate its National Pollutant Discharge Elimination System (NPDES) Water Quality permitting program and make recommendations to improve the quality and timeliness of individual NPDES permits. There are currently 360 individual municipal and industrial NPDES wastewater permits in Oregon, which must be renewed every five years. DEQ administers other water quality permits (general NPDES permits, Water Pollution Control Facility (WPCF) Permits, and water quality certifications), but the permit backlog that motivated this evaluation is concentrated in the individual NPDES permit program.

DEQ contracted with MWH Americas, Inc., now part of Stantec, and its subcontractor Larry Walker Associates to conduct the evaluation. The consultants' work began in April and culminated in December 2016 with the final Recommendations and Implementation Plan. Project information and documents are available on DEQ's website at http://www.deq.state.or.us/wq/wqpermit/review.htm

Through research and interviews with dozens of knowledgeable staff and stakeholders, the consultants identified a number of issues contributing to the NPDES permit backlog, including:

- Lack of clarity regarding decision-making responsibility
- Ambiguity regarding the roles of staff working on permits (technical advisor vs. regulator)
- Lack of coordination between water quality planning and permitting
- The difficulty for some dischargers to meet water quality standards, requiring complex regulatory solutions and/or expensive engineering

The consultants recommended numerous actions and implementation approaches covering a number of different topic areas to address these issues. Topic areas include leadership, community capacity, alignment across programs and with federal regulations, quality and efficiency, staffing and workload, program funding, and communications and progress reporting.

The overarching message in the report is that eliminating the NPDES permit backlog and achieving a sustainable permitting program is dependent on addressing the recommended actions in all topic areas, not all of which are under DEQ's control. If recommended actions are only partially implemented, while some gains may accrue, a sustainable permitting program will not be possible.

DEQ and the Oregon Environmental Quality Commission are committed to implementing the recommendations in the report, and consider this to be a top priority for the agency – one which will likely require years of focused attention to resolve. Internal process improvements are underway and DEQ is engaging external partners and stakeholders to seek their assistance in implementing the report's recommendations.

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The Water Quality program's immediate priorities include developing a longer-term work plan and a communications plan, implementing initial internal organizational changes, and undertaking a "permit readiness review." The readiness review identifies backlogged permits for which there are sufficient water quality data, compliance solutions and community capacity to immediately proceed with permit renewal. The readiness review also identifies barriers to renewing other permits, which provides information to support development of a strategic plan to remedy those barriers. The program will continue writing NPDES permits while implementing the recommendations but during the initial stages permit writers may be called upon to lend their expertise to critical process improvement efforts and updating permit writing tools and templates. DEQ will be able to provide more information on next steps and expected outcomes by late January 2017.

1. Introduction

The 2015 Oregon Legislature, due to concerns with a backlog in renewing individual municipal and industrial NPDES water quality permits, directed DEQ to hire an outside consultant to evaluate the NPDES Water Quality permitting program and make recommendations on improving the quality and timeliness of permits. The full text of the budget note is provided in Appendix A.

The evaluation focuses on the 360 DEQ-issued individual and municipal NPDES permits. These are federal permits authorized by the federal Clean Water Act. Each permit must be renewed every five years. While a permit remains in effect even if its renewal is delayed, there can be negative consequences. Outdated permits may not assure that discharges meet current water quality standards if the standards have been expanded or tightened since the permit was originally issued. Further, a permitted facility may not be able to expand or implement process changes if those actions would require a change to its permit, because DEQ is not able to modify expired permits. In the long term, this uncertainty can lead to disinvestment in existing manufacturing facilities and to significant capital costs to local governments. Finally, expired permits can also hinder economic development. Under certain circumstances, a new facility may not be able to obtain a permit if the permits of other facilities discharging to that waterbody are out of date.

2. Project Plan

In May 2015, DEQ assembled a project team and began procuring a contractor. DEQ requested support from the Department of Administrative Services in developing the Request for Proposal. DEQ met three times with members of the Water Quality program's Blue Ribbon Committee to obtain its feedback on a draft scope of work for the proposal, and made improvements to the scope based on the committee's input.

DEQ selected a contractor in early 2016 through a competitive procurement process. The contract was awarded to MWH Americas, Inc., now part of Stantec, and its subcontractor

