

**Willamette Intake Facilities Commission
Board Meeting Agenda
Monday, January 28, 2019 | 6:00 – 8:00 PM**

**Tualatin Valley Water District – Board Room
1850 SW 170th Avenue, Beaverton, OR 97003**

To prepare to address the Willamette Intake Facilities Board, please fill out the Public Comment Form located on the table near the main door to the meeting room. **Assistive Listening Devices (ALD) are available upon request 48 hours prior to the day of the meeting by calling (503) 941-4580.**

All testimony is electronically recorded.

The Board and other attendees dine at 5:30 p.m.

CALL TO ORDER

1. **GENERAL MANAGER'S REPORT** (Brief presentation on current activities relative to the WIF Commission)
2. **PUBLIC COMMENT**
This time is set aside for persons wishing to address the Board on items on the Consent Agenda, as well as matters not on the agenda. Additional public comment will be invited on agenda items as they are presented. Each person is limited to five minutes, unless an extension is granted by the Board. Should three or more people testify on the same topic, each person will be limited to three minutes.
3. **CONSENT AGENDA** (The entire Consent Agenda is normally considered in a single motion. Any Commissioner may request that an item be removed for separate consideration.)
 - A. Approve the October 29, 2018 meeting minutes.
4. **BUSINESS AGENDA**
 - A. Election of Officers
5. **INFORMATION ITEMS**
 - A. Semi-annual Update on the WIF-related Elements of the WWSP Raw Water Facilities Project
 - B. FY 2019 – 20 Annual Work Plan and Budget Preparation
 - C. Permitting Update
 - D. The next Board meeting is scheduled on April 29, 2019, at Tualatin Valley Water District – Board Room.
6. **COMMUNICATIONS AND NON-AGENDA ITEMS**
 - A. None scheduled.

ADJOURNMENT

Willamette Intake Facilities Commission

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Willamette Water Supply

Our Reliable Water

Safety Moment: What to do After an Auto Accident

Set the Scene



Allstate Insurance: What to do after an Accident

- 1 Check yourself for injuries
- 2 Check on the well-being of your passengers
- 3 Get to safety
- 4 Call 911
- 5 Wait for help
- 6 Exchange information
- 7 Document the accident
- 8 Notify your insurer

Legal Responsibilities per DMV

You must file an Oregon Traffic Accident and Insurance Report with DMV within 72 hours when:

- Damage to any vehicle is over \$2,500 (even if your vehicle was the only one in the crash);
- Any vehicle is towed from the scene;
- Injury or death resulted from this accident; or
- Damages to anyone's property other than a vehicle involved in this accident is more than \$2,500.

We will suspend your license if you don't file a required report.

If you were in an accident and the damages were less than \$2,500, you can report to DMV if the other party doesn't have insurance. Be sure to clearly note on the accident report that it doesn't meet mandatory reporting criteria.

Note: A police report does not count as filing an accident report with DMV. You must also file an accident report with DMV.

MEMO

Date: January 28, 2019

To: Willamette Intake Facilities Board of Commissioners

From: David Kraska, General Manager

Re: Willamette Intake Facilities General Manager's Report

The following items will be covered during the report by the GM:

1. **Be Sure to Use Microphones** – Just a reminder to please use your microphone whenever you are speaking this evening. Also, please be sure to turn off your microphone when you are not speaking.
2. **Safety Minute** – Tonight's safety minute – What to do after a car accident
3. **Kinder Morgan Update** – As a reminder, our last meeting with Kinder Morgan was held on October 4, 2018 at the Willamette River Water Treatment Plant. Kinder Morgan is the investor-owned utility that owns and operates petroleum product transmission pipelines, including one that crosses the Willamette River approximately 2,000-feet upstream of the WIF.

At this meeting, Kinder Morgan presented a proposal for improving emergency response in the event of a leak from their pipeline. After the meeting, they submitted a Statement of Intent that included the following items:

- a. Installing equipment to enable remote closure of the Kinder Morgan pipeline valve on the north side of the river
- b. Sharing relevant portions of Kinder Morgan's system information
- c. Sharing Kinder Morgan's computer modeling of a possible spill to understand the fate of any leaked petroleum products
- d. Kinder Morgan hosting joint training and response exercises
- e. Staging select emergency response equipment at the WRWTP for quicker response

Staff are continuing to follow up with Kinder Morgan representatives regarding their proposal. In particular, Wilsonville City Attorney, Barbara Jacobson, is drafting an intergovernmental agreement to formalize the terms of the arrangement, and Dave Kraska is working to obtain additional information from

GM Report to the WIF Board of Commissioners

January 28, 2019

Page 2

Kinder Morgan regarding pipeline operation to verify the planned improvements will be adequate.

- 4. Willamette Intake Facilities Insurance Update** – At our last meeting on October 29, 2018, the Board considered a staff recommendation to grant the General Manager authority to approve the 2019 property and liability insurance renewal with the Special Districts Insurance Services. The Board granted the General Manager that authority and the insurance has been renewed at a cost of \$19,315. This cost is in line with our expectations. It reflects a slight decrease, due to a credit that we receive by participating in the Special Districts Insurance Services Best Practices Program, and a slight increase, due to the increased value of the facilities. The premium covers the entire calendar year and is paid as a lump sum due on February 1.

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**Willamette Intake Facilities Commission
Board Meeting Minutes
October 29, 2018**

REGULAR SESSION – 6:00 PM

CALL TO ORDER AND ROLL CALL

Commissioners present:

| | |
|--|---------------------------------------|
| Tualatin Valley Water District (TVWD): | Jim Doane Dick Schmidt (Alternate) |
| Beaverton: | Marc San Soucie |
| Hillsboro: | John Godsey (Chair) |
| Sherwood: | Sean Garland (Vice Chair) |
| Tigard: | John Goodhouse |
| Wilsonville: | Tim Knapp |

Committee Members present:

| | |
|------------|--|
| TVWD: | Mark Knudson, Management Committee Paul Matthews, Finance Committee |
| Beaverton: | David Donaldson, Management Committee |
| Hillsboro: | Kevin Hanway, Management Committee Lee Lindsey, Finance Committee Niki Iverson, Management Committee (Alternate) |
| Sherwood: | Craig Sheldon, Management Committee |
| Tigard: | Brian Rager, Management Committee |

Managing Agency Staff present:

Dave Kraska, WIF Commission General Manager
Clark Balfour, TVWD General Counsel
Justin Carlton, Willamette Water Supply Program (WWSP) Finance and Administrative Supervisor
Mike Jacobs, TVWD Risk Management Coordinator/WWSP Safety & Security Supervisor
Collin Fleming, TVWD Facilities Supervisor
Faye Branton, WIF Commission Recorder

Other Attendees:

Joel Cary, TVWD Water Resources Division Manager
Joelle Bennett, WWSP Assistant Director

Chairman Godsey opened the meeting at 6:00pm, followed by attendee introductions.

1. GENERAL MANAGER'S REPORT

Mr. Kraska presented the General Manager's report, including Safety Minute on eye health and safety, followed by updates regarding the Raw Water Facilities project and coordination with Kinder Morgan.

In answer to Commissioners' questions, staff replied that all components of Kinder Morgan's proposal for improving emergency response for protection of the river water quality and the quality of the water entering the WIF will be evaluated in detail. The separation between the Willamette Water Supply System intake facility and the Kinder Morgan pipeline is approximately 2,000 feet.

2. PUBLIC COMMENT

There were no public comments.

3. CONSENT AGENDA

- A. Approve the July 30, 2018 inaugural meeting minutes.

Motion was made by Doane, seconded by Knapp, to approve the Consent Agenda as presented. The motion passed unanimously with Doane, Garland, Godsey, Goodhouse, Knapp, and San Soucie voting in favor.

4. BUSINESS AGENDA

- A. Rules of Conduct: Potential Amendment of Article C.2 Relating to Special Meetings

Mr. Balfour presented background and amendment alternatives for consideration related to a concern raised at the last Board meeting regarding Article C.2 of the WIF Board of Commissioners Rules of Conduct, which were approved at the July 20, 2018 Board meeting. Article C.2 currently reads "Special meetings may be called by the Chair or any two Board members."

Mr. Balfour clarified quorum and unanimous vote requirements and asked if the Board wished to amend the rule regarding special meetings or leave it as currently written.

Commissioners agreed on the need to clarify the rule regarding special meetings and agreed on the wording of suggested alternative number two, striking the words "issuance of debt".

"2. Special Meetings may be called by the Chair or any two Board Members, but action or decisions regarding addition of new members, amendment or modification of the IGA, dissolution, ~~issuance of debt~~, default of a member, or change of capacity allocations shall only occur at a regular meeting unless hardship or emergency factors exist."

Motion was made by San Soucie, seconded by Doane, to modify Article C.2 of the Rules of Conduct as stipulated in the staff report as alternative number two, striking the words "issuance of debt".

The motion passed unanimously with Doane, Garland, Godsey, Goodhouse, Knapp, and San Soucie voting in favor.

- B. Consider adopting Resolution No. WIF-05-18, a resolution adopting the Raw Water Facility Project Plan.

Mr. Carlton presented background and budget impact information regarding the Raw Water Facility Project Plan and asked the Board to consider adopting Resolution No. WIF-05-18.

Motion was made by San Soucie, seconded by Garland, to adopt Resolution No. WIF-05-18.

The motion passed unanimously with Doane, Garland, Godsey, Goodhouse, Knapp, and San Soucie voting in favor.

- C. Consider adopting Resolution No. WIF-06-18, a resolution amending and adopting a supplemental budget for the 2018-19 fiscal year regarding capital outlay for the Willamette Intake Facilities Commission.

Mr. Carlton presented the background and budget impact regarding the proposed Fiscal Year 2018-19 capital outlay for the Willamette Intake Facilities Commission, including a table reflecting each partner's share.

Motion was made by Doane, seconded by Knapp, to adopt Resolution No. WIF-06-18.

The motion passed unanimously with Doane, Garland, Godsey, Goodhouse, Knapp, and San Soucie voting in favor.

- D. Consider approving WIF Insurance Renewal Recommendation.

Mr. Jacobs presented staff's recommendation that the Board grant authority to the WIF General Manager to approve the 2019 property and liability insurance renewal with Special Districts Insurance Services (SDIS).

In answer to Commissioners' questions, staff replied that the WIF Commission does not currently own automobiles, therefore owned automobile coverage is excluded. This coverage can be placed when it becomes a need. The policy term is per calendar year.

Motion was made by Garland, seconded by San Soucie, to grant authority to the WIF General Manager to approve the 2019 property and liability insurance renewal with SDIS.

The motion passed unanimously with Doane, Garland, Godsey, Goodhouse, Knapp, and San Soucie voting in favor.

5. INFORMATION ITEMS

- A. WIF Plans Development Strategy

Mr. Kraska presented the development strategy for the three plans required by the Willamette Intake Facilities Commission Intergovernmental Agreement (IGA), which are the Operations Plan, the Curtailment Plan, and the Emergency Response Plan. (See attached presentation.)

In answer to Commissioner's question, staff replied that we are in the beginning stage of the concept regarding which plan(s) will house the delegation of responsibilities for response to challenges, such as harmful algal blooms. Staff listed a number of questions to be evaluated during the development of this concept.

Commissioner Knapp encouraged staff to clearly define the line of authority and lead protocol for emergency response scenarios, leaving no doubt regarding who is responsible for each step.

Commissioner San Soucie expressed the desire for gathering and managing data appropriately for the benefit of operational understanding.

B. Report on the Financial Affairs of the Willamette Intake Facilities Commission

Mr. Matthews presented an overview of the audited WIF Commission Basic Financial Statements for the three months period ended June 30, 2018, and the unaudited Quarterly Financial Report for the period ended September 30, 2018. Partners will be invoiced on a quarterly basis. (See attached presentation.)

In answer to Commissioners' questions, staff replied that during this quarter TVWD covered staff expense, because the WIF Commission did not yet have an adopted budget. An example of Business Expense is meals for Board meetings.

- C. The next Board meeting is scheduled on January 28, 2019, at Tualatin Valley Water District – Board Room.

6. COMMUNICATIONS AND NON-AGENDA ITEMS

- A. None scheduled.

ADJOURNMENT

There being no further questions or business, Chairman Godsey adjourned the meeting at 6:53 p.m.

