

Willamette Water Supply System Commission

Board Meeting
Thursday, October 1, 2020
12:00 – 2:00 PM

Microsoft Teams Meeting
In compliance with COVID-19 restrictions,
this meeting is dial-in only.

Willamette Water Supply System Commission

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**Willamette Water Supply System Commission
Board Meeting Agenda
Thursday, October 1, 2020 | 12:00 – 2:00 PM**

Microsoft Teams Dial-in Conference

To slow the spread of COVID-19, this meeting is dial-in only. It will not be held at a physical location.

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- If you wish to attend via conference call and need dial-in information, please contact Faye.Branton@twwd.org or call 971-329-5523. • If you wish to address the Willamette Water Supply System Board, please request the Public Comment Form and return it 48 hours prior to the day of the meeting. • **All testimony is electronically recorded.**
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EXECUTIVE SESSION – 11:30 AM

An executive session of the Board is called under ORS 192.660(2)(h) to consult with counsel concerning the legal rights and duties of a public body with regard to current litigation or litigation likely to be filed.

REGULAR SESSION – 12:00 PM

CALL TO ORDER

1. GENERAL MANAGER'S REPORT – Dave Kraska

(Brief presentation on current activities relative to the WWSS 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 September 3, 2020 meeting minutes.

4. BUSINESS AGENDA

- A. Adopt PLW_2.0 Supplemental Resolution of Public Necessity – *Joelle Bennett*
- B. Adopt Resolution Approving MPE_1.2/COB_1.2 City of Beaverton Construction IGA (SW Nimbus Avenue/SW Scholls Ferry to SW Western Avenue) – *Joelle Bennett*
- C. Acting as Local Contract Review Board: Adopt Resolution Approving the Use of Alternative Contracting Methods for Construction of a Phase of MPE_1.2/COB_1.2 – *Mike Britch*
- D. Acting as Local Contract Review Board: Approve Public Notice of Findings for the Use of Alternative Contracting Methods for Construction of PLW_2.0 – *Mike Britch*
- E. Approve PLM_1.0 Design Contract Amendment for Completing PLM_1.3 – *Mike Britch*

5. INFORMATION ITEMS

- A. Thermal Trading Plan Update – *Christina Walter*
- B. Planned November Business Agenda Items – *Joelle Bennett*
- C. The next Board meeting is scheduled on November 5, 2020, via Microsoft Teams conference

6. COMMUNICATIONS AND NON-AGENDA ITEMS

- A. None scheduled.

ADJOURNMENT

Willamette Water Supply
Our Reliable Water

Safety Minute:
Protecting Your Online Privacy

1



DO YOUR PART.
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Willamette Water Supply
Our Reliable Water

2

2

Online Privacy

- The Internet touches almost all aspects of our daily lives. We are able to shop, bank, connect with family and friends, and handle our medical records – all online.
- These activities require you to provide personally identifiable information (PII) such as your name, date of birth, account numbers, passwords, and location information.

Tips to Protect Your Online Privacy

- **Double your login protection**
 - Enable multi-factor authentication (MFA) when available.
 - Use MFA for any service that requires logging in (e.g., email, banking, social media).
- **Shake up your password protocol**
 - Use the longest password or passphrase permissible.
 - Customize your standard password for different sites.

Tips to Protect Your Online Privacy

- **If you connect it, protect it**
 - Keep your software and all network devices (i.e., computer, smartphone, game device), web browser, and operating system updated to the latest version available.
 - Turn on automatic updates.
 - Set security software to run regular scans.

Tips to Protect Your Online Privacy

- **Play hard to get with strangers**
 - If unsure who an email is from, even if details appear accurate, do not respond or click on any links or attachments.
- **Never click and tell**
 - Limit information you post on social media.
 - Keep Social Security numbers, account numbers, passwords, and specific information about yourself (full name, address, birthday, even vacation plans) private.
 - Disable location services that allow anyone to see where you are – or where you aren't.

Tips to Protect Your Online Privacy

- **Keep tabs on your apps**
 - Check your app permissions.
 - Use the “rule of least privilege” to delete what you don’t need or no longer use.
 - Only download apps from trusted vendors and sources.

Tips to Protect Your Online Privacy

- **Stay protected while connected**
 - Before connecting to any public wireless hotspot (e.g., airport, hotel, café) ensure the network is legitimate. Confirm the network name and exact login procedures with appropriate staff.
 - If using an unsecured public access point, avoid sensitive activities that require passwords or credit cards (e.g., banking).
 - Only use sites that begin with <https://> when online shopping or banking.



NATIONAL
CYBERSECURITY
AWARENESS
MONTH

DO YOUR PART.
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Source: https://www.cisa.gov/sites/default/files/publications/NCSAM_OnlinePrivacy_2020.pdf

Willamette Water Supply
Our Reliable Water

Willamette Water Supply System Commission

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MEMO

Date: October 1, 2020
To: Willamette Water Supply System Board of Commissioners
From: David Kraska, P.E., General Manager
Re: Willamette Water Supply System (WWSS) General Manager's Report

The following items will be covered during the report by the General Manager (GM):

1. **Remote Meetings Etiquette:** Thank you for your continued flexibility as we hold our meetings remotely. We request participants continue to adhere to three basic rules:
 - a. Please mute your microphone when you are not talking.
 - b. Please identify yourself before you speak.
 - c. If someone other than a Board member would like to ask a question or make a comment, please use the chat feature to let the General Manager know and wait to be acknowledged.
2. **Safety Minute** – David Kraska will present today's safety minute.
3. **Approvals and Procurements Forecast** – Attached to this GM report is the approvals and procurements forecast (Forecast) for September through November 2020. The Forecast presents a view of WWSP activities that have recently been approved or are scheduled for approval over the next two months by either the WWSP Director, WWSS Committees, or the WWSS Board.

The Forecast shows that we currently anticipate having five business items on the November Board meeting agenda. These include one item pertaining to an individual WWSP project budget, one item pertaining to WWSP real estate activities, two WWSS intergovernmental agreements, and a Local Contract Review Board (LCRB) approval to initiate public comment for use of alternative contracting methods for construction of one project. One real estate item listed in the Forecast for approval today will, instead, be submitted to the Board for approval in November. Joelle Bennett will present a staff report later in this meeting on these anticipated November business agenda items.

The forecast also lists one upcoming contract anticipated for approval in December.

4. **Projects Planning, Permitting, and Communications Updates** – Recent permit approvals have been received for the PLM_1.2, PLW_1.3, and MPE_1.2 projects. Recent submittals include land use permit applications for the PLM_4.3 and MPE_1.2 projects and a revised Thermal Trading Plan submitted to DEQ.

GM Report to the WWSS Board of Commissioners

October 1, 2020

Page 2

Christina Walter will provide a Thermal Trading Plan update later in this meeting. Permit applications continue to be prepared and submitted for various WWSP projects (WTP_1.0, PLM_5.3, PLW_2.0, and MPE_1.2). Despite restrictions and modified business practices of the permitting agencies related to COVID-19, our permits continue to be processed in a timely manner.

5. Projects Design Status Updates – Work continues on multiple design projects, including ten pipeline projects, the Water Treatment Plant (WTP_1.0), the Distributed Controls System (DCS_1.0), and the Terminal Storage project (RES_1.0). All of the design projects are progressing according to plan.

6. Projects Construction Status Updates – There are six active construction projects:

Project	Description	Progress Since Last Month
1. RWF_1.0	Raw Water Facilities project located at the Willamette River Water Treatment Plant	Continued access road construction. Began mobilizing equipment for bank stabilization work.
2. PLM_1.1	Raw water pipeline project in Wilsonville that extends from our RWF_1.0 project to Wilsonville Road	Completed creek crossing and began creek restoration.
3. PLM_1.2	Raw water pipeline project being completed in partnership with the City of Wilsonville's Garden Acres Road project	2,000 LF of waterline installed. Began installing carrier pipe in the casing for the Day Road crossing.
4. PLM_5.1	Finished water pipeline project being completed in partnership with Washington County's Roy Rogers Road project	2,430 LF of waterline installed so far. Completed pipe along Scholls Ferry Road. Continuing south along Roy Rogers Road.
5. PLM_5.2	Finished water pipeline project along SW Scholls Ferry and SW Tile Flat roads that we are working to complete in advance of development work in the area	Continued installing the corrosion protection system. Testing installed appurtenances.
6. PLW_1.3	Finished water pipeline project in South Hillsboro from SW Farmington Road to SE Blanton Street	Mobilization is complete. Continued clearing and grubbing and haul road construction.

All projects remain on track and are progressing according to plan, and all contractors are remaining in compliance with the Governor's Executive Order No. 20-12 regarding hygiene and social distancing.

Approvals and Procurement Forecast: September 2020 through November 2020

This report provides a three-month projection of (1) forthcoming actions under the WWSS Management Authority Matrix and (2) ongoing and forthcoming procurements.

a = Actual date
e = Email approval
FC = Finance Committee
LCRB = Local Contract Review Board
MC = Management Committee
N/A = Not applicable
OC = Operations Committee

Rec. = Recommendation
t = Tentative date
TBD = To be determined; sufficient information not available to project a date
Note: Dates in **red text** indicate meetings needed outside the normal meeting schedule

Type	Description	Projecte d Action	Body/Position (projected action date)		
			Program Director	WWSS Committees	WWSS Board
Program Baseline or Related Plans	1. PLW_2.0 Modify Baseline construction duration to accommodate traffic control requirements, resulting in increase to individual project budget	Approve	N/A	MC: 10/22/2020 t	11/05/2020 t
Real Estate	2. PLM_5.3 Resolution of Need (third supplemental approval)	Approve	N/A	MC: 8/20/2020 a	9/3/2020 a
	3. PLW_2.0 Resolution of Need (supplemental approval)	Approve	N/A	MC: 8/20/2020 a	9/3/2020 a
	4. PLM_4.3 Resolution of Need (supplemental approval)	Approve	N/A	MC: 8/20/2020 a	9/3/2020 a
	5. PLM_1.3 Resolution of Need	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
	6. PLM_5.3 Resolution of Need (fourth supplemental approval)	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
	7. PLW_2.0 Resolution of Need (third supplemental approval)	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
	8. PLM_1.3 Resolution of Need (supplemental approval)	Approve	N/A	MC: 10/22/2020 t	11/05/2020 t
IGAs, MOUs, Permit Commitments, & Similar Agreements	9. MPE_1.0/COB_1.0 Design IGA Amendment 1 to add a City of Beaverton Hall Boulevard 16-inch pipeline to COB_1.0	Approve	N/A	MC: 7/23/2020 a	8/6/2020 a
		Execute	TBD	N/A	N/A
	10. MPE_1.0 WWSS Project Management Services Agreement Amendment to add TVWD connection to 24-inch pipeline at Oleson Blvd.	Approve	N/A	MC: 8/20/2020 a	9/3/2020 a
		Execute	9/4/2020 a	N/A	N/A
	11. City of Wilsonville IGA for WRWTP Filtration Pilot Study Participation	Approve	N/A	MC: 8/20/2020 a	9/3/2020 a
		Execute	9/4/2020 a	N/A	N/A
	12. MPE_1.1/COB_1.1 City of Beaverton Construction IGA (S.W. Western Ave. from S.W. Beaverton-Hillsdale Hwy. to S.W. Allen Blvd.)	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
		Execute	10/2/2020 t	N/A	N/A
	13. MPE_1.2/COB_1.2 City of Beaverton Construction IGA (S.W. Nimbus Ave./S.W. Scholls Ferry Road to S.W. Western Ave.)	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
		Execute	10/2/2020 t	N/A	N/A
	14. PLM_4.2 WCLUT Design IGA Amendment 2	Approve	N/A	MC: 10/22/2020 t	11/5/2020 t
		Execute	11/6/2020 t	N/A	N/A
	15. PLW_1.2 Construction IGA to Relocate Existing 18-inch TVWD pipeline	Approve	N/A	MC: 10/22/2020 t	11/5/2020 t
		Execute	11/6/2020 t	N/A	N/A

Type	Description	Execute	Body/Position (projected action date)		
			Program Director	WWSS Committees	WWSS Board
Contracts	16. RES_1.0 and PLM_5.3 Project Construction Manager/General Contractor (CM/GC) <ul style="list-style-type: none"> • Goal: CM/GC for RES_1.0/PLM_5.3 project • Approximate value (design phase): \$0.47 M • Approximate value (construction phase): \$118.9 M • Contractor: TBD • Publish Request for Proposals: 9/2/2020 a 	Approve	N/A	MC: 11/19/2020 t	12/3/2020 t
		Execute	12/4/2020 t	N/A	N/A
Contract Amendments and Change Orders (above Program Director's Authority)	17. PLM_1.0 Design Contract Amendment for Completing PLM_1.3 Design <ul style="list-style-type: none"> • Goal: Amend contract for design services to accommodate PLM_1.3 • Value: \$618K • Engineer: HDR 	Approve	N/A	MC: 9/17/2020 t	10/1/2020 t
		Execute	10/2/2020 t	N/A	N/A
	18. PLW_2.0 Design Contract Amendment for Scope Modifications <ul style="list-style-type: none"> • Goal: Amend contract for design services and engineering services during construction to accommodate scope modifications • Value: \$612K • Engineer: Kennedy Jenks 	Approve	N/A	MC: 8/25/2020 a	9/3/2020 a
		Execute	9/4/2020 a	N/A	N/A
Local Contract Review Board (LCRB) Actions	19. Findings for the Use of Alternative Contracting Methods for Construction of MPE_1.2/COB_1.2 <ul style="list-style-type: none"> • Goal: Use of best value selection approach • Board approval to initiate public comment 8/6/2020 a 	Approve	N/A	MC: 7/23/2020 a	10/1/2020 t
		20. Findings for the Use of Alternative Contracting Methods for Construction of PLW_2.0 <ul style="list-style-type: none"> • Goal: Use of best value selection approach • Board approval to initiate public comment 10/1/2020 t 	Approve	N/A	MC: 9/17/2020 t

**Willamette Water Supply System Commission
Board Meeting Minutes
Thursday, September 3, 2020**

Commissioners present:

Tualatin Valley Water District (TVWD): Jim Duggan
City of Hillsboro: David Judah
City of Beaverton: Denny Doyle

Committee Members present:

TVWD: Tom Hickmann, Management Committee
Carrie Pak, Operations Committee
City of Hillsboro: Niki Iverson, Management Committee
City of Beaverton: Chad Lynn, Management Committee
David Winship, Operations Committee

Managing Agency Administrative Staff present:

Dave Kraska, Willamette Water Supply Program (WWSP) Director; WWSS Commission General Manager
Joelle Bennett, WWSP Assistant Director
Bill Van Derveer, WWSP Program Manager
Faye Branton, WWSP Administrative Assistant; WWSS Commission Recorder

Other Attendees:

Mike Britch, WWSP Engineering and Construction Manager
Christina Walter, WWSP Permitting and Outreach Manager
Lisa Houghton, WWSP Finance Manager
Matt Oglesby, TVWD Asset Management Division Manager
Joe Miller, HDR Water Resources Project Manager; Water Business Development Lead

CALL TO ORDER

Chairman Duggan called the regular Willamette Water Supply System (WWSS) Commission meeting to order at 12:00 p.m.

