

*Evaluation and Recommendations  
Workbook*

# **NPDES Permitting Program Review**

September 19, 2016

Prepared for  
Oregon Department  
of Environment Quality  
Stakeholders

*Prepared by*

MWH Americas [now a part of Stantec]

*in collaboration with*

Larry Walker Associates



## Stakeholder Workshop 2— Evaluation (Recommendations) Report

Monday, September 19, 2016

Registration: 12:15 p.m.

12:30 to 3:30 p.m.

DEQ Headquarters, 811 SW 6th Avenue, Portland, OR 97204



State of Oregon  
Department of  
Environmental  
Quality

During this workshop the Consultants will share the Findings and Recommendations from their Evaluation Report. These recommendations focus on the WHAT - what changes will be needed to reduce permit backlog. Stakeholder input from this workshop will be used to prioritize and refine the activities advanced into an Implementation Plan.

### Meeting Goals

- Recap and discuss the Evaluation Report Findings and Recommendations
- Learn Stakeholder Perspectives and Priorities for Implementation
- Initiate Discussion on the Implementation Plan

### Discussion Items

Time	Item	Lead
12:15 P.M.	Registration <ul style="list-style-type: none"> <li>• Name tags, handouts</li> </ul>	Staff <i>MWH (now part of Stantec)</i>
12:30	Greetings, and Agenda Review <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Overview of Agenda &amp; Meeting Goals</li> <li>• Ground rules</li> </ul>	Abby Boudouris, <i>DEQ</i> Lisa Beutler, <i>MWH</i> , <i>Facilitator</i>
12:40	Project Overview <ul style="list-style-type: none"> <li>• Recap of Work to Date</li> <li>• Role of the Evaluation Report and this Workshop</li> <li>• Next Steps for the Implementation Report</li> </ul>	Lisa Beutler, Tom Grovhoug, <i>Larry Walker Associates</i> ,
12:50	Workbook <ul style="list-style-type: none"> <li>• Limitations (Pg. 1)</li> <li>• NPDES Basics (Pg. 3)</li> </ul>	All
1:05	Workbook <ul style="list-style-type: none"> <li>• Inadequate Resources (Pg. 8)</li> <li>• Permit Renewal is Inefficient (Pg. 13)</li> </ul>	All
1:40	5-Minute Break	All

Time	Item	Lead
1:45	Workbook <ul style="list-style-type: none"> <li>• DEQ Commitment Not Adequate (Pg. 18)</li> <li>• Permit Guidance and Development Not Aligned (Pg. 22)</li> </ul>	All
2:10	Workbook <ul style="list-style-type: none"> <li>• Systemic Factors Outside of DEQ Control (Pg. 23)</li> <li>• History of Failed Change Efforts (Pg. 29)</li> </ul>	All
2:45	Workbook <ul style="list-style-type: none"> <li>• Consequences of No Action (Pg. 30)</li> <li>• Next Steps (Pg. 31)</li> </ul>	All
3:00	Workbook <ul style="list-style-type: none"> <li>• Stakeholder Priorities (Pg. 32)</li> </ul>	All
3:15	Additional Implementation Suggestions and Recommendations for Next Steps <ul style="list-style-type: none"> <li>• <i>Full group discussion</i></li> </ul>	All
3:25	Closing Comments	Lisa Beutler & Tom Grovhoug
3:30	Adjourn	

## GROUND RULES

There will be many opportunities to engage group discussion. Participants are asked to subscribe to several key agreements to allow for productive outcomes

### USE COMMON CONVERSATIONAL COURTESY

*Don't interrupt; use appropriate language, no third party discussions, etc.*

### ALL IDEAS AND POINTS OF VIEW HAVE VALUE

*You may hear something you do not agree with or you think is "silly" or "wrong." Please remember that the purpose of the forum is to share ideas. All ideas have value in this setting. The goal is to achieve understanding. Simply listen, you do not have to agree, defend or advocate.*

### HONOR TIME

*We have an ambitious agenda, in order to meet our goals, it will be important to follow the time guidelines given by the facilitator.*

## HUMOR IS WELCOME

*BUT humor should never be at someone else's expense.*

## BE COMFORTABLE

*Please feel help yourself to refreshments or take personal breaks. If you have other needs, please let a facilitator know.*

## SPELLING DOESN'T COUNT

*Write for meaning. Spell checker can catch errors later.*

## ELECTRONICS COURTESY

*Please turn cell phones, or any other communication item with an on/off switch to "silent." If you do not believe you will be able to participate fully, please discuss your situation with one of the facilitators.*

## AVOID EDITORIALS

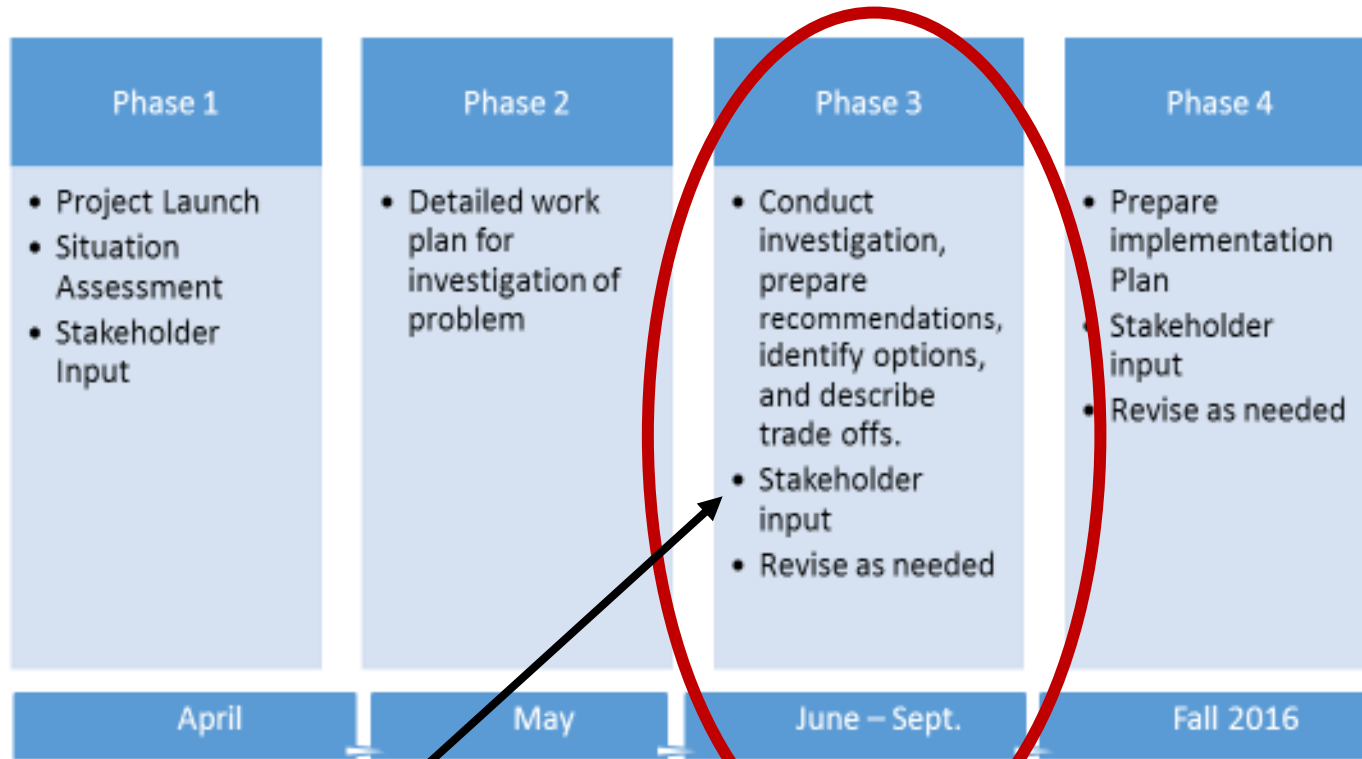
*It will be tempting to analyze the motives of others or offer editorial comments. Please talk about YOUR ideas and thoughts*

## List of Acronyms and Terms

ACRONYM	TERM
BRC	Blue Ribbon Committee
Consultant	MWH ( <i>now a part of Stantec</i> ) and Sub consultant Larry Walker Associates
CWA	United States Clean Water Act
DEQ	Oregon Department of Environmental Quality
DMR	Discharge Monitoring Report
EDMS	Electronic Data Management System
EPA	United States Environmental Protection Agency
FTEs	Full time equivalent employees
KPM	Key Performance Measure
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OAWU	Oregon Association of Water Utilities
RACI Chart	Responsible, Accountable, Consulted, Informed Chart
RPA	Reasonable Potential Analysis
SRF	State Revolving Fund
TMDL	Total Maximum Daily Load
TBEL(s)	Technology-Based Effluent Limits
WQS	Water Quality Standard
WQBEL(s)	Water Quality Based Effluent Limits
MOA	Memorandum of Agreement
PWM	Permit Writers' Manual

## Background Information

# Project Overview



**Stakeholder Workshop  
September 19, 2016**

This National Pollutant Discharge Elimination System (NPDES) Permitting Program Review Workshop is being conducted in fulfillment of Contract DASPS 1589-16, Oregon Department of Environmental Quality (DEQ), Task 3. The purpose of this task is to evaluate and utilize research and stakeholder feedback initiated during Task 1 and continued in Task 3, to review the program and develop improvements specific to 360 individual municipal and industrial NPDES wastewater permits. This includes identifying factors that contribute to:

- o Bottlenecks and roadblocks
- o Permit compliance
- o Permit issuance planning
- o Permit quality assurance
- o Resource and workload allocation
- o Staff skills and training
- o Achievement of metrics and goals for the program

## **BACKGROUND INFORMATION - LIMITATIONS**

Like all studies this review had limitations. Typical program review limitations revolve around three factors: 1) Time, 2) Resources and 3) Scope. The limitations of this program review mirror these same factors.

