



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Brown, Carlson, Mital, Simpson and Helgeson  
FROM: Sue Fahey, Chief Financial Officer; Deborah Hart, Interim Finance Manager;  
Ben Ulrich, Interim General Accounting Supervisor  
DATE: August 24, 2018  
SUBJECT: 2017 Audit Management Letter Update  
OBJECTIVE: Information Only

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Attached is the 2017 Audit Management Letter, which includes an update by Management to outline the progress made since the letter was presented to the Board in April.



COMMUNICATIONS WITH THOSE  
CHARGED WITH GOVERNANCE

**EUGENE WATER & ELECTRIC BOARD**

December 31, 2017

## **Communications with Those Charged with Governance and Internal Control Related Matters**

To the Board of Commissioners  
Eugene Water & Electric Board

Dear Commissioners:

We have audited the financial statements of Eugene Water & Electric Board (EWEB or the Board) as of and for the year ended December 31, 2017, and have issued our report thereon dated March 19, 2018. Professional standards require that we provide you with the following information related to our audit.

### **Our Responsibility under Auditing Standards Generally Accepted in the United States of America**

As stated in our engagement letter dated September 6, 2017, our responsibility, as described by professional standards, is to form and express an opinion about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with accounting principles generally accepted in the United States of America. Our audit of the financial statements does not relieve you or management of your responsibilities.

Our responsibility is to plan and perform the audit in accordance with auditing standards generally accepted in the United States of America and to design the audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free from material misstatement. An audit of financial statements includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control over financial reporting. Accordingly, we considered Board's internal control solely for the purposes of determining our audit procedures and not to provide assurance concerning such internal control.

We are also responsible for communicating significant matters related to the financial statement audit that, in our professional judgment, are relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

### **Planned Scope and Timing of the Audit**

We performed the audit according to the planned scope and timing previously communicated to you in our planning meeting held on December 5, 2017.

## **Significant Audit Findings and issues**

### ***Qualitative Aspects of Accounting Practices***

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Board are described in Note 1 to the financial statements. No new accounting policies were adopted and there were no changes in the application of existing policies during 2017. We noted no transactions entered into by the Board during the year for which there is a lack of authoritative guidance or consensus. There are no significant transactions that have been recognized in the financial statements in a different period than when the transaction occurred.

### ***Significant Accounting Estimates***

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most significant estimates affecting the financial statements were:

**Unbilled Revenue** – Unbilled revenue is a measure of revenue earned through the end of the reporting period that has yet to be billed. This generally represents accounts with billing cycles that start in the reporting year and end in the subsequent year. We have evaluated the key factors and assumptions used to develop unbilled revenue in determining that it is reasonable in relation to the financial statements taken as a whole.

**Allowance for Doubtful Accounts** – This represents an estimate of the amount of accounts receivable that will not be collected. We have evaluated the key factors and assumptions used to develop the allowance in determining that it is reasonable in relation to the financial statements taken as a whole.

**Recovery Periods for the Cost of Plant** – This represents the depreciation of plant assets. Management's estimate of the recovery periods for the cost of plant is based on regulatory-prescribed depreciation recovery periods. We have evaluated the key factors and assumptions used to develop the recovery periods in determining that they are reasonable in relation to the financial statements taken as a whole.

**Other Post-employment Benefit Obligations** – This represents the amount of annual expense recognized for post-employment benefits. The amount is actuarially determined, with management input. No liability is recognized in EWEB's financial statements because the annual required contribution, as actuarially determined, is transferred to an external trust. We have evaluated the key factors and assumptions used to develop the annual expense in determining that it is reasonable in relation to the financial statements taken as a whole.

**Mark-to-Market Adjustment** – Certain derivative instruments are marked to market at year end. However, the impact to the statement of revenues, expenses, and changes in net position is deferred in accordance with GAAP. We have evaluated the key factors and assumptions used to develop year-end amounts and have determined that they are reasonable in relation to the financial statements taken as a whole.

**Net Pension Liability** – This represents the amount of pension liability. The amount is actuarially determined, with OPERS management input. We have evaluated the key factors and assumptions used to develop the annual expense in determining that it is reasonable in relation to the financial statements taken as a whole.

**Valuation of Investments** – Management’s estimate of investments is based on current market rates and conditions. We evaluated the key factors and assumptions used to develop the valuation of investments and determined that they are reasonable in relation to the financial statements taken as a whole.

### ***Financial Statement Disclosures***

The disclosures in the financial statements are consistent, clear, and understandable. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. Significant disclosures include: Note 2 – Power Risk Management, Note 17 – Commitments and Contingencies and Note 15 – Retirement Benefits.

### ***Significant Difficulties Encountered in Performing the Audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.

### ***Corrected and Uncorrected Misstatements***

Professional standards require us to accumulate all factual and judgmental misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management.

Audit adjustments – For purposes of this letter, professional standards define an audit adjustment as a proposed correction of the financial statements made subsequent to the start of audit final fieldwork. An audit adjustment may or may not indicate matters that could have a significant effect on the Board’s financial reporting process (that is, cause future financial statement to be materially misstated).