ROLL CALL

Ms. Branton administered the roll call and noted attendance.

1. GENERAL MANAGER'S REPORT

Mr. Kraska presented a safety minute covering fire prevention tips during extreme hot weather.
(*presentation on file*)

The General Manager's report included an overview of etiquette for remote meetings; the Approvals and Procurement Forecast for August through October 2020; updates on projects planning, permitting, and communications; and status updates on the design and construction of projects. The report also noted that all contractors are remaining in compliance with the Governor's Executive Order No. 20-12 regarding hygiene and social distancing.

2. PUBLIC COMMENT

There were no public comments.

3. CONSENT AGENDA

- A.** Approve the August 6, 2020 meeting minutes.

Motion was made by Judah, seconded by Doyle, to approve the consent agenda as presented. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

4. BUSINESS AGENDA

In the interest of time efficiency, Ms. Bennett presented a combined staff report requesting adoption of Resolution Nos. WWSS-18-20 (for PLM_4.3), WWSS-19-20 (for PLM_5.3), and WWSS-21-20 (for PLW_2.0), and reminded the Board that each resolution would require a separate motion.

- A.** Consider adopting Resolution No. WWSS-18-20 declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLM_4.3 for the Willamette Water Supply System. • *Staff Report – Joelle Bennett*

Motion was made by Doyle, seconded by Judah, to adopt Resolution No. WWSS-18-20 declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLM_4.3 for the Willamette Water Supply System. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- B.** Consider adopting Resolution No. WWSS-19-20, declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLM_5.3 for the Willamette Water Supply System. • *Staff Report – Joelle Bennett*

Motion was made by Judah, seconded by Doyle, to adopt Resolution No. WWSS-19-20, declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLM_5.3 for the Willamette Water Supply System. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- C.** Consider adopting Resolution No. WWSS-20-20, declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLW_2.0 for the Willamette Water Supply System. • *Staff Report – Joelle Bennett*

Motion was made by Doyle, seconded by Judah, to adopt Resolution No. WWSS-20-20, declaring public necessity to acquire property interests over, upon, under and through real property for pipeline section PLW_2.0 for the Willamette Water Supply System. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- D. Consider adopting Resolution No. WWSS-21-20 authorizing the WWSS Commission General Manager to enter into an intergovernmental agreement with the City of Wilsonville for the Willamette River Water Treatment Plant (WRWTP) Filtration Pilot Study.
 - *Staff Report – Dave Kraska*

Mr. Kraska presented the staff report requesting adoption of Resolution No. WWSS-21-20.

Motion was made by Doyle, seconded by Judah, to adopt Resolution No. WWSS-21-20 authorizing the WWSS Commission General Manager to enter into an intergovernmental agreement with the City of Wilsonville for the Willamette River Water Treatment Plant (WRWTP) Filtration Pilot Study. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- E. Consider adopting Resolution No. WWSS-22-20, approving Amendment 1 to the Project Management Services Agreement between Tualatin Valley Water District and Willamette Water Supply Program for delivery of MPE_1.0 through the Willamette Water Supply Program. • *Staff Report – Joelle Bennett*

Ms. Bennett provided a presentation requesting adoption of Resolution No. WWSS-22-20.
(presentation on file)

Motion was made by Judah, seconded by Doyle, to adopt Resolution No. WWSS-22-20, approving Amendment 1 to the Project Management Services Agreement between Tualatin Valley Water District and Willamette Water Supply Program for delivery of MPE_1.0 through the Willamette Water Supply Program. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

- F. Consider approving Amendment 4 to the PLW_2.0 design contract in the amount of \$612,036.73 to Kennedy Jenks Consultants, Inc. for additional design services on the PLW_2.0 Project of the Willamette Water Supply Program. • *Staff Report – Mike Britch*

Mr. Britch provided a presentation requesting approval of Amendment 4 to the Kennedy Jenks contract to provide additional design services for the PLW_2.0 project of the Willamette Water Supply Program.
(presentation on file)

In answer to Commissioner's question staff provided additional insight into the complexities and challenges of the PLW_2.0 project. Although staff is exerting efforts to manage change as rigorously as possible, the magnitude of projects and the overall Program dictates that we be nimble in addressing challenges. This project has generated much public interest and is requiring a lot of public outreach. Hillsboro is also evaluating the need for water quality analysis at its turnouts. In support of this additional work, staff anticipates one or two more amendments to this contract, both of which are expected to be within the General Manager's signature authority.

Motion was made by Doyle, seconded by Judah, to approve Amendment 4 to the PLW_2.0 design contract in the amount of \$612,036.73 to Kennedy Jenks Consultants, Inc. for additional design services on the PLW_2.0 Project of the Willamette Water Supply Program. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

5. INFORMATION ITEMS

A. Planned October Business Agenda items · Staff Report – Joelle Bennett

Ms. Bennett presented information on anticipated business agenda items for the October 1, 2020 WWSS Commission Board meeting. Staff anticipates recommending approval of (1) PLM_1.3 Resolution of Public Necessity, (2) PLM_1.0 Design Contract Amendment for Completing PLM_1.3 Design and PLM_1.1 Construction Services, (3) MPE_1.1/COB_1.1 City of Beaverton Construction Intergovernmental Agreement (IGA) (SW Western Avenue from SW Beaverton-Hillsdale Highway to SW Allen Boulevard), (4) MPE_1.2/COB_1.2 City of Beaverton Construction IGA (SW Nimbus Avenue/SW Scholls Ferry to SW Western Avenue), and (5) Findings for the Use of Alternative Contracting Methods for Construction of MPE_1.2/COB_1.2.

B. The next Board meeting is scheduled on October 1, 2020, immediately preceded by an executive session. Both meetings will be held via dial-in conference, due to continued COVID-19 restrictions.

6. COMMUNICATIONS AND NON-AGENDA ITEMS

A. None scheduled.

In closing, Commissioners extended best wishes to all for an enjoyable the Labor Day weekend.

ADJOURNMENT

There being no further business, Chairman Duggan adjourned the meeting at 12:53 p.m.

James Duggan, Chair

Denny Doyle, Vice Chair

STAFF REPORT

To: Board of Commissioners

From: Joelle Bennett, P.E., WWSP Assistant Program Director

Date: October 1, 2020

Subject: Supplemental Resolution Declaring Public Necessity to Acquire Property Interests Over, Upon, Under, and Through Real Property for Pipeline Section PLW_2.0 for the Willamette Water Supply System

Requested Board Action:

Consider adopting a resolution declaring public necessity to acquire permanent and temporary construction easements over, upon, under, and through real property for pipeline section PLW_2.0 for the Willamette Water Supply System (WWSS).

Key Concepts:

The WWSS includes a section of pipeline referred to as PLW_2.0.

- The Willamette Water Supply Program (WWSP) has progressed the design of this pipeline section to enable identification of property requirements for construction and long-term operation and maintenance of the pipeline.
- After consideration of various alignments and alternatives, the identified route will be located in a manner that will be most compatible with the greatest public good and the least injury to private property owners.
- This resolution declares the public need for the property interests and enables the WWSS Commission's agents, including the WWSP team, to begin negotiating with respective property interest holders, and also authorizes the acquisition of the property interests by eminent domain, to the extent negotiations fail.
- This is the third resolution declaring property needs for PLW_2.0. The first resolution was approved at the August 6, 2020 meeting and the second at the September 3, 2020 meeting.

Background:

The WWSS includes a section of pipeline along Cornelius Pass Road, from SW Frances Street to Highway 26, mostly within the City of Hillsboro. The project area is shown in the attached map. The pipeline will be a 48-inch diameter welded steel or ductile iron pipe.

The WWSP has progressed the design of this pipeline section to enable identification of property requirements for construction and long-term operation and maintenance of the pipeline. The pipeline alignment was selected through an extensive alternatives evaluation, and the preferred location was selected based upon the best interests of the public and the least injury to private property owners. The proposed resolution will enable the submission of the project's land use application in addition to initiation of the property acquisition process, including negotiations with the Property owners and other applicable interest holders.

October 1, 2020

Supplemental Resolution Declaring Public Necessity to Acquire Property Interests for WWSP Pipeline
Section PLW_2.0

The PLW_2.0 pipeline alignment requires permanent and temporary easements to fulfill WWSP standard construction work zone requirements as well as provide for the future maintenance and operations of the WWSS pipeline and associated water system facilities.

WWSP continues to coordinate with the City of Hillsboro and Washington County during final design.

Resolution Summary

The WWSS Commission has authority to acquire real property for the WWSS. The pipeline section PLW_2.0 requires the acquisition of real property for the construction, operation, and maintenance of the WWSS. The PLW_2.0 pipeline alignment was selected through an extensive alternatives evaluation, and the preferred location was selected based on the best interests of the public and the least injury to private property owners. The resolution enables the initiation of the property acquisition process, including negotiations with interest holders, and also authorizes the acquisition of the property interests by eminent domain, to the extent negotiations fail.

Budget Impact:

The WWSP real estate team has completed an estimate that represents, in the professional judgment of the real estate team, the budget-level cost required to acquire the easements shown in Exhibit 1. Funds for purchase of these easements are included in the WWSP baseline budget.

Staff Contact Information:

Dave Kraska, P.E., WWSS General Manager, 503-941-4561, david.kraska@tvwd.org

Clark Balfour, General Counsel, 503-848-3061, clark.balfour@tvwd.org

Joelle Bennett, P.E., WWSP Assistant Program Director, 503-941-4577, joelle.bennett@tvwd.org

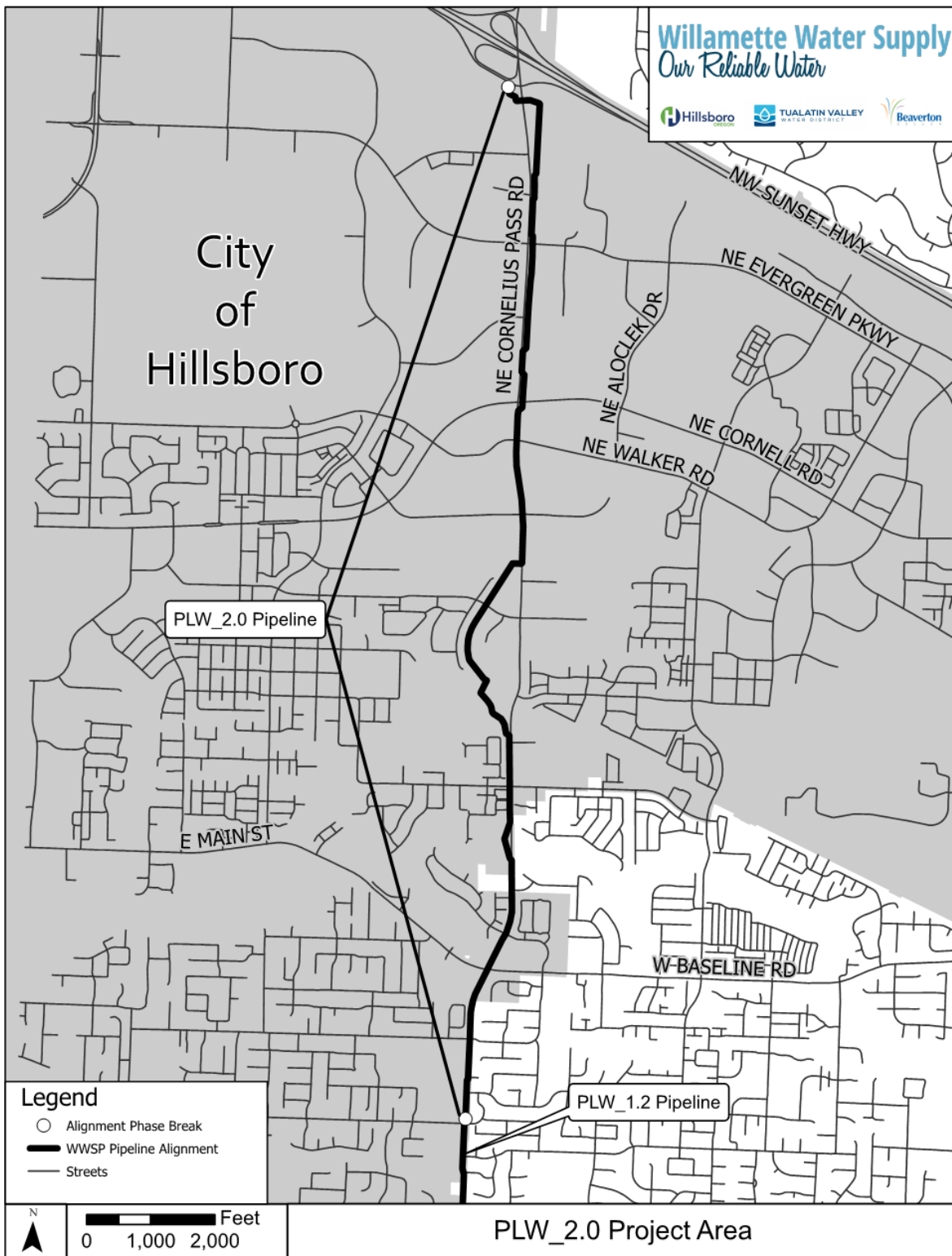
Attachments:

Project area map

Proposed Resolution

Exhibit 1: Property Interests (including Exhibit A Legal Descriptions and Exhibit B Acquisition Maps)

Project area map:



Willamette Water Supply System Commission

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RESOLUTION NO. WWSS-23-20

RESOLUTION DECLARING PUBLIC NECESSITY TO ACQUIRE PROPERTY INTERESTS OVER, UPON, UNDER AND THROUGH REAL PROPERTY FOR PIPELINE SECTION PLW_2.0 FOR THE WILLAMETTE WATER SUPPLY SYSTEM.