**Time:** The program review was timed to coincide with other external events, and most particularly the Legislative Calendar. This restricted the ability of the consultants to easily access some staff and information due to vacation schedules. For example, it was difficult to schedule meetings with the Senior Permit writers group and some information related to information systems was being developed concurrent with this process. As a result, some information was developed later in the review process and merits additional review during implementation planning. This may result in some modifications to recommendations and implementation plans.

**Resources:** In conducting the study, the consultants reviewed an extensive number of documents and other studies and interviewed well over 50 knowledgeable, internal and external stakeholders. These interviews yielded consistent and valuable, if anecdotal, information. In some cases, no additional data was available to validate the interview findings. This does not diminish the anecdotal reports; however, additional study may be indicated and findings may be modified if new data does not confirm the anecdotal reports.

The quality or quantity of environmental and effluent data or the method by which the data is stored and reported by DEQ precluded a detailed level of analysis of some factors. In many cases relevant information was available; however, due to its format, it was difficult to easily extract some critical information. For example, in some cases the raw data was available in spreadsheet format; however, it was organized by the fields that were not readily sortable by the topics of interest and the volume of information precluded a manual search.

In other cases, information related to the specific area of interest was not available or captured at sufficient detail for analysis. For example, information regarding the existing treatment facilities for the individual municipal and industrial NPDES permitted entities in Oregon was requested as part of this evaluation. DEQ does not maintain a database of information that would allow a detailed assessment of projected future NPDES permit compliance problems in the State of Oregon. Without such information, it is not possible to fully understand the aggregate impact of NPDES permit requirements on the regulated community or to develop regulatory or funding strategies to address the issue.

In some cases, the data provided didn't entirely address the questions the consultants may have posed. These data limitations will need to be addressed in implementation planning.

**Scope:** This program review was specifically limited to reduction of backlog related to 360 municipal and industrial NPDES wastewater permits. Significant contributing factors were analyzed to focus on the extent to which those factors directly affected the NPDES permit backlog. Many recommendations address systemic concerns; however, additional analysis may be required to address issues outside of the project scope.

As an example, the current distributed, regional leadership structure was identified as a contributing factor to the backlog and recommendations regarding this are tendered. Multiple, triangulated, anecdotal reports indicated that the structure as currently implemented reduced accountability for the backlog and made decision making on problematic permit issues difficult. Therefore, the findings and recommendations are offered and appropriate even though a detailed analysis of the benefits of centralized versus decentralized leadership models was not performed. Such an analysis may be beneficial to refine implementation actions suggested in this effort.

For the remainder of this document, the term *NPDES permits* will only refer to the 360 individual municipal and industrial wastewater permits being reviewed.

## BACKGROUND INFORMATION: NPDES BASICS

### *Discussion*

The NPDES process is one part of an overall system to meet the goals of the Clean Water Act (CWA). In the process of investigating the Oregon permitting backlog it was determined that elements of the system to achieve CWA goals were potentially out of alignment and this misalignment was a contributing factor to the permit backlog. Following is an overview of the NPDES Basics. The goal of the NPDES narrative is to provide a short primer on the full system of CWA compliance. It is targeted at readers familiar with regulatory language but not necessarily the NPDES process. Potential audiences include staff of the Legislature and Executive Branch as well as local public administrators or elected officials, and other regulatory personnel that work outside of the water sector.

## Questions

- To what extent does this primer establish the context for potential NPDES dilemmas and/or deficiencies? What, if any of the issues, seems to be particularly relevant?
- Given the intended audience and goal for a short primer, what would you add, subtract or change in the narrative?

## NPDES Basics

In order to address the permit backlog, it is important to understand the basics of the NPDES program. Issuance of permits is one part of an overall program to achieve Oregon's water quality goals.

The NPDES program operates under the framework of the Clean Water Act (CWA) which also establishes the basis for Water Quality Standards (WQS). The United States Environmental Protection Agency (EPA) is responsible for oversight and enforcement of the CWA and its provisions. It may also delegate some of its responsibilities to the states.

As described in the Federal Register, Vol. 80, No. 162, Friday, August 21, 2015, Water Quality Standards (WQS) Regulatory Revisions and extensively repeated or paraphrased in part, below, the core components of WQS are designated uses, water quality criteria that support the uses, and antidegradation requirements.

- **Designated uses** establish the environmental objectives for a water body.
- **Water quality criteria** define the minimum conditions necessary to achieve those environmental objectives.
- **Anti-degradation requirements** provide a framework for maintaining and protecting water quality that has already been achieved.

The CWA includes pollutant discharge restrictions for **point sources**.<sup>1</sup> Pollutant discharge restrictions are implemented under NPDES permits and provide for more stringent requirements as necessary to meet:

- Water quality standards
- Technology-based treatment standards
- Schedules of compliance

The CWA also gives states discretion on how to control pollution from nonpoint sources.<sup>2</sup> According to EPA, Nonpoint source pollution can include:

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<sup>1</sup> Under section 502(14) of the Clean Water Act, the term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture."

<sup>2</sup> EPA defines the term "nonpoint source" as any source of water pollution that does not meet the legal definition of "point source." EPA explains, "Nonpoint source pollution generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification. Nonpoint source (NPS) pollution, unlike pollution from industrial and sewage



- Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas
- Oil, grease and toxic chemicals from urban runoff and energy production
- Sediment from improperly managed construction sites, crop and forest lands, and eroding streambanks
- Salt from irrigation practices and acid drainage from abandoned mines
- Bacteria and nutrients from livestock, pet wastes and faulty septic systems
- Atmospheric deposition and hydromodification

Although the CWA includes specific requirements for the control of pollution from certain discharges, WQS apply to the water bodies themselves, regardless of the source(s) of pollution/pollutants.

This is particularly relevant in Oregon, and to this review of the 360 individual municipal and industrial wastewater NPDES permits. The WQS express the desired condition and level of protection for designated uses in a water body, regardless of whether and how a state chooses to place controls on upstream or downstream nonpoint source activities, in addition to its point source activities.<sup>3</sup>

Section 303(d) of the Clean Water Act requires states to identify impaired waters where current pollution control technologies alone cannot meet the water quality standards that are set for that waterbody. States must establish total maximum daily loads (TMDLs) to address the pollutants causing the impairment. Impaired waters are then prioritized based on the severity of pollution and the impacts to the designated uses of the water.

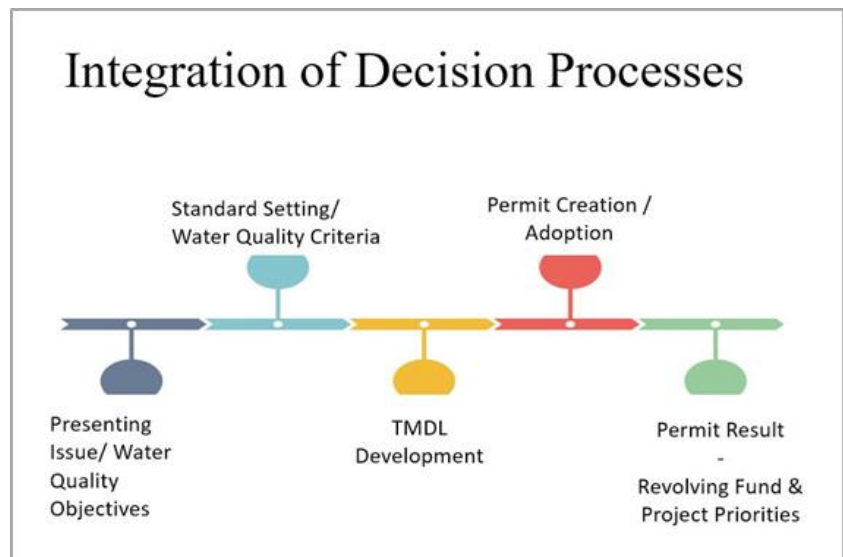


Figure 1. The NPDES program is one part of an integrated process that includes Water Quality Standards and TMDLs.