John Godsey, Chair

Sean Garland, Vice Chair

Willamette Water Supply
Our Reliable Water

Willamette Intake Facilities Plans Development Strategy

October 29, 2018

Outline

- Background on the WIF Plans
- Overall Plans development strategy
- WWSP operations planning overview

Willamette Water Supply
Our Reliable Water

BACKGROUND ON THE WIF PLANS

Willamette Intake Facilities IGA requires development of three plans

- Section 11 – Operations Plan
 - Complete prior to startup of WWSS
 - Developed by the Ops committee with support of the Managing Agency
 - Review and approval by the Management Committee
 - To be adopted by the Board
 - Contents:
 - How to provide equitable, effective, and efficient operation, management, capital improvement and expansion

Willamette Intake Facilities IGA requires development of three plans

- Section 12.1 – Curtailment Plan
 - Completion date not specified in the IGA
 - Developed by the Managing Agency for review and comment by the Operations committee
 - Management Committee to review and ultimately recommend for adoption by the Board
 - Contents:
 - When and how reductions in demand shall be made
 - Describe how to treat all parties fairly and equitably when reductions are necessary

Willamette Intake Facilities IGA requires development of three plans

- Section 12.2 – Emergency Response Plan
 - Completion date not specified in the IGA
 - Prepared by the Managing Agency for review and comment by the Operations committee
 - Management Committee to review and ultimately recommend for adoption by the Board
 - Contents:
 - Not specified in the IGA / to be determined

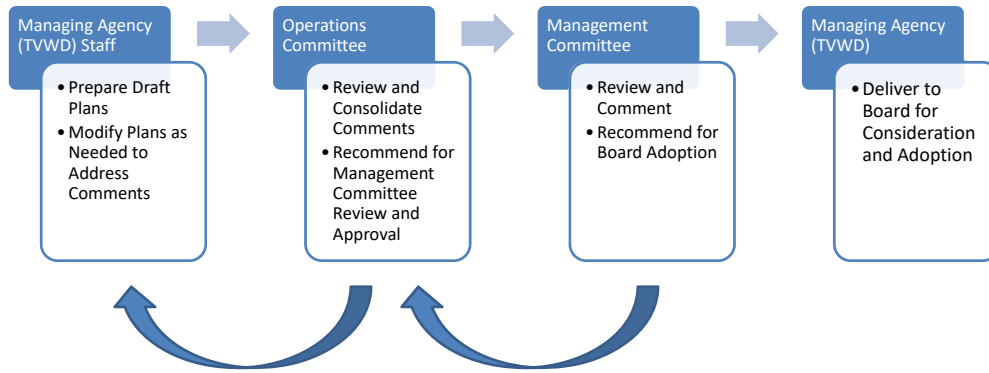
Our FY 2018 – 19 Annual Work Plan includes creating a strategy for preparing the plans

Task 1 – General Administration

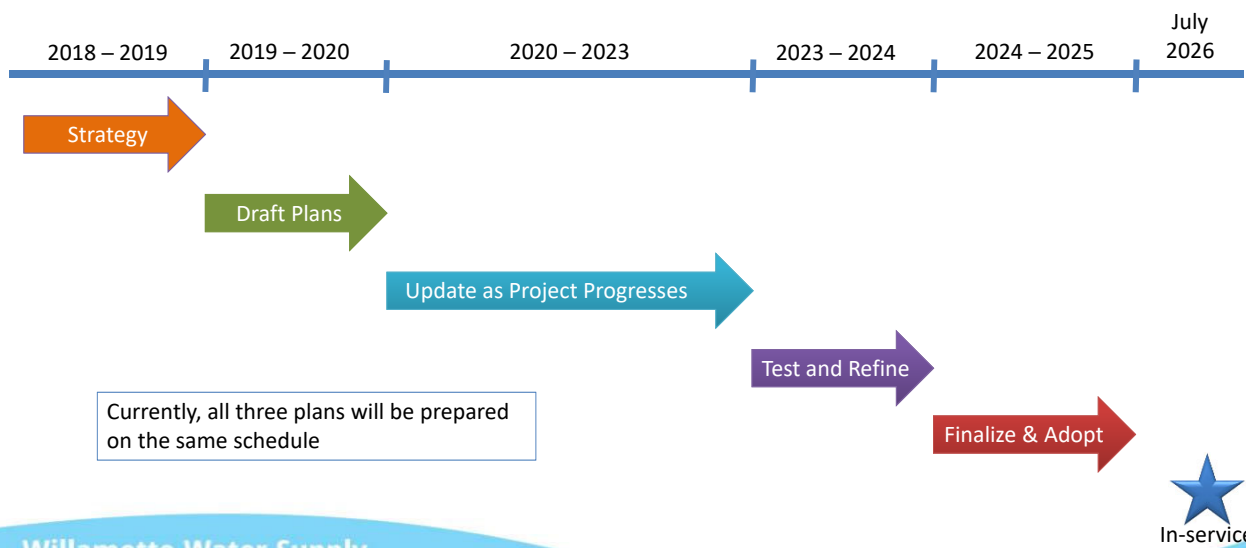
- A. Administration of Infrastructure and Maintenance
 - Draft a strategy for preparing three plans:
 - Operations Plan
 - Curtailment Plan
 - Emergency Response Plan
 - Include general scope and schedule for plans development
 - Wilsonville remains responsible for operations until 2026
- Budget: 16 hours
 - General manager 4
 - Professional: 8
 - Admin: 4

OVERALL PLANS DEVELOPMENT STRATEGY

The same development and approval process will be followed for all three plans



Overall Plans Development Schedule



Anticipated Content – Operations Plan

- Provide for equitable, effective, and efficient operation, management, capital improvement and expansion
- Topics:
 - Fish screens cleaning and maintenance
 - Intake pipeline cleaning and maintenance
 - Caisson cleaning and maintenance
 - Building maintenance
 - Air burst system operation and maintenance

Anticipated Content – Curtailment Plan

- Facilitate equitable treatment of all parties when reductions are needed
- Describe when and how reductions in demand shall be made
 - Drought
 - Extreme river water quality issue
 - Major equipment failure
- Use OAR 690-086-0160 – Municipal Water Curtailment Element for guidance
 - Description of supply deficiencies
 - Stages of alert
 - Describe severity of shortage
 - List standby supplies
- Provide consistency with Water Management & Conservation Plans

Anticipated Content – Emergency Response Plan

- Facilitate equitable treatment of all parties during an emergency
- Identify situations that trigger emergency response:
 - Major earthquake
 - Extreme river water quality issue
 - Major equipment failure
- Use existing plans for reference
 - FEMA guidelines
 - Emergency response plans of the parties
 - Washington County Emergency Management Cooperative
 - WWSS emergency response plan

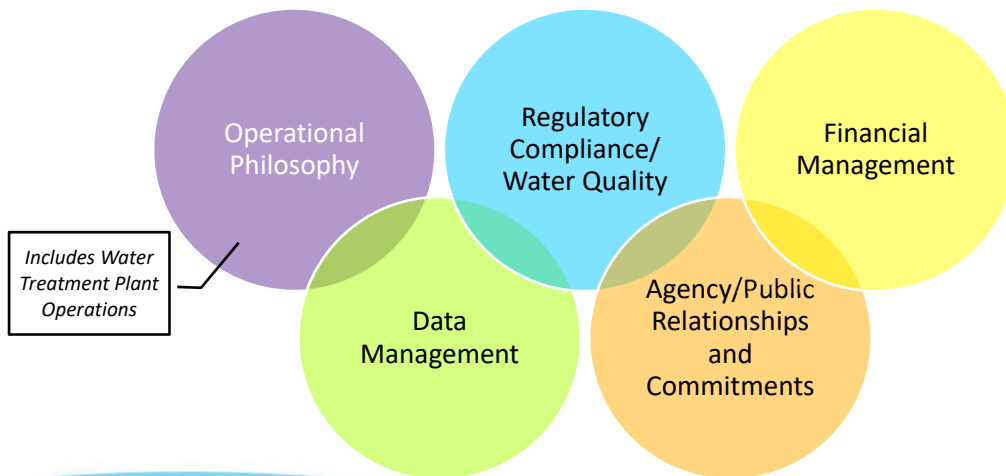
WWSP OPERATIONS PLANNING OVERVIEW

Planning for WWSS Operations

- Defining a comprehensive scope for WWSS operations
 - Integration into partner distribution systems
 - Long-term operations
- Initial WWSS operations planning workshops
 - Over 300 topics and issues identified

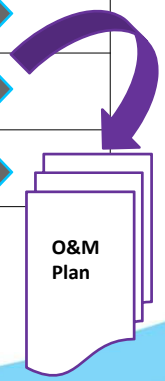


Five Primary Themes and Numerous Subthemes



Process for Developing WWSS O&M Plan

| Theme | Program Facilitator | TVWD Leader | Hillsboro Leader | Work Group Members | Implementation Steps (workshops, recurring reports, final deliverables, etc.) |
|--|---------------------|--------------|------------------|--------------------|---|
| Operational Philosophy | Russ Snow | Pete Boone | Sophia Hobet | TBD TBD TBD | |
| Data Management | Corianne Hart | Matt Oglesby | Tyler Wubbena | TBD TBD TBD | |
| Regulatory Compliance/Water Quality | Matthew Gribbins | Joel Cary | Jessica Dorsey | TBD TBD TBD | |
| Agency/Public Relationships and Commitments | Bill Van Derveer | Carrie Pak | Tacy Steele | TBD TBD TBD | |
| Financial Management | Jeremy Taylor | Tod Burton | Lee Lindsey | TBD TBD TBD | |



END

Willamette Intake Facilities Commission

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FY2018 Audited Basic Financial Statements and First Quarter FY2019 Unaudited Financial Performance

Willamette Intake Facilities Commission
October 29, 2018

Paul L. Matthews
Chief Financial Officer



Tonight's Information

FY2018 Audited Basic Financial Statements

- Overview WIF's financial statements
- Report of Independent Auditors

FY2019 Unaudited Financial Performance

- Financial Performance in 1st Quarter
- Issues for coming year

FY2018 Audited Basic Financial Statements

Enterprise Fund Reporting

- *Statement of Net Position* (Similar to a Balance Sheet)
- *Statement of Revenue, Expenses and Changes in Net Position* (Similar to an Income Statement)
- *Statements of Cash Flows*

Report of Independent Auditors

- Audit following requirements of the WIF IGA
- Unmodified Opinion (i.e., “clean audit”)

Management’s Discussion and Analysis

- Provides a good overview of the WIF’s financial results

**Willamette
Intake Facilities
Commission**

**Basic Financial
Statements**

Three month period ended June 30, 2018

Prepared by the Tualatin Valley Water District * 1850 SW 170th Avenue * Beaverton, OR 97003

Statement of Net Position

| | 2018 |
|-------------------------------------|--------------|
| NON-CURRENT ASSETS | |
| Capital assets, net of depreciation | \$ 7,474,246 |
| TOTAL ASSETS | \$ 7,474,246 |
| NET POSITION | |
| Net investment in capital assets | \$ 7,474,246 |
| | \$ 7,474,246 |

Statement of Revenues, Expenses and Changes in Net Position

| | <u>2018</u> |
|---|---------------------|
| OPERATING EXPENSES: | |
| Depreciation | \$ 28,146 |
| OPERATING INCOME (LOSS) | (28,146) |
| CAPITAL CONTRIBUTIONS | <u>7,502,392</u> |
| CHANGE IN NET POSITION | 7,474,246 |
| NET POSITION , beginning of period | <u>-</u> |
| NET POSITION , end of period | <u>\$ 7,474,246</u> |

FY2018 Audited Basic Financial Statements

Findings and Conclusions

- No operating expenses for the WIF in FY2018 other than depreciation
- Future operating expenses other than depreciation will be offset by payments from partners
- Expect future negative net income equal to depreciation expense
- Unmodified review by Independent Auditors

FY2018 Audited Basic Financial Statements and First Quarter FY2019 Unaudited Financial Performance

Willamette Intake Facilities Commission
October 29, 2018

Paul L. Matthews
Chief Financial Officer



First Quarter Performance

| Activity for the Quarter | | | Unaudited | Annual | | | | |
|--------------------------|-----------------|--------------------|---------------------------|-------------------|------------------|---------------|--------------------|-------------------|
| Budget | Actual | Variance | | Budget | Budget To date | Actual | Variance | Remaining Budget |
| \$ 27,401 | \$ - | \$ (27,401) | Resources | | | | | |
| | | | Revenues | | | | | |
| | | | Contributions | \$ 109,607 | \$ 27,401 | \$ - | \$ (27,401) | \$ 109,607 |
| - | - | - | Beginning Fund Balance | - | - | - | - | - |
| <u>\$ 27,401</u> | <u>\$ -</u> | <u>\$ (27,401)</u> | Total Resources | <u>\$ 109,607</u> | <u>\$ 27,401</u> | <u>\$ -</u> | <u>\$ (27,401)</u> | <u>\$ 109,607</u> |
| | | | Requirements | | | | | |
| | | | Materials and Services | | | | | |
| \$ 9,226 | \$ 16,557 | \$ (7,331) | Operating expenses | \$ 66,898 | \$ 9,226 | \$ 16,557 | \$ (7,331) | \$ 50,341 |
| 2,500 | - | 2,500 | Professional services | 1,500 | 2,500 | - | 2,500 | 1,500 |
| 10,000 | 9,734 | 266 | Insurance expense | 10,000 | 10,000 | 9,734 | 266 | 266 |
| 6,928 | 384 | 6,544 | Business expense | 27,709 | 6,928 | 384 | 6,544 | 27,325 |
| - | - | - | Audit fees | 3,500 | - | - | - | 3,500 |
| - | - | - | Capital Outlay | - | - | - | - | - |
| <u>28,654</u> | <u>26,676</u> | <u>1,978</u> | Total Expenditures | <u>109,607</u> | <u>28,654</u> | <u>26,676</u> | <u>1,978</u> | <u>82,931</u> |
| <u>(1,253)</u> | <u>(26,676)</u> | <u>25,423</u> | Ending Fund Balance | - | (1,253) | (26,676) | (29,379) | 26,676 |
| <u>\$ 27,401</u> | <u>\$ -</u> | <u>\$ 27,401</u> | Total Requirements | <u>\$ 109,607</u> | <u>\$ 27,401</u> | <u>\$ -</u> | <u>\$ (27,401)</u> | <u>\$ 109,607</u> |

These statements unaudited and are preliminary for fiscal year ending June 30, 2019.