WHEREAS, the above-entitled matter came before the Willamette Water Supply System Commission (WWSS Commission) at its regular meeting on October 1, 2020; and,

WHEREAS, the Willamette Water Supply System Intergovernmental Agreement (Agreement) between Tualatin Valley Water District (TVWD), the City of Hillsboro (Hillsboro), and the City of Beaverton (Beaverton) (collectively, Members) created the WWSS Commission, an ORS Chapter 190 intergovernmental entity, effective July 1, 2019, to exercise the powers and duties set forth in the Agreement; and,

WHEREAS, pursuant to the Agreement, TVWD has been designated as the Managing Agency of the WWSS Commission; and,

WHEREAS, the Willamette Water Supply System (WWSS) includes, but is not limited to, an expanded and improved water intake on the Willamette River in the City of Wilsonville currently owned by TVWD and the City of Wilsonville, along with a new raw water pipeline, potable water treatment plant, finished water pipelines, pumping, storage, and other necessary water system facilities to enable the WWSS to utilize existing water rights to provide water system ownership and reliability to the Members' water system users; and,

WHEREAS, the WWSS Commission has been delegated authority by its Members under the Agreement and ORS Chapter 190 pursuant to City Charters, ORS 223.005 to 223.105, ORS 264.240 and Oregon Revised Statutes Chapter 35 to acquire real property by purchase or through eminent domain proceedings; and,

WHEREAS, the WWSS Commissioners determine, consistent with the powers and purposes of the WWSS Commission, that it is necessary for the economic well-being, public health, safety and welfare of the WWSS Commission and the Members' water system users, to acquire fee title to certain real property, as well as necessary rights-of-way, easements, and other property interests, in order to design, locate, construct, operate, and implement the WWSS; and,

WHEREAS, after investigation of various routes for a water pipeline and related water system facilities, the WWSS Commission has determined that certain property interests, are necessary for the construction, location, and operation of the WWSS, and in particular, pipeline section PLW_2.0, and that such use is planned and located in a manner that is most compatible with the greatest public benefit and the least private injury; and,

WHEREAS, such property interests are preliminarily described on Exhibits A and depicted for illustration purposes only on Exhibits B attached hereto and incorporated by reference, with final legal descriptions and easement documents to be determined by TVWD staff, including the Willamette Water Supply Program (WWSP) and its consultants, as the Managing Agency and on behalf of the WWSS

Commission, to be reasonably necessary to accommodate the design and operation of the WWSS (the Easement Interests); and,

WHEREAS, the WWSS Commission finds that declaration by resolution to acquire the Easement Interests for the WWSS is necessary and being so advised.

NOW, THEREFORE, BE IT RESOLVED BY THE WILLAMETTE WATER SUPPLY SYSTEM COMMISSION THAT:

Section 1: The above recitals shall form an integral part of this resolution and shall have the same force and effect as if fully stated herein.

Section 2: It is necessary for the preservation of economic well-being, public health, safety, and welfare of the public served by the Members and the WWSS that the WWSS Commission commence the acquisition process for the Easement Interests through exercise of the power of eminent domain.

Section 3: TVWD staff, including the WWSP, and counsel are authorized to retain real estate appraisers, negotiators, and other consultants, with said appraisals to be prepared under the auspices of WWSS Commission counsel, for initiation of proceedings as described below.

Section 4: TVWD staff, including WWSP, consultants, and counsel, are authorized to negotiate in good faith necessary agreements to acquire the Easement Interests on behalf of and in the name of the WWSS Commission and to pay just compensation and applicable compensable damages in accordance with applicable law without necessity of further approval by the WWSS Commission.

Section 5: TVWD staff, including WWSP, and counsel, are authorized to file complaints in condemnation, on behalf of and in the name of the WWSS Commission, and to take other steps as they determine necessary as the Managing Agency, and to prosecute to final determination such actions to acquire title to the Easement Interests if negotiations fail.

Section 6: Upon the trial of any suit or action instituted to acquire the Easement Interests, counsel acting for and on behalf of the WWSS Commission are authorized to make such stipulation, agreement, or admission as in their judgment may be for the best interest of the WWSS Commission and to take possession of the Easement Interests at such time as appropriate in their judgment without necessity of further WWSS Commission approval.

Approved and adopted at a regular meeting held on the 1st day of October 2020.

James Duggan, Chair

Denny Doyle, Vice Chair

Exhibits A and B to Resolution No. WWSS-23-20

Exhibit "A"

Willamette Water Supply Program
PLW 2.0
September 4, 2020

Project 19110
Pacific Realty Associates, L.P.
Tax Lots 1N226CD 00900 & 01000

PARCEL 1 - PERMANENT EASEMENT

A parcel of land situate in the southwest one-quarter of Section 26 in Township 1 North, Range 2 West of the Willamette Meridian, City of Hillsboro, Washington County, Oregon and being a portion of that property conveyed to Pacific Realty Associates, L.P. in that Bargain and Sale Deed, recorded March 4, 1999 as Document No. 99027079, Washington County Book of Records; more particularly described as follows:

Beginning on the northerly right-of-way of NE Walbridge Street (County Road No. 715 and 1149) which bears South 86° 17' 25" West 101.40 feet from a found 5/8" iron rod with yellow plastic cap stamped "NORTHWEST SURVEYING" as shown on Partition Plat No. 2017-010, Washington County Records; thence leaving said right-of-way North 02° 50' 37" West 8.17 feet; thence North 88° 34' 38" East 26.96 feet; thence North 59° 00' 38" East 50.38 feet; thence North 86° 14' 25" East 130.05 feet to the westerly right-of-way of NE Cornelius Pass Road (County Road No. 3020); thence along said westerly right-of-way South 04° 36' 10" East 15.22 feet; thence leaving said westerly right-of-way and along said northerly right-of-way South 77° 46' 32" West 101.85 feet; thence South 86° 17' 25" West 101.40 feet to the point of beginning.

The parcel of land to which this description applies contains 4,219 square feet, more or less.

PARCEL 2 – TEMPORARY CONSTRUCTION EASEMENT

A parcel of land situate in the southwest one-quarter of Section 26 in Township 1 North, Range 2 West of the Willamette Meridian, City of Hillsboro, Washington County, Oregon and being a portion of that property conveyed to Pacific Realty Associates, L.P. in that Bargain and Sale Deed, recorded March 4, 1999 as Document No. 99027079, Washington County Book of Records; more particularly described as follows:

Commencing on the northerly right-of-way of NE Walbridge Street (County Road No. 715 and 1149) which bears South $86^{\circ} 17' 25''$ West 101.40 feet from a found $5/8''$ iron rod with yellow plastic cap stamped "NORTHWEST SURVEYING" as shown on Partition Plat No. 2017-010, Washington County Plat Records; thence leaving said right-of-way North $02^{\circ} 50' 37''$ West 8.17 feet to the True Point of Beginning; thence North $02^{\circ} 50' 37''$ West 52.87 feet; thence North $86^{\circ} 14' 25''$ East 120.27 feet; thence North $04^{\circ} 01' 28''$ West 115.95 feet; thence North $86^{\circ} 38' 17''$ East 55.00 feet; thence North $04^{\circ} 01' 28''$ West 40.10 feet; thence North $80^{\circ} 04' 11''$ East 16.60 feet to the westerly right-of-way of Cornelius Pass Road (County Road No. 3020), said point also being a point on a non-tangent curve; thence on the arc of a 1401.00 foot radius curve to the right (the radial of which bears North $79^{\circ} 49' 43''$ East), through a central angle of $02^{\circ} 49' 13''$, an arc distance of 68.96 feet (the long chord of which bears South $08^{\circ} 45' 41''$ East 68.95 feet); thence leaving said westerly right-of-way South $86^{\circ} 38' 17''$ West 13.70 feet; thence South $50^{\circ} 37' 06''$ West 17.50 feet; thence South $02^{\circ} 50' 37''$ East 10.17 feet; thence South $86^{\circ} 38' 17''$ West 42.09 feet; thence South $04^{\circ} 01' 28''$ East 68.79 feet; thence North $86^{\circ} 14' 25''$ East 10.00 feet; thence South $04^{\circ} 01' 28''$ East 30.91 feet; thence South $86^{\circ} 14' 25''$ West 66.96 feet; thence South $59^{\circ} 00' 38''$ West 50.38 feet; thence South $88^{\circ} 34' 38''$ West 26.96 feet to the point of beginning.

EXCEPT therefrom a sidewalk easement recorded as Document No. 2006-038694, Washington County Book of Records.

The parcel of land to which this description applies contains 9,609 square feet, more or less.

The bearings of this description are based on Oregon Coordinate Reference System, Portland Zone.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

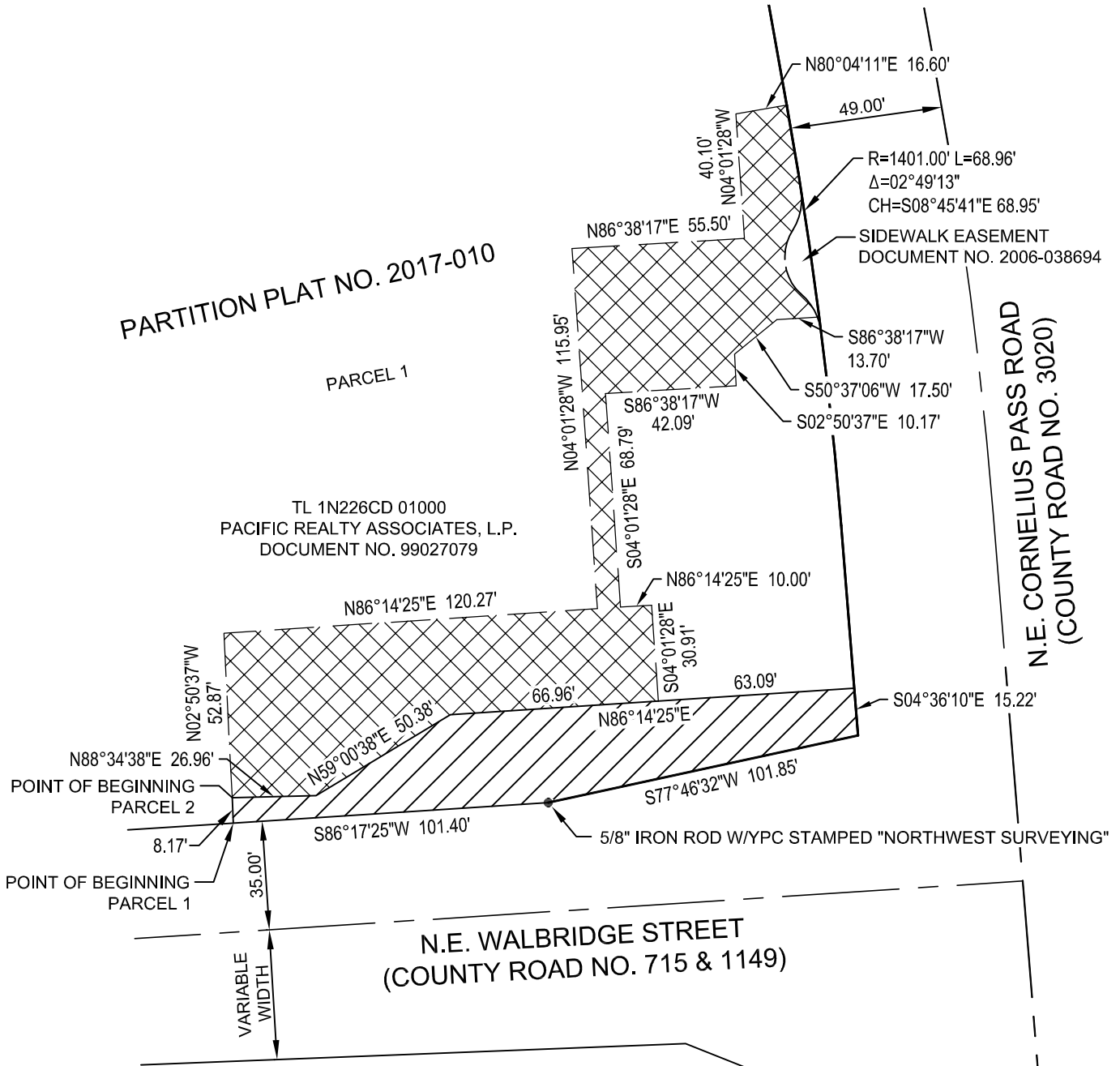
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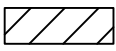
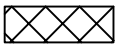
RENEWS: 6/30/2022