Regulations governing impaired waters and TMDLs are contained in 40 CFR Part 130.7. Issued in 1992, these regulations require the states to identify waters that require TMDLs in a list referred to as a 303(d) list, produced

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treatment plants, comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.”

<sup>3</sup> EPA indicates that, “States report that nonpoint source pollution is the leading remaining cause of water quality problems. The effects of nonpoint source pollutants on specific waters vary and may not always be fully assessed. However, we know that these pollutants have harmful effects on drinking water supplies, recreation, fisheries and wildlife.” [EPA: <https://www.epa.gov/polluted-runoff-nonpoint-source-pollution/what-nonpoint-source>, accessed 9.05.16]

every two years. The 303(d) list includes the data and information used and the rationale for the listing decision. TMDLs establish a maximum load to a given waterbody of a given pollutant that results in attainment of either numeric or narrative WQS

TMDLs divide the total allowable load into allocations to point sources (wasteload allocations), non-point sources (load allocations), and an allowance for a margin of safety, with consideration for seasonal variations and critical conditions for stream flow, loadings and water quality parameters. TMDLs must be established for all pollutants preventing (or expected to prevent) attainment of water quality standards.

Point source wasteload allocations established in TMDLs are implemented through NPDES permits. Water quality-based effluent limitations contained in NPDES permits must be “consistent with the assumptions and requirements” of wasteload allocations in EPA-approved TMDLs.

States are not explicitly required to develop TMDL implementation plans under Section 303(d) of the CWA. However, states may include an implementation plan as part of a TMDL which provides more information regarding the contributions from various sources and how loadings from those sources should be controlled. CWA section 301 prohibits the discharge of any pollutant to waters of the United States except in compliance with certain sections of the Act, including CWA section 402, which established the NPDES permit program.

The NPDES program is administered by EPA or authorized states, territories or eligible tribes. Thus the NPDES program, as described in the Federal Register / Vol. 81, No. 96 / Wednesday, May 18, 2016 and repeated extensively in part below, is one part of an integrated process that includes WQS and TMDLs. designed to achieve CWA and Oregon’s goals.

While the backlog reduction effort considers potential improvements specific to DEQ’s administration of 360 individual NPDES municipal and industrial wastewater permits, the NPDES permit program itself provides for two types of permits, individual and general, that may be used to authorize point source discharges of pollutants to surface waters of the United States. Individual permits are issued to a single facility and require submission of a permit application. General permits are developed to cover classes or categories of dischargers under a single permit and require submittal of a Notice of Intent to seek coverage under the permit. Both types of permits are issued for a fixed period of time not to exceed five years.

Under the NPDES regulations, EPA has developed permit application forms for applicants seeking coverage under individual permits. Each individual permit application form corresponds to a different category of dischargers subject to permitting. After receiving an application for an individual permit, the permit writer reviews the application for completeness and accuracy. Once the permit writer determines the application is complete, the permit writer uses the data submitted with the application to develop the draft permit and either a fact sheet or statement of basis that explains the rationale behind the draft permit provisions.

The first major step in the permit development process is deriving technology-based effluent limits (TBELs). The permit writer then determines whether, after application of the TBELs, the discharge will cause, have the reasonable potential to cause, or contribute to an excursion above a narrative or numeric WQS.

If the permit writer determines that discharge “will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard,” the permit writer derives effluent limitations necessary to meet state WQS (*i.e.*, water quality based effluent limits (WQBELs) for that constituent). The permit writer then includes final effluent limitations (TBELs and WQBELs) that implement all applicable technology and water quality standards in the permit.

After developing the effluent limits, the permit writer develops and includes appropriate requirements for monitoring, reporting, and facility-specific special conditions. The permit writer also includes standard conditions that are required for all NPDES permits. The permit’s fact sheet<sup>4</sup> documents the decision-making process for deriving the permit limits and establishing permit conditions.

In Oregon, after the draft permit is complete, OAR 340-045-0035(5) provides an applicant a 14-day review period prior to public notice/comment. Applicants may request an extension. A public notice then announces the availability of the draft permit and administrative record and gives interested parties an opportunity to submit comments and request a public hearing. After taking into account all significant comments raised during the comment period, the permitting authority develops the final permit with careful attention to documenting the process and decisions for the administrative record. The permitting authority then issues the final permit to the facility.

Under CWA section 402(b), a state may obtain authorization to administer the NPDES permit program. In order to obtain authorization, the state must demonstrate to EPA that it has the authorities and resources necessary to implement the program as outlined in CWA section 402(b) and as specified in an EPA/state memorandum of agreement (MOA). When EPA revises the NPDES regulations, authorized states may need to amend their own regulations and legal authorities to ensure their programs continue to be as stringent as the federal program. To date, 46 states and territories, including Oregon, have obtained authorization to administer the NPDES permit program. If a state or tribe does not have an approved NPDES program, EPA administers the NPDES program.

In general, once a state is authorized to administer the program, EPA no longer conducts these activities. However, the state must provide EPA with an opportunity to review NPDES permits, and EPA may object based on specified criteria. If an agency does not satisfactorily address the points of objection within the applicable timeframe, exclusive authority to issue the permit passes to EPA.

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<sup>4</sup> Sometimes called a *statement of basis* or a *permit evaluation report*, per OAR 340-045.

EPA regulations establish permit application requirements and corresponding forms for use by all applicants for EPA-issued permits. Where a state chooses not to use the EPA forms, the state is responsible for developing and using its own forms; however, the state forms must collect all of the data that the EPA regulations require.

EPA has developed several guidance documents to help permitting authorities manage the quality and consistency of NPDES permits. The NPDES Permit Writers' Manual (PWM) provides a comprehensive overview of the framework of the NPDES program and provides basic training on the requirements for the development and issuance of a viable NPDES permit. The NPDES PWM is also a resource for other stakeholders interested in the NPDES permitting process.

## DISCUSSION TOPIC 1 – INADEQUATE RESOURCES

Following are a series of findings related to the resources dedicated to the NPDES Permit Writing Function. We will ask two rounds of questions about the findings:

1. **What, if any questions of clarification do you have?** For example, questions of clarification include things like, “Did you reference a particular document or study?” or “What was the number used in a calculation?” or “What does the term \_\_\_\_ mean.”
2. **What, if any, new or disputing information do you have that may augment or alter the conclusions?**

### Finding 1. Inadequate resources are devoted to wastewater NPDES permit renewals.

#### A. Bifurcated Duties

By design, NPDES permit writers at DEQ perform a wide range of duties in addition to those specifically required for preparation of NPDES permit renewals. These additional duties include preparation of NPDES permits for new discharges, preparation of state permits for land discharges, performance of inspections, preparation of inspection reports, technical assistance to permittees, plan review, complaint response, enforcement actions and review of monthly Discharge Monitoring Reports (DMRs), and support to other DEQ staff in the development of policies, water quality standards, and TMDLs. DEQ and EPA have estimated that for the current list of 22 NPDES permit writers at DEQ, less than 6 full time equivalents (FTEs) are devoted

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the conclusions?

specifically to wastewater NPDES permit renewals. In other words, available permit staff collectively spend less than 30 percent of their time writing individual wastewater NPDES permits. (EPA, Final Permit Quality Review for Oregon, March 2016).

A related issue is the ability of some applicants to complete the permit application process. DEQ has attempted to provide technical assistance to these communities with varying success. The diversion from other permit writing duties to provide technical assistance also contributes to the NPDES permit backlog.

### **B. Predicted Workload**

There are 360 major and minor municipal and industrial wastewater NPDES permits in Oregon. NPDES permits must be renewed every five years in accordance with EPA regulations. Therefore, *on average*, 72 NPDES permits must be renewed every year to avoid accumulation in backlog. Actual numbers that need to be renewed in a given year will vary depending on the year that existing NPDES permits were adopted. With the current resources of approximately 6 FTEs for NPDES permit renewals, this would require 12 renewals per year per FTE. A January 2016 Survey of State NPDES Programs<sup>5</sup> shows that this level of resource commitment would either not be adequate (California, Colorado, Virginia) and would barely be adequate in several other states (Washington, Missouri).

In addition to predicted annual workload and the extreme permit backlog will need to be reduced. Backlogged permit renewals are expected to be more time consuming and complex.<sup>6</sup> Thus with barely adequate or inadequate resources to management current year workload, addressing backlog without additional resources is highly problematic.

To properly assign resources to the NPDES permit renewal effort, it is clear from our program review that DEQ needs to better quantify the amount of

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the conclusions?