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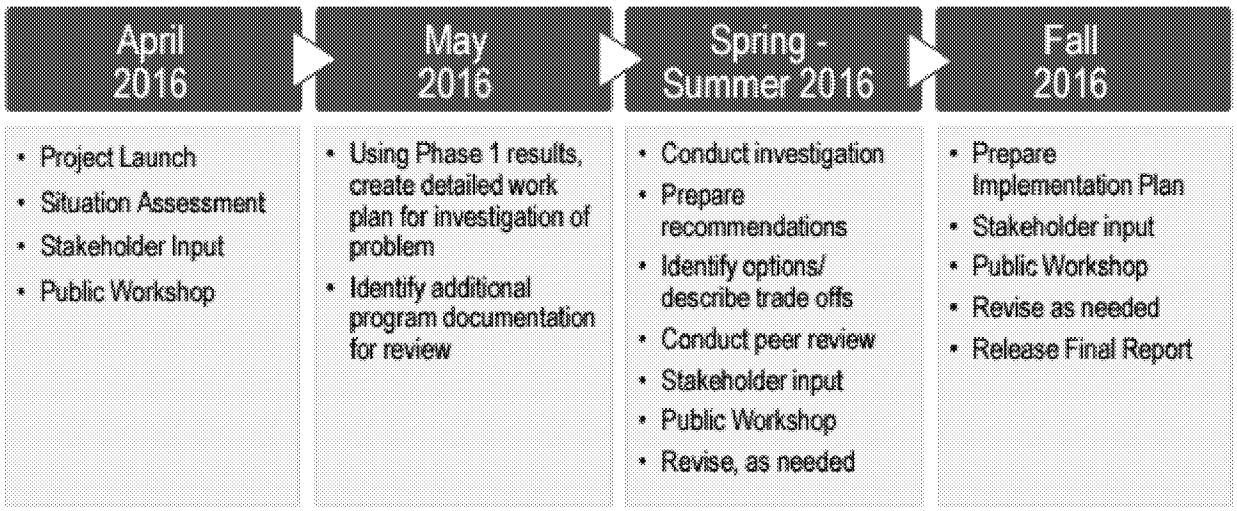

Larry Walker Associates. Work began in April and culminated in December 2016 with the final Recommendations and Implementation Plan.

The project plan involved researching past reports and other permitting program documents, interviewing dozens of knowledgeable staff and stakeholders, holding three public workshops to report findings and receive feedback on draft recommendations, and expert peer review of draft recommendations.

3. Recommended Actions

DEQ received the Recommendations and Implementation Plan on Dec. 8, 2016. It contains recommended actions and implementation approaches covering a number of different topic areas. The report is available at http://www.deq.state.or.us/wq/wqpermit/review.htm

The report's overarching message is that eliminating the permit backlog and achieving a sustainable level of NPDES permitting is dependent on widespread changes at the systems level. If recommended actions are only partially implemented, the backlog problem that has persisted already for over fifteen years is unlikely to diminish measurably and Oregon's NPDES permitting program will fail to achieve a sustainable level of operation.

A high-level overview of the final report including excerpts of the consultants' key findings and recommended actions is provided below.

Leadership

The lack of clear decision authority, the decentralized structure of DEQ and the distribution of water quality personnel across several organizational entities inhibits the ability of the organization to overcome its permit backlog.

Recommended Actions

- Elevate permit renewal to a top priority of the Water Quality program, and centralize authority for permit issuance.

- Update individual and organizational performance metrics to emphasize the elevated importance of permit renewals.

- Sunset the Blue Ribbon Committee and convene one or more new advisory bodies for the program that has a well-defined role in helping to implement the report's recommendations.

Community Capacity

Some of Oregon's communities lack the technical and/or financial resources to comply with their NPDES permits. This contributes to the permit backlog in two ways. In some instances, DEQ permit writers have provided technical support to permit holders that extends beyond their core permit-writing responsibilities. This reduces the amount of time devoted to permit renewal. DEQ has also been reluctant to issue permits at times due to concerns about a community's ability to afford or carry out required facility upgrades.

Key Actions

- Develop an inventory of permitted facilities that includes information on their ability to comply with existing and anticipated future permit requirements.

- Estimate additional resources needed to build treatment facilities or natural systems to achieve compliance.

- Convene an advisory group to identify and develop strategies to assist individual municipal and industrial NPDES permit holders with both the technical expertise needed to develop, design and operate wastewater facilities, and the financial assistance necessary to pay for facility upgrades, expansions or other changes. The advisory group should include representation from the Legislature, as it is likely that legislative action will be required for the program to succeed in the long term.

Alignment Across Programs and with Federal Requirements

NPDES permits must comply with federal requirements including but not limited to implementation of water quality standards and Total Maximum Daily Load (TMDL) requirements in permits. DEQ has not always integrated its work in water quality standards and TMDLs with its NPDES permit program, to assure that standards and TMDLs can be readily implemented in permits. Draft permits have not consistently aligned with these requirements and sometimes require rework, adding to time it takes to issue or renew a permit.

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Key Actions

- Work with stakeholders to identify effective strategies and procedures to implement water quality standards and TMDLs in permits, including strategic use of permitting tools such as site-specific standards, multiple discharger variances and trading programs.

- Evaluate DEQ's process for developing water quality standards. Develop methods to address cases where it has been problematic to attain beneficial uses and water quality standards associated with those uses.

Quality and Efficiency

A series of process improvements are needed to improve and ensure consistent permit quality and address significant inefficiencies in the NPDES permit renewal process.

Key Actions – Data Management

- Execute a plan to efficiently gather and deliver data that is routinely needed as part of the permitting process.