PARTITION PLAT NO. 2017-010

PARCEL 1

TL 1N226CD 01000
 PACIFIC REALTY ASSOCIATES, L.P.
 DOCUMENT NO. 99027079



- LEGEND
-  PERMANENT EASEMENT
4,219 ft² ±
 -  TEMPORARY CONSTRUCTION EASEMENT
9,609 ft² ±



SCALE: 1"=50'

EXHIBIT "B"
WILLAMETTE WATER SUPPLY PROGRAM
PLW 2.0
 IN THE SW 1/4, SEC. 26, T.1N., R.2W., W.M.,
 CITY OF HILLSBORO,
 WASHINGTON COUNTY, OREGON
 SEPTEMBER 4, 2020
 SHEET 1 OF 1

Otak



808 SW 3rd Ave., Ste. 800
 Portland, OR 97204
 Phone: (503) 287-6825
 www.otak.com
 project: 19110

Willamette Water Supply System Commission

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STAFF REPORT

To: Management Committee

From: Dave Kraska, Willamette Water Supply Program Director

Date: October 1, 2020

Subject: Intergovernmental Agreement between Willamette Water Supply System Commission and City of Beaverton for Construction of COB_1.2 Water Pipeline

Requested Action:

Consider adopting a resolution approving an Intergovernmental Agreement between Willamette Water Supply System Commission and City of Beaverton for Construction of COB_1.2 Water Pipeline.

Key Concepts:

- WWSP can deliver additional non-WWSS projects as detailed in the WWSS Intergovernmental Agreement
- The City of Beaverton project in the subject agreement is specifically identified within the WWSS Intergovernmental Agreement
- WWSP's delivery of such projects requires establishing a project agreement, this proposed agreement fulfills that requirement for construction of the project
- Approval of this Agreement allows for coordinated construction of the MPE_1.2 and COB_1.2 pipelines, with goals to reduce impacts to the traveling public and neighbors and to take advantage of the WWSP project delivery expertise

Background:

In January 2020, WWSS Board of Commissioners and the City of Beaverton executed an IGA between the City of Beaverton and the Willamette Water Supply System (WWSS) for Design of SW Nimbus/Scholls Ferry to SW Beaverton-Hillsdale Highway Pipeline Project (COB_1.0) with part of the TVWD MPE_1.0 project (specifically MPE_1.1 and MPE_1.2) (COB_1.0 Design IGA). Included in the recitals of the agreement was the option to expand the agreement to add additional pipeline work for Beaverton along SW Hall Boulevard from SW Scholls Ferry Road to SW Oleson Road through an amendment. Amendment 1, executed in August 2020, confirmed the design of the Beaverton Hall Boulevard pipeline by WWSS under the terms of the existing COB_1.0 Design IGA.

At the execution of the COB_1.0 Design IGA, staff acknowledged that a future agreement was needed to complete the project. The COB_1.2 Construction IGA clarifies the following items:

- Management of the project by Managing Agency resources,
- Responsibility for all direct and indirect costs associated with the ancillary project incurred by the Managing Agency, and
- To fully indemnify, defend and hold harmless the WWSS and other parties from any and all claims, costs, damages, liabilities or demands of any kind.

Intergovernmental Agreement between Willamette Water Supply System Commission and City of Beaverton for Construction of COB_1.2 Water Pipeline

For the COB_1.2 project, the WWSS, through WWSP, will lead the construction contractor procurement and delivery. Specific construction management coordination requirements are included in the IGA to define the responsibilities of each party, so construction of the coordinated projects can progress efficiently.

Staff recommend approval of the COB_1.2 Construction IGA.

Budget Impact:

There is no budgetary impact to WWSS from adopting the Agreement. The construction costs for COB_1.2 will be invoiced to the City of Beaverton. The additional costs associated with the WWSP's management of this additional pipeline construction project, including system-wide costs, will be invoiced to the City of Beaverton.

Staff Contact Information:

Dave Kraska, WWSP Program Director, 503-941-4561, david.kraska@tvwd.org
Clark Balfour, General Counsel, 503-848-3061, clark.balfour@tvwd.org

Attachments:

Exhibit A: Proposed Resolution

Exhibit B: Intergovernmental Agreement between Willamette Water Supply System Commission and City of Beaverton for Construction of COB_1.2 Water Pipeline

RESOLUTION NO. WWSS-24-20

A RESOLUTION APPROVING THE INTERGOVERNMENTAL AGREEMENT BETWEEN WILLAMETTE WATER SUPPLY SYSTEM COMMISSION AND CITY OF BEAVERTON FOR CONSTRUCTION OF COB_1.2 WATER PIPELINE

WHEREAS, Tualatin Valley Water District (“TVWD”), the City of Hillsboro (“Hillsboro”), and the City of Beaverton (“Beaverton”) formed the Willamette Water Supply System Commission (“Commission”) to permit, design, and construct the Willamette Water Supply System, including intake pumping facilities and transmission facilities, a water treatment plant, and reservoir facilities (“System”) under the Willamette Water Supply Program (“WWSP”) to provide potable water to TVWD, Hillsboro, and Beaverton and to increase system reliability; and

WHEREAS, Beaverton operates a municipal water supply utility under ORS Chapter 225, which distributes potable water to its water system users; and,

WHEREAS, Beaverton desires to design and construct a project consisting of a 16-inch pipeline to be owned solely by Beaverton and extend from S.W. Nimbus/Scholls Ferry to S.W. Allen, then to S.W. Western to S.W. Beaverton Hillsdale Highway (“COB_1.0”); and

WHEREAS, the COB_1.0 project route coincides with parts of the route for a pipeline project known as the Metzger Pipeline East (“MPE_1.0”), which is being designed and constructed by the WWSS Commission through the WWSP for TVWD; and

WHEREAS, the Commission and Beaverton entered into the Intergovernmental Agreement (Agreement) between City of Beaverton and the Willamette Water Supply System Commission for the Design of S.W. Nimbus/Scholls Ferry to S.W. Beaverton-Hillsdale Highway Pipeline Project, with an effective date of January 1, 2020; and

WHEREAS, the Parties have divided the COB_1.0 and MPE_1.0 into multiple projects, this agreement is for the construction of the COB_1.2 project, coincident with MPE_1.2, from SW Nimbus/Scholls Ferry to SW Allen, then to SW Western Avenue, and on SW Hall Boulevard from Scholls Ferry Road to SW Oleson Road.

NOW, THEREFORE, BE IT RESOLVED BY THE WILLAMETTE WATER SUPPLY SYSTEM COMMISSION THAT:

Section 1: This Agreement between Willamette Water Supply System Commission and City of Beaverton for Construction of COB_1.2 Water Pipeline, attached hereto as Exhibit 1 and incorporated herein by this reference, is approved.

Section 2: The General Manager is hereby directed to work with the Commission’s legal counsel to finalize the Agreement, consistent with this Resolution, and is authorized to execute the Agreement on behalf of the Commission.

Section 3: The General Manager is hereby authorized to approve updates to the Agreement exhibits to negotiate cost shares and schedule commitments as design progresses.

Approved and adopted at a regular meeting held on the 1ST day of October 2020.

James Duggan, Chair

Denny Doyle, Vice Chair

Proposed

INTERGOVERNMENTAL AGREEMENT**BETWEEN****WILLAMETTE WATER SUPPLY SYSTEM COMMISSION****AND****CITY OF BEAVERTON****FOR CONSTRUCTION OF COB_1.2 WATER PIPELINE**

This Agreement is made and entered into by and between the Willamette Water Supply System Commission, an Oregon intergovernmental entity (“WWSS Commission”), and the City of Beaverton, an Oregon municipal corporation acting by and through its City Council (“City”). The WWSS Commission and the City are referred to individually as a “Party” and jointly as “Parties.”

RECITALS

- A. ORS Chapter 190 authorizes the WWSS Commission and the City to enter into intergovernmental agreements for the performance of any or all functions and activities that a party to the agreement has the authority to perform.
- B. Tualatin Valley Water District (“TVWD”), the City of Hillsboro (“Hillsboro”), and the City formed the WWSS Commission to permit, design, and construct the Willamette Water Supply System, and also to develop a pipeline project known as the Metzger Pipeline East (“MPE_1.0”).
- C. The City desires to design and construct a project consisting of a 16-inch water pipeline to be owned solely by the City and extending from SW Nimbus Ave./SW Scholls Ferry Rd. to SW Allen Blvd., then along SW Western Ave. to SW Beaverton Hillsdale Highway (“COB_1.0”), which the City refers to as the East Transmission Intertie Project (CIP No. 4172).
- D. The route of the City’s COB_1.0 project coincides with a portion of the route of the WWSS Commission’s MPE_1.0 project and the Parties previously executed an intergovernmental agreement to coordinate the design of those projects.
- E. To maximize benefits to their constituents and to the community at large, it is the mutual desire of the WWSS Commission and the City to enter into this Agreement to cooperate in the construction and inspection of the COB_1.0 project and the MPE_1.0 project in a portion of the area where those projects overlap (“Project”), with the allocation of responsibilities as detailed below.

AGREEMENT

NOW, THEREFORE, the premises being in general as stated in the Recitals, which are incorporated here by this reference, and in consideration of the terms, conditions and covenants set forth below, the Parties agree as follows:

ARTICLE 1 PROJECT COMPONENTS AND MILESTONES

- 1.1. The “Project” shall consist of the construction of the water system improvements referred to as MPE_1.2 and COB_1.2 as shown in Exhibit 1 (MPE_1.0 and COB_1.0 Project Limits), which is incorporated by this reference, and defined as follows:
 - 1.1.1. “MPE_1.2” means the 48-inch pipeline to be owned solely by TVWD that extends from SW Nimbus/Scholls Ferry to SW Allen, then to SW Western Avenue, and the 24-inch pipeline owned solely by TVWD on SW Hall Boulevard from Scholls Ferry Road to SW Oleson Road, including the Pressure and Flow Control Facility at the corner of Hall Boulevard and Oleson Road.
 - 1.1.2. “COB_1.2” means the 16-inch pipeline to be owned solely by the City that extends from SW Nimbus/Scholls Ferry to SW Allen, then to SW Western Avenue, and on SW Hall Boulevard from Scholls Ferry Road to SW Oleson Road.
- 1.2. The Parties agree that the construction of the Project shall occur on a schedule as set forth in Exhibit 2 (“Project Milestones”).

ARTICLE 2 WWSS COMMISSION WORK AND OBLIGATIONS

- 2.1. In implementing this Agreement, the WWSS Commission may at all times act by and through the Willamette Water Supply Program (“WWSP”). References to the WWSP in this Agreement shall be deemed to be references to the WWSS Commission.
- 2.2. The WWSS Commission shall designate a person to be responsible for coordination of the Project with the City (“Construction Manager”) and a principal engineer (“WWSP Principal Engineer”). The WWSS Commission initially designates Brendan Robless as Construction Manager and Mike Britch as Principal Engineer. The WWSS Commission will notify the City if a different person is so designated for either position.
- 2.3. WWSP will administer all aspects of bidding for construction of the Project and will solicit bids in compliance with public contracting laws.
 - 2.3.1. WWSP intends to select the prime construction contractor (“Contractor”) using a best-value approach, taking into consideration qualifications,

project approach, cost, and any other applicable factors. Prequalification requirements for the Contractor will be included in the bid documents and will be a requirement of award of the bid. Notwithstanding the foregoing, WWSP may use any lawful process for the procurement of the Contractor.

- 2.3.2. WWSP's bidding process and bid documents will include, at a minimum:
 - (a) a mandatory pre-bid meeting, or proprietary meetings with interested bidders;
 - (b) a thirty-day bid period;
 - (c) insurance requirements set in accordance with WWSP's standard minimum requirements.
 - 2.3.3. If WWSP receives questions from potential bidders relating to the COB_1.2 portion of the Project, WWSP will submit the questions and proposed responses to the City's Project Representative and Beaverton Engineer. The WWSP will issue the final response to such questions after incorporating feedback from the City's representatives, with final responses to be copied to the City's Project Representative.
 - 2.3.4. WWSP will provide the City ten (10) business days to evaluate the bid results and shared costs prior to issuing notice of intent to award for the Project. If after the evaluation of the bid results and shared costs, the City elects not to proceed, WWSP reserves the right to proceed with the MPE_1.2 portion of the Project.
- 2.4. WWSP shall perform, or cause to be performed, all actions necessary for the construction of the Project, including contract administration, construction engineering, real estate acquisition, permit acquisition, materials testing, inspection, and project management.
- 2.4.1. The acquisition of real estate required for the construction of MPE_1.2 that overlaps with a real estate acquisition required for the construction of COB_1.2, are acquisitions for the Project which WWSP will coordinate. Beaverton must review and approve the form of easements applicable to COB_1.2 during and prior to final acquisition to verify that Beaverton has the required ability to enter any easement area of the Project to perform required work.
 - 2.4.2. Permits for construction of MPE_1.2 that overlap with permits required for the construction of COB_1.2 that will be obtained by the WWSP may include, without limitation, permits for WWSP and its agents and contractors to perform work for the Project on or across railroad property, highways, Washington County right-of-way, City of Beaverton right-of-way or property, and City of Tigard right-of-way or property.
 - 2.4.3. Notwithstanding the foregoing, the WWSP shall be responsible for all Oregon Department of Transportation permits required for either COB_1.2 or MPE_1.2 to cross Highway 217.