<sup>5</sup> 2016 Survey of State NPDES Programs, DEQ, Page 12, Figure 8

<sup>6</sup> Backlogged permit renewals are expected to be more time consuming because of aging or incomplete information, and/or the original issue that caused the permit to become backlogged.

staff time that needs to be devoted solely to NPDES permit renewals. During this review, requests for better-defined information focused on staff tasks and workload could not be fulfilled because existing DEQ systems and data do not provide the necessary information, although efforts are underway, through workload audits and process mapping, to better quantify this. Recent changes to create a focused permit writing function at DEQ headquarters may allow for a better assessment of the time needed to produce permits. This information will be essential to more accurate and appropriate allocation of resources and management of the NPDES program.

### **C. Availability of Expertise**

Preparation of NPDES permits also requires training and skills. Permit writers and stakeholders have identified a wide variation in the skill sets of permit writers and the lack of accompanying timeliness and quality of permits associated with fewer skills.

A variety of factors contribute to uneven skills although a lack of training, experience, consistent supervision and guidance, and the lack of more senior mentors were all mentioned. This problem was compounded by the decentralized structure of DEQ and the distribution of water quality personal across several organizational entities. The absence of a chain of command knowledgeable about NPDES requirements also results in a lack of accountability when goals are not met

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the conclusions?

**Following are a series of recommendations related to Finding 1. Inadequate resources are devoted to wastewater NPDES permit renewals. We will ask three rounds of questions about the recommendations.**

- What, if any questions of clarification do you have?
- What, if any, new or disputing information do you have that may augment or alter the recommendation?
- What, if any, suggestions do you have that might improve or strengthen the recommendations?

**Recommendations for Finding 1. Inadequate resources are devoted to wastewater NPDES permit renewals.**

These recommendations are intended to better utilize available internal permit writing resources and to provide a short-term “surge” strategy to provide the necessary influx of resources and talent to deal with the immediate backlog problem and set the stage for a program that is sustainable in the long term.

<p><b>R1.1. Reduce tasks assigned to NPDES permit writers to essential functions to permit issuance and permit process related improvements.</b></p> <p>NPDES permit writers should focus on permit renewals and those actions that directly support that function. Duties essential to preparation of quality NPDES permits that should be performed by NPDES permit writers include individual permit writing; targeted input on rules, regulations and policies impacting the NPDES program; facility inspections necessary to the permit writing function and NPDES public process functions associated with permit review and adoption (hearings, response to comments, meetings with permittees and stakeholders).</p> <p>Some of the other functions now assigned to NPDES permit writers should be re-assigned to other staff, including compliance functions (e.g. preparation of inspection reports, enforcement proceedings), complaint response, writing non-NPDES permits, plan review and discharge monitoring report (DMR) review. The task of providing technical assistance to permittees should be handled in a different manner (see Recommendation R.1.7).</p>
<p><b>R1.2. Determine the number of NPDES FTEs needed to eliminate the NPDES permit backlog in Oregon over a 5-year time horizon.</b></p> <p>Based on the re-vamped job description for permit writers as described above, determine the number of NPDES FTEs needed to eliminate the NPDES permit backlog in Oregon over a 5-year time horizon. This should be achieved through use of workload assessments and the EPA workload model, combined with assumptions and estimates regarding the number of permits to be renewed per permit writer per year.</p>
<p><b>R1.3. Assign staff with strong permit writing experience and skills to an NPDES permit writers group.</b></p> <p>Based on these initial FTE estimates, assign staff with strong permit writing experience and skills to an NPDES permit writers group, which will have staff in each region and in headquarters.</p>
<p><b>R1.4. Hire/train additional permit writers in accordance with FTE requirements.</b></p>

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the recommendation?
3. What, if any, suggestions do you have that might improve or strengthen the recommendations?

Additional limited-term resources will be essential to address Oregon's backlog problem. Options include internal reassignment of personnel, contract services, Intergovernmental Personnel Act (IPA) assignments in coordination with USEPA, or a combination of the above. Begin process of hiring/training new permit writers in accordance with FTE requirements necessary to maintain a sustainable NPDES permit program that issues permits on schedule to meet the 10 percent backlog goal.

**R1.5. Retain additional expertise work to with the DEQ NPDES permit writers group.**

In the short term, institute a surge strategy that includes contracting with external resources to work with the DEQ NPDES permit writers group to reduce the immediate NPDES permit backlog. Consideration should be given to

(1) the use of Intergovernmental Personnel Act (IPA) assignments to add experienced USEPA personnel to support the near term effort and (2) the use of expert outside contractors skilled in NPDES permit preparation and program development. Some supplemental support may be provided via realignment of existing DEQ resources; however, given the need for additional expertise in preparing NPDES permits, it is should not be relied upon to provide the needed immediate relief.

**R1.6. Provide sufficient training and guidance to ensure proficiency and skills building.**

Use the external experts retained for the surge strategy to work with DEQ staff in development/refinement of permitting guidance and tools, training program, process improvements, and refinement of FTE estimates.

**R1.7. Provide technical assistance to communities, on a needs basis, with external resources.**

Remove the "technical assistance to permittees" function from the DEQ permit writers. Provide funding/support to private firms, professional associations or other organizations to provide needs based technical assistance for those communities (typically small or medium sized, and/or disadvantaged) to facilitate facilities planning, NPDES permitting (e.g, applications, compliance assessments, data collection), and treatment plant operational issues.

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the recommendation?
3. What, if any, suggestions do you have that might improve or strengthen the recommendations?



## DISCUSSION TOPIC 2 – PERMIT RENEWAL IS INEFFICIENT

Following are a series of findings related to the efficiency of the NPDES Permit Writing Function. We will ask two rounds of questions about the findings:

1. **What, if any questions of clarification do you have?**
2. **What, if any, new or disputing information do you have that may augment or alter the conclusions?**

### Finding 2. The Process for Wastewater NPDES Permit Renewal is Inefficient.

DEQ has expended significant effort over the past 15 years to understand and improve its NPDES permit renewal process in an attempt to address the permit backlog problem. In 2000, the Wastewater Permitting Improvement Team (WPIT) was formed to address the NPDES permit backlog issue and other permitting problems. The WPIT issued a final report in June 2001. The WPIT prepared process maps of the NPDES permit development and adoption process and identified problems and necessary process improvements. Unfortunately, a number of the process problem areas identified in the WPIT report remain as issues today, based on the information collected for the Situation Assessment. Review of other process improvement attempts by DEQ over the past 15 years corroborates this finding. Following are some significant contributors to inefficiencies.

#### A. Data Inadequacy

The preparation of NPDES permit renewals in a timely matter is entirely dependent on the availability of the right data to the permit writer. In order to prepare a renewed NPDES permit on the EPA mandated five-year cycle, essential data are required. These data needs are, in large part, predictable.

For example, essential data needs for a typical NPDES permit renewal include:

Effluent – data representative of the current effluent collected over the last 3 to 4 years. The data includes effluent flows and water quality data for conventional constituents, toxics, hardness, pH, nutrients and other constituents covered by water quality standards and or 303(d) lists applicable to the receiving water for the discharge

- Ambient receiving water – data representative of the receiving water upstream of the discharge point collected over a period of years. Data includes streamflow and water quality data of relevance to the NPDES permitting process, including temperature, hardness, pH, and all constituents of concern as established

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by the previous NPDES permit, water quality standards, TMDL wasteload allocations (WLAs), or the 303(d) list for the water in question.

Interviews with NPDES permitting staff indicate that timely access to the above essential data is a significant problem that hampers the preparation of NPDES permits. Problems include:

- Inadequate or aging data provided in permit applications
- Delays in permitting (which cause data originally submitted with applications to become outdated)
- Problems in having necessary ambient data at essential locations and problems in accessing ambient data from DEQ data bases which are currently bifurcated.

## **B. Outdated Data Delivery Systems**

DEQ's current delivery systems are outdated. Information from different systems, which should be integrated, is not. Permit writers do not have access to critical parts of the systems and must query organizational entities outside of their chain of command to gather the essential permit information described above.

DEQ recognizes this issue and is in the process of developing new data systems. The completion of these efforts, the long term DEQ-wide Environmental Data Management System (EDMS) and short term bridging efforts, will likely have a direct impact on DEQ's ability to more efficiently resolve the NPDES permit backlog.

A critical issue is when the planned long term EDMS project will be able to address needs essential to permit issuance. While a system with extended functionality (one that includes the ability to complete multiple tasks) such as the one DEQ proposes is desirable and rational, increased complexity increases development time and project risk factors. Given the current status and schedule for long term efforts to develop new data systems (i.e. 5 to 10 years to full implementation), specific funding and effort must also be directed to

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concurrent short-term bridging improvements that will meet critical NPDES permit renewal needs, as described above.

Development of this type of EDMS system requires proper resources, priority and executive sponsorship. Projects of this type always include significant project management risk factors that must be carefully managed and mitigated. Issues related to creation of information systems of this type are outside the scope of this report; however, Oregon has created large scale electronic data management systems for other significant program areas, and other states have implemented similar water quality related EDMS efforts which have DEQ staff have reviewed.