Issues for Coming Year

- Update interim financial procedures
- Implement supplemental budget for capital outlay
- Streamline reporting process

Questions and Answers

FY2018 Audited Basic Financial Statements and First Quarter FY2019 Unaudited Financial Performance

Paul L. Matthews
Chief Financial Officer

Tualatin Valley Water District


Delivering the Best Water  Service  Value

Willamette Intake Facilities Commission

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WIF COMMISSION STAFF REPORT

To: Board of Commissioners
From: David Kraska, PE, General Manager
Date: January 28, 2019
Subject: Election of Officers for 2019

Requested Board Action:

The WIF Commission should elect a Chair and Vice-Chair for the 2019 calendar year.

Key Concepts:

- Current WIF officers include: John Godsey, Chair and Sean Garland, Vice Chair.
- The Commission needs to nominate and elect officers for the 2019 calendar year.

Background:

The Willamette Intake Facilities Intergovernmental Agreement, effective April 18, 2018, includes:

“4.6 **Officers.** The Board shall annually elect from its Members a chair and a vice chair, who shall be officers of the Board. The elections shall occur at the first meeting of the Board in each calendar year, unless otherwise agreed. The chair shall serve as the presiding officer. In the absence of the chair, the vice chair shall serve as presiding officer. Officers shall serve at the pleasure of the Board or until a successor is appointed.”

At the April 30, 2018, inaugural WIF Commission meeting, John Godsey was elected Chair and Sean Garland was elected Vice Chair. This item consists of nominations and election of WIF Commission officers for the 2019 calendar year. Considering the 2018 mid-year commencement of the WIF Commission, the Board also may choose to keep the current officers in place.

Budget Impact:

None.



Staff Contact Information:

David Kraska, PE; General Manager; 503-941-4561; david.kraska@tvwd.org

Attachments:

None

Management Staff Initials:

| | | | |
|---------------------|---|------------------------------|---|
| General Manager |  | TVWD General Counsel |  |
| TVWD Chief Engineer | N/A | TVWD Chief Financial Officer | N/A |

Willamette Intake Facilities Commission

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WIF COMMISSION STAFF REPORT

To: Board of Commissioners

From: David Kraska, PE, General Manager

Date: January 28, 2019

Subject: Semi-annual update on the Willamette Intake Facilities (WIF)-related elements of the Willamette Water Supply Program's (WWSP) Raw Water Facilities Project

Requested Board Action:

Informational item. No Board action required.

Key Concepts:

- On a semi-annual basis, the WIF Commission will receive an update on the WIF-related elements of the RWF_1.0 project.
- This update will present the status of the construction cost estimate, the bank stabilization design concept, and the overall project schedule.

Background:

The RWF_1.0 project, which is part of the WWSP, includes upgrades to the WIF including replacing the screens, expanding the air burst system, and improving the seismic resiliency. This semi-annual update is intended to keep the WIF Commission apprised of the regular progress being made on this project.

Our construction contractor, Kiewit, provided an updated cost estimate on November 27, 2018 based on the 50 percent complete design. They estimate that construction will cost \$81 million, which is approximately nine percent higher than the baseline estimate for the overall RWF_1.0 project. The impact to the estimated construction cost for the WIF-related elements has not yet been analyzed. The program team reviewed the estimate and returned comments to Kiewit in December. A work session is scheduled for January 23, 2019 where Kiewit will respond to reviewer comments, a consensus will be established, and the 50 percent estimate will be finalized. Following that work session, an updated construction cost estimate of the WIF-related elements will be prepared.

Various concepts have been considered by the design team to stabilize the bank between the caisson and the river for it to withstand the anticipated shaking that will occur during a major seismic event. The concept selected by the design team comprises three elements: 1) a jet grout block between the river and the caisson, 2) a tie-back retaining wall at mid slope, and 3) a sediment catchment fence in the river adjacent to the screens. Additional geotechnical explorations were performed in December, and this information was used to refine the geotechnical models. Initial results indicate that it may be possible to eliminate the tie-back wall. This work requires additional vetting prior to initiating the change.

The design, permitting and right-of-way efforts are on schedule. A construction schedule was prepared by Kiewit based on the 50 percent complete design. This schedule verified earlier assumptions about the construction sequence and duration and added confidence to the overall program schedule.

Budget Impact:

None at this time. The Program team will be working with the contractor to critically vet its latest construction cost estimate, and then the effect on the anticipated construction cost of the WIF-related elements.


Staff Contact Information:

David Kraska, PE; General Manager; 503-941-4561; david.kraska@tvwd.org

Attachments:

DRAFT Raw Water Facilities Project Update presentation

Management Staff Initials:

| | | | |
|---------------------|---|------------------------------|-----|
| General Manager |  | TVWD General Counsel | N/A |
| TVWD Chief Engineer | N/A | TVWD Chief Financial Officer | N/A |

Semi-annual Update on the WIF-related Elements of the Raw Water Facilities Project

Willamette Intake Facilities Meeting

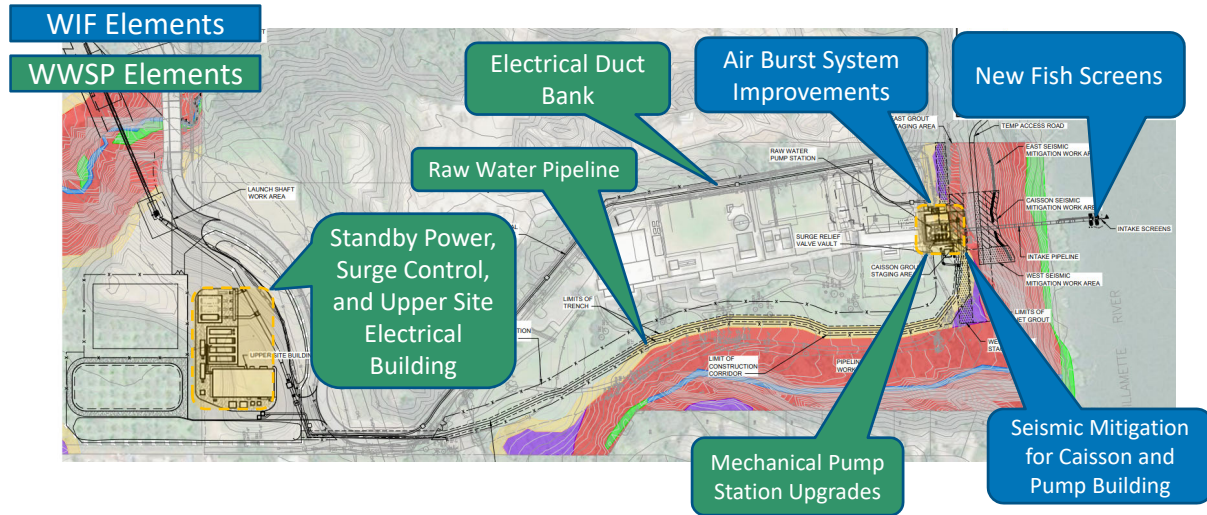
January 28, 2019



Outline

- Construction Cost
- Bank Stabilization Design
- Overall Project Schedule Status

WIF-Related Elements of the WWSP's RWF_1.0 Project



Construction Cost Estimate Update

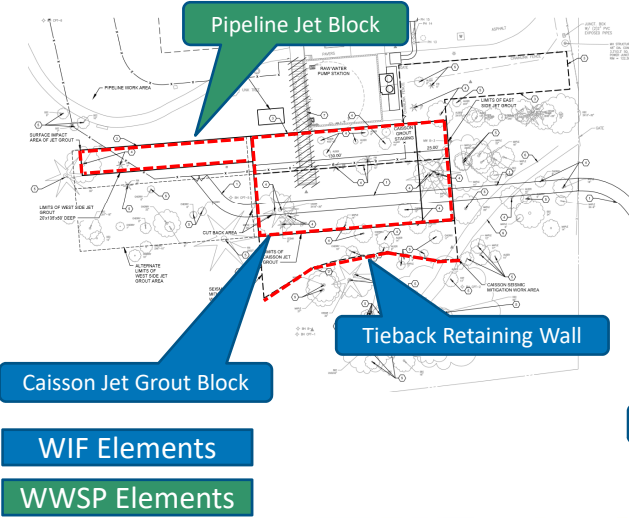
Estimate Presented to WGG May 2017

| Project Component | Estimated Cost (million \$) | | |
|--|-----------------------------|--------------|--------------|
| | Total | WIF | WWSS |
| Intake Screen Replacement | 1.40 | 1.40 | |
| Intake Screen Protection | 1.81 | 1.81 | |
| 76" Intake Pipeline Modifications | -- | -- | |
| Seismic Stability Improvements | | | |
| Existing Caisson Stability | 9.36 | 9.36 | |
| New 66" Pipeline Stability | 18.98 | | 18.98 |
| New Electrical Building and Surge Control Facility Stability | 8.54 | | 8.54 |
| Existing Pump Station Building Modifications | 1.64 | | 1.64 |
| Air Burst System Modifications | 1.44 | 1.44 | |
| WWSS Pumps and Related Equipment | 12.49 | | 12.49 |
| WWSS Raw Water Pipeline | 12.15 | | 12.15 |
| WWSS Electrical Improvements | 40.44 | | 40.44 |
| Civil Improvements | 3.42 | | 3.42 |
| Intake Maintenance Modifications | 0.10 | 0.10 | |
| PGE Modifications | -- | -- | -- |
| Permitting: Intake Replacement | 1.3 | 1.3 | |
| Permitting: WWSS | 0.1 | | 0.1 |
| Total | 113.17 | 15.41 | 97.76 |

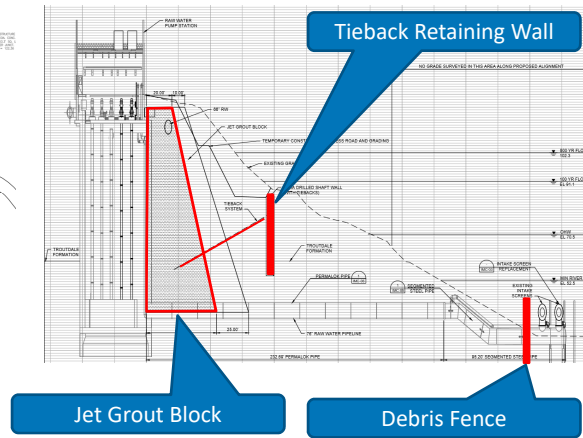
- Kiewit 50 Percent Estimate
 - \$81M, includes \$13M contingency
 - Class 3 estimate: +30% to -20%
- Kiewit estimate is being vetted by the team
 - January 23 meeting with Kiewit to arrive at consensus estimate
 - Impact to WIF-related costs to be determined afterward