The following audit adjustments were noted in the current year:

- 1) To correct the accrued payroll entry to include non-labor hours – \$405,000 (electric)
- 2) To correct the accrued payroll entry to include non-labor hours – \$127,000 (water)

Passed adjustments – Passed adjustments are those entries found during the course of the audit that management has decided to not post to the financial statements of the Board. It has been concluded by management, and agreed upon by Moss Adams, that the adjustments are immaterial to the financial statements as a whole. Passed adjustments are as follows:

- 1) To close work orders in commercial operation at year end – \$130,000 (water)

### ***Disagreements with Management***

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

### ***Management Representations***

We have requested certain representations from management that are included in the management representation letter dated March 19, 2018.

### ***Management Consultation with Other Independent Accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Board's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

### ***Other Significant Audit Findings or Issues***

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Board's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

### ***Independence***

Moss Adams is independent in appearance and fact with respect to Eugene Water & Electric Board.

## Communications of Internal Control Related Matters

In planning and performing our audit of the financial statements of EWEB as of and for the year ended December 31, 2017, in accordance with auditing standards generally accepted in the United States of America, we considered the Board's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. Accordingly, we do not express an opinion on the effectiveness of the Board's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis.

In addition to the required communications, we have identified the following matters for your consideration. Our recommendations are based on observations and testing during the course of our audit. These recommendations should be evaluated by management and the Commissioners for implementation and EWEB should conduct a cost benefit analysis including consideration of the risks for the recommended action.

### ***Other Matters***

#### **Accrued Payroll**

During our review of the year end accrued payroll amounts, we noted that the payroll accrual was not complete as it did not contain the non-labor hours (vacation, sick time, etc.) portion of the accrual. This resulted in an audit adjustment, which management recorded as of December 31, 2017.

**Recommendation:** We recommend that the payroll reports generated and utilized for the year end accrual be adjusted to include non-labor hours so that the accrual is complete and accurate at the end of the reporting period.

#### **Management Response:**

TiaMarie Harwood, Interim General Accounting Supervisor

Management agrees with the recommendation. Staff have been working with consultants to implement new payroll and time management systems over the course of the past two years. Fiscal year 2017 was the first time staff closed the year within the new payroll application.

System reports have been identified to use in the year-end accrual process to ensure completeness with respect to payroll liabilities.

**2018 Update - Management Response:**

Ben Ulrich, Interim General Accounting Supervisor

The new payroll and time management systems have been live for 2018 and are functioning as intended. Monthly payroll accrual procedures have been modified to assure completeness and accuracy. They include non-labor hours.

**Timely closing of work orders**

During our testing of open work orders, we noted that one of the work orders selected was in commercial operation in 2017 and should have been closed to plant in service prior to year end.

**Recommendation:** We recommend that management generate a report at year end to show the date of the last charge for each of the open work orders to help identify work orders that should be closed to plant in service at year end.

**Management Response:**

Mel Damewood, Chief Water Engineering and Operations Officer

Management agrees with the above recommendation. The open work order was placed in Finished status in June 2017 and was ready to close in a routine manner. However, in final review before closeout a new task was added to the work order which reopened it. Staff was unaware of the status change.

Although the recommended report exists and was reviewed at year end, the format and size make it difficult to review, and the work order was not identified in the review process. Management plans to undertake process improvements to make the report more easily consumed by end-users and will continue to review the report on a quarterly basis.

**2018 Update - Management Response:**

Mel Damewood, Chief Water Engineering and Operations Officer

Staff reviews the report on a quarterly basis, and will review reports monthly for the remainder of the year. To ensure completeness for year-end capital close, reports will be reviewed bi-weekly during the month of December. The reports for July will be run the week of August 6th.

**User Access**

Segregation of duties conflicts within each of the applications are not currently tracked and monitored by application owners. During our user access testing procedures, we noted the following for each of the major applications subject to our testing:



#### *WAM User Access*

We noted 2 business users were assigned “ADMIN” role within WAM. This role allows for full access and rights to work orders and inventory within WAM, creating segregation of duties conflicts.

#### *CIS User Access*

We noted that 5 users have “super user” access via 5 key roles within CIS. This poses a risk if user activity performed by these individuals is not properly monitored (e.g. unauthorized changes made to rates).

#### *Segregation of Duties Across Systems*

We noted that several users have access to more than one of the applications thus allowing access to potentially do more than what should be allowed. For example:

- a) One of the four WAM ADMIN users also has access to create journal entries in SmartStream.
- b) One accounting employee is assigned to the WAM G/L ADMIN role and has access to create journal entries in SmartStream.

**Recommendation:** We recommend that the user access review process continue to be formalized with application owners for SmartStream, WAM, and CIS applications to help ensure user permissions are appropriate for each user’s job responsibilities. A similar user access review process should be implemented for the new UltiPro (Human Resource Information System) application as well. Any segregation of duties conflicts identified as a result of the review should be documented with an approved business use case and the related mitigating and/or monitoring controls that will help ensure the excess access was not exploited.