### **C. NPDES Permitting**

A series of problems associated with NPDES permitting tools were identified, including the following:

- The DEQ program struggles to keep templates and tools up to date in the face of changing standards, policies, court decisions, and EPA policy determinations. These problems include a lack of a strategic approach to deal with current and future issues affecting the NPDES permitting process and the lack of resources and unified approach to perform necessary updates to permitting tools.
- There is inconsistent use of the tools and guidance from region to region.
- Some tools and guidance are not user friendly for permit writers, i.e. instructions are not clear and concise.
- Tools and documents are maintained separately. Consolidation of guidance into a single permit writers' guidance document (or suite of documents) would simplify communications and training in the use of these tools.

Interviews with a broad range of DEQ staff working in different divisions and regions have indicated widespread acknowledgement of these NPDES permitting process efficiency problems.

1. What, if any questions of clarification do you have?
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**Following are a series of recommendations related to Finding 2. Inadequate resources are devoted to wastewater NPDES permit renewals.**

**Recommendations for Finding 2. The Process for Wastewater NPDES Permit Renewal is Inefficient.**

Despite the other major problems that hamper DEQ’s ability to renew NPDES’s on time, process inefficiencies must also be remedied. Process improvement steps must address serious problems regarding:

- Delivery of essential data to NPDES permit writers
- The need for updated NPDES permitting training tools and guidance manuals
- The process to ensure consistent use, updated, user-friendly training materials and improvements to the permitting process itself

**R2.1. Take steps to ensure that essential data is available to NPDES permit writers at the appropriate time.**

Identify/confirm essential data needs – Establish monitoring locations, data quality requirements, detection limits, other standards to ensure delivery of high quality data. Work with the regulated community to establish processes to provide essential effluent and receiving water data with permit renewal applications. Work within DEQ to provide essential effluent and receiving water data to permit writers in the short term and long term.

There are currently significant ongoing long term efforts by DEQ to develop new databases and data delivery systems to serve a variety of functions. NPDES permit data needs must be identified through the involvement of the Senior Permit Writers Group (or other suitable group of NPDES permit experts) to ensure that essential NPDES data is delivered on time under these new systems. Short term measures must be developed to address data needs during the period prior to completion of the upgrades, which is anticipated to range from 5 to 10 years.

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2. What, if any, new or disputing information do you have that may augment or alter the recommendation?
3. What, if any, suggestions do you have that might improve or strengthen the recommendations?

**R2.2. Ensure that data is available for the purposes of transparency and to track outcomes that can be translated into documents used to create public accountability.**

Data acquisition and sharing should ultimately focus on establishing transparent records and create a mechanism

for public accountability on progress toward achieving desired water quality improvement goals.

**R2.3. Improve permit template, permit evaluation report guidance, permit writers guidance documents, permit tools, IMDs.**

Consolidate guidance into a single simplified compendium of information suitable for use as a training manual. Establish process and devote resources to create updates to guidance documents and tools. Tools to be considered include translators and water effect ratios (to deal with current or anticipated future compliance issues regarding trace metals such as copper, cadmium, etc), and dynamic modeling (in lieu of steady-state modeling to establish effluent limitations). New or refined guidance for the application of site specific criteria, use attainability analyses, compliance schedules, variances and integrated planning should be developed. In general, guidance regarding available tools as specified in the EPA Permit Writers Guide, Technical Support Document (TSD) for Water Quality-based Toxics Control, Water Quality Standards Handbook, recent EPA Water Quality Standards regulations and other USEPA documents should be considered.

**R2.4. Charge an Expert NPDES Group with improving/optimizing the NPDES permitting process – include updated process maps in Permit Writers guidance compendium.**

Utilize the Senior Permit Writers group (or other suitable group of NPDES permit experts) to collaborate with the external contractors retained for the surge strategy to continue to explore the opportunity for process improvements and efficiencies.

**R2.5. Update the current permit issuance planning process to achieve backlog reduction with interim goals that approach a 10 percent backlog over a 5-year time horizon.**

Using the information developed under Recommendation 1, establish an annual schedule for the next five years for NPDES permit adoption. Using the 5-year permit issuance plan, develop attainable long term and interim metrics for annual and 5-year time horizons.

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Devote resources as required to manage and execute the plan. This will require integration with the surge strategy, recruitment and training program.

**R2.6. Centralize authority for NPDES permit adoption.**

Establish a single NPDES permit executive at headquarters with direct access to the DEQ Director. Grant authority and responsibility for leadership, management, tracking and reporting on attainment of NPDES permit renewal goals and achievement of metrics.

**DISCUSSION TOPIC 3 –  
DEQ LACKS FULL COMMITMENT**

Following are a series of findings related to the efficiency of the NPDES Permit Writing Function.

**FINDING 3: DEQ Lacks Full Commitment to Timely Renewal of Wastewater NPDES Permits**

The DEQ personnel interviewed for the Situation Assessment and involved in the coordination of this wastewater NPDES permit program review all demonstrate a sincere desire to see the NPDES Permit backlog problem resolved. However, the continuation of the permit backlog over the past 15 to 20 years and the multiple efforts commissioned to address the issue suggests a lack of total commitment by DEQ and stakeholders to work together to resolve the problem.

**A. While concerned, DEQ Leadership Has Not Given the NPDES Permit Backlog Problem Sufficient Priority to Resolve It**

Competing priorities, complex policy and legal issues, resource limitations, and DEQ's culture contribute to the lack of resolution of the backlog problem. The consultant team reviewed the past NPDES program improvement efforts and resulting recommendations that have occurred within the DEQ program. In these efforts, a long list of reasonable approaches to assist in the reduction of the backlog problem were identified.

In many cases, these recommendations were never fully implemented, were the subject of false starts, or were started and discontinued. Contributing factors included a lack of clear ownership and accountability for improvements, a lack of prioritization of an overwhelming number of recommendations, failure to address organizational resistance to changes, and failure to recognize and address larger external issues impacting the overall success of the NPDES permit renewal effort. A significant number of stakeholders indicated it was

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difficult to ascertain who in the leadership structure was the final decision authority to resolve for various permit related issues.

An additional problem that touches on DEQ's culture is an identity conflict. The conflict is between being a technical advisor and being the lead regulator under the CWA. Based on feedback from a number of respondents during the assessment, this presents real problems to permit writers who try to wear these two hats and is suggested as a contributor to the NPDES permit backlog.

A resolute change in the long-term commitment of DEQ leadership, stakeholders and the Legislature will be necessary to address the backlog problem.

### **B. The Blue Ribbon Committee Requires Reassessment**

A Blue Ribbon Committee (BRC) on Wastewater Permitting was convened in December 2002,<sup>7</sup> to help the agency improve Oregon's wastewater permit program. In 2001, Oregon had one of the highest backlog rates in the nation for processing/renewing major NPDES individual permits, a status which Oregon has retained.

At that time, the NPDES permit backlog was attributed in large part to increasingly complex permit requirements, more stringent water quality standards, the need to implement Total Maximum Daily Loads and assign more complex waste-load allocations, and a dramatic increase in the number of sources needing permits.

The committee completed recommendations for improving the permitting program in 2004 and issued a report, *Blue Ribbon Committee Report on Key Enhancements to the Oregon Wastewater Permitting Program*.

The *Wastewater Permitting Program Improvements and Measures Report*,<sup>8</sup> submitted a little over six years later on January 2011 to Governor Kitzhaber, the Oregon Legislative Assembly, and the Environmental Quality Commission, recapped progress on the recommendations proposed in 2004. Those changes were to accomplish the following:

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<sup>7</sup> This document section is directly quoted or paraphrased from <http://www.deq.state.or.us/WQ/wqpermit/brcreports.htm> (accessed 09.05.16)

<sup>8</sup> This document is quoted or paraphrased directly from: <http://www.deq.state.or.us/WQ/pubs/reports/2011WastewaterLegReport.pdf> (accessed 09.05.16)

- Create a watershed-based permitting cycle to improve permit planning, accountability and follow-up, as well as integration with other water quality programs
- Provide for up-to-date, consistent wastewater permitting to improve the timeliness and quality of DEQ-issued permits
- Develop a strong, effective and appropriate compliance and enforcement program
- Report annually on progress made to the Oregon Environmental Quality Commission and Legislature.

This report indicates some progress towards watershed based management goals but ultimately reduction of the NPDES backlog was not achieved. Identified obstacles included litigation on the Willamette Basin TMDL and use of compliance schedules in permits, as well as an EPA objection regarding the permitting of sanitary sewer overflows that prevented permit issuance. At the same time, in anticipation of general fund reductions during the 2009-2011 biennium, DEQ chose not to refill certain positions in order to manage the budget.

Even with legal issues resolved in late 2009 and 2010 but operating at less than full staff, DEQ still managed to make some progress toward meeting the Committee's recommendations but ultimately continued to fall short and continues to do so today.