Preliminary Bank Stabilization Design

Plan View

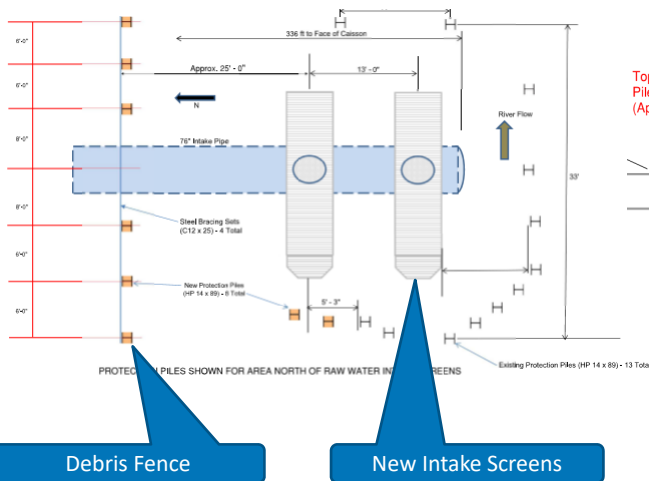


Section View

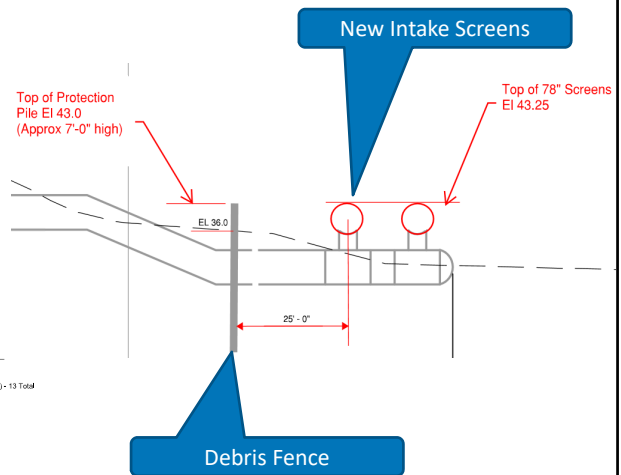


Debris Fence Concept

Plan View

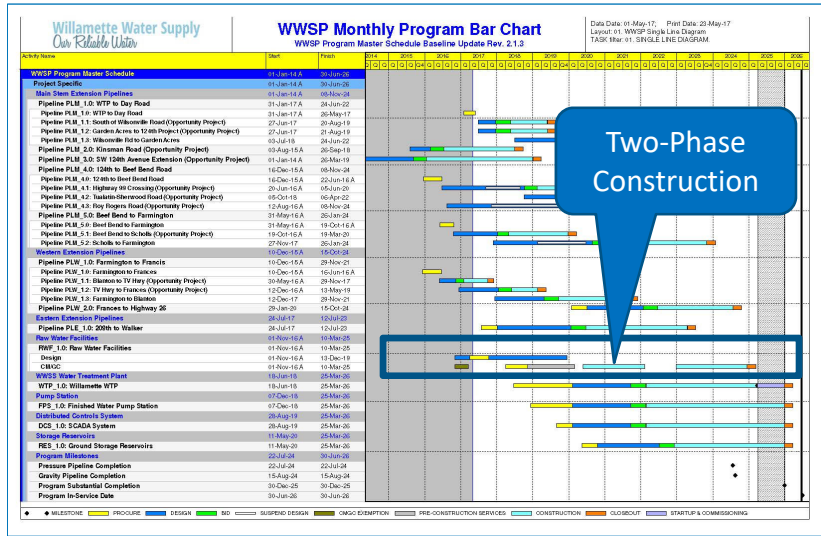


Section View



RWF_1.0 Project Schedule

- Design Phase:
 - In progress
 - Land Use application April 2019
 - Ends Q4 2019
- Construction Phase 1
 - Starts Q2 2020
 - Ends Q1 2022
- Construction Phase 2
 - Starts Q3 2022
 - Ends Q4 2024



QUESTIONS?

WIF COMMISSION STAFF REPORT

To: Willamette Intake Facilities Board of Commissioners
From: David Kraska, P.E., General Manager
Date: January 28, 2019
Subject: Fiscal Year 2020 Annual Work Plan and Budget Preparation

Requested Board Action:

Informational item. No Board action required.

Key Concepts:

- Exhibit 8 of the Willamette Intake Facilities (WIF) Intergovernmental Agreement (IGA) establishes the WIF Budget Calendar.
- TVWD, as the Managing Agency, prepared a draft annual work plan (AWP) and budget for review by the Operations and Finance committees in accordance with the calendar.
- The AWP provides the scope of work to be performed by the Managing Agency for the 2020 fiscal year, in accordance with the WIF intergovernmental agreement.
- The details of the AWP and budget will be reviewed, modified, and finalized by the WIF committees prior to presentation to the WIF Board for adoption in April.

Background:

Article 5.6 of the WIF IGA specifies the powers and duties of the Managing Agency, TVWD. TVWD prepared a draft version of the AWP to address those Managing Agency duties that are relevant to the 2020 fiscal year. TVWD also prepared a draft budget for the AWP. The first draft of the AWP and budget was shared with the Operations and Finance committees on January 4, 2019.

The draft FY 20 AWP includes all the same tasks as the current AWP, with the following additional items:

1. General Administration
 - a. It is planned that drafts of the Operations Plan and Curtailment Plan will be prepared during the next fiscal year.
 - b. Having the WIF perform cyanotoxins, or other water quality monitoring will be considered by the WIF committees.
2. Finance Administration
 - a. The developing financial procedures task will be continued into next fiscal year.

The WIF Operations and Finance committees will meet on January 30 to discuss the first draft of the AWP and budget. The Managing Agency will prepare an updated version in time to be delivered to the Management Committee by February 15, 2019. Depending on the requested changes, additional meetings will be held to facilitate providing a final recommended version of the FY 20 AWP and budget to the WIF Board by March 31, 2019.

Budget Impact:


The budget for the FY 20 AWP is still under development. A final budget, along with the final AWP, will be presented for consideration at the April Board meeting.

Staff Contact Information:

David Kraska, PE; General Manager; 503-941-4561; david.kraska@tvwd.org

Attachments: Annual Work Plan and Budget Preparation presentation

Management Staff Initials:

| | | | |
|---------------------|---|------------------------------|-----|
| General Manager |  | TVWD General Counsel | N/A |
| TVWD Chief Engineer | N/A | TVWD Chief Financial Officer | N/A |

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Willamette Intake Facilities Annual Work Plan and Budget Preparation

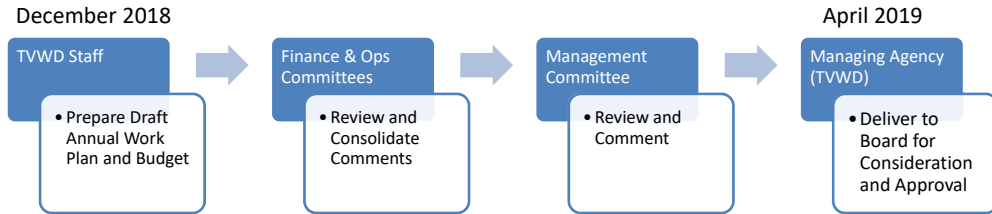
January 28, 2019

Outline

- Schedule
- Modifications from the current AWP
 - General Administration
 - Finance Administration

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Annual Work Plan and Budget Preparation



Annual Work Plan and Budget Preparation

WIF IGA Exhibit 8 Budget Calendar

| Budget Deliverable | Annual Submission Date | Party Receiving Budget |
|--|------------------------|-----------------------------------|
| Preliminary capital improvement project list | December 15 | Operations Committee |
| Preliminary budget | January 5 | Operations and Finance Committees |
| Draft budget | February 15 | Management Committee |
| Proposed budget | March 31 | Board |



FY 2019 – 20 Annual Work Plan

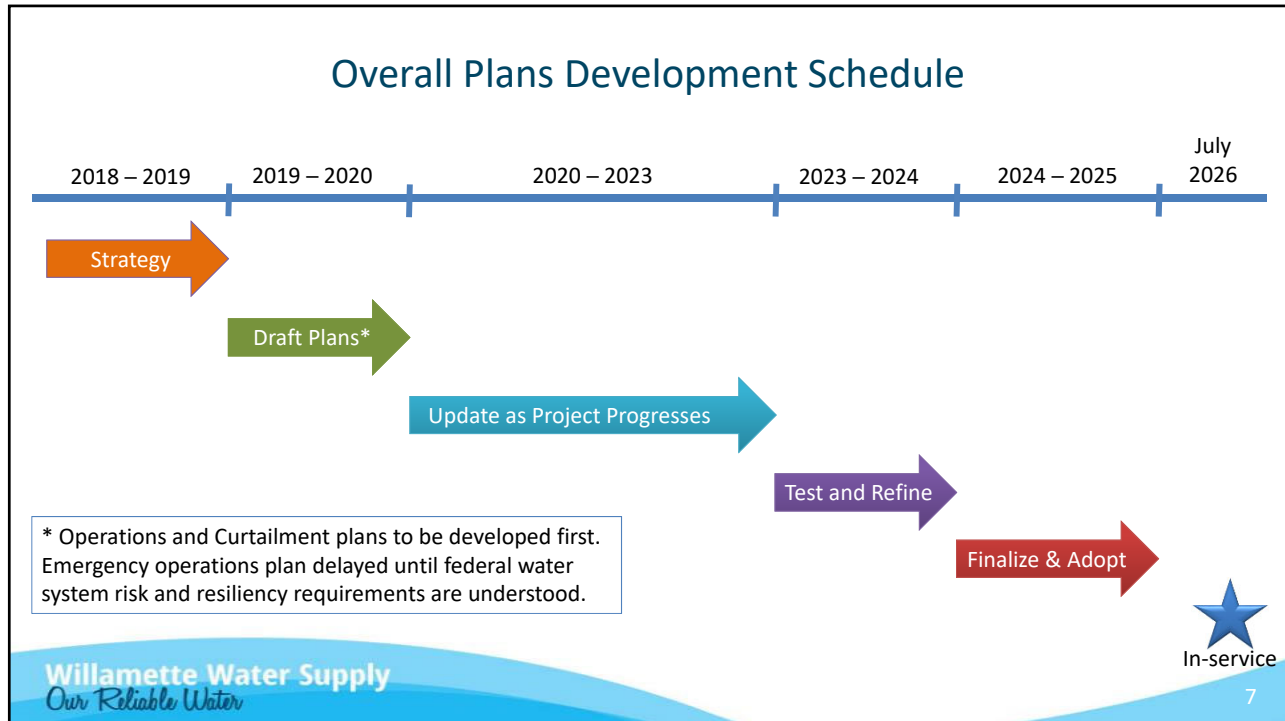
- Task List:

- General Administration
- Capital Projects Management
- Annual Work Plan and Budget Development
- Finance Administration
- Operations Committee Administration
- Management Committee Administration
- Administer WIF Board of Commissioners Meetings

FY 2019 – 20 WIF General Administration

Changes from the current year AWP

- Administration of Infrastructure Operations and Maintenance
 - Develop initial outlines and drafts of the three plans
 - Draft Operations Plan
 - Draft Curtailment Plan
 - Outline Emergency Operations Plan
- Willamette River Basin Activities Monitoring
 - Cyanotoxins Monitoring?
 - to be discussed and considered by the WIF committees



FY 2019 – 20 Finance Administration

Changes from the current year AWP

- Develop Financial Procedures
 - This task will be continued into the next fiscal year

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Schedule for Completing the FY 20 AWP and Budget

- January 4, 2019 – first draft emailed to Operations and Finance Committees
- January 30, 2019 – Operations and Finance committees meeting to review and edit the draft
- February 15, 2019 – MA deliver revised FY 20 AWP and budget to Management Committee for consideration
- March 31, 2019 – MA delivers final recommended FY 20 AWP and Budget to WIF Board

END

Willamette Intake Facilities Commission

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WIF COMMISSION STAFF REPORT

To: Board of Commissioners

From: Niki Iverson; Willamette Water Supply Program Permitting and Outreach Manager

Date: January 28, 2019

Subject: Summary of U.S. Army Corps of Engineers Permit Issued to Willamette Water Supply Program December 2018

Key Concepts:

- On December 6, 2018, the US Army Corps of Engineers (USACE) issued a permit pursuant to the Rivers and Harbors Act, Section 10; and the Clean Water Act, Section 404. The USACE permit authorizes temporary and permanent impacts to wetlands and waterways. Associated approvals and permits from other entities include a Biological Opinion (BiOp) from National Marine Fisheries Service (NMFS); a Water Quality Certification (WQC) from the Oregon Department of Environmental Quality (DEQ); and a Programmatic Agreement (PA) from the Oregon State Historic Preservation Office (SHPO) for the protection of cultural resources.
- Each approval/permit includes conditions that will govern Willamette Intake Facilities (WIF) and Willamette Water Supply System (WWSS) construction and operation once complete.
- Key conditions of the DEQ WQC are intended to address temperature impacts to the Willamette River associated with water withdrawals.
- Key conditions of the NMFS BiOp are intended to address incidental take of endangered species associated with construction and water withdrawals from the Willamette River.

Background:

On December 6, 2018, the Willamette Water Supply Program (WWSP) received a permit from USACE pursuant to the Rivers and Harbors Act, Section 10; and the Clean Water Act, Section 404. The USACE permit authorizes temporary and permanent impacts to wetlands and waterways. Associated approvals and permits from other entities include a BiOp from NMFS; a WQC from DEQ; and a PA from SHPO. Each approval/permit includes conditions that will govern WIF and WWSS construction and operation once complete. This report summarizes the key conditions of the USACE permit and associated permits and approvals.

USACE Permit

USACE issued an initial proffered permit in November 2018. WWSP reviewed the conditions in that permit and made a request for minor revisions to some of the conditions; after discussions with WWSP staff, USACE accepted most of the requested revisions and issued a final permit on December 6, 2018.

The USACE permit conditions include general conditions, which are typically applied on all USACE permits pursuant to the Clean Water Act, Section 404. It also includes special conditions, which are tailored to the specifics of WWSS construction and operations. Most conditions are designed to minimize impacts, require the WWSP to restore conditions after construction, or require monitoring and reporting back to the USACE. The USACE permit conditions also require purchase of credits to offset 1.73 acres of

permanent impacts to wetlands and waterways; approximately 13 square feet of permanent impacts are associated with seismic improvements at the WIF. WWSP purchased the credits in 2018 from the Butler Mitigation Bank, located near the Tualatin River outside of Sherwood, Oregon. The USACE permit conditions also require compliance with the NMFS BiOp, DEQ WQC, and SHPO PA.