- 2.4.4. WWSP will provide all traffic control plans, as well as changes to traffic control plans, that utilize City of Beaverton right-of-way for review and approval by the City prior to WWSP approval and implementation of the traffic control plan.
- 2.4.5. WWSP will provide access to all Project documents, including, but not limited to, submittals, requests for information (“RFI”), contract correspondence, Quality Assurance/Quality Control, daily reports, and photos through e-Builder as administered by the WWSP for the Parties.
- 2.4.6. WWSP will receive, catalog, and promptly route to the City all RFIs and all requests for substitutions, submittals, and any other documents pertaining to, or that could result in a change order to, the COB_1.2 portion of the Project.
- 2.4.7. Before issuing a final response to an RFI or other Contractor request, the WWSP Project Construction Manager will incorporate any comments received from the City within seven (7) business days, using e-Builder. WWSP will defer to comments and responses from the City’s Project Representative or Beaverton Engineer when responding to all RFIs, substitutions, and submittals solely related to COB_1.2.
- 2.4.8. If a claim or request for Change Order would increase the amount of the shared costs, or if it affects the City-only cost for COB_1.2 work, the City will respond to WWSP within ten (10) business days regarding whether it approves or disapproves of the claim or request for Change Order. WWSP will not resolve or settle a claim for extra compensation or schedule adjustment for such claims without City approval in writing.
- 2.4.9. WWSP will provide written and verbal notice to the City within one (1) business day of receiving notice of any disagreements, disputes, delays, or claims with the Contractor related to or arising out of the COB_1.2 portion of the Project and coordinate with the City to reach a resolution.
- 2.4.10. WWSP will have sole and total decision-making authority with respect to the MPE_1.2 portion of the Project. WWSP will have decision-making authority on any shared cost items after notifying the City of any decision that results in a material change or increased cost to the COB_1.2 portion of the Project.
- 2.4.11. WWSP will determine, in its reasonable discretion, when the Project has achieved substantial completion and final acceptance. At substantial completion, the WWSP Construction Manager shall perform a “walk-thru” with the City’s Project Representative of the entire length of the project to allow the City to identify construction defects, non-complying materials or workmanship, and any construction that is contrary to the plans and specifications. Then the WWSP will prepare and provide a construction

punch list to the City based on the walk-thru. The WWSS will also accompany the City's Project Representative for inspection and final acceptance of the COB_1.2 portion of the Project. The WWSP shall require a two-year maintenance bond for all COB_1.2 improvements upon final acceptance.

- 2.5. WWSP will be solely responsible for managing the Project construction schedule, including the Project Milestones. WWSP will provide the Contractor's baseline schedule and monthly schedule updates to the City for review and comment. WWSP will consider and incorporate the City's review comments that do not have a materially adverse impact on MPE_1.2 costs or Project Milestones, as determined by WWSP in a commercially reasonable manner.
- 2.6. WWSP shall be responsible for all Project outreach and communications, unless it relates to planned utility service interruptions or changes to existing service that may result from Project construction or operation, which will be performed by the City pursuant to Section 3.9. City shall have access to all outreach via e-builder.
- 2.7. WWSP shall perform actions regarding compensation as set forth in Article 5 – Compensation.
- 2.8. The City owns all rights to COB_1.2. Following completion of the Project, upon request by the City, the WWSS Commission will assign to the City all rights under performance and payment bonds, warranties, and claims arising out of the construction contract related to the COB_1.2 portion of the Project, after which it shall be the City's responsibility to manage and administer all warranties and warranty work associated with COB_1.2.

ARTICLE 3 CITY OBLIGATIONS

- 3.1 City shall grant WWSP, its contractors and subcontractors, permission to enter and use City rights of way for the Project with the condition that it must fully comply with all City requirements and policies. WWSP shall be required to obtain all necessary permits pursuant to Section 2.4.2 and 2.4.3; however, the City will not require the WWSP to pay permit fees for City Right-of-Way and Site Development permits.
- 3.2 The City shall designate a person that has authority to approve requests for field changes for COB_1.2 to be responsible for coordination of the Project with WWSP ("Project Representative") and a principal engineer ("Beaverton Engineer"). The City initially designates David Winship as Project Representative and Beaverton Engineer, and the City will notify the WWSP if a different person is so designated for either position.
- 3.3 The Project Representative will participate in the mandatory pre-bid meeting or proprietary meetings set forth in Section 2.3.2, provide timely responses to bidder's questions about COB_1.2 as contemplated in Section 2.3.3, and provide

timely responses to an RFI or other Contractor request as contemplated in Section 2.4.3.

- 3.4 The City will have primary responsibility for the review of all shop drawings, submittals, RFIs, and other requested clarifications related to the COB_1.2 portion of the Project.
- 3.5 The City may provide additional inspection, monitoring, or require corrective work beyond those provided by or contracted for by WWSP for the COB_1.2 work at the City's sole expense.
 - 3.5.1 The City may require additional or corrective work to be completed for the COB_1.2 work if, in the sole judgment of the City, the work is not complete in accordance with the Project contract documents. If the City determines the COB_1.2 work is not in compliance with the Project contract documents, the Project Representative shall inform WWSP at the earliest opportunity following discovery, and WWSP will require the Contractor to perform corrective actions as necessary.
 - 3.5.2 The City's Project Representative shall notify the WWSP Construction Manager of the need to stop the COB_1.2 work based on observations that the COB_1.2 work is not being performed according to the Contract Documents. Notwithstanding the foregoing, the WWSP shall make the final determination of any stop work order on the Project.
- 3.6 The City shall provide a potable water source for use by the WWSP during construction for testing of the Project, as well as use of storm drain or sanitary sewer infrastructure, as directed by the City's Project Representative, for disposal of water following testing of the Project.
- 3.7 The City shall exercise its authority to cause franchise utilities located in City rights-of-way to have their infrastructure relocated as necessary for the Project prior to the Construction Notice to Proceed date provided in the Project Milestones as long as the WWSS demonstrates that it made reasonably commercial efforts to design MPE_1.2 around existing utilities.
- 3.8 The City shall be responsible for the coordination with Beaverton water customers regarding service connections, interruptions, or potential variations in water quality. The City will provide an on-site representative, and the WWSP will be responsible for constructing the water service connections related to the COB_1.2 work. City water operations staff designated as the Direct Responsible Charge under the Oregon Health Authority's Drinking Water Program regulations ("City Direct Responsible Charge") must be physically present to make decisions that may impact the City's drinking water.
- 3.9 Beaverton, in coordination with WWSP, will be responsible for public outreach and communication to its customers about any planned utility service interruptions to existing services that may result from Project construction or

operation. Prior coordination with the City Direct Responsible Charge must occur when making decisions that may impact City drinking water.

3.10 City shall perform actions regarding compensation as set forth in Article 5.

ARTICLE 4 JOINT OBLIGATIONS

- 4.1 The WWSP Construction Manager and City Project Representative shall mutually determine the anticipated frequency and timing of any coordination meetings depending on the needs of the Project.
- 4.2 The Parties anticipate use of Water Infrastructure Finance and Innovation Act (“WIFIA”) funding for the Project. WIFIA funding requires compliance with certain conditions, including, but not limited to, Davis-Bacon and related acts, American Iron and Steel Act, Disadvantaged Business Enterprises Program, regulations governing debarment and suspension, Equal Employment Opportunity Executive Order, civil rights laws, Drug-Free Workplace Act, and restrictions on lobbying. The City shall provide its WIFIA loan requirements to the WWSP and assist the WWSP with the interpretation and implementation of those requirements. The Parties shall coordinate to meet each Party’s WIFIA requirements.

ARTICLE 5 COMPENSATION

- 5.1 The City shall reimburse the WWSP the actual costs of construction, materials, and any other costs incurred solely for the benefit of COB_1.2. The City shall not pay any portion of costs solely for the benefit of MPE_1.2.
- 5.2 In addition to the costs incurred as set forth in Section 5.1, the City shall reimburse the WWSP for the actual cost for construction, including costs for WWSP’s staff and consultant team, as shown in Exhibit 3 and as described below:
 - 5.2.1 WWSP will track time and materials when working on COB_1.2 in the same manner as WWSP tracks time and materials for the design and construction of WWSP work packages, and the City will have immediate access to this information in e-Builder.
 - 5.2.2 WWSP will track and/or allocate all work performed on COB_1.2 separately from work performed on MPE_1.2 to the extent practicable. For Project tasks that are not separable between COB_1.2 and MPE_1.2, the WWSP will allocate the work in accordance with the City’s proportional share of the Project as shown in Exhibit 3. For any Project costs that are not specified in Exhibit 3, the proportional share shall be the ratio comprising (1) the construction costs of COB_1.2 to (2) construction costs

of MPE_1.2 and COB_1.2, or cost of actual work, adjusted annually based on re-baseline, and finalized at substantial completion.

- 5.2.3 The cost to the City and the WWSP for shared cost items related to Project construction work will be shown on Schedule A.
- 5.2.4 The cost to the City for items solely attributed to COB_1.2 will be as shown in Schedule B.
- 5.3 WWSP will submit invoices to the City monthly. Each invoice shall be accompanied with documentation supporting all requested costs for compensation or reimbursement.
- 5.4 The City shall promptly review invoices from WWSP and shall pay WWSP the amount due within thirty (30) days of its receipt of each invoice.
 - 5.4.1 The City shall provide notice of any disputed invoice amount within seven (7) business days from the day WWSP provides the invoice to the City.
 - 5.4.2 Undisputed amounts shall be paid as provided in Section 5.4.
 - 5.4.3 The Parties will meet to resolve any disputed amounts and, if necessary resolve the dispute through the provisions of Section 6.6.
- 5.5 Prior to final cost accounting and Final Acceptance, the WWSP will fulfill the requirements of 2.4.11.
- 5.6 WWSP will provide a final cost accounting for COB_1.2 to the City within forty-five (45) days of Final Acceptance of the Project and payment to the Contractor.

ARTICLE 6 GENERAL PROVISIONS

6.1 Laws of Oregon

The Parties agree to abide by the WWSS Commission Agreement, all applicable laws and regulations regarding the handling and expenditure of public funds. This Agreement shall be governed by the laws of the State of Oregon. All provisions required by ORS Chapter 279A and 279C to be included in public contracts are incorporated by reference and made a part of this Agreement as if fully set forth in this Agreement.

6.2 Default

Either Party shall be deemed to be in default if it fails to comply with any provision of this Agreement. WWSP and the City agree time is of the essence in the performance of any of the obligations within this Agreement. The complaining party shall provide the other party with written notice of default and allow thirty (30) days within which to cure

the defect. City shall pay WWSP for costs incurred for satisfactorily completed and authorized work up to the time of default. Each party shall be liable for all costs and damages arising from default by the other party.

6.3 Indemnification

This Agreement is for the benefit of the Parties only. Each party agrees to indemnify and hold the other harmless, including the other party's respective officers, employees, agents and representatives, from and against all claims, demands, causes of actions and suits of any kind or nature for personal injury, death or damage to property on account of or arising out of services performed, the omission of services or in any way resulting from the acts or omissions of the parties so indemnifying and/or its officers, employees, agents or representatives. Indemnification is subject to and shall not exceed the limits of liability of the Oregon Tort Claims Act (ORS 30.260 through 30.300). In addition, each party shall be responsible for any contract claims, delay damages or similar items caused by the action or inaction of the party.

6.4 Documents are Public Records

All records, reports, data, documents, systems, and concepts, whether in the form of writings, figures, graphs, or models which are prepared or developed in connection with this Project shall become public records when required by Oregon Law.

6.5 Modification of Agreement

No waiver, consent, modification or change of terms of this Agreement shall bind a party unless in writing, signed by all parties. Such waiver, consent, modification or change, if made, shall be effective only in specific instances and for the specific purpose given.

6.6 Dispute Resolution

Except when an event of Default as set forth in Section 6.2 has already occurred, the Parties shall attempt to informally resolve any dispute concerning any Party's performance or decision under this Agreement, or regarding the terms, conditions, or meaning of this Agreement. A written description of the dispute shall be delivered by the complaining Party to the other. The Parties agree that disputes will be attempted to be resolved by the WWSP Construction Manager and the City's Project Manager before escalating to the principal engineer level. Disputes not resolved by the Parties' principal engineers will be submitted to the Division Manager/Director level. The Parties may use a neutral third party to mediate if the Parties agree to facilitate such negotiations. The mediator shall be mutually chosen within 30 days of the original date of written notice of the dispute. Impasse shall be declared if the Parties cannot agree on a mediator within the 30-day period above or the Parties cannot resolve the matter through mediation within 45 days after selection of the mediator. In the event of any impasse in the resolution of any dispute, the issues shall be submitted to the governing bodies of both Parties for a recommendation or resolution within 30 days after submission. Thereafter, any Party may pursue available legal or equitable remedies.