Although asked during the Situation Assessment, none of the Committee members were able to directly articulate its mission and many reported extreme frustrations with the lack of progress in reducing the backlog. Some even questioned if the right stakeholders were participating.

Given the need for perhaps more than one stakeholder workgroup and the longevity of the Committee, a re-assessment and re-chartering, with an updated focus, identified specific tasks, and a process for refreshing its mission and membership is indicated. This in turn can drive membership composition and create clarity about meeting topics, expected deliverables, and the committee's role.

1. What, if any questions of clarification do you have?
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**Recommendations for Finding 3. DEQ Lacks Full Commitment to Timely Renewal of Wastewater NPDES Permits Process for Wastewater NPDES Permit Renewal is Inefficient.**

The DEQ water quality program faces many challenges and competing priorities, not the least of which are resource and funding limitations. As described above, these challenges and problems affect DEQ's ability to renew NPDES permits within the stipulated five-year period. This has created a situation



where DEQ leadership and staff are overwhelmed by the effort needed to get the NPDES permit program on track.

If the recommended future efforts offered in this Recommendations Report are to be successful, it will take a serious commitment, by the Legislature, DEQ, EPA, the regulated community, and all stakeholders, to make it happen. For its part, DEQ must establish clear goals, actions and priorities to lead this effort.

<p><b>R3.1. To demonstrate commitment, DEQ must elevate NPDES permit renewal to be a top priority of its Water Quality Program.</b></p> <p>As part of this, DEQ personnel must align with the typical roles of a regulatory agency. This not in conflict with effective collaboration with stakeholders to accomplish goals or demonstrating a cooperative spirit. However, to address backlog, DEQ may need to make difficult decisions to fulfill its role in achieving the requirements of the CWA.</p>
<p><b>R3.2. DEQ must establish the leadership structure and management measures to implement the plan.</b></p> <p>As described in Recommendation 2, DEQ should establish an accountable, singular chain of command for NPDES permitting, empowered with navigating a decentralized organizational structure.</p>
<p><b>R3.3. DEQ must engage EPA, the regulated community and other knowledgeable stakeholders to implement improvements.</b></p> <p>A backlog reduction plan will be described in this project's Phase 4 Implementation Report. DEQ will require support from the full CWA stakeholder community, including EPA, the regulated community and other knowledgeable stakeholders to implement needed changes.</p>
<p><b>R3.4.</b></p> <p><b>R3.5. DEQ should assist in re-chartering one or more BRC (and/or additional stakeholder bodies) with a revitalized purpose that creates a champion for implementation of recommended improvements and ensures transparency and public accountability for changes.</b></p> <p>A revitalized, BRC or similar stakeholder body must be organized. This body should include sub-committees, working groups or other structures. The group should have a clear re-vamped vision and purpose and be representative of the full stakeholder community and be assigned</p>

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bounded and time certain tasks. Meeting methods should be utilized to ensure productive sessions that encourage participation of all group members.

**DISCUSSION TOPIC 4 –  
PERMIT GUIDANCE & DEVELOPMENT NOT CONSISTENTLY ALIGNED**

**Finding.4. Permit Guidance and Development is Not Consistently Aligned with Clean Water Act and DEQ Requirements.**

Failure to address such deficiencies affects the NPDES permit renewal backlog, as rework is required to meet legal requirements while an NPDES permit remains incomplete.

**A. No Overarching Strategy or Process Exists to Address Implementation of Existing and Anticipated Future Water Quality Standards and TMDLs in NPDES permits.**

A number of the stakeholders interviewed for the Situation Assessment indicated that the adoption of new water quality standards or changes to existing standards as a result of either litigation or EPA disapprovals has had an ongoing disruptive effect on the renewal of wastewater NPDES permits. This was attributed as an issue in even the earliest BRC reviews.

**C. Unresolved policy problems related to water quality standards and/or TMDLs have had a significant impact on the NPDES permitting process.**

Issues related to standards must be resolved to allow NPDES permits to be properly renewed.

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the conclusions?

**Recommendations for Finding 4. Permit Guidance and Development is Not Consistently Aligned with Clean Water Act and DEQ Requirements.**

The DEQ water quality program faces many challenges and competing priorities, not the least of which are resource and funding limitations. As described above, these challenges and problems affect DEQ's ability to renew NPDES permits within the stipulated five-year period. This has created a situation where DEQ leadership and staff are overwhelmed by the effort needed to get the NPDES permit program on track.

**R4.1.** Address the major Oregon Water Quality Standards adopted or modified over the past fifteen years.

**R4.2.** Initiate a coordinated effort with DEQ, EPA and all stakeholders to identify NPDES permitting solutions for problems associated with implementation of

existing water quality standards that affect the NPDES permit renewal process.

**R4.3.** Review DEQ's water quality standards development process to identify whether prescribed implementation measures would result in the attainment of proposed standards.

**R4.4.** Utilize a newly chartered BRC or similar stakeholder group to identify anticipated future water quality standards to be adopted in the next 10 years. This group should evaluate compliance issues that may result from projected future water quality standards.

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the recommendation?
3. What, if any, suggestions do you have that might improve or strengthen the recommendations?

## **DISCUSSION TOPIC 5 – SYSTEMIC ISSUES OUTSIDE OF DEQ CONTROL CONTRIBUTE TO THE NPDES BACKLOG**

### **Finding.5. Systemic Issues Outside of DEQ Control Contribute to the NPDES Backlog**

DEQ operates as part of a dynamic system of governance that seeks to provide public health and safety, environmental stewardship, economic viability, and enriching experiences (recreation, education, etc.). As such, its roles, responsibilities and contributions are continually balanced with other societal goals and requirements. This results in circumstances outside of DEQ control driving budgetary processes, infrastructure investment, and regulatory considerations of other agencies and sectors. Further, State budget decisions are influenced by national policy (such as the Affordable Care Act or energy and environmental regulations) and local issues (such as crime and the quality of education).

#### **A. Uneven Funding Streams for Permit Functions Creates Difficulties in Permit Planning and Results in Increased Future Year Costs and Permit Backlog**

Given that NPDES permit renewal workload is fully predictable, (each permitted facility will have a renewal in 5 years) failure to adequately resource it one year will add costs to future years that will exceed the cost and time of completing the renewal in the scheduled year.

The current NPDES permit funding approach relies on a specified proportion of the State General Fund to provide the agency budget. This creates a cap on the budget regardless of other fund sources. While the balancing of general public good to permittee cost is a reasonable public policy approach, it creates greater uncertainty in planning future work. The availability of General Fund for the NPDES permitting is subject to significant

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fluctuation as it depends on anticipated revenues and planned and unplanned expenditures, which may change over the course of a fiscal year.

**B. Anticipated NPDES Permit Requirements Cannot Immediately Be Achieved by Many Members of the Regulated Community**

Based on interviews conducted for the Situation Assessment, DEQ staff, EPA staff, NGO representatives and the regulated community all described the inability of some permittees to meet anticipated new limitations in NPDES permits as widespread and a future impediment to the renewal of NPDES permits.

Numerous respondents reported that DEQ's NPDES permitting staff is reluctant to write permits that will drive major expenditures. One specific example of the anticipated compliance problems facing the regulated community is small municipalities with existing secondary treatment or lagoon/pond treatment systems discharging treated effluent to surface waters that do not currently convert ammonia to nitrates.

The new ammonia standard adopted by DEQ in 2015 to protect the aquatic life beneficial use is anticipated to require low concentrations of ammonia in effluent for many treated wastewater discharges. Based on stakeholder input received during the interview process, a number of small communities anticipate they will have difficulty meeting such effluent limitations.

This anticipated compliance problem will likely drive the need for new nitrification treatment facilities for current secondary dischargers with limited dilution in their receiving waters.

A second example where the ability to comply with new NPDES permit requirements is problematic is with regard to the existing temperature standards, which have been modified by court orders to remove the natural condition exclusion.

As stated in a December 2015 Oregon Association of Clean Water Agencies report titled Compliance Options for Oregon Wastewater Treatment Plants roughly half of Oregon's 50 major municipal treatment systems cannot meet the existing temperature standards with existing treatment facilities.

The setting of new effluent limits for current or new permits, can result in permit issuance delays as DEQ and the permittee work out a compliance schedule or it could

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lead to applying for variances if there are no “reasonable” treatment options. In addition to temperature, other expected issues include but are not limited to:

- The lack of data regarding ambient conditions when new contaminants are identified.
- The number of other adopted water quality standards (e.g. human health standards) that have not yet been fully implemented in NPDES permits that may set new effluent limitations difficult for permittees to comply with.
- New water quality standards are under development or are anticipated (e.g. copper, nutrients) which will likely create additional NPDES effluent limitation compliance problems and drive the need for new or upgraded treatment facilities

The lack of “reasonable” treatment alternatives. Information regarding the existing treatment facilities for the individual municipal and industrial NPDES permitted entities in Oregon was requested as part of this evaluation. DEQ does not maintain a database of information that would allow a detailed assessment of projected future NPDES permit compliance problems in the State of Oregon. Without such information, it is not possible to fully understand the aggregate impact of NPDES permit requirements on the regulated community or to develop regulatory or funding strategies to address the issue.