With respect to WAM user access, we recommend that generic, privileged users be removed, if possible, to help ensure user accountability for actions taken within the system. We further recommend that management limit administrative rights to IT personnel in order to prevent unnecessary access.

With respect to CIS user access, we recommend that if management is not able to segregate responsibilities to limit access to these individuals due to their current job function, then a periodic (e.g. semi-annual or quarterly) review of user activity of these individuals should be performed to ensure that no unauthorized changes or transactions are made.

#### **Management Response:**

Matt Barton, Chief Information Officer; Sue Fahey, Chief Financial Officer; Julie McGaughey, Customer Operations Manager

Management agrees that system access should be reviewed on a regular basis. EWEB developed a process in 2017 to review user access conflicts, however, additional refinements

to the process are needed for it to be an effective internal control. Additional work will be completed in 2018 to better define what user access, by role, means. This will enable EWEB business units to effectively evaluate user access conflicts.

With respect to WAM user access, there are a total of three employees who have administrative rights in WAM. EWEB has limited the administrative rights to only one business user outside of IS. This user is assigned administrative rights to ensure we have continuity of coverage and system support for WAM.

User access to the system and a user's ability to approve a transaction in WAM are different controls. Going forward Finance will review approval limits on an annual basis.

With respect to CIS, all five users with "super user" access are IS employees who require this level of access to operate the system. While EWEB Management agrees that a regular review of user activity is a best practice, CIS does not have that capability due to its age.

To monitor and control system changes, EWEB staff are required to follow IS's System Change & Configuration Management Policy. The overall mission of system change & configuration management is to ensure that Change Requestors conform to standardized methods and procedures. This is to ensure that changes to IS production systems may be tracked and deployed promptly and efficiently, minimizing the impact of change-related incidents upon service quality, and consequently improve the day-to-day operations of the organization.

EWEB developed a process in 2017 to review user access conflicts however, additional refinements to the process are needed for it to be an effective internal control. Additional work will be completed in 2018 to better define what user access, by role, means. This will enable EWEB business units to effectively evaluate user access conflicts.

**2018 Update - Management Response:**

Matt Barton, Chief Information Officer; Sue Fahey, Chief Financial Officer; Julie McGaughey, Customer Operations Manager

Information Services has created the user access definitions for the WAM, CIS, SmartStream and Ultipro systems. Information Services began reviewing user access with EWEB Business Units in August with the goal of completing the reviews by December.

Finance will be reviewing approval limits within WAM on an annual basis starting in Q3 2018.

This communication is intended solely for the information and use of the board and members of management and is not intended to be and should not be used by anyone other than these specified parties.





# Upriver Presentation Agenda

EUGENE WATER & ELECTRIC BOARD  
 McKenzie Fire & Rescue Training Center  
 42870 McKenzie Highway

Sept. 18, 2018

[www.eweb.org](http://www.eweb.org)

**Doors open at 6:00 p.m., Presentations will begin at 6:30 p.m.**

Topic	Objective	Est. Length	
Social mixer - Meet and Greet	-	30	
<b>Presentations</b>			
Emcee: TBD			
Item	Topic	Objective	Est. Length
1.	Welcome and Meeting Overview	-	5
2.	Carmen-Smith Project Update <ul style="list-style-type: none"> <li>▶ Mike McCann, Generation Manager</li> <li>▶ Patty Boyle, Principal Project Manager</li> <li>▶ Mark Zinniker, Generation Engineering Supervisor</li> </ul>	Information	10
3.	Leaburg Substation and Holden Creek Project Updates <ul style="list-style-type: none"> <li>▶ Rod Price, Chief Electric Engineering &amp; Operations Officer</li> <li>▶ Tyler Nice, Systems Engineering Supervisor</li> <li>▶ Philip Peterson, Senior Engineer</li> </ul>	Information	10
4.	A-B Transmission Line Modification Project <ul style="list-style-type: none"> <li>▶ Rod Price, Chief Electric Engineering &amp; Operations Officer</li> <li>▶ Tyler Nice, Systems Engineering Supervisor</li> <li>▶ Lisa McLaughlin, Environmental Supervisor</li> </ul>	Information	10
5.	Results of Increased River Flow Protocol at Walterville for Low-Water Years <ul style="list-style-type: none"> <li>▶ Mike McCann, Generation Manager</li> <li>▶ Lisa McLaughlin, Environmental Supervisor</li> </ul>	Information	10
6.	Canal Maintenance <ul style="list-style-type: none"> <li>▶ Mike McCann, Generation Manager</li> <li>▶ Mark Zinniker, Generation Engineering Supervisor</li> </ul>	Information	10
7.	Advanced Meter Infrastructure <ul style="list-style-type: none"> <li>▶ Sue Fahey, Chief Financial Officer</li> <li>▶ Marianne McElroy, Business Line Manager</li> </ul>	Information	5
8.	General Question and Answer Session	Information	30
9.	Conclusion	-	