6.7 Remedies

Subject to the provision in paragraph 6.6, any party may institute legal action to cure, correct, or remedy any default, to enforce any covenant or provision in this Agreement, or to enjoin any threatened or attempted violation of this Agreement. All legal actions shall be initiated in Washington County Circuit Court. The parties, by signature of their authorized representatives below, consent to the personal jurisdiction of that court.

6.8 Severability

If any term or provision of this Agreement or its application to any person or circumstance is determined by a court of valid jurisdiction to be invalid or unenforceable to any extent, the remainder of this Agreement and the application of the remaining terms and provisions shall not be affected and shall be valid and enforceable to the fullest extent permitted by law.

6.9 Nondiscrimination

No person shall be denied or subjected to discrimination in receipt of the benefits of any services or activities made possible by or resulting from this Agreement on the grounds of race, color, religion, gender, sexual orientation, national origin, disability, age or marital status. Any violation of this provision shall be considered a material defect and shall be grounds for cancellation, termination or suspension in whole or in part by the County.

6.10 Integration

This Agreement includes the entire agreement of the parties and supersedes any prior discussions or agreements regarding the same subject. There are no understandings, agreements, or representations, oral or written, regarding this Project except those in this Agreement.

ARTICLE 7 TERM AND TERMINATION

7.1 The term of this Agreement shall be from the date of execution for four (4) years or until completion of all obligations, whichever is sooner.

7.2 This Agreement may be amended or extended for periods of up to one year by consent of the Parties, subject to provisions of this Agreement. Except for breach, this Agreement may be canceled or terminated for any reason by either party. Termination or cancellation shall be effective thirty (30) days after written notice to the other party, or at such time as the parties may otherwise agree. The parties shall, in good faith, agree to such reasonable provision for completing the Project and paying any additional costs as necessary.

[Signatures on Following Page]

The Parties executed this Agreement as of the latest day and year written below.

CITY OF BEAVERTON, OREGON

**WILLAMETTE WATER SUPPLY
SYSTEM COMMISSION**

By: _____
Denny Doyle, Mayor

By: _____
David Kraska, General Manager

Date: _____

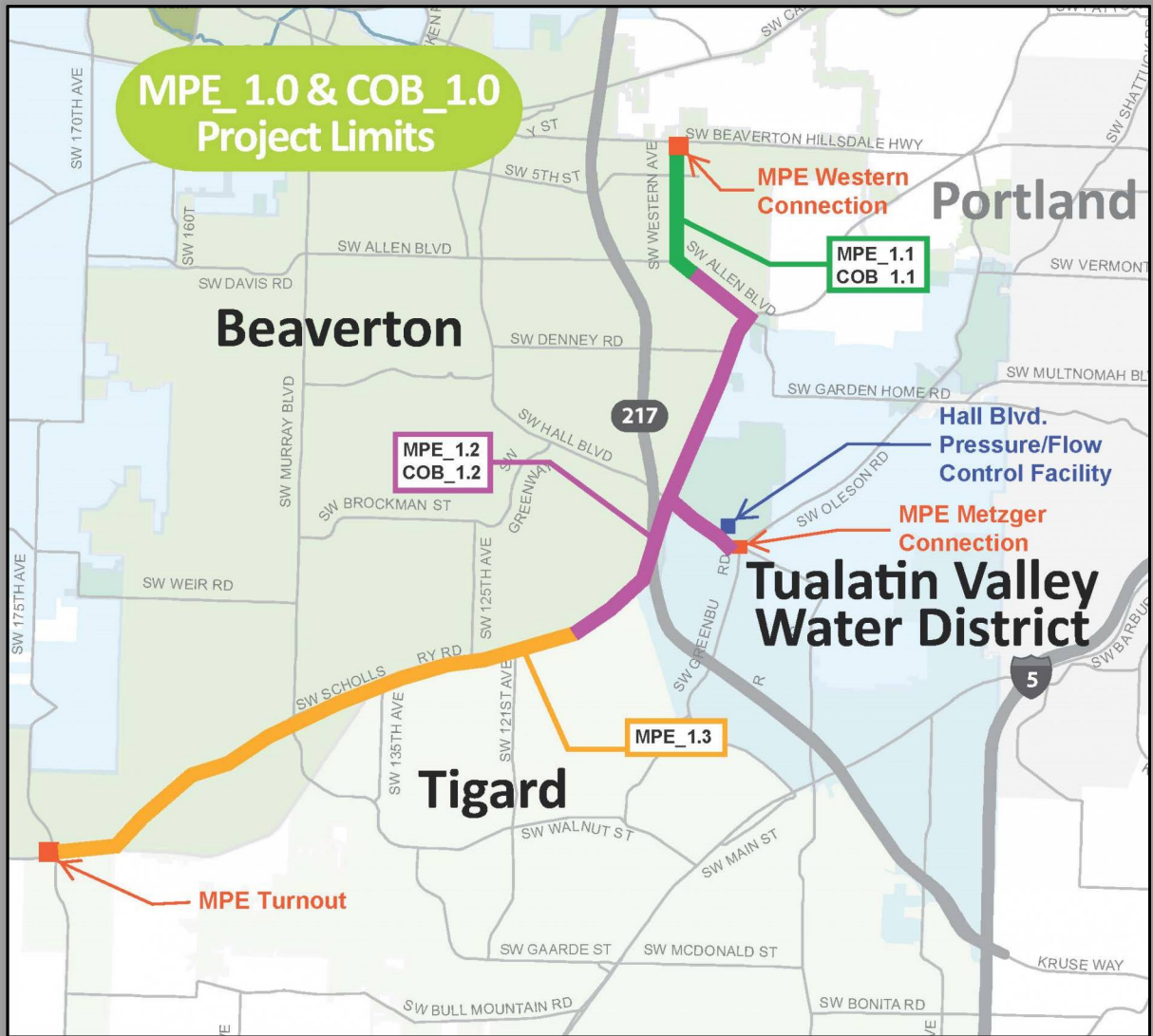
Date: _____

Approved as to form: _____

MPE_1.2 AND COB_1.2 WATERLINE PROJECT

Exhibit 1

MPE_1.0 and COB_1.0 Project Limits



MPE_1.2 AND COB_1.2 WATERLINE PROJECT

Exhibit 2

Construction Milestones

Construction Milestones	Date
Request for Proposal	November 23, 2020
Proposals Due	December 23, 2020
Authorization to Award	February 1, 2021
Contract Execution – Issue Limited Notice to Proceed	April 1, 2021
Construction Notice to Proceed	June 29, 2021
Substantial Completion of Project	August 1, 2023
Record Drawings Completed and Submitted	February 23, 2024
Final Acceptance of Project	February 26, 2024

MPE_1.2 AND COB_1.2 WATERLINE PROJECT

Exhibit 3

Compensation for Construction Costs

City of Beaverton Cost Share

Invoices for construction, construction management and inspection, administration, and other professional services directly related to the construction of the Project will be initially paid for directly by the WWSP, which will then allocate the costs proportionally between the TVWD, WWSP, and Beaverton, and billed accordingly.

The proportional shares for invoicing will be determined based on the table provided below. The proportional cost shares between the TVWD, WWSP and Beaverton will be revised annually during the re-baseline and budget process.

Description	Construction Cost Basis
Beaverton share of costs, on a monthly basis, for WWSP work related to Program Management, Procurement, Controls, Public Outreach, and Permitting Support ("Systemwide costs") incurred by the WWSP after execution of this Agreement.	10% of Actual Cost
WWSP Consultant Team Project Management, Construction Management, and Inspection	19% ¹ of Actual Cost based on COB_1.2 Bid Costs
Design Consultant cost for COB_1.2 Services During Construction	Actual Cost ²
Materials Testing and Third-Party Services	Actual Cost where feasible, or 19% ¹ of Actual Cost based on COB_1.2 Bid Costs
Beaverton share of Partial MPE_1.2 (Schedule A)	19% ¹ of the awarded bid total of Schedule A shared items related to COB_1.2
Schedule B – COB_1.2 work	Actual Cost

1 Percent share shall be based on the ratio comprising (1) the construction costs of COB_1.2 to (2) construction costs of MPE_1.2 and COB_1.2, or cost of actual work, adjusted annually based on re-baseline, and finalized at substantial completion.

2 Actual cost per Brown and Caldwell Amendment "MPE_1.0 Fee Amend 5 COB 16 inch 6-21-19"

STAFF REPORT

To: WWSS Board of Commissioners

From: David Kraska, P.E., Willamette Water Supply System General Manager

Date: October 1, 2020

Subject: Request to Local Contract Review Board for Exemption from Competitive Bidding for the MPE_1.2 and COB_1.2 Pipeline Ancillary Projects

Requested Board Action:

Acting as the Local Contract Review Board (LCRB), consider adopting a resolution declaring an exemption from competitive bidding for the MPE_1.2 and COB_1.2 ancillary pipeline projects and approving the use of best value selection method for a construction contractor.

Key Concepts:

- The proposed resolution declaring an exemption from competitive bidding under ORS 279C.300 allows the use of best value selection for a construction contractor for Willamette Water Supply System ancillary projects MPE_1.2 and COB_1.2.
- Best value selection would enable consideration of a combination of cost and qualifications specific to the combined construction project, including technical approach and specialized expertise relevant to specific project requirements.
- The existing pool of prequalified pipeline contractors would be eligible to submit proposals for this project.
- The declaration of an exemption from competitive bidding must occur after public notice. At its August 6, 2020 meeting, the Board, acting as the LCRB, considered the subject resolution and approved providing an opportunity for public comment prior to enactment at the October 1, 2020 regular Board meeting.
- A public notice of the opportunity to comment was published on September 2, 2020.

Background:

In accordance with intergovernmental agreement establishing the Willamette Water Supply System (WWSS) Commission, the Willamette Water Supply Program (WWSP) may oversee and manage the design and construction of certain additional projects (Ancillary Projects) for the WWSS member agencies when approved by the Board. The MPE_1.2 and COB_1.2 projects are such Ancillary Projects and are being delivered for Tualatin Valley Water District and City of Beaverton, respectively. The MPE_1.2 project consists of approximately 14,000 feet of 48-inch diameter welded steel and 2,600 feet of 24-inch diameter ductile iron pipelines to convey treated water. The MPE_1.2 48-inch diameter pipeline will travel east along SW Scholls Ferry Road beginning near SW Springwood Drive, and then along SW Allen Boulevard to connect to the MPE_1.1 pipeline project near SW Western Avenue. The MPE_1.2 24-inch pipeline travels east along SW Hall Boulevard beginning at SW Scholls Ferry Road and connects to the existing Metzger service area at SW Oleson Road. The COB_1.2 16-inch pipeline parallels the MPE_1.2 pipeline and will be constructed in conjunction with the MPE_1.2 project. COB_1.2 consists of approximately 12,800 feet of

Page 2 of 2

October 1, 2020

Request to Local Contract Review Board for Exemption from Competitive Bidding for
MPE_1.2 and COB-1.2 Pipeline Ancillary Projects

16-inch diameter ductile iron pipeline that will convey treated water. MPE_1.2 and COB_1.2 will be constructed together under a single construction contract.

The WWSP will lead the construction procurement. The current selection method is low bid to prequalified contractors. Under ORS 279C.300, construction contractors are selected through bidding low bid, open-competitive, or low bid with prequalification, unless an exemption is adopted by the LCRB. The WWSP is seeking approval from the LCRB for an exemption to use a best value selection for the combined MPE_1.2 and COB_1.2 construction project that would enable consideration of total construction cost and non-cost factors such as technical approach and specialized expertise, from prequalified contractors.

Budget Impact:

There are no budgetary impacts anticipated from this item.

Staff Contact Information:

David Kraska, P.E., WWSP Program Director; 503-941-4561; david.kraska@tvwd.org

Mike Britch, P.E., WWSP Engineering & Construction Manager; 503-941-4565; mike.britch@tvwd.org

Attachments:

1. Proposed Local Contract Review Board resolution
2. Exhibit 1 - Findings for an exemption from competitive bidding for of the MPE_1.2 and COB_1.2 water transmission pipeline ancillary project

RESOLUTION NO. WWSS-25-20

A RESOLUTION BY THE LOCAL CONTRACT REVIEW BOARD DECLARING AN EXEMPTION FROM COMPETITIVE BIDDING FOR WILLAMETTE WATER SUPPLY SYSTEM WATER TRANSMISSION PIPELINE PROJECT MPE_1.2/COB_1.2 AND APPROVING A BEST VALUE CONSTRUCTION CONTRACTOR SELECTION METHOD

WHEREAS, this matter came before the Board of Commissioners of the Willamette Water Supply System Commission (Commission), acting as the Local Contract Review Board for the Commission; and

WHEREAS, the Commission, formed by the Tualatin Valley Water District, the City of Hillsboro, and the City of Beaverton, has designated Tualatin Valley Water District as its Managing Agency to manage and deliver the Willamette Water Supply System (WWSS) which includes the class of water transmission pipeline projects; and

WHEREAS, the Managing Agency operates the Willamette Water Supply Program (WWSP) to construct the WWSS; and

WHEREAS, the WWSP staff evaluated the MPE_1.2/COB_1.2 water transmission pipeline project is well-suited for a best value construction contractor selection method; and

WHEREAS, based on WWSP staff's evaluation, best value provides the greatest degree of owner control and enables selection of the best qualified construction contractor for of the MPE_1.2/COB_1.2 water transmission pipeline contract; and

WHEREAS, the WWSP staff developed findings required by ORS 297C.335 for an exemption from competitive bidding for MPE_1.2/COB_1.2, as described in Exhibit 1, attached hereto and incorporated by reference, concluding that the exemption is unlikely to encourage favoritism in the awarding of the contract or substantially diminish competition for the contract and that awarding a contract under the exemption will likely result in cost savings and other substantial benefits; and

WHEREAS, the Local Contract Review Board has noticed a public hearing on September 2, 2020 and conducted a public hearing on October 1, 2020 under ORS 297C.335 to provide opportunity for comments on the Findings as described in Exhibit 1, and being advised,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE WILLAMETTE WATER SUPPLY SYSTEM COMMISSION, ACTING AS THE LOCAL CONTRACT REVIEW BOARD, THAT:

Section 1: The Commission hereby adopts the Findings attached as Exhibit 1 and grants the exemption from competitive bidding for the MPE_1.2/COB_1.2 project; and

Section 2: The Commission hereby directs and authorizes WWSP staff to take all action to adopt the best value construction contractor selection method for the MPE_1.2/COB_1.2 project.