Information that does exist regarding compliance problems associated with new permit requirements mainly resides at the permit writer or regional level, based on information received from individual permittees on a permit-specific basis. This information is conveyed to the permit writers but is not well documented or summarized at a statewide level. Therefore, DEQ does not have the information to properly assess or develop solutions for this problem area.

In the short term, anticipated NPDES permit compliance problems point to the need for utilization of tools provided by USEPA (compliance schedules, variances, integrated planning) as a means to develop approvable permits. DEQ has not effectively used these tools in its NPDES program to date.

**B. Issues Outside of DEQ Control Affect the Ability of DEQ to Fully Manage Water Quality Through the Just the NPDES Process.**

1. What, if any questions of clarification do you have?
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DEQ's authority and the State of Oregon's effectiveness in controlling all the major activities that impact ambient water quality in Oregon (e.g. agriculture, silviculture) must be recognized and addressed.

In cases where such factors are important in terms of loadings to impaired water bodies, it was suggested by multiple stakeholders that attainment of water quality standards will not be possible through the management of municipal and industrial wastewater sources regulated under the NPDES program alone. In those cases, TMDL wasteload allocations and NPDES permit effluent limitations must be carefully developed to avoid unwarranted compliance problems for municipalities and industries. The use of available tools and flexibilities afforded under the Clean Water Act in the NPDES permitting program will likely be necessary in such cases.

Another indirect factor is the projected inability for some municipalities and industries to meet NPDES effluent limitations, e.g. temperature limitations, ammonia limitations, for example.

To ultimately resolve the NPDES permit renewal conundrum, stakeholders must confront the status of its current wastewater treatment infrastructure, and ongoing funding limitations, especially related to funding for required capital improvements and subsequent operational expenses. Various funding sources for upgrading treatment facility upgrades exist, including but not limited to:

- Bonds\
- State Revolving Fund
- Grants
- Tax credits
- Time Limited Surcharges

A jurisdiction's inability to meet NPDES standards because of funding is not DEQ's direct responsibility. However, it is in DEQ's interest to address this issue. Supporting efforts to anticipate and properly resource needed infrastructure creates good will and will ultimately reduce backlog by facilitating issuance of permits that do not require variances or compliance schedules.

1. What, if any questions of clarification do you have?
2. What, if any, new or disputing information do you have that may augment or alter the conclusions?

**Recommendations for Finding 5. Systemic Issues outside of DEQ Control Contribute to the NPDES Backlog.**

It should be noted that the following recommendations are part of a group of parallel activities that will proceed with the involvement of DEQ and the reinvigorated BRC of similar body of stakeholders. There are no direct dependencies between these recommendations and the recommendations related to Findings No. 1-4. Additionally, because these recommendations will require additional resourcing, it is anticipated that a portion of the resources for these efforts will come from the regulated community since it is in their long term interest to develop this information with DEQ and other stakeholders as a joint fact-finding effort.

**R5.1. Evaluate and make recommendations to the Executive branch and Legislature regarding mechanisms to stabilize and adequately fund the NPDES Permitting Function in recognition of fluctuating access to general funds.**

DEQ should work with the reinvigorated BRC or similar body to develop options for improving funding stable, adequate funding. This effort is needed to bring focus to the issue of achieving NPDES permit limitations needed to fulfill CWA requirements. Information developed should highlight the compliance problems that are anticipated to result from the next round of NPDES

permit renewals as well as anticipating future capacity requirements. This information is important as a point of common knowledge and understanding for DEQ and stakeholders to enable an assessment of current, anticipated and future compliance and infrastructure problems faced by NPDES permittees, particularly as current and future standards are implemented.

**R5.3. Develop a strategic approach and action plan for moving forward with NPDES permitting and addressing anticipated compliance issues.**

It is anticipated that the next round of NPDES permit renewals will lead to effluent limitations which compel the construction and operation of new treatment facilities or implementation of alternative solutions by a number of municipalities and industries. The strategic approach must address the need for time to either (a) plan, design and construct facilities or (b) to allow for a re-examination of the beneficial uses and associated standards which drive those effluent limitations. USEPA tools are available which should be used to implement this approach.

The strategic approach should include partnering with the regulated community to develop information regarding the funding requirements for new or upgraded wastewater treatment facilities needed to meet NPDES permit requirements. The approach should also draw on DEQ expertise with the State Revolving Fund (SRF) and other

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<p>financing to develop a suite of options for funding support for treatment facility capital and operating costs.</p>
<p><b>R5.4. Partner with regulated community and other stakeholders to formulate a matrix/data base describing key information pertaining to individual wastewater NPDES-permitted facilities in Oregon</b></p> <p>Information should include design capacity, current flows, seasonal discharge, adoption date of last permit, receiving water flow characteristics, availability of dilution or mixing zone. This information should be sortable by:</p> <ul style="list-style-type: none"> <li>○ Region &amp; Major and minor dischargers</li> <li>○ Discharge description – seasonal, effluent dominated, with dilution</li> <li>○ Existing treatment technology</li> </ul>
<p><b>R5.5. Partner with regulated community and other stakeholders to evaluate the ability to comply with (a) existing NPDES permit effluent limitations and (b) projected NPDES permit requirements in renewed permits</b></p> <ul style="list-style-type: none"> <li>● Assemble representative effluent data by treatment category</li> <li>● Define representative effluent limitations by discharge category based on existing NPDES permit requirements</li> <li>● Define representative effluent limitations by discharge category based on anticipated NPDES permit requirements</li> <li>○ Evaluate compliance for different sectors of the regulated community based on the above information</li> </ul>
<p><b>R5.6. Estimate additional resources at local, state or federal level needed to build facilities to achieve compliance with NPDES permit requirements.</b></p> <ul style="list-style-type: none"> <li>● This would be a revision to existing information developed for the Clean Water Needs Survey under the SRF program.</li> </ul>
<p><b>R5.7. DEQ, the State Legislature and stakeholders should identify and work together to provide the resources needed to fund major capital expenditures to assist the regulated community in achieving CWA requirements.</b></p> <p>Investments in infrastructure will be necessary for the long term sustainability of the NPDES program in meeting CWA requirements. A plan to support funding for necessary municipal and industrial wastewater</p>

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treatment capital improvements at a statewide level is needed.

Given the probable magnitude of costs and the number of communities that may be involved, this will involve coordination with the Legislature. Funding sources to be explored include Federal and philanthropic grants, State Revolving Fund loans, other local funding sources and State bonds.

**R5.8. Utilize available EPA regulatory tools in individual permits or across a class of permittees to provide time for compliance actions (treatment upgrades, site specific standards, use attainability analyses, etc.) to occur.**

Available tools include permit conditions, compliance schedules, variances, integrated plans, and others. This will be a significant effort requiring close coordination between DEQ, EPA, the regulated community and other stakeholders.

## **DISCUSSION TOPIC 6 – A HISTORY OF FAILED CHANGE EFFORTS INCREASED RISKS FOR FUTURE EFFORTS**

### **Finding.6. A History of Failed Change Efforts Creates Increased Risks for Future Efforts**

The frequency and continuous lackluster implementation of DEQ change efforts along with associated disappointing results have created organizational fatigue. This has also inoculated the staff members to resist change. Special attention will be required in building an implementation approach that addresses this issue.

### **Recommendations for Finding 6. History of Failed Change Efforts**

**R 6.1. Include specific change management techniques in the project implementation report.**

Recognize the timeframes and resources available to achieve results.

## **DISCUSSION TOPIC 7 – CONSEQUENCES OF NO ACTION**

**Following is an assessment of the consequences of no action.**

1. What, if any, additional consequences may occur if DEQ and other stakeholders fail to make necessary changes?
2. What would you add subtract or change about the consequences listed?

As affirmed by statute and regulation,<sup>9</sup> “Maintaining high water quality is critical to supporting economic and community growth and sustainability. Protecting high water quality also provides a margin of safety that will afford the water body increased resilience to potential future stressors, including climate change. Degradation of water quality can result in increased public health risks, higher treatment costs that must be borne by ratepayers and local governments, and diminished aquatic communities, ecological diversity, and ecosystem services.

Conversely, maintaining high water quality can lower drinking water costs, provide revenue for tourism and recreation, support commercial and recreational fisheries, increase property values, create jobs and sustain local communities. While preventing degradation and maintaining a reliable source of clean water involves costs, it can be more effective and efficient than investing in long-term restoration efforts or remedial actions.”

In constructing the Work Plan for this Program Review, it was anticipated that some recommendations could potentially be mutually exclusive or that more than one approach could be pursued. To accommodate this potential, the Work Plan prescribed inclusion of a review of alternatives as part of the Recommendations Report.