NMFS BiOp

The NMFS BiOp contains three “Reasonable and Prudent Measures,” which are intended to minimize the incidental take of endangered species associated with WIF and WWSS construction and operation. The Reasonable and Prudent Measures are general in nature; specific terms and conditions are included to implement the Reasonable and Prudent Measures, as summarized below:

- Reasonable and Prudent Measure 1 is to “Minimize incidental take from project construction by applying conditions to the proposed action that avoid or minimize construction impacts.” Terms and conditions to implement this measure address construction, and include best management practices (BMPs) consistent with those proposed by the WWSP in the Joint Permit Application (JPA) and associated Biological Assessment (BA), as well as conditions addressing fish salvage and sound attenuation during in-river pile driving.
- Reasonable and Prudent Measure 2 is to “Minimize incidental take from project operation by applying conditions to the proposed action that avoid or minimize impacts due to the effects of water withdrawal.” This measure addresses operations, and has just one condition capping water withdrawals at the Willamette Intake Facilities to not exceed “...150 mgd or a maximum withdrawal rate of 232 cfs.”
- Reasonable and Prudent Measure 3 is to “Ensure completion of a monitoring and reporting program to confirm that the take exemption for the proposed action is not exceeded, and that the terms and conditions in this incidental take statement are effective in minimizing incidental take.” The terms and conditions to implement this measure concern monitoring and reporting of fish capture, pile driving, turbidity, and water withdrawals. Water withdrawal monitoring, including daily flow volume, daily withdrawal rate, daily temperature, and 7-day average of the daily maximum (7DADM) temperature at the Willamette Intake Facilities. Monitoring is to be carried out for 10 years following project completion, with reports provided to NMFS on an annual basis.

DEQ WQC

DEQ issued a WQC pursuant to Clean Water Act Section 401. The WQC includes general conditions, as well as conditions specific to construction, in-stream work, piling removal, post-construction stormwater management, and temperature impacts. Of the 28 conditions, most are standard best practices for design, construction, and system maintenance; others address permit administration. Condition 28 is specific to managing temperature impacts of water withdrawals at the Willamette River, and is summarized below.

As part of evaluating the WIF and WWSS, DEQ requested that WWSP model the effects of water withdrawals on temperature in the Willamette River using CE-QUAL-W2 models originally developed for establishing the Willamette River Total Maximum Daily Load (TMDL) for temperature. Consistent with guidance from DEQ, WWSP modeled multiple scenarios to identify the maximum potential increase in the flow-weighted 7-day average of the daily maximum (7DADM) water temperature above baseline conditions. The maximum increase in 7DADM water temperature was 0.078 degrees Celsius. The WWSP proposed a water quality trading project to DEQ as part of the approach to address temperature impacts.

The WWSP permitting team is currently working with DEQ to finalize a thermal trading plan and implement the tree planting and shading project at Molalla State Park that was originally included in the JPA as a proposed environmental benefit project.

SHPO PA

Construction activities for the WIF and the WWSS have the potential to discover or impact cultural and historic resources and properties. The WWSP consulted with USACE, SHPO, and with the Confederated Tribes of the Grande Ronde (CTGR), concerning measures to avoid, minimize, or mitigate adverse effects to those properties and resources. Several other tribal governments were invited to participate in the consultation, but only CTGR chose to participate at a more active level.

WWSP, USACE, and SHPO determined the best approach to managing potential cultural and historic resource discoveries was to develop a Programmatic Agreement (PA) to provide oversight of the construction of the WIF and WWSS facilities. The PA will allow the WWSP to survey areas after removal/fill permit issuance and prior to construction. The PA outlines the requirements for the surveys to be completed and how to handle any potential findings from those surveys. It documents the required measures and procedures for avoiding, minimizing, or mitigating adverse effects to those properties and resources. The PA also outlines the expectations from USACE, SHPO, and CTGR. Through the PA, SHPO requested additional reporting from the WWSP during the 10-year removal/fill permit construction window to demonstrate compliance with the PA requirements.

Budget Impact:

There is no direct budget impact associated with permit receipt. The purchase of wetland mitigation credits and the Molalla project construction that is being utilized for temperature trading offsets was already included in the permitting budget estimate for the WIF.

There will be on-going compliance costs after completion of the WWSP (post 2026) which will be included in WIF budgets for approval. Compliance costs are expected to be reasonably minimal and include annual reporting to DEQ and surveying to confirm shade was produced as promised.

Staff Contact Information:





Niki Iverson; City of Hillsboro Water Resources Manager and WWSP Permitting and Outreach Manager; 503-615-6770; Niki.Iverson@hillsboro-oregon.gov

Attachments:

US Army Corps of Engineers Permit NWP-2015-0041
Oregon Department of Environmental Quality Water Quality Certificate

Additional permit attachments can be requested through Niki Iverson.

Management Staff Initials:

| | | | |
|---------------------|---|------------------------------|---|
| General Manager |  | TVWD General Counsel |  |
| TVWD Chief Engineer |  | TVWD Chief Financial Officer |  |

Willamette Intake Facilities Commission

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Niki Iverson
City of Hillsboro Water Resources Manager
WWSP Permitting & Outreach Manager

WWSP PERMITTING UPDATE

Status of Federal Permitting Process

- On December 6, 2018, US Army Corps of Engineers issued a permit pursuant to Rivers and Harbors Act, Section 10; Clean Water Act Section 404.
- Associated approvals and permits from other entities include National Marine Fisheries Service, OR Dept of Env. Quality, OR SHPO
- Each approval/permit includes conditions that will govern WWSS construction and operation once complete.



Permitting Strategy

- Developed a permitting strategy in 2015
- Communicate early and often with the regulatory agencies
- No surprises approach
- Overall Goal and Objective – avoid water withdrawal conditions
- Propose mitigation or similar project benefits to avoid withdrawal conditions

Lessons Learned From Other Water Supply Projects

- Lake Oswego-Tigard Water Supply Project BiOp
 - Restrictions in addition to OWRD proportional reductions when flows below ODFW fish minimums
 - Withdrawals between August 21 and September 30 based on a proportional reduction calculated using the lowest maximum daily mean flow of 10% percentile flows of the 10 year hydrograph as measured at the Oregon City gage.
- Medford Water Commission Intake Construction BiOp
 - Withdrawals restricted when the daily mean temperature exceeds 70° F (measured as a 3-day moving average using the prior 3 days)
 - Only withdraw a volume of water less than or equal to an amount released above the point of diversion from a winter water storage facility (bucket for bucket)

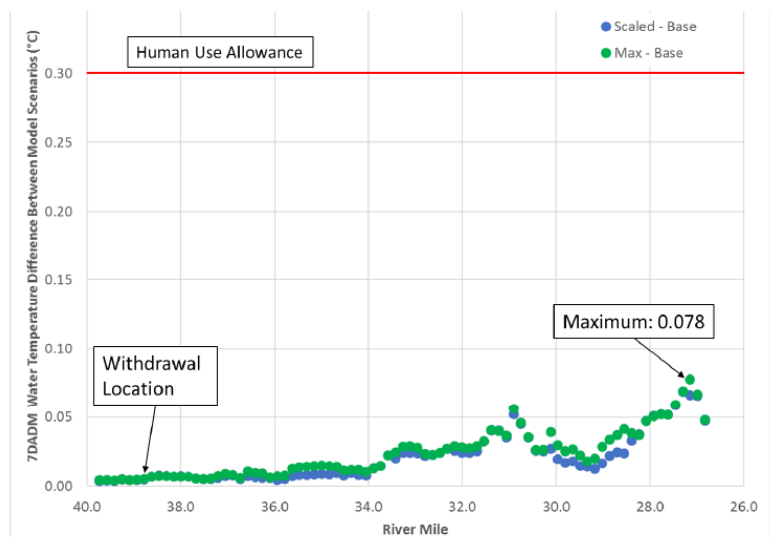
Federal Permit Condition Highlights



- Most conditions minimize impacts, restore conditions after construction, or provide reports back to the agencies.
- USACE permit conditions require WWSP to purchase wetland mitigation credits.
- OR DEQ Water Quality Certification requires developing and implementing a plan to offset temperature impacts

Water Temperature Modeling

- In early 2018, DEQ requested modeling effects of water withdrawals on river temperature
- The maximum modeled temp. increase was 0.078°C , and occurred on September 12, 2001, approx. 0.6 miles above Willamette Falls



Molalla State Park – Shading Project



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Next Steps

- Submitted Draft Thermal Trading Plan to DEQ for review
- Incorporate DEQ comments and revisions
- Finalize scope of Molalla Shading Project based on approved DEQ plan
- Finalize agreement with Molalla Water Watch (watershed council) and Molalla State Parks to implement project
- Complete tree planting prior to 2026 to ensure shade benefit before maximum withdrawal is reached

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QUESTIONS?

Willamette Intake Facilities Commission

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DEPARTMENT OF THE ARMY PERMIT

Permittee:

Tualatin Valley Water District
1850 SW 170th Ave.
Beaverton, OR 97003

City of Hillsboro
150 E. Main Street
Hillsboro, OR 97123-4028

Permit No: NWP-2015-0041

Issuing Office: U.S. Army Corps of Engineers, Portland District

NOTE: The term "you" and its derivatives as used in this permit means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The project is the Willamette Water Supply System Project and involves completing seismic and capacity upgrades at an existing intake within and along the Willamette River, construction of a new water treatment plant, construction of new water storage tanks, and construction of water transmission lines. The project will permanently impact 0.86 acres of wetland and 13 square feet of non-wetland waters, and temporarily impact 4.51 acres of wetland, 0.28 acre of non-wetland waters and 1.58 acres of roadside ditches. Approximately 0.47 acre of temporary impacts will result in a conversion of palustrine forested wetland to palustrine emergent or palustrine scrub shrub wetland in the area directly over the transmission pipeline. Approximately 0.40 acres of indirect impact to palustrine forested wetland would occur due to loss of forested buffer at the proposed water treatment plant. The project infrastructure would allow for the withdrawal of up to 150 million gallons of water per day.

The project consists of the following elements:

- Existing 66-inch diameter fish screens will be replaced with new 78-inch diameter fish screens. The old screens will be un-bolted and new screens will be bolted on. Divers will perform the work and a barge mounted crane will maneuver the screens.

- Up to 10 H-piles will be modified to accommodate the larger fish screens. The contractor may complete one of the following to accommodate the larger screens: 1) The existing H-pile would be cut by divers and attached to brackets to extend the area protected by the pile; or 2) the existing H-pile will be removed using a vibratory hammer and replaced with either a steel H-pile designated HP 24 or smaller, or wood pile that has not been treated with preservatives or pesticides. The existing H-pile may be cut at 2-feet below the mud line if it is unable to be completely removed. New pile will be installed using vibratory methods until refusal and finished with an impact hammer.

- The project includes site seismic improvements to protect the intake, pump station, and associated structures. Sixteen (16) 4-foot diameter concrete tangent piles will be constructed on the bank of the Willamette River to provide seismic stabilization at the intake. Of the sixteen piles, one will be constructed below the ordinary high water mark (OHWM) of the Willamette River. The tangent piles will extend approximately 50 feet deep. Existing access roads will be upgraded using geotextile fabric and crushed rock to access the site.

- Approximately thirty-seven (37) 10-foot diameter piles and a jet grout block will be constructed above the OHWM of the Willamette River near the intake pipe. Jet grouting consists of injecting liquid concrete into the soil to create a soil/concrete mixture below the ground surface. The piles and jet grout block will extend 450 feet in length at the top of the slope in two segments.

- Pump station facilities will be constructed in the City of Wilsonville in uplands and will not involve work in waters of the United States.

- A new water treatment plant (WTP) will be constructed near the City of Sherwood. The new WTP will permanently impact a total of 0.86 acres of wetland for site grading, construction of a retaining wall, construction of an access road, and building construction. Construction will also temporarily impact 0.10 acre of forested wetland. Loss of forested buffer will result in indirect impacts to 0.40 acres of palustrine forested wetland.

- New reservoir facilities will be constructed on South Cooper Mountain. The reservoir facilities, staging, and stockpile areas, will all be constructed in uplands.

- Construction of the water transmission pipelines will impact wetlands, non-wetland waters, and ditches. The transmission pipe will convey water from the pump station, to the WTP near Sherwood, Oregon, to the new water storage tanks on South Cooper Mountain, and to connections with existing Tualatin Valley Water District and City of Hillsboro water distribution systems. The transmission pipeline will be installed using trench excavation and trenchless construction (jack and bore, pipe ramming, shielded tunneling, and microtunneling).

Detailed Project impacts are included in Attachment 1.

Purpose: To provide an increased amount of drinking water that is resilient to seismic events and drought, and provides water source redundancy for the water customers of the City of Hillsboro and the Tualatin Valley Water District.