Approved and adopted at a regular meeting held on the 1st day of October 2020.

James Duggan, Chair

Denny Doyle, Vice Chair

Willamette Water Supply System Commission

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Exhibit 1 to Resolution No. WWSS-25-20

FINDINGS IN SUPPORT OF AN EXEMPTION FROM COMPETITIVE BIDDING

WILLAMETTE WATER SUPPLY SYSTEM

BEST VALUE FOR THE MPE_1.2 AND COB_1.2 WATER TRANSMISSION PIPELINE ANCILLARY PROJECTS

I. GENERAL

The Oregon Legislative Assembly encourages public agencies to consider alternative and innovative public improvement contracting methods that take into account other important considerations in addition to low bid. Under ORS 279C.335(2) and local contracting rules, the local contract review board may exempt certain public improvement contracts from traditional priced-based competitive bidding by showing that an alternative contracting process is unlikely to encourage favoritism or diminish competition, and that it will result in cost savings and other substantial benefits to the public agency.

For the reasons set forth more fully below, it is recommended that contractors be selected by utilizing the competitive proposal process in accordance with ORS 279C.400 for of the MPE_1.2 and COB_1.2 water transmission pipeline contract. The competitive proposal process is advantageous for this project as it allows for consideration of critical factors other than lowest bid price in selecting a contractor. It also allows contractors to customize their proposals to suggest creative and innovative approaches to project execution. The competitive proposal process also provides some degree of flexibility by allowing for negotiations with the contractor in order to obtain the best overall value for the Willamette Water Supply System Commission ("Owner").

II. BACKGROUND

Willamette Water Supply System Commission was formed to develop the Willamette Water Supply System ("WWSS") as a new water source through the work of the Willamette Water Supply Program ("WWSP"). The WWSS is a drinking water infrastructure project that will provide the Owner's members with a seismically resilient water supply to meet future demands and redundancy in case of an emergency event. The WWSS includes more than thirty (30) miles of transmission pipelines from the Willamette River Water Treatment Plant ("WRWTP") in Wilsonville, Oregon north to Tualatin Valley Water District, Hillsboro and Beaverton, Oregon. The WWSS also includes constructing finished water storage tanks (terminal storage), upgrades of the existing raw water facilities at the WRWTP, and a new water treatment plant. The WWSP may oversee and manage the design and construction of certain additional projects ("Ancillary Projects") for the WWSS member agencies when approved by the Owner. The MPE_1.2 and COB_1.2 projects are such Ancillary Projects and are being delivered for Tualatin Valley Water District and City of Beaverton, respectively.

A. Project Description – Willamette Water Supply System, MPE_1.2 and COB_1.2 Ancillary Projects

The MPE_1.2 project consists of approximately 14,000 feet of 48-inch diameter welded steel and 2,600 feet of 24-inch diameter ductile iron pipelines to convey treated water. The MPE_1.2 48-inch diameter pipeline will travel east along SW Scholls Ferry Road beginning near SW Springwood Drive,

and then along SW Allen Boulevard to connect to the MPE_1.1 pipeline project near SW Western Avenue. The MPE_1.2 24-inch pipeline travels east along SW Hall Boulevard beginning at SW Scholls Ferry Road and connects to the existing Metzger service area at SW Oleson Road. The COB_1.2 16-inch pipeline parallels the MPE_1.2 pipeline and will be constructed in conjunction with the MPE_1.2 project. COB_1.2 consists of approximately 12,800 feet of 16-inch diameter ductile iron pipeline that will convey treated water. MPE_1.2 and COB_1.2 will be constructed together under a single construction contract.

The WWSP will lead the procurement of the MPE_1.2 and COB_1.2 construction package and the applicable delivery method for that construction package is low bid to prequalified contractors. Under ORS 279C.300, construction contractors are selected through bidding low bid, open-competitive, or low bid with prequalification, unless an exemption is adopted by the Local Contract Review Board (“LCRB”).

Unlike the Competitive Bidding process typical to construction projects, selection employing a “best value” process may include other factors in addition to price. Procuring construction contractor services and awarding an agreement based on best value is permissible under ORS Chapter 279C and LCRB rules; however, the exemption process described in ORS 279C.335 must be completed by the WWSP and approved by the LCRB prior to publishing a Request for Proposals (RFP) using the exempted process. The exemption process can be specific to a single contract or for a class of public improvement contracts (e.g., pipelines).

The MPE_1.2 and COB_1.2 construction project was evaluated to determine the recommended selection method.

The recommended selection method for this project is best value with prequalification. While prequalification assures firms have met minimum standards, some of these firms and their subcontractors may be better suited for a given project, as further described below.

III. EVALUATION AND BASIS FOR SELECTION

The MPE_1.2 and COB_1.2 projects were evaluated for technical and logistical aspects that may benefit from consideration of bidding contractor’s technical proposal and additional qualifications. This evaluation considered the following questions for project-specific elements:

- Public Benefits – Are there opportunities to propose a work approach that minimizes disruption and/or increases safety for businesses, residents, emergency services, and the traveling public?
- Schedule – Are there opportunities to propose advantageous alternate schedules?
- Value Engineering – Are there opportunities to offer significant value engineering proposals?
- Specialized Expertise – Does the project require specialized expertise beyond WWSP’s minimum requirements for prequalification (e.g., substantial trenchless work)?
- Technical/planning complexity – Does the project’s complexity warrant evaluation and comparison of each contractor’s technical approach to executing the work (e.g., substantial trenchless work or traffic management)?

For the MPE_1.2 and COB_1.2 construction project, evaluating the contractors’ responses to technical and logistical aspects such as the trenchless subcontractor’s qualifications and/or value engineering

ideas are advantages provided by a best value approach. For MPE_1.2 and COB_1.2, a best value selection would enable an evaluation that includes a contractor's approach to complex crossings of Oregon Highway 217 (three separate trenchless crossings) and critical resource crossings (two separate trenchless crossings), an evaluation of proposed tunneling contractors (not prequalified), and an evaluation of traffic control and pipe installation methods that could prove beneficial to the schedule, traffic impacts, and local business impacts.

Using best value, contractors are evaluated on both price and qualitative criteria such as project team experience and performance, safety records, project personnel, and overall project approach. Relative weighting of criteria would be tailored to the specific requirements of the project and published in the RFP.

IV. LOCAL CONTRACT REVIEW BOARD (LCRB)

ORS 279C.335(1) requires, with certain exceptions, that all public contracts be based on competitive bidding and, under ORS 279C.375, be awarded to the lowest responsive and responsible bidder. ORS 279C.335(2) permits an exemption from this general requirement pending approval from a local contract review board. An exemption may be granted for a public improvement project or a class of public improvement contracts if the conditions described in ORS 279C.335(2) are met. The findings in this document demonstrate that those conditions are met and that the projects may be procured through a best value selection approach.

Approval of this exemption allows for the MPE_1.2 and COB_1.2 construction contract to be entered using alternative procurement methods rather than through a low-bid competitive bidding process.

This specific request is for approval to utilize a best value selection method for the MPE_1.2 and COB_1.2 construction project.

To seek approval of a contract-specific procurement, a written request must be submitted to the WWSS Commission that describes the proposed contracting procedure and the circumstances that justify the use of a special procurement, whereby the special procurement is unlikely to encourage favoritism in the awarding of a public contract or substantially diminish competition. An exemption must also show that awarding the exemption will likely result in substantial cost savings or other substantial benefits. The following section presents WWSP staff findings relative to each of the factors required to be addressed by ORS 279C.335.

V. FINDINGS REGARDING COMPETITION

ORS 279C.335(2) requires that an agency make certain findings as a part of exempting certain public contracts or classes of public contracts from competitive bidding. ORS 279C.335(2)(a) requires an agency to find that: *"It is unlikely that such exemption will encourage favoritism in the awarding of public contracts or substantially diminish competition for public contracts."*

Favoritism will not play a role in the selection of a contractor. The selection will be based on a fair and unbiased process. Proposals will be evaluated based on clearly stated criteria that are not tailored to any specific contractor. A team of appointed WWSP, Tualatin Valley Water District, Hillsboro, and Beaverton staff will establish the criteria and perform the evaluation of each proposal according to the criteria identified in the RFP. All qualified firms will be able to participate in the bidding.

Prequalified contractors will be selected through a competitive proposal process. No reduction in competition is expected since the proposed process is open to the same prequalified contractors as the default low bid method. In September 2019, WWSP solicited statements of qualification from interested contractors and updated its prequalified list to include a large pool of contractors, both local and national.

To mitigate the risk that prequalified contractors prefer the traditional low bid method and will not bid on a best value solicitation, WWSP will give public notice of the proposed LCRB exemption, conduct pre-bid outreach to contractors to promote awareness to the prequalified contractors, and emphasize the transparency in the selection process.

VI. FINDINGS REGARDING COST SAVINGS AND OTHER SUBSTANTIAL BENEFITS

ORS 279C.335(2) requires that a public agency make certain findings as part of exempting certain public contracts or classes of public contracts from competitive bidding. ORS 279C.335(2)(b) requires an agency to find that: “Awarding a public improvement contract under the exemption will likely result in substantial cost savings and other substantial benefits to the contracting agency or the state agency that seeks the exemption.”

In addition to the findings above, the selection of qualified contractors possessing the required experience and expertise is expected to result in overall cost savings to the Owner. Selecting the best contractor with an innovative approach to the project through a value-based selection method should optimize the construction and minimize challenges for the combined MPE_1.2 and COB_1.2 projects. Specifically, selecting the highest-scoring contractor should result in fewer change orders and claims because the selection will be evaluated with appropriate weight provided to non-pricing criteria as WWSP staff determines should be prioritized for the project. Fewer change orders and claims should result in cost savings for the project. Selection considering the qualifications and experience of the proposer’s key staff is expected to lead to more collaboration, which minimizes challenges and enables a focus on value engineering.

This type of project is well-suited to the best value selection method because evaluating proposers based on criteria such as value engineering and overall approach is expected to lead to benefits to the public including reducing disruption to businesses, residents, emergency services, and the traveling public throughout the project. Selecting the highest-scoring contractor provides the best overall value. WWSP has experience using this same best value procurement method for other contracts and has been able to achieve these increased benefits and reduced risks from that process.

VII. CONCLUSION

In accordance with ORS Chapter 279C, an exemption from competitive bidding for the MPE_1.2 and COB_1.2 public improvement contract and approval of a best value construction selection method will allow for the evaluation of contractors using price and technical factors with relative weighting of criteria tailored to the specific requirements. Using prequalified contractors, with experience best suited for the project based on specific criteria provides many benefits. The use of a competitive proposal process will not diminish competition or result in favoritism or increased cost. Additionally, this approach is expected to contribute to public benefit including minimized disruption to businesses, residents, emergency services, and traveling public.