## Pre-meeting table top presentations

Upriver Broadband

Customer Solutions

Water Quality, Toxic Algal Blooms, Spills, Pure Water Partners



# LANE COUNTY BOARD OF COMMISSIONERS

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Jay Bozievich  
Pat Farr  
Sid Leiken  
Pete Sorenson  
Gary Williams

August 21, 2018

EWEB Board of Commissioners  
PO Box 10148  
Eugene, OR 97440

Dear Members of the Board:

Lane County has had an intergovernmental agreement with the Eugene Water and Electric Board (EWEB) for over twenty years to provide energy assistance and energy education services to EWEB's low-income customers. This partnership has benefited both Lane County and EWEB and its low income customers by coordinating and leveraging federal, state and local funds towards a common objective.

By coordinating services EWEB's low-income customers benefit from streamlined access to a variety of Lane County's social and health services, which enhance the wellness and stability of EWEB's vulnerable customer households. The ability to make a utility payment can often be part of a broader issue that a household faces to stay housed, employed, well or safe.

Lane County supports and recognizes EWEB's desire to make improvements and streamline the process that its customers go through to receive its rate payer supported low-income energy assistance and energy efficiency services. Lane County is eager to implement changes and improvements to this end.

Lane County would like to continue to maintain a partnership with EWEB through an intergovernmental agreement for services that would incorporate EWEB's goal of reducing costs, and streamlining systems and significantly increasing the benefits and impacts to EWEB's low-income customers.

We are hopeful that there are many opportunities for us to collaborate, implement best practices and increase program impacts. Lane County looks forward to assisting EWEB in achieving common goals in a way that benefits our citizens.

Sincerely,

Jay Bozievich, Chair  
Lane County Board of Commissioners



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Brown, Carlson, Mital, Simpson and Helgeson  
FROM: Mel Damewood, Chief Water Engineering & Operations Officer;  
Karl Morgenstern, Water Quality & Source Protection Supervisor  
DATE: August 24, 2018  
SUBJECT: Pentachlorophenol Plume Associated with International Paper Mill Complex  
OBJECTIVE: Information Only

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## **Issue**

Provide Board with requested update concerning potential drinking water threats associated with the pentachlorophenol plume in groundwater adjacent to the McKenzie River.

## **Background**

For the past 23 years, the Oregon Department of Environmental Quality (DEQ) has been working with both the Weyerhaeuser Company (Weyerhaeuser) and International Paper Company (IP) to address the pentachlorophenol (PCP) plume originating from the Springfield mill site at 801 North 42<sup>nd</sup> Street. Wood treatment practices using PCP occurred on site until approximately 1987. Weyerhaeuser discovered soil contamination in the area after removing a sawmill facility in 1991. Weyerhaeuser signed a consent order with the DEQ in September 1995, agreeing to investigate the contamination and identify potential solutions to protect human health and the environment. To be protective of the Springfield Utility Board (SUB)/Rainbow Water District (RWD) well field, Weyerhaeuser installed a carbon filtration system in 1996 to treat water from the SUB/RWD wells should PCP be detected.

In September 2002, DEQ approved a Remedial Design/Remedial Action Work Plan (RD/RA) for the site and has been tracking the implementation of this plan. The RD/RA work plan requires continued monitoring and reporting on the progress and concentrations of the groundwater PCP plume as it migrates to the northwest and toward the SUB/RWD supply wells adjacent to the McKenzie River (see attached map).

Ongoing groundwater monitoring of the PCP plume is conducted by PES Environmental, Inc. (PES) on behalf of IP. Prior to 2012, monitoring wells were sampled on a monthly basis. In July, 2012, PES began collecting samples on a semiannual basis from a select number of monitoring wells after DEQ approved proposed monitoring changes submitted by PES on behalf of IP. In addition to providing analytical results from the monitoring wells to both IP and DEQ, PES provides the data on behalf of IP to EWEB upon request. The SUB/RWD wells and the well field treatment system are sampled on a monthly basis when the systems are in production. Analytical results from the wells and associated treatment system are sent to IP, SUB, RWD, DEQ and EWEB.

In addition, semiannual RD/RA progress reports summarizing work performed during the previous six months at the mill complex, along with anticipated work, are submitted to DEQ. EWEB staff have been given access to the semiannual reports. The most recent report, Number 86, was submitted to DEQ on April 16<sup>th</sup>, 2018, and is included in the discussion below. The next submission, Report Number 87, is not due until October.

## **Discussion**

Results for monitoring wells located within the intermediate depth zone, with screening intervals ranging from 36 to 72 feet below ground surface, show decreasing concentration trends near the former sawmill site and at a site downgradient of the PCP plume, just north of Keizer Slough. PCP concentrations ranged from 0.56 to 7.1 micrograms per liter ( $\mu\text{g/L}$ ) during the July, 2017 and January, 2018 sampling events. For perspective, the monitoring well located near the sawmill reporting the 7.1  $\mu\text{g/L}$  value reported a maximum value of 1,100  $\mu\text{g/L}$  in 1996.