Instead, the offered recommendations emerged as a suite of actions that, in total, offer the best option for systemic improvement. Each recommendation also individually leads to incremental improvement in some aspect of the permitting process. In this format, the most realistic alternative to the proposed package of recommendations is No Action. The following are projections of probable future consequences under a No Action condition.

- The failure to renew NPDES permits on time continues to create negative perceptions of DEQ and a breakdown in trust, within the department, with the public, with EPA, with the regulated community and with the NGO community. Although this is not an immediate concern, should problems accelerate, and/or a court or legislative body requires, EPA ultimately has the authority to remove Oregon’s delegation to take back NPDES permitting authority over some or all NPDES permits in the State.
- New EPA permitting regulations are anticipated to place more pressure on the State than has been previously experienced. The preponderance of administratively extended NPDES permits in Oregon and other states are likely to trigger more stringent oversight by EPA. Given the previous pace of these changes have already created permit issuance delays, it can be expected the backlog situation would only grow worse.
- The perpetuation of the NPDES permit backlog will make the permitting problem even more difficult to solve over time. Additional costs will be incurred by the regulated community to re-produce current data sets necessary for the permit renewal process. The delay in implementing standards and TMDL requirements will create legal and public perception problems and may magnify the eventual cumulative step increase in capital costs needed for treatment facilities or other measures to meet permit requirements.

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<sup>9</sup> Federal Register / Vol. 80 , No. 162 / Friday, August 21, 2015 / Rules and Regulations, [Page 51020], ENVIRONMENTAL PROTECTION AGENCY, 40 CFR Part 131, [EPA-HQ-OW-2010-0606; FRL-9921-21-OW], RIN 2040-AF16, Water Quality Standards Regulatory Revisions

- The response to a failure to issue “quality permits” will differ depending on the content of those permits. If the permits fail to fulfill all Clean Water Act and DEQ requirements, the likely response will be more letters from EPA requesting permit modifications, potential reversal of NPDES delegation authority, and more administrative and legal challenges from the NGO community. Such challenges will divert resources and further complicate the current backlog situation. If the permits result in an immediate major increase in compliance problems and treatment requirements, the response will likely be administrative appeals and legal action from the regulated community and a breakdown in collaboration between DEQ and the regulated community. During the period of administrative and legal conflict, implementation of practical and effective treatment facility improvements and/or alternative compliance projects will likely be delayed. Fines for enforcement due to noncompliance will increase.
- The failure to properly address training and documentation needs, and manage recruitment issues, will continue to erode the ranks of qualified NPDES permitting staff.
- Failure to implement large scale programmatic changes regarding integrating the standards and TMDL requirements that impact the NPDES permitting effort will cause the backlog to return.

## **DISCUSSION TOPIC 8 – NEXT STEPS**

Utilizing stakeholder input gathered at the Stakeholder Workshop conducted on September 19, 2016 to determine what content will be advanced an Implementation Plan. This plan will be refined with a stakeholder workshop on October 28, 2016 to receive additional suggestions.

A Final Evaluation and Implementation Plan will be submitted to DEQ on November 16, 2016.

**DISCUSSION TOPIC 9 – STAKEHOLDER PRIORITIES**

A significant number of findings and recommendations have been tendered. A full list of recommendations is included on the following pages. The volume of recommendations tendered in previous backlog reduction efforts has been identified as factor in failure to achieve implementation. Following are some concepts related to priority.

<b>Overall –The findings and recommendations list a number of options for reducing the backlog.</b>	
1. What do you believe are the 5 most promising recommendations for reducing the backlog?	
2. What are the 5 most promising recommendations you believe could be achieved in the near term?	
3. What are the top 5 recommendations you finding promising in the long term?	
4. What, if any, recommendations would you remove from consideration?	
5. What, if any, recommendations: a. Do you need more information on before making an assessment? b. What information would you request?	

Looking at the Recommendations by Category, please circle your top one or two priorities per category.

<b>Recommendations by Number</b>						
1.1	1.5	2.1	3.1	4.1	5.1	5.5
1.2	1.6	2.2	3.2	4.2	5.2	5.6
1.3	1.7	2.3	3.3	4.3	5.3	5.7
1.4		2.4	3.4	4.4	5.4	5.8
		2.5				
		2.6				

Recommendations related to the Resources provided for Permit Writing	Recommendations related to Inefficiencies	Recommendations related to Commitment
<p><b>R1.1.</b> Reduce tasks assigned to NPDES permit writers to essential functions to permit issuance and permit process related improvements.</p> <p><b>R1.2.</b> Determine the number of NPDES FTEs needed to eliminate the NPDES permit backlog in Oregon over a 5-year time horizon.</p> <p><b>R1.3.</b> Assign staff with strong permit writing experience and skills to an NPDES permit writers group.</p> <p><b>R1.4.</b> Hire/train additional permit writers in accordance with FTE requirements.</p> <p><b>R1.5.</b> Retain additional expertise work to with the DEQ NPDES permit writers group.</p> <p><b>R1.6.</b> Provide sufficient training and guidance to ensure proficiency and skills building.</p> <p><b>R1.7.</b> Provide technical assistance communities, on a needs basis, with external resources.</p>	<p><b>R2.1.</b> Take steps to ensure that essential data is available to NPDES permit writers at the appropriate time.</p> <p><b>R2.2.</b> Ensure that data is available for the purposes of transparency and to track outcomes that can be translated into documents used to create public accountability.</p> <p><b>R2.3.</b> Improve permit template, permit evaluation report guidance, permit writers guidance documents, permit tools, IMDs.</p> <p><b>R2.4.</b> Charge an Expert NPDES Group with improving/optimizing the NPDES permitting process – include updated process maps in Permit Writers guidance compendium.</p> <p><b>R2.5.</b> Update the current permit issuance planning process to achieve backlog reduction with interim goals that approach a 10 percent backlog over a 5-year time horizon.</p> <p><b>R2.6.</b> Centralize authority for NPDES permit adoption</p>	<p><b>R3.1.</b> To demonstrate commitment, DEQ must elevate NPDES permit renewal to be a top priority of its Water Quality Program.</p> <p><b>R3.2.</b> DEQ must establish the leadership structure and management measures to implement the plan.</p> <p><b>R3.3.</b> DEQ must engage EPA, the regulated community and other knowledgeable stakeholders to implement improvements.</p> <p><b>R3.4.</b> DEQ should assist in re-chartering one or more BRC (and/or additional stakeholder bodies) with a revitalized purpose that creates a champion for implementation of recommended improvements and ensures transparency and public accountability for changes.</p>

Recommendations on Alignment of Processes	Recommendations related to Issues Outside of DEQ Control	
<p><b>R4.1.</b> Address the major Oregon Water Quality Standards adopted or modified over the past fifteen years.</p> <p><b>R4.2.</b> Initiate a coordinated effort with DEQ, EPA and all stakeholders to identify NPDES permitting solutions for problems associated with implementation of existing water quality standards that affect the NPDES permit renewal process.</p> <p><b>R4.3.</b> Review DEQ’s water quality standards development process to identify whether prescribed implementation measures would result in the attainment of proposed standards.</p> <p><b>R4.4.</b> Utilize a newly chartered BRC or similar stakeholder group to identify anticipated future water quality standards to be adopted in the next 10 years. This group should evaluate compliance issues that may result from projected future water quality standards.</p>	<p><b>R5.1.</b> Evaluate and make recommendations to the Executive branch and Legislature regarding mechanisms to stabilize and adequately fund the NPDES Permitting Function in recognition of fluctuating access to general funds.</p> <p><b>R5.2.</b> Develop a statewide inventory of the existing treatment facilities subject to the 360 NPDES permits. In addition to location, the inventory should categorize treatment capabilities and capacity relative to community population.</p> <p><b>R5.3.</b> Develop a strategic approach and action plan for moving forward with NPDES permitting and addressing anticipated compliance issues.</p> <p><b>R5.4.</b> Partner with regulated community and other stakeholders to formulate a matrix/data base describing key information pertaining to individual wastewater NPDES-permitted facilities in Oregon</p> <p><b>R5.5.</b> Partner with regulated community and other stakeholders to evaluate the ability to comply with (a) existing NPDES permit effluent limitations and (b) projected NPDES permit requirements in renewed permits</p>	<p><b>R5.6.</b> Estimate additional resources at local, state or federal level needed to build facilities to achieve compliance with NPDES permit requirements.</p> <p><b>R5.7.</b> DEQ, the State Legislature and stakeholders should identify and work together to provide the resources needed to fund major capital expenditures to assist the regulated community in achieving CWA requirements</p> <p><b>R5.8.</b> Utilize available EPA regulatory tools in individual permits or across a class of permittees to provide time for compliance actions (treatment upgrades, site specific standards, use attainability analyses, etc.) to occur.</p>