Project Location: The project is located in the Willamette River, the Tualatin River and several of its tributaries, multiple wetlands, and ditches in the cities of Wilsonville, Sherwood, Beaverton, Tigard, Tualatin, and Hillsboro, in Clackamas and Washington Counties, Oregon.

Drawings: Seventy Eight (78) Drawings and Figures (Attachment 2)

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on November 9, 2028. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition No. 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions (Attachment 3).

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

a. Upon starting the activities authorized by this permit, Permittee shall notify the U.S. Army Corps of Engineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided at the start of each construction year, detailing the work packages that will be constructed and the approximate start dates. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: NWP-2015-41, Washington County.

b. Permittee must allow representatives from the Corps of Engineers to inspect the authorized activity and any mitigation, preservation, or avoidance areas at any time deemed necessary to ensure that the authorized activity is being or has been accomplished in accordance with the terms and conditions of your permit.

c. The following special condition is a part of all Department of the Army permits that provide authorization under Section 10 of the Rivers and Harbors Act, regardless whether the permit provides such authorization under Section 10 alone, or in combination with authorization under other laws:

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the U.S Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

d. Permittee shall complete all in-water work, to the maximum extent practicable, within the preferred time period (i.e., work window) specified in Oregon Department of Fish and Wildlife's (ODFW) "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources," June 2008, or most current version, available at: <http://www.dfw.state.or.us/lands/inwater/>.

If work cannot be completed within the preferred timing window, despite every attempt to do so, permittee shall submit a written request to work outside of the preferred window to the District Engineer. The request can be made by means of the joint-agency In-water Work Period Variance Request for Previously Permitted Authorizations form which can be found at <http://www.oregon.gov/dsl/WW/Pages/WWforms.aspx>. Permittee shall not begin any in-water work outside of the preferred window until they have received written approval from the District Engineer.

e. This Corps permit does not authorize you to take an endangered species, in particular the USFWS Animal Trust Species or USFWS Plant Trust Species or NMFS Trust Species. In order to legally take a listed species, you must have separate authorization under the ESA (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed BiOp prepared by the National Marine Fisheries Service (NMFS) dated October 1, 2018 contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO (NMFS Reference Number WCR-2017-7795). Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit (Attachment 4). Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your Corps permit. The NMFS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

f. Permittee shall conduct species surveys to determine Streak Horned lark (*Eremophila alpestris strigata*) presence within suitable habitat if work will occur within the habitat during nesting season (typically April through August). The surveys should occur the year prior to planned construction and occur during the nesting season. For construction beginning in 2019 within areas determined to be suitable habitat, species surveys should be completed and submitted to the Corps for review prior to work commencing. Permittee shall provide the results of the survey to the address listed in Special Condition a. to allow the Corps to determine if the lark may be impacted by the proposed project.

g. Permittee shall implement and abide by the Programmatic Agreement (PA), entitled "PROGRAMMATIC AGREEMENT AMONG THE UNITED STATES ARMY CORPS OF ENGINEERS AND THE OREGON STATE HISTORIC PRESERVATION OFFICE AND TUALATIN VALLEY WATER DISTRICT, and CITY OF HILLSBORO" in its entirety. The U.S. Army Corps of Engineers has been designated the lead federal agency responsible for implementing and enforcing the Programmatic Agreement as signed. If you fail to comply with the implementation and associated enforcement of the PA, the Corps may determine you are out of compliance with the conditions of the Department of the Army permit or authorization and suspend the permit or authorization. Suspension may result in modification or revocation of the authorized work.

h. Permittee shall obtain 1.73 credits from the Butler Mitigation Bank. Prior to performing work in waters of the U.S. authorized by this permit, permittee shall submit documentation of the completed mitigation bank transaction to the U.S. Army Corps of Engineers, Portland District, Regulatory Branch. Documentation shall be submitted by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: NWP-2015-41, Washington County.

i. Permittee shall re-vegetate disturbed areas at the project site during the earliest appropriate planting season after activity is completed. The vegetation shall consist of native, non-invasive herbs, shrubs, and trees.

j. Permittee shall submit detailed restoration plans for the areas where open-trench crossing is proposed across a stream for each work package prior to the discharge of fill into Waters of the U.S. The restoration plans should be consistent with the guidance outlined in the plan titled "Willamette Water Supply Program – Conceptual Post-Construction Site Restoration Plan" dated February 28, 2017.

k. Permittee shall provide a copy of the permit transmittal letter, permit form, and permit drawings to all contractors performing any work authorized by Corps No. NWP-2015-41.

l. Permittee shall complete and sign the enclosed Compliance Certification (Attachment 5). Permittee shall submit the completed certification to the U.S. Army Corps of Engineers, Portland District, Regulatory Branch by December 31st of each year construction activities occur. The certification should be accompanied with a description of the work that was completed.

m. Permittee shall submit an as built report to the Corps at the address shown in Special Condition (a) by December 31 of the year a work package is completed. An as built report shall be submitted for each completed work package. The report shall contain photographs of the site and the initial grading survey of resource areas within the work package. A map identifying the locations and directions of the photographs shall be included in the as-built report.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this Authorization:

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

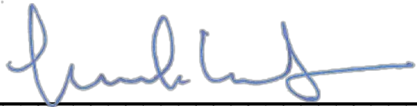
b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain

situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit. Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



(PERMITTEE SIGNATURE)

December 6, 2018

(DATE)

Mark Knudson

(PRINTED NAME)

Chief Executive Officer

(TITLE)



(PERMITTEE SIGNATURE)

December 6, 2018

(DATE)

Kevin Hanway

(PRINTED NAME)

Director

(TITLE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

**FOR THE COMMANDER, AARON L. DORF, COLONEL, CORPS OF ENGINEERS,
DISTRICT COMMANDER:**

for _____
(DISTRICT COMMANDER)

(DATE)

William D. Abadie
Chief, Regulatory Branch

When the structures or work authorized by this permit are still in existence at the time the property is transferred , the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign below.

PERMIT TRANSFEREE:

Transferee Signature

DATE

Name (Please print)

Address

City, State, and Zip Code

Willamette Intake Facilities Commission

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Oregon

Kate Brown, Governor

Department of Environmental Quality
Northwest Region Portland Office/Water Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232-4100
(503) 229-5263
FAX (503) 229-6957
TTY 711

October 12, 2018

Mark Knudson
Chief Executive Officer
Tualatin Valley Water District
1850 SW 170th Avenue
Beaverton, OR 97003

Kevin Hanway
Water Department Director
City of Hillsboro
150 E. Main Street
Hillsboro, OR 97123

RE: 2015-00041; Willamette Water Supply System 401 Water Quality Certification

The Department of Environmental Quality (DEQ) has reviewed the U.S. Army Corps of Engineers (USACE) Permit application #2015-00041, pursuant to a request for a Clean Water Act Section 401 Water Quality Certification (WQC) received on October 12, 2017. DEQ's 401 WQC public comment opportunity was circulated with the USACE public notice, and DEQ received one water quality comment. This comment was considered in making this final certification decision.

According to the application, the Tualatin Valley Water District (TVWD) and the City of Hillsboro ("the Applicant") propose to impact the Willamette River in order to provide a seismically resilient water supply and increase available water supply to meet population growth projections for the City of Hillsboro and Tualatin Valley Water District service areas. The project is located in the Willamette River, the Tualatin River, and multiple wetlands and tributaries to the Willamette River and Tualatin River, in the Cities of Wilsonville, Sherwood, Beaverton, Tigard, Tualatin, and Hillsboro in Clackamas and Washington Counties, Oregon.

Project Description: The project involves seismically upgrading a raw water intake structure, constructing a new water treatment plant, constructing new reservoir facilities, and installing water transmission lines. Raw water withdrawal from the Willamette River will be pumped through two transmission lines to two water treatment plants: the existing Willamette River Water Treatment Plant and a proposed new water treatment plant to be constructed as part of this project. The new water treatment plant and new reservoir facilities will serve both TVWD and the City of Hillsboro. In addition to serving TVWD and the City of Hillsboro, the transmission lines will tie into the City of Beaverton's and Joint Water Commission's transmission systems to provide emergency access between the systems.

This project will provide for up to 150 million gallons per day (mgd) of water withdrawal from the Willamette River. The capacity of the raw water facilities will be increased from 70 mgd to 150 mgd. The new water treatment plant will be constructed in phases to a capacity of 120 mgd. The new reservoir facilities will contain two above-ground water storage tanks, with a combined storage capacity of 30 million gallons.

Raw Water Facilities

The upgrade to the existing raw water facilities includes replacing the fish screens with larger fish screens, and modifying or replacing up to all of the 10-H piles that protect the fish screens. Sixteen, 4-foot diameter concrete tangent piles, approximately thirty-seven 10-foot diameter piles and a jet grout block above the ordinary high water line near the intake pipe will be constructed for seismic stabilization of the bank. The fish screens will be replaced using a barge mounted crane to maneuver the screens and divers to unbolt the old screens and bolt on the new screens. The H-piles will either be 1) modified by divers who will cut the piles and attach them to brackets or 2) removed by a vibratory hammer and replaced with either steel H-piles or wood piles that have not been treated with preservatives or pesticides using vibratory and impact hammers. About sixteen, 4-foot diameter tangent piles will be built into the bank above the intake screen to form a pile wall to stabilize the area; one of these piles is anticipated to be below the ordinary high water elevation. An auger will drill the shafts, then steel casing will be installed and concrete pumped in to backfill the shaft. Existing access roads to the intake will be upgraded using geotextile fabric and crushed rock.

Additionally, the raw water pump station will be upgraded, increasing the total impervious surface area of 2.86 acres by an additional 1.36 acres. All of this new impervious surface area will be in uplands.

Water Treatment Plant

The new water treatment plant will be on a site of about 20 acres, of which 10.05 acres will be impervious surface. To construct the water treatment plant, 1.18 acres of wetlands will be filled.

Reservoir Facilities

The new reservoir facilities will be constructed in uplands, with an impervious surface area of 3.56 acres.

Water Transmission Lines

The water transmission lines will convey water from the pump station, to the new water treatment plant, to the new reservoir facilities on South Copper Mountain to the connections with existing City of Hillsboro and TVWD water supplies. The transmission lines will be installed using trench excavation and trenchless construction (i.e., jack and bore, pipe ramming, shielded tunneling and microtunneling). See Table 1, which includes a list of waterbodies which the transmission lines will cross. To provide construction access, numerous ditches will also be temporarily impacted by adding 1 foot of crushed rock fill over geotextile fabric for equipment access and/or for placing the waterline beneath the ditch.

Some of the water transmission lines have already been installed; the installation of these transmission lines are not part of this certification:

- PLM_2.0, the Kinsman Road Partnership Project. The City of Wilsonville received a 401 water quality certification for the Kinsman Road Extension (USACE No. 2014-00134) on January 16, 2015. The waterline construction was completed prior to the installation of this roadway.
- PLM_3.0, the 124th Avenue Partnership Project has already been certified. Washington County received a 401 water quality certification for The SW 124th Avenue Extension (USACE No. 2014-462) on October 28, 2015. As stated in the project description of the 401 water quality certification, "Construction will include...installation of a section of waterline for the Willamette Water Supply Program beneath the new roadway".

Mitigation

The project would permanently impact 0.86 acres of wetlands for the new water treatment plant near the City of Sherwood, and 13 square feet of the Willamette River for the tangent pipe wall installed as part of the intake upgrade. No other permanent wetland or waterway impacts are associated with the project. The project would temporarily impact 4.51 acres of wetland, 0.28 acre of non-wetland waters and 1.58 acres of roadside ditches. A portion of the temporary wetland impacts (0.47 acres) will occur to forested wetlands; however, vegetation type will be permanently converted from forested to emergent wetland vegetation. Mitigation will be provided by purchasing 1.33 wetland mitigation bank credits, which is intended to offset permanent wetland impacts and the permanent conversion of forested wetland to emergent wetland condition.