PCP results for deep groundwater monitoring wells, typically 78 to 92 feet deep, show similar decreasing concentration trends over time with the exception of one well, MW-18D, located along the western edge of the downgradient portion of the plume (see attached map). Concentrations for this well were largely non-detect for PCP prior to 2010, but have steadily increased to current levels (July 2017 – 6.1  $\mu\text{g/L}$  and January 2018 – 4.8  $\mu\text{g/L}$ ). The highest PCP concentration detected over the past two sampling events was 36  $\mu\text{g/L}$  in July 2017, which came from a monitoring well located in the immediate downgradient portion of the plume. Looking at all available data since 2001, the peak concentration reported for this particular well was 320  $\mu\text{g/L}$  in 2001. Several of the deep groundwater wells have reported non-detect values over the past few years. Of notable exception are two down-gradient monitoring wells, MW-19D and MW-5D, which are both located between Keizer Slough and the McKenzie River. Although concentrations appear to be decreasing over time, reported values ranged from 7  $\mu\text{g/L}$  at MW-5D to 11  $\mu\text{g/L}$  at MW-19D this past January.

From 2001 to 2018, over 300 samples have been collected by PES from three SUB/RWD wells (#1, #2, #3) down-gradient of the plume and adjacent to the McKenzie River. During this time there have been a total of 7 PCP detections. The U.S. Environmental Protection Agency maximum contaminant level (MCL) for PCP is 1  $\mu\text{g/L}$  for drinking water. The 7 detections were found in wells #1 and #2 and concentrations ranged from .082 to 0.21  $\mu\text{g/L}$ , which are 5 to 10 times below the MCL. No detections were reported for well #3. As expected, most detections were reported during the second half of the monitoring period, in line with model predictions showing a slow progression of the plume to the northwest and towards the well fields. No PCP detections have been reported over the past 24 months. Samples collected from all three SUB/RWD wells are also analyzed for volatile organic compounds (VOCs). Over the past 5 years, three VOCs have been detected at least once at very low concentrations in Wells #1 and #3. No VOC detections have been reported during the past 12 months.

EWEB Hayden Bridge staff and Drinking Water Source Protection staff have been collecting water samples from stormwater sources in the vicinity of the plume and from raw water at the drinking water plant on a regular basis since 2002. Although Hayden Bridge staff collected raw water samples at the drinking water plant prior to 2000, only data collected since 2000 is included in this review. PCP has been sampled at the intake more than 160 times since 2000. During this time, there have been no detections above the reporting limit (RL). The RL typically falls around .1  $\mu\text{g/L}$  for most PCP samples. Over 100 samples have been analyzed for PCP from sites associated with

Springfield urban stormwater runoff since 2002. A total of 19 PCP detections have been reported from sites related to urban stormwater runoff, although over half are considered estimated values since the detected values fall below the RL. Nearly 90% of the detections are the result of targeted monitoring efforts during storm events. Concentrations range from .078 µg /L to .8 µg /L, all below the MCL for PCP. The maximum value observed originated from the 42<sup>nd</sup> stormwater channel, but was flagged by the analyzing laboratory as an estimated value. A total of 8 detections are associated with locations adjacent to or near the plume. However, the other 11 detections came from stormwater sources not associated with the plume. The occurrence of PCP in stormwater channels not associated with IP's property suggests the presence of PCP is likely ubiquitous at low concentrations in urban landscapes, especially during storm events when many contaminants are flushed into local waterways. No PCP detections have been observed in either raw water or stormwater sources within the past 24 months, which includes approximately 30 samples in total.