- Establish electronic reporting systems, and consult with the regulated community to develop a process for accepting monitoring data electronically, in a manner that makes it easily accessible to permit writers.

Key Actions – Process Improvement

- Review and update permit renewal process maps to remedy inefficiencies and roadblocks.

- Formalize the updated procedures and train staff in their use. Verify that standardized procedures are consistently used.

Key Actions – Permit Tools and Guidance

- Develop a comprehensive permit writer's guidance manual and training program.

- Implement the training program. Conduct post-permit issuance reviews to determine effectiveness of tools and training, and update tools or retrain staff as needed.

- Update and improve user-friendliness of permit templates and tools. Implement processes to ensure they are kept up-to-date with changing policies, water quality standards and legal decisions.

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Staffing and Workload

Differences in the level of skills and expertise among permitting staff contributes to inefficiencies and inconsistent permit quality. Given Oregon's current need to reduce backlogs and increase the average number of annual permit renewals, additional short-term resources will be essential to address the backlog. DEQ must also develop the data necessary to provide information needed to support long-term resource planning.

Key Actions

- Implement the following measures to achieve an immediate short-term infusion of additional staff resources. Some may require may require additional program funding or create deficits in other program areas if existing staff are reassigned to do permit-related work.
    - Realign work tasks so that permit writing specialists focus only on permit renewals, and not on technical assistance or enforcement.
    - Secure contractors and/or reassign staff to accomplish high-priority tasks, including moving resources as needed within and between regions to achieve permit issuance objectives.
    - Add temporary staff to supplement the pool of permit writers.
- Collect and utilize data on the amount of time it takes to complete permitting tasks to determine the staffing level needed to eliminate the permit backlog and meet state and federal requirements over the long term.

Program Funding

Circumstances outside of DEQ's control drive the budget process. When permit renewals are delayed due to inadequate program resources, the delay increases the ultimate cost of permit renewal due to inefficiencies and data problems. Funding uncertainty and fluctuations may also impede DEQ's ability to develop and implement effective permit renewal plans.

Key Actions

- Develop a per-permit funding formula for renewals.
- Establish a realistic annual funding estimate based on a five-year work plan. Initial iterations must consider routine and backlogged workload.
- Establish a process for flagging and addressing annual funding gaps.

Communications and Progress Reporting

Tracking and reporting progress is essential to ensure staff and stakeholders are informed, involved and committed to success. Early reporting measures should focus on progress

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toward implementing short-term changes necessary to improve efficiency and quality control. Course corrections and schedule adjustments are inevitable due to the high number of variables. It will be critical to promptly communicate these to internal and external stakeholders.

Key Actions

- Develop and resource a Permit Backlog Reduction Communications Plan.
- Create metrics and institute reporting methods to track implementation progress. Ensure sufficient measures to allow for plan or schedule adjustments if needed.

4. Implementing the Recommendations

Now that the evaluation has been completed and the recommendations are in hand, DEQ is turning its attention to implementation. DEQ and the Environmental Quality Commission are committed to implementing the recommendations in the report and consider this to a top priority for the agency – one that will likely require years of focused attention to resolve. Internal process improvements are underway and DEQ is engaging external partners and stakeholders to seek their assistance in implementing the report's recommendations.

The Water Quality program's immediate priorities include developing a longer-term work plan and a communications plan, implementing initial internal organizational changes, and undertaking a "permit readiness review." The readiness review identifies backlogged permits for which there are sufficient water quality data, compliance solutions and community capacity to immediately proceed with permit renewal. The readiness review also identifies barriers to renewing other permits, which provides information to support development of a strategic plan to remedy those barriers. The program will continue writing NPDES permits while implementing the recommendations but during the initial stages permit writers may be called upon to lend their expertise to critical process improvement efforts and updating permit writing tools and templates. DEQ will be able to provide more information on next steps and expected outcomes by late January 2017.

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Appendix 1 – Water Quality Permitting Budget Note

2015 Legislative Session, Joint Committee on Ways and Means, Subcommittee on Natural Resources

Budget Note:
Water Quality Permitting
The Subcommittee expressed concerns with the backlog in renewing water quality permits and directed the Department of Environmental Quality (DEQ) to undertake a review of its permitting program. To achieve this, the Department is directed to hire an outside consultant with the knowledge and skills needed to conduct an evaluation of the program and the ability to make recommendations. These recommendations will focus on improving the quality and timeliness of water quality permits issued under the NPDES program and meeting the associated metrics developed by the Blue Ribbon Committee in its 2004 report (percent of permits being current, inspections, DMR reviews and assignment of general permit coverage) or any agreed upon replacement metrics. DEQ will report to the appropriate legislative committee on or before December 2015 and again by December 2016 on progress toward completing the evaluation, meeting the program metrics and implementing recommendations that come out of the consulting work. DEQ will work with the Blue Ribbon Committee on implementing these recommendations for meeting programs goals and will provide the Blue Ribbon Committee with periodic updates on progress being made to improve the program.

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