Table 1 Impacts to Waterways

| Impact | Impact Duration | Location | Water | Tributary to |
|----------------------------------|---|----------------------------------|---------------------------|---|
| Intake | Permanent for the water withdrawal and intake fill; temporary for the intake installation | Wilsonville | Willamette River at RM 39 | Columbia River |
| Water Transmission Line Crossing | Avoided due to trenchless installation | Roy Rogers Rd | Tualatin River | Willamette River |
| | | Arrowhead Creek Lane | Arrowhead Creek | Coffee Lake Creek |
| | | South Hillsboro | Butternut Creek | Tualatin River |
| | | Cornelius Pass Rd | Reedville Creek | Rock Creek (LLID 1229444454907) |
| | | Millikan Way | Beaverton Creek | Rock Creek (LLID 1229444454907) |
| | | Beef Bend Rd #2 | Unnamed drainage | Tualatin River at RM 20.0 |
| | | Bridge north of Bull Mountain Rd | Unnamed perennial creek | Unnamed tributary to the Tualatin River at RM. 20.1 |

| | | | | |
|----------------------------------|---|--|---|---|
| | Avoided due to installation under the roadway located above the creek | SW Ridder Road | Tapman Creek | Coffee Lake Creek |
| | | Tualatin-Sherwood Road | Rock Creek | Tualatin River |
| Water Transmission Line Crossing | Temporary due to open trench method of installation | Industrial Way/Ore-Pac Ave. | Coffee Lake Creek | Willamette River |
| | | Roy Rogers Rd. | Chicken Creek | Tualatin River |
| | | Grabhorn Rd. | McKernan Creek | Tualatin River |
| | | Cornelius Pass Rd. | Beaverton Creek | Rock Creek (LLID 1229444454907) |
| | | Cornelius Pass Rd. | Rock Creek | Tualatin River |
| | | SW 124 th Ave/Tualatin-Sherwood Rd intersection | Water detention pond in-line with tributary to Hedges Creek | Hedges Creek |
| | | Beef Bend Rd #1 | Unnamed tributary to Tualatin River | Tualatin River |
| | | Roy Rogers Rd | Agricultural drainage | Unnamed tributary to the Tualatin River at RM. 20.1 |
| | | Scholls Ferry Rd near Vandermost Rd | Unnamed tributary to Tualatin River | Tualatin River |
| | | | Unnamed tributary to Tualatin River | Tualatin River |
| | | Grabhorn Rd | Unnamed seasonal tributary to McKernan Creek | McKernan Creek |
| | | At Tanabe Property | Unnamed seasonal drainage | McKernan Creek |
| | | Clark Hill Rd | Unnamed swale/drainage through pasture wetland | McKernan Creek |
| | | Rosedale Rd | Unnamed seasonal drainage | Tualatin River at RM 34.1 |
| | | Cornelius Pass Rd | Unnamed tributary to Butternut Creek | Butternut Creek |

Status of Affected Waters of the State: The Section 303(d) list of impaired water bodies and EPA-approved Total Maximum Daily Loads (TMDLs), based on Oregon's 2012 Integrated Report, are listed in Table 2 below. Reedville Creek, Arrowhead Creek, Tapman Creek, McKernan Creek, did not have specific listings. Coffee Lake Creek had insufficient data to determine impairments. Numerous ditches and wetlands will be temporarily impacted by adding 1 foot of crushed rock fill over geotextile fabric for equipment access and/or for placing the waterline beneath the ditch, these ditches are within the basins of the waterbodies listed in Table 2 below.

Table 2: Status of Water bodies

| Waterbody | 303-d listings (year-round unless otherwise indicated) | EPA-approved TMDLs (year-round unless otherwise indicated) | Impairments (not requiring a TMDL) |
|---|--|--|--|
| Willamette River | aldrin, biological criteria, DDE 4,4, DDT 4,4, dieldrin, iron, PCBs, lead, chlorophyll a (summer), mercury | dioxin (2,3,7,8-TCDD), temperature, <i>E. Coli</i> (fall/winter/spring) | none listed |
| Tualatin River | ammonia, biological criteria, copper, iron, lead, mercury, zinc | chlorophyll a, dissolved oxygen, phosphorus (Jun 1–Sept 30), temperature (summer), <i>E. Coli</i> | none listed |
| Rock Creek (LLID 1229444454907) | arsenic, dissolved oxygen (Jan 1–May 15 for spawning), iron, lead | ammonia (Jun 1–Sept 30), chlorophyll a (summer), dissolved oxygen, <i>E. Coli</i> , phosphorus (Jun 1–Sept 30), temperature (summer) | biological criteria |
| Beaverton Creek (LLID 1229133455196) | arsenic, iron, lead | phosphorus (Jun 1–Sept 30), dissolved oxygen, <i>E. Coli</i> , temperature (summer) | biological criteria |
| Butternut Creek | none listed | phosphorus (Jun 1–Sept 30), fecal coliform, temperature (summer), dissolved oxygen (May 1–Oct 31) | biological criteria |
| Chicken Creek | dissolved oxygen (Jan 1–May 15 for spawning), iron, lead | ammonia (Jun –Sept 30), dissolved oxygen, <i>E. Coli</i> , phosphorus (Jun 1–Sept 30) | none listed |
| Hedges Creek | none listed | phosphorus (Jun 1–Sept 30), temperature (summer), <i>E. Coli</i> , dissolved oxygen (May 1–Oct 31) | biological criteria |
| Rock Creek (LLID 1228322453862) | none listed | none listed | biological criteria |

Certification Decision: Based on the information provided by the Applicant and the USACE, DEQ is reasonably assured that implementation of the project will be consistent with applicable provisions of Sections 301, 302, 303, 306, and 307 of the federal Clean Water Act, state water quality standards set forth in Oregon Administrative Rules Chapter 340 Division 41, and other appropriate requirements of state law, provided the following conditions are strictly adhered to by the Applicant.

401 WQC GENERAL CONDITIONS

- 1) **Responsible parties:** This 401 WQC applies to the Applicant. The Applicant is responsible for the work of its contractors and sub-contractors, as well as any other entity that performs work related to this WQC.
- 2) **Work Authorized:** Work authorized by this 401 WQC is limited to the work described in the Joint Permit Application signed on March 28, 2017 and additional application materials (hereafter "the permit application materials"), unless otherwise authorized by DEQ. If the project is operated in a manner not consistent with the project description contained in the permit application materials, the Applicant is not in compliance with this 401 WQC and may be subject to enforcement.
- 3) **Duration of Certificate:** This 401 WQC for impacts to waters, including dredge and fill activities, is valid for ten years from the date of issuance of the USACE 404 permit. A new or modified 401 WQC must be requested prior to any modification of the USACE 404 permit for project changes or project activities not consistent with the scope of the Work Authorized as defined in General Condition 2 (above). Post-construction stormwater facilities must be maintained for the life of the facility.
- 4) A copy of this 401 WQC letter must be kept on the job site and readily available for reference by the Applicant and its contractors, as well as by DEQ, USACE, National Marine Fisheries Service (NMFS), Oregon Department of Fish and Wildlife (ODFW), and other appropriate state and local government inspectors.
- 5) **Modification:** Any approved modifications to this 401 WQC will incur a Tier 1 fee of \$985 at a minimum. Complex modifications may be charged a higher fee.
- 6) The Applicant must notify DEQ of any change in ownership or control of this project and obtain DEQ review and approval before undertaking any change to the project that might affect water quality.
- 7) DEQ may modify or revoke this 401 WQC, in accordance with OAR 340-048-0050, if the project changes or project activities are having an adverse impact on state water quality or beneficial uses, or if the Applicant is otherwise in violation of the conditions of this certification.
- 8) The Applicant and its contractors must allow DEQ access to the project site, staging areas, and mitigation sites to monitor compliance with these 401 WQC conditions, including
 - a. Access to any records, logs, and reports that must be kept under the conditions of this 401 WQC;
 - b. To inspect best management practices (BMPs), monitoring or operational equipment or methods;
 - c. To collect samples or monitor any discharge of pollutants.
- 9) Failure of any person or entity to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce its terms.

CONSTRUCTION SPECIFIC CONDITIONS

- 10) **Erosion Control:** During construction, erosion control measures must be implemented to prevent or control movement of soil into waters of the state. The Applicant is required to develop and implement an effective erosion and sediment control plan. **Any project that disturbs more than one acre is required to obtain an NPDES 1200-C or 1200-CN construction stormwater general permit from DEQ or DEQ agent, as applicable.** In addition, the Applicant must do the following, unless otherwise authorized by DEQ in writing:
- a. Maintain an adequate supply of materials necessary to control erosion at the project construction site.
 - b. Deploy compost berms, impervious materials, or other effective methods during rain events or when stockpiles are not moved or reshaped for more than 48 hours. Erosion of stockpiles is prohibited.
 - c. Inspect erosion control measures daily and maintain erosion control measures as often as necessary to ensure the continued effectiveness of measures. Erosion control measures must remain in place until all exposed soil is stabilized.
 - i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, the Applicant must mobilize immediately to make repairs, install replacements, or install additional controls as necessary.
 - ii. If sediment has reached 1/3 of the exposed height of a sediment or erosion control, the Applicant must remove the sediment to its original contour.
 - d. Use removable pads or mats to prevent soil compaction at all construction access points through, and staging areas in, riparian or wetland areas to prevent soil compaction, unless otherwise authorized by DEQ.
 - e. Flag or fence off wetlands not specifically authorized to be impacted to protect from disturbance and/or erosion.
 - f. Place dredged or other excavated material on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands.
 - g. Place clean aggregate at all construction entrances, and utilize other BMPs, including, but not limited to truck or wheel washes, when earth moving equipment is leaving the site and traveling on paved surfaces. The tracking of sediment off site by vehicles is prohibited.
 - h. This certification *does not* authorize the placement of BMPs into waters of the state unless specifically outlined in the application and authorized by DEQ.
- 11) **Deleterious waste materials:** The Applicant is prohibited from placing biologically harmful materials and construction debris including, but not limited to petroleum products, chemicals, cement cured less than 24 hours, welding slag and grindings, concrete saw cutting by-products, sandblasted materials, chipped paint, tires, wire, steel posts, asphalt and waste concrete where such materials could enter waters of the state, including wetlands (wetlands are waters of the state). The Applicant must do the following:
- a. Cure concrete, cement, or grout for at least 24 hours prior to any contact with flowing waters;
 - b. Use only clean fill, free of waste and polluted substances;

- c. Employ all practicable controls to prevent discharges of spills of deleterious materials to surface or ground water;
- d. Maintain at the project construction site, and deploy as necessary, an adequate supply of materials needed to contain deleterious materials during a weather event;
- e. Remove all foreign materials, refuse, and waste from the project area; and
- f. Employ general good housekeeping practices at all times.

12) **Spill Prevention:** The Applicant must fuel, operate, maintain and store vehicles and equipment, and must store construction materials, in areas that will not disturb habitat either directly or result in potential discharges. In addition, the following specific requirements apply:

- a. Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150 feet or more from any waters of the state. An exception to this distance may be authorized upon written approval by DEQ if all practicable prevention measures are employed and this distance is not possible because of any of the following site conditions:
 - i. Physical constraints that make this distance not feasible (e.g., steep slopes, rock outcroppings);
 - ii. Natural resource features would be degraded as a result of this setback; or
 - iii. Equal or greater spill containment and effect avoidance is provided even if staging area is less than 150 feet of any waters of the state.
- b. If staging areas are within 150 feet of any waters of the state, as allowed under subsection (a)(iii) of this condition, full containment of potential contaminants must be provided to prevent soil and water contamination, as appropriate.
- c. All vehicles operated within 150 feet of any waters of the state must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected in the vehicle staging area must be repaired before the vehicle resumes operation.
- d. Before operations begin and as often as necessary during operation, equipment must be steam cleaned (or undergo an approved equivalent cleaning) until all visible external oil, grease, mud, and other visible contaminants are removed if the equipment will be used below the bank of a waterbody.
- e. All stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 feet of any waters of the state must be covered by an absorbent mat to prevent leaks, unless other suitable containment is provided to prevent potential spills from entering any waters of the state.
- f. An adequate supply of materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials) needed to contain spills must be maintained at the project construction site and deployed as necessary.
- g. All equipment operated in state waters must use bio-degradable hydraulic fluid.
- h. Implement BMPs to prevent spills of drilling fluid, including controlling the operating pressure, maintaining the necessary distance below the ground surface during drilling and using a drill casing, if needed.
- i. A maintenance log documenting equipment maintenance inspections and actions must be kept on-site and available upon request.