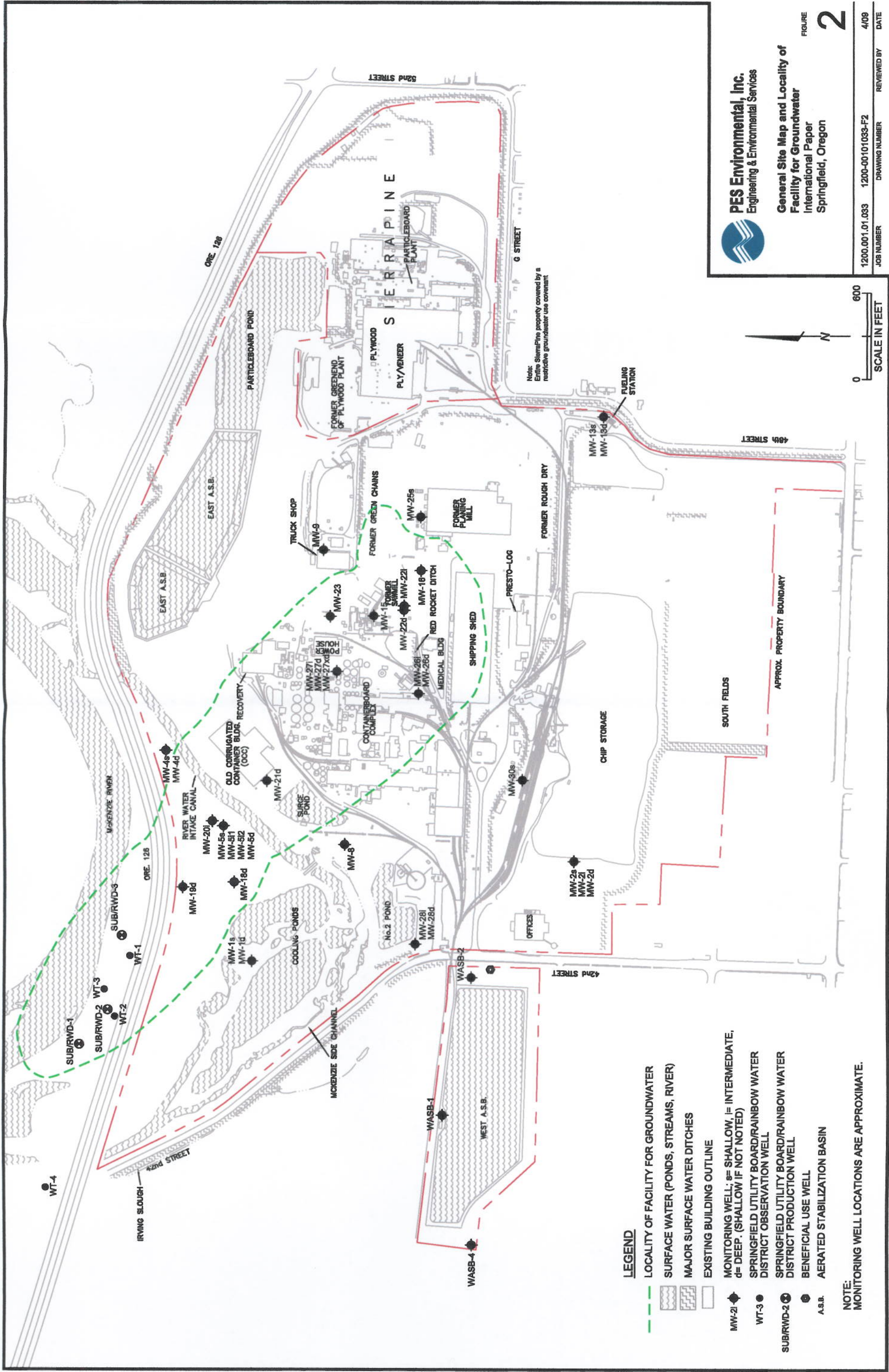
**Recommendation**

This memo is for informational purposes only. Staff will continue to monitoring the situation and based on current data and information do not believe the PCP contaminated groundwater plume poses a significant threat to EWEB's drinking water quality.

**Requested Board Action**

No formal action is requested at this time.





**PES Environmental, Inc.**  
Engineering & Environmental Services

**General Site Map and Locality of Facility for Groundwater International Paper Springfield, Oregon**

FIGURE  
**2**



1200.001.01.033 1200-00101033-F2  
JOB NUMBER DRAWING NUMBER  
4/09  
REVIEWED BY DATE

Note:  
Entire SierraPine property covered by a restrictive groundwater use covenant.



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Brown, Carlson, Mital, Simpson and Helgeson  
FROM: Mark Zinniker, Generation Engineering Supervisor  
DATE: August 23, 2018  
SUBJECT: Urgent Investigations at Carmen Diversion Reservoir  
OBJECTIVE: Information Only

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## **Issue**

As described in the attached emergency declaration, EWEB has needed to move ahead quickly on preparations for investigation work related to the presence of sinkholes on the bottom of Carmen Diversion Reservoir.

On July 16 and 17, 2018, a team consisting of EWEB staff, our Part 12D Independent Consultant (Schnabel Engineering), and our FERC dam safety compliance engineer inspected the Carmen-Smith Project. During that field inspection, the team viewed numerous known sinkholes in Carmen Diversion Reservoir, reviewed results from a previous bathymetric survey of the reservoir bottom, and discussed potential failure modes associated with the sinkhole situation.

In response to concerns raised from observations and discussions during the week of July 16<sup>th</sup>, the FERC issued a letter on July 25, 2018 requesting that EWEB take immediate action to work with the Independent Consultant to develop a work plan for assessing the site conditions, complete site investigations, and design of any needed repairs at the Carmen Diversion Reservoir within 45 days of receipt of their letter (see attached letter).

Since receipt of the FERC letter, EWEB staff have worked with Schnabel Engineering to negotiate a scope and fee to develop and perform the FERC mandated work plan. The fee exceeded the threshold for Board approval and waiting until the September 4<sup>th</sup> Board meeting would not permit EWEB to comply with the FERC-mandated response schedule. As a result, EWEB staff requested an emergency declaration so that this necessary work could proceed in a timely manner.

EWEB staff also observe that rapid progress on the FERC requested work plan is advantageous with respect to the approaching wet weather season which could complicate or preclude certain investigation and/or remediation opportunities.

## **Requested Board Action**

Information only, no Board action requested.

FEDERAL ENERGY REGULATORY COMMISSION  
Office of Energy Projects  
Division of Dam Safety and Inspections – Portland Regional Office  
805 SW Broadway, Suite 550  
Portland, Oregon 97205  
(503) 552-2700 Office - (503) 552-2799 Facsimile

7/25/2018

In reply refer to:  
P-2242-OR

Mr. Mark Zinniker  
Generation Engineering Supervisor  
Eugene Water and Electric Board  
P.O. Box 10148  
Eugene, OR 97440

Subject: 2018 Dam Safety Inspection Follow-Up Items for the Carmen-Smith Project

Dear Mr. Zinniker:

On July 16 and 17, 2018, Ms. Kristie Hartfeil of this office inspected the Carmen-Smith Project, FERC No. 2242. All project structures were inspected. As discussed with you and your staff, numerous large sinkholes have been identified in Carmen Diversion reservoir in the past as well as during this inspection. Based on our observations, the sinkholes could pose a significant dam safety or reservoir blowout concern and require immediate attention. Based on our visual inspections, review of project files, and discussions during the Part 12D Potential Failure Mode Assessment (PFMA), we have significant dam safety concerns about the following:

- a. Thirteen sinkholes documented in the 2016 bathymetry survey of the Carmen Diversion reservoir, including a sinkhole 25 feet in diameter and 13 feet deep near the upstream dam toe;
- b. Two previously backfilled sinkholes immediately downstream of the dam near Station 24+00;
- c. Linear depressions or slumping observed on the dam downstream slope, near the toe between Stations 22+00 and 24+00; and
- d. Uncontrolled seepage exiting at the downstream dam toe between Station 22+00 and 23+00.

These observations are consistent with developing potential internal erosion failure modes of the foundation and/or embankment under normal loading conditions. Although the dam currently has a low downstream hazard classification, failure of the structure would result in loss of the ability to divert water into Smith Reservoir and

severely limit the functionality of the power project. In addition, there are dozens of people recreating in the Tamolitch Falls (Blue Pool) area downstream from the dam during the summer that could be endangered in the event of a reservoir blowout and/or dam failure. **Therefore, we are requesting that EWEB should take immediate action and work with your Part 12D Independent Consultant (IC) to develop a workplan for assessing the site conditions, complete site investigations, and design of any needed repairs to be submitted within 45 days of receipt of this letter.** Furthermore, you need to develop interim risk reduction measures, which could include restricting the reservoir level, increased monitoring and surveillance, and/or enhanced downstream warning systems.

Additional items observed during the inspection were discussed with you, Ms. Cheri Wilson, Mr. Dan Olmstead, and Ms. Laura Ohman. A complete list of the additional items requiring your attention are listed below:

General:

1. The 2016 Bathymetric and Topographic Survey of Trail Bridge Dam, Smith Dam, and Carmen Diversion Reservoirs for EWEB by David Evans and Associates was never formally submitted to D2SI-PRO. This report and all future bathymetric and topographical surveys should be filed with D2SI-PRO upon receipt by EWEB.

Carmen Diversion Development:

2. Seepage Weir CD-SW1 is affected by backwater from spillway discharges and does not adequately monitor seepage flows observed between Stations 22+00 and 23+00 at the downstream dam toe. Additional weirs should be constructed near the seepage exit points to adequately monitor flows.
3. An approximately 1250-foot-long seepage blanket was originally constructed over the native pervious talus slope along the western edge of the reservoir, as shown in the as-built Drawing 3048-A-22-004. Trees are currently growing along the eastern edge of the road and into the seepage blanket. All vegetation over the seepage blanket should be removed and the seepage blanket repaired to original condition.
4. Given the presence of recreationalists and campgrounds downstream, EWEB should confirm the low hazard classification of this development. This effort would include a dam break analysis under both flood and sunny day, inundation mapping, and Sudden Failure Assessment (SFA).
5. As mentioned above, Blue Pool is heavily recreated and is downstream of the Carmen Diversion development. If Blue Pool is determined to be within the inundation zone of a Carmen Diversion dam breach, EWEB should

revise their Emergency Action Plan and Public Safety Plan, including development of interim risk reduction measures, to provide adequate warning time for evacuation of recreationists.

6. As discussed during the inspection, the Carmen Diversion tunnel was last inspected in 1982, and required repairs at that time due to settlement and internal erosion of foundation material. It is our understanding that EWEB is intending to inspect the tunnel this fall and we concur with the importance of this activity.
7. The vegetation near the downstream toe impairs visual inspection for seepage and surficial changes due to dam operations. Your IC should provide a recommendation for the width of the vegetation buffer that EWEB should maintain.

Smith Dam Development:

8. The siren on the Smith Dam spillway operates only as the gate opens, providing an inadequate warning time for anyone downstream. EWEB should revise the Public Safety Plan and project operations to improve the warning time for spillway discharges.