13) **Transmission Pipelines:**

- a. Provide a minimum of two pipe diameters depth of cover for transmission pipelines below active stream channels, or deep enough to avoid active scour as indicated by a subsequent site-specific analysis.
 - b. Unless infeasible, set transmission pipelines under active stream channels at a depth to allow medium rooting vegetation along the stream banks.
 - c. Include anti-seep collars or equivalent technology to prevent draining the wetlands, for utility lines through wetlands.
- 14) **Hydrostatic Testing Water:** Discharges of hydrostatic testing water must be less than the bankfull discharge of the receiving stream and must not cause water quality criteria to be exceeded. Prior to discharge to waters of the state, hydrostatic testing water must be tested for pH, chlorine, and turbidity.
- 15) **Dewatering of Transmission Pipelines:** Discharges from dewatering the transmission pipelines, must be less than the bankfull discharge of the receiving stream and must not cause water quality criteria to be exceeded. Prior to discharge to waters of the state, water from the dewatering of transmission pipelines must be tested for residual chlorine.
- 16) **Spill & Incident Reporting:**
- a. In the event that petroleum products, chemicals, or any other deleterious materials are discharged into state waters, or onto land with a potential to enter state waters, the Applicant must promptly report the discharge to the Oregon Emergency Response System (OERS, 1-800-452-0311). The Applicant must immediately begin containment and complete cleanup as soon as possible.
 - b. If the project operations cause a water quality problem which results in distressed or dying fish, the Applicant must immediately do the following: cease operations; take appropriate corrective measures to prevent further environmental damage; collect fish specimens and water samples; and notify DEQ, ODFW and other appropriate regulatory agencies.
- 17) **Vegetation Protection and Restoration:**
- a. The Applicant must protect riparian, wetland, and shoreline vegetation in the authorized project area (as defined in the permit application materials) from disturbance through one or more of the following:
 - i. Minimization of project and impact footprint;
 - ii. Designation of staging areas and access points in open, upland areas;
 - iii. Fencing and other barriers demarcating construction areas; and
 - iv. Use of alternative equipment (e.g., spider hoe or crane).
 - b. Replant impacted riparian, wetland, and shoreline vegetation, providing medium (or deeper) rooting vegetation along stream banks, unless infeasible.
 - c. If authorized work results in riparian, wetland, or shoreline vegetative disturbance and the disturbance has not been accounted for in planned mitigation actions, the Applicant must successfully reestablish vegetation to a degree of function equivalent to or better than before the disturbance. The standard for success is

80% cover for native plant species. The vegetation must be reestablished by the completion of authorized work and include the following:

- i. Restoring damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation, unless precluded by pre-project conditions (e.g., a natural rock wall).
- ii. Replanting or reseeding each area requiring revegetation before the end of the first planting season following construction.
- iii. Planting disturbed areas with native plants and trees in all cases except where the use of non-native plant materials may be essential for erosion control.
- iv. Using invasive species to reestablish vegetation is prohibited.
- v. Herbicides, pesticides and fertilizers must be applied per manufacturer's instructions, and only if necessary for vegetation establishment. If chemical treatment is necessary, the Applicant is responsible for ensuring that pesticide application laws, including with the 2300-A pesticide NPDES general permit are met. Please review the information on the following website for more information:
www.deq.state.or.us/wq/wqpermit/pesticides.htm.

Additionally:

1. Unless otherwise approved in writing by DEQ, applying surface fertilizer within stormwater treatment facilities or within 50 feet of any stream channel is prohibited;
 2. Other than spot application to cut stems, no herbicides are allowed within stormwater treatment facilities or within 150 feet of waters of the state. Mechanical, hand, or other methods may be used to control weeds and unwanted vegetation within stormwater treatment facilities or within 150 feet of waters of the state; and
 3. No pesticides may be used within stormwater treatment facilities or within 150 feet of waters of the state.
- vi. Install wildlife-friendly fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
 - vii. Minimize soil compaction, especially in areas that are designated to be replanted. If soils are compacted, decompact staging areas and work construction areas prior to replanting. Leave topsoil when possible. Chip materials from clear and grub operation and spread on soil surface, unless cleared areas contained invasive species.
- 18) Provide a minimum 50-foot buffer zone to protect existing riparian areas and wetlands, wherever feasible. Impacts to buffer areas will be restored, where possible, according to the project's Conceptual Post-Construction Site Restoration Plan.
- 19) **Notification to DEQ:** The Applicant must provide pre-construction notification to DEQ one week prior to the start of construction. Contact information can be found at the end of the certification.

SPECIFIC CONDITIONS FOR IN-STREAM WORK

- 20) **Fish protection/ Oregon Department of Fish and Wildlife timing:** The Applicant must perform in-water work only within the ODFW preferred time window as specified in the *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources*, or as authorized otherwise under a Department of State Lands removal/fill permit. Exceptions to the timing window must be recommended by ODFW and/or the NMFS as appropriate.

Aquatic life movements: Any activity that may disrupt the movement of aquatic life living in the water body, including those species that normally migrate through the area, is prohibited. The Applicant must provide unobstructed fish passage at all times during any authorized activity unless one of the following conditions occurs and the method is approved by ODFW; (1) The ability to completely block fish movement will be limited in duration to no more than ten days and will only be allowed when water quality conditions preclude the likelihood that salmonids will use the area, and (2) upstream fish movement will be required in locations where blocking upstream movement, even for short durations, will unduly stress salmonids using the area. Exceptions must be reviewed and recommended by Oregon Department of Fish Wildlife and/or NMFS as appropriate.

- 21) **Isolation of in-water work areas:** The Applicant must isolate in-water work areas from the active flowing stream, unless otherwise authorized as part of the approved application, or authorized by DEQ. The Applicant is referred to DEQ's *Oregon Sediment and Erosion Control Manual*, April 2005, for isolation techniques (see <http://www.deq.state.or.us/wq/stormwater/docs/escmanual/appxd.pdf>). During open-trench construction, use cofferdams, sheet piles, or diversion pipes, as appropriate.

- 22) **Cessation of Work:** The Applicant must cease project operations under high flow conditions that will result in inundation of the project area. Only efforts to avoid or minimize turbidity or other resource damage as a result of inundation of the exposed project area are allowed during high flow conditions.

- 23) **Turbidity:** The Applicant must implement best management practices (BMPs) to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidities is prohibited except as specifically provided below:

a. **Monitoring:** Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two hour intervals each day during daylight hours when in-water work is being conducted. A properly calibrated turbidimeter is required.

- i. **Representative Background Point:** The Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area 100 feet upcurrent from the in-water disturbance, in order to establish background turbidity levels. The background turbidity, location, date, and time must be recorded immediately prior to monitoring downcurrent at the compliance point described below.
- ii. **Compliance Point:** The Applicant must monitor every two hours, 100 feet downcurrent from the disturbance, at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, and time must be recorded for each measurement.

- b. **Compliance:** The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two-hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances are allowed as follows:

| MONITORING WITH A TURBIDIMETER EVERY 2 HOURS | |
|---|---|
| TURBIDITY LEVEL | Restrictions to Duration of Activity |
| 0 to 4 NTU above background | No Restrictions |
| 5 to 29 NTU above background | Work may continue for a maximum of 4 Hours. If turbidity remains 5-29 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background. |
| 30 to 49 NTU above background | Work may continue for a maximum of 2 Hours. If turbidity remains 30-49 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background. |
| 50 NTU or more above background | Stop work immediately and inform DEQ |

- c. **Reporting:** The Applicant must record all turbidity monitoring required by subsections (a) and (b) above in daily logs. The daily logs must include calibration documentation; background NTUs; compliance point NTUs; comparison of the points in NTUs; location; date; and time for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions. The Applicant must make available copies of daily logs for turbidity monitoring to DEQ, USACE, NMFS, USFWS, and ODFW upon request. An example turbidity log is attached to this certification.
- d. **BMPs to Minimize In-stream Turbidity:** The Applicants must implement the following BMPs, unless accepted in writing by DEQ:
- i. Sequence/Phasing of work – The Applicant must schedule work activities so as to minimize in-water disturbance and duration of in-water disturbances;
 - ii. Bucket control - All in-stream digging passes by excavation machinery and placement of fill in-stream using a bucket must be completed so as to minimize turbidity. All practicable techniques such as employing an experienced equipment operator, not dumping partial or full buckets of material back into the wetted stream, adjusting the volume, speed, or both of the load, or using a closed-lipped environmental bucket must be implemented;
 - iii. The Applicant must limit the number and location of stream crossing events. Establish temporary crossing sites as necessary at the least sensitive areas and amend these crossing sites with clean gravel or other

- temporary methods as appropriate, so as to discharge sediments to the waterbody;
- iv. Machinery may not be driven into the flowing channel, unless authorized in writing by DEQ;
 - v. Excavated material must be placed so that it is isolated from the water's edge or wetlands, and not placed where it could re-enter waters of the state uncontrolled; and
 - vi. Containment measures such as silt curtains, geotextile fabric, and silt fences must be implemented and properly maintained in order to minimize in-stream sediment suspension and resulting turbidity.

SPECIFIC CONDITIONS FOR PILING REMOVAL

- 24) **Piling Removal:** The Applicant will use vibratory extraction for pile removal wherever feasible. If not feasible, pile cutoff methods may be used as an alternative removal method. The Applicant must implement the following measures to reduce the incidence of sediment disturbance and contaminant mobilization:
- a. Use an adequately trained equipment and crane operator;
 - b. Install a floating surface boom for capture and containment of debris and floatable pollutants;
 - c. Vibrate each pile to break the skin friction bond between pile and sediment, to avoid pulling out a large block of soil and possibly breaking off the pile in the process;
 - i. Remove each pile slowly;
 - ii. Do not allow extraction equipment (e.g., bucket, steel cable, vibratory hammer) to enter the water; and,
 - iii. Once loose, immediately transfer the piling along the most direct route to a contained, dry storage site.
 - d. If vibratory extraction or pulling is not feasible due to slope stability or pile breakage, pile cutoff may be used. When pile cutting is performed, the Applicant or its contractors must
 - i. Time work to occur at lowest water possible;
 - ii. Use a pneumatic underwater chainsaw; and,
 - iii. In areas that are tidally influenced or prone to scour, cut the pile at least two feet below the sediment surface.
 - e. **Pile Handling and Disposal**
 - i. No treated wood debris may fall into waters of the state. If any treated wood debris enters waters of the state, it must be removed immediately and disposed of properly;
 - ii. The Applicant or its contractors must immediately place removed pilings into a contained, dry storage site;
 - iii. Treated wood pile(s) may not be left in the water or stacked on the streambank; and
 - iv. The Applicant or its contractors must dispose of all treated wood debris removed during a project at an upland facility in accordance with all applicable state and federal requirements.

SPECIFIC CONDITIONS FOR POST CONSTRUCTION STORMWATER MANAGEMENT

- 25) **Post Construction Stormwater Management:** The Applicant must implement and comply with the terms of the approved post-construction stormwater management plan, which describes best management practices (BMPs) to prevent or treat pollution in stormwater anticipated to be generated by the project, in order to comply with state water quality standards. Two bioretention ponds will be provided at the raw water facilities site to provide stormwater treatment. A bioretention pond at the water treatment plant and a bioretention pond at the reservoir facilities will provide stormwater treatment at these locations. **Clean Water Services has jurisdiction of the stormwater treatment at the water treatment plant and the reservoir facilities; stormwater review for these facilities is deferred to Clean Water Services.**

The Applicant must implement BMPs as proposed in the stormwater management plan, including operation and maintenance, dated April 2017. If proposed stormwater facilities change due to site conditions, the Applicant must notify DEQ, and receive approval in writing.

Within 30 days of project completion, the Applicant must submit a copy of the 'As-Builts' or red-lined construction drawings showing all stormwater management facilities.

- 26) **Stormwater Management & System Maintenance:** The Applicant is required to implement effective operation and maintenance practices for the lifetime of the proposed facility. These include but are not limited to
- a. Maintenance techniques and frequency for each system component must follow appropriate recommendations in accepted manuals.
 - b. Long-term operation and maintenance of stormwater treatment facilities will be the responsibility of the Applicant, unless and until an agreement transferring that responsibility to another entity is submitted to DEQ.
- 27) **Corrective Action May Be Required:** The Department retains the authority to require corrective action in the event the stormwater management facilities are not built or performing as described in the plan.

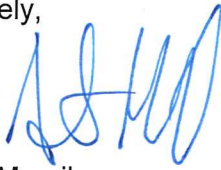
SPECIFIC CONDITIONS FOR TEMPERATURE IMPACTS

- 28) The Applicant must address the temperature impacts of Willamette River water withdrawal to the satisfaction of DEQ prior to increasing withdrawal. The Applicant may do this in stages, documenting offsets to temperature impacts incrementally, as withdrawal increases. To demonstrate that temperature is adequately addressed, the Applicant must do all of the following, prior to increasing withdrawal:
- a. At least six months prior to desired increase, submit a plan to DEQ that quantifies how temperature impacts will be offset. The Applicant has expressed its intent to offset temperature impacts through water quality trading per OAR 340-039-0017(2). Therefore, the plan submittal must meet the requirements of a Water Quality Trading Plan in OAR 340-039-0025. Should the Applicant choose to pursue offsetting temperature impacts through other means a sufficient plan must be submitted to DEQ.

- b. Update and revise the Water Quality Trading Plan as necessary to meet water quality standards and receive approval from DEQ.
- c. Implement the Water Quality Trading Plan as approved by DEQ.

If the Applicant is dissatisfied with the conditions contained in this certification, a contested case hearing may be requested in accordance with OAR 340-048-0045. Such request must be made in writing to the DEQ Office of Compliance and Enforcement at the Lloyd 700 Building, 700 NE Multnomah St #600, Portland, OR 97232 within 20 days of the mailing of this certification. The DEQ hereby certifies this project with the above conditions in accordance with the Clean Water Act and state rules. If you have any questions, please contact Sara Christensen at christensen.sara@deq.state.or.us, or by phone at 541-633-2007.

Sincerely,



Steve Mrazik
Water Quality Manager
Northwest Region

2015-41_WillametteWaterSupply_401WQC.docm

cc: Michael Ladouceur, USACE
Jaimee Davis, USACE
Anita Huffman, DSL
Annie Birnie, NOAA Fisheries
Ethan Rosenthal, David Evans and Associates, Inc.
Niki Iverson, City of Hillsboro
Jill Chomycia, Willamette Water Supply
Wade Peerman, ODEQ

Willamette Intake Facilities Commission

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