Trail Bridge Development:

9. The actual embankment footprint of Trail Bridge Dam is much larger than what is currently covered by EWEB's vegetation management plan. The embankment footprint extends west across Highway 126 (West Embankment), to the upstream end of the impervious/cutoff blanket; and almost five hundred feet upstream along the right abutment. Vegetation (shrubs to trees) were observed within the embankment footprint at the following locations:
  - a. On both upstream and downstream slopes of the West Embankment;
  - b. On upstream impervious blanket from approximately Station 4+84 to Station 7+00; and
  - c. On several hundred feet of the upstream right abutment embankment shell and blanket.

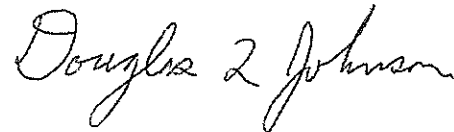
All vegetation over blanket and shell materials should be removed and embankment materials repaired to original condition.

Due to the potential urgency of the issues associated with the sinkholes at Carmen Diversion, in addition to providing a workplan as requested within 45 days from the date of this letter, we also request a face to face meeting with you and your

consultants to discuss the workplan and a path forward. For the remaining nine comments, please respond to or submit a plan and schedule for addressing comments Nos. 1 through 9 within 60 days of the date on this letter.

Thank you for your continued cooperation and interest in dam safety and emergency planning. If you have any questions, please contact Ms. Kristie Hartfeil of this office at (503) 552-2731.

Sincerely,

A handwritten signature in cursive script that reads "Douglas L. Johnson". The signature is written in black ink and is positioned above the printed name and title.

Douglas L. Johnson, P.E.  
Regional Engineer

Document Content(s)

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## FINDINGS TO SUPPORT DECLARATION OF EMERGENCY

DATE: 8/17/2018REQUESTOR: Cheri Wilson, Generation EngineeringESTIMATED COST: \$169,616

**In accordance with ORS 279A.065, ORS279A.025, 279B.080, 279B.145, 279C.335(5); 279C.380(4) and all applicable EWEB Rules:**

The Purchasing Manager, with the concurrence of the General Manager and/or an affected Executive Manager, may approve award of a public contract for goods, services, or work as an emergency procurement.

“**Emergency**” means circumstances that:

- (A) Could not have been reasonably foreseen;
- (B) Create a substantial risk of loss, damage or interruption of services or a substantial threat to property, public health, welfare or safety; and
- (C) Require prompt execution of a contract to remedy the condition. (See ORS 279A.010((1)(f))

Such circumstances may also include, but are not limited to:

- (a) EWEB moving forward as quickly as possible to prevent interruption to vital services, restoration of vital services, or to
- (b) Prevention of loss to EWEB,
- (c) Protection of the quality of services, or
- (d) Other circumstances necessary to responsibly carry out EWEB's services to its customers

**279B.145 Finality of determinations.** The determinations under ORS 279B.055 (3) and (7), 279B.060 (3) and (10), 279B.075, 279B.080, 279B.085 and 279B.110 (1) are final and conclusive unless they are clearly erroneous, arbitrary, capricious or contrary to law.

**NATURE OF THE EMERGENCY:**

(Describe the nature of the emergency and what if any effort was made to complete a competitive process)

On July 16 and 17, 2018, a team consisting of EWEB staff, our Part 12D Independent Consultant (Schnabel Engineering), and our FERC dam safety compliance engineer inspected the Carmen-Smith Project. During that field inspection, the team viewed numerous known sinkholes in Carmen Diversion Reservoir, reviewed results from a previous bathymetric survey of the reservoir bottom, and discussed potential failure modes associated with the sinkhole situation. In response to concerns raised during those discussions, the FERC issued a letter on July 25, 2018 requesting that EWEB take immediate action to work with the Independent Consultant to develop a work plan for assessing the site conditions, complete site investigations, and design of any needed repairs at the Carmen Diversion Reservoir within 45 days of receipt of their letter (see attached letter). Since receipt of the FERC letter, EWEB staff have worked with Schnabel Engineering to negotiate a scope and fee to develop and perform the FERC mandated work plan. Since the fee exceeds the threshold for Board approval and waiting until the September 4<sup>th</sup> Board meeting will not permit EWEB to comply with the FERC-mandated response schedule, EWEB staff request an emergency declaration so that this necessary work can proceed in a timely manner. EWEB staff also observe that rapid progress on the FERC requested work plan is



advantageous with respect to the approaching wet weather season which could complicate or preclude certain investigation and/or remediation activities.

**APPROVALS**

Department Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

Purchasing Manager: \_\_\_\_\_ Date: \_\_\_\_\_

ET Manager: \_\_\_\_\_ Date: \_\_\_\_\_

General Manager: \_\_\_\_\_ Date: \_\_\_\_\_

**PURCHASE CONTACT INFORMATION**

Vendor/Contractor: Schnabel Engineering, Inc \_\_\_\_\_

Buyer Name: \_\_\_\_\_ P.O. Number: \_\_\_\_\_