Willamette Water Supply
Our Reliable Water

4C. Recommendation to Use Best Value Selection
for MPE_1.2/COB_1.2 Construction Contract

October 1, 2020

1

Outline

- Background
- MPE_1.2 and COB_1.2 project status
- Best value selection approach
- Implementation steps
- Recommendation

2

Background

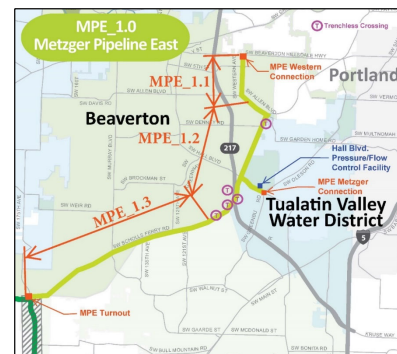
- WWSP evaluated and recommended contractor procurement methods for WWSP-led construction projects (late 2019)
- LCRB approved class exemption for 3 projects (January 2020)
 - Best value selection *PLM_1.3, PLM_4.3, PLW_1.3*
 - Among WWSP’s prequalified contractors
- Evaluation and decision for 3 other projects, including MPE_1.0, was deferred until more information was available

RES_1.0/PLM_5.3, MPE_1.0/COB_1.0, PLW_2.0

3

Readiness for Selecting Contractor Procurement Method for MPE_1.0

- Design is sufficiently advanced to understand construction details
 - Currently 60% design level
- Delivery method is confirmed
 - Design-bid-build
- Project phasing is established (3 phases)
 - MPE_1.1 (including COB_1.1)
 - MPE_1.2 (including COB_1.2)
 - MPE_1.3



4

Recommended Selection Methods

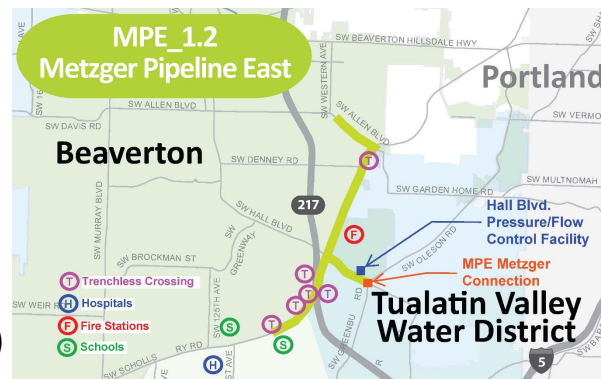
Project Phase	Recommended Selection Method	Basis
MPE_1.1 (w/COB_1.1)	Low-bid among prequalified contractors	City of Beaverton will lead procurement and hold contract
MPE_1.2 (w/COB_1.2)	Best value	Understanding each contractor's technical approach and qualifications along with cost is valuable, considering the project risk and complexity
MPE_1.3	Low-bid among prequalified contractors	Project is less complex than some other WWSP projects; specialty subcontractors (e.g., trenchless) not required

5

Best Value Selection Benefits for MPE_1.2/COB_1.2

Best value selection would enable evaluation of:

- Contractor's approach to:
 - ODOT HWY 217 Crossing
 - Overall traffic control
 - Open cut and trenchless methods
- Trenchless subcontractor's qualifications (firm and personnel)
 - Total of 6 trenchless crossings



6

Potential Risks of Using Best Value Selection

- Additional level of effort for bidders
 - Mitigation: Limit length and complexity of proposals
- Increased potential for protest
 - Mitigation: Public notice of proposed LCRB exemption
 - Mitigation: Pre-bid outreach to contractors to promote awareness
- Potential for higher initial construction contract pricing*
 - Mitigation: Apply a high relative weight to price
 - Opportunity: May result in fewer change orders/claims

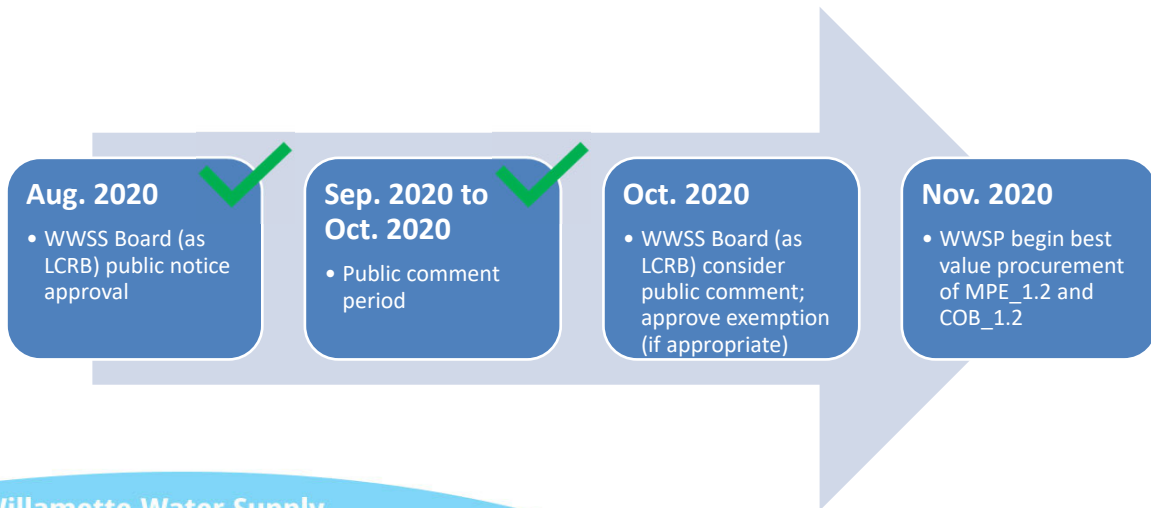
* Recent PLW_1.3 bid:
Lowest price was identified as providing the best value

Exemption Summary

The use of best value selection for construction contractor for MPE_1.2 and COB_1.2:

- Is unlikely to encourage favoritism or reduce competition
- Will likely result in cost savings and other substantial benefits

Implementation Steps



Recommendation

Consider adopting a resolution declaring an exemption from competitive bidding for the MPE_1.2 and COB_1.2 project and approving the use of best value selection method for the construction contractor.

QUESTIONS

STAFF REPORT

To: WWSS Board of Commissioners

From: David Kraska, P.E., Willamette Water Supply System General Manager

Date: October 1, 2020

Subject: Request to Local Contract Review Board for Exemption from Competitive Bidding for the PLW_2.0 Pipeline Project and COH_1.0 Pipeline Ancillary Project

Requested Board Action:

Acting as the Local Contract Review Board (LCRB), consider approving a draft resolution declaring an exemption from competitive bidding for the PLW_2.0 pipeline project and COH_1.0 ancillary pipeline project and approving the use of best value selection method for a construction contractor, receive oral testimony or written comments and direct that the resolution be brought back for adoption at the November 5, 2020 Board meeting.

Key Concepts:

- The draft resolution declaring an exemption from competitive bidding under ORS 279C.300 allows the use of best value selection for a construction contractor for Willamette Water Supply System PLW_2.0 project and COH_1.0 ancillary project.
- Best value selection would enable consideration of a combination of cost and qualifications specific to the combined construction project, including technical approach and specialized expertise relevant to specific project requirements.
- The existing pool of prequalified pipeline contractors would be eligible to submit proposals for this project.
- The declaration of an exemption from competitive bidding must occur after public notice. The adoption and opportunity for public comment prior to enactment is scheduled to occur at the November 5, 2020 regular Board meeting.

Background:

The PLW_2.0 and COH_1.0 project consists of approximately 17,600 feet of 48-inch diameter welded steel pipeline and 2,200 feet of 12-inch diameter ductile iron pipeline to convey treated water. The PLW_2.0 48-inch pipeline is almost entirely within the right-of-way of Cornelius Pass Road, from SE Frances Street to Highway 26. The terminus of the pipeline is at the existing TVWD Pressure Reducing Valve (PRV) facility located at the southwest corner of Cornelius Pass Road and Highway 26. The COH_1.0 12-inch pipeline runs parallel with the PLW_2.0 pipeline in Cornelius Pass Road from NE Shaleen Street to NE Quatama Street and connects to the City of Hillsboro distribution system.

In accordance with intergovernmental agreement establishing the Willamette Water Supply System (WWSS) Commission, the Willamette Water Supply Program (WWSP) may oversee and manage the design and construction of certain additional projects (Ancillary Projects) for the WWSS member agencies when approved by the Board. The COH_1.0 project is an Ancillary Project that is being delivered for City of

Page 2 of 2

October 1, 2020

Request to Local Contract Review Board for Exemption from Competitive Bidding for PLW_2.0/COH_1.0

Hillsboro. The COH_1.0 12-inch pipeline parallels the PLW_2.0 48-inch pipeline and the projects will be constructed together under a single construction contract.

The WWSP will lead the construction procurement. The current selection method is low bid to prequalified contractors. Under ORS 279C.300, construction contractors are selected through bidding low bid, open-competitive, or low bid with prequalification, unless an exemption is adopted by the LCRB. The WWSP is seeking approval from the LCRB for an exemption to use a best value selection for the combined PLW_2.0 and COH_1.0 construction project that would enable consideration of total construction cost and non-cost factors such as technical approach and specialized expertise, from prequalified contractors.

Budget Impact:

There are no budgetary impacts anticipated from this item.

Staff Contact Information:

David Kraska, P.E., WWSP Program Director; 503-941-4561; david.kraska@tvwd.org

Mike Britch, P.E., WWSP Engineering & Construction Manager; 503-941-4565; mike.britch@tvwd.org

Attachments:

1. Proposed Local Contract Review Board resolution
2. Exhibit 1 - Findings in support of an exemption from competitive bidding: best value for the PLW_2.0 water transmission pipeline project and COH_1.0 water transmission ancillary project

RESOLUTION NO. WWSS-XX-20

A RESOLUTION BY THE LOCAL CONTRACT REVIEW BOARD DECLARING AN EXEMPTION FROM COMPETITIVE BIDDING FOR WILLAMETTE WATER SUPPLY SYSTEM WATER TRANSMISSION PIPELINE PROJECT PLW_2.0/COH_1.0 AND APPROVING A BEST VALUE CONSTRUCTION CONTRACTOR SELECTION METHOD

WHEREAS, this matter came before the Board of Commissioners of the Willamette Water Supply System Commission (Commission), acting as the Local Contract Review Board for the Commission; and

WHEREAS, the Commission, formed by the Tualatin Valley Water District, the City of Hillsboro, and the City of Beaverton, has designated Tualatin Valley Water District as its Managing Agency to manage and deliver the Willamette Water Supply System (WWSS) which includes the class of water transmission pipeline projects; and

WHEREAS, the Managing Agency operates the Willamette Water Supply Program (WWSP) to construct the WWSS; and

WHEREAS, the WWSP staff evaluated the PLW_2.0/COH_1.0 water transmission pipeline project is well-suited for a best value construction contractor selection method; and

WHEREAS, based on WWSP staff's evaluation, best value provides the greatest degree of owner control and enables selection of the best qualified construction contractor for the PLW_2.0/COH_1.0 water transmission pipeline contract; and

WHEREAS, the WWSP staff developed findings required by ORS 297C.335 for an exemption from competitive bidding for PLW_2.0/COH_1.0, as described in Exhibit 1, attached hereto and incorporated by reference, concluding that the exemption is unlikely to encourage favoritism in the awarding of the contract or substantially diminish competition for the contract and that awarding a contract under the exemption will likely result in cost savings and other substantial benefits; and

WHEREAS, the Local Contract Review Board has noticed a public hearing on TBD, 2020 and conducted a public hearing on November 5, 2020 under ORS 297C.335 to provide opportunity for comments on the Findings as described in Exhibit 1, and being advised,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE WILLAMETTE WATER SUPPLY SYSTEM COMMISSION, ACTING AS THE LOCAL CONTRACT REVIEW BOARD, THAT:

Section 1: The Commission hereby adopts the Findings attached as Exhibit 1 and grants the exemption from competitive bidding for the PLW_2.0/COH_1.0 project; and

Section 2: The Commission hereby directs and authorizes WWSP staff to take all action to adopt the best value construction contractor selection method for the PLW_2.0/COH_1.0 project.

Approved and adopted at a regular meeting held on the 5th day of November 2020.

James Duggan, Chair

Denny Doyle, Vice Chair

Willamette Water Supply System Commission

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FINDINGS IN SUPPORT OF AN EXEMPTION FROM COMPETITIVE BIDDING
WILLAMETTE WATER SUPPLY SYSTEM
BEST VALUE FOR THE PLW_2.0 WATER TRANSMISSION PIPELINE PROJECT AND COH_1.0
WATER TRANSMISSION PIPELINE ANCILLARY PROJECT

I. GENERAL

The Oregon Legislative Assembly encourages public agencies to consider alternative and innovative public improvement contracting methods that take into account other important considerations in addition to low bid. Under ORS 279C.335(2) and local contracting rules, the local contract review board may exempt certain public improvement contracts from traditional priced-based competitive bidding by showing that an alternative contracting process is unlikely to encourage favoritism or diminish competition, and that it will result in cost savings and other substantial benefits to the public agency.

For the reasons set forth more fully below, it is recommended that a contractor be selected by utilizing the competitive proposal process in accordance with ORS 279C.400 for the PLW_2.0 and COH_1.0 water transmission pipeline contract. The competitive proposal process is advantageous for this project as it allows for consideration of critical factors other than lowest bid price in selecting a contractor. It also allows contractors to customize their proposals to suggest creative and innovative approaches to project execution. The competitive proposal process also provides some degree of flexibility by allowing for negotiations with the contractor in order to obtain the best overall value for the Willamette Water Supply System Commission (“Owner”).

II. BACKGROUND

Willamette Water Supply System Commission was formed to develop the Willamette Water Supply System (“WWSS”) as a new water source through the work of the Willamette Water Supply Program (“WWSP”). The WWSS is a drinking water infrastructure project that will provide the Owner’s members with a seismically resilient water supply to meet future demands and redundancy in case of an emergency event. The WWSS includes more than thirty (30) miles of transmission pipelines from the Willamette River Water Treatment Plant (“WRWTP”) in Wilsonville, Oregon north to Tualatin Valley Water District, Hillsboro and Beaverton, Oregon. The WWSS also includes constructing finished water storage tanks (terminal storage), upgrades of the existing raw water facilities at the WRWTP, and a new water treatment plant. The PLW_2.0 Project is a WWSS transmission pipeline project as described more fully below. The WWSP may oversee and manage the design and construction of certain additional projects (“Ancillary Projects”) for the WWSS member agencies when approved by the Owner. The COH_1.0 project, as described more fully below, is an Ancillary Project that is being delivered for City of Hillsboro under the same construction contract as the PLW_2.0 Project.

A. Project Description – Willamette Water Supply System, PLW_2.0 Project and COH_1.0 Ancillary Project

The PLW_2.0 project consists of approximately 17,600 feet of 48-inch diameter welded steel pipeline to convey treated water. The pipeline is almost entirely within the right-of-way of Cornelius Pass Road, from SE Frances Street to Highway 26. The terminus of the pipeline is at the existing TVWD Pressure Reducing Valve (PRV) facility located at the southwest corner of Cornelius Pass Road and Highway 26. The COH_1.0 pipeline is approximately 2,200 feet of 12-inch diameter ductile iron pipeline within the Cornelius Pass Road right-of-way from NE Shaleen Street to NE Quatama Street and connects to the City of Hillsboro distribution system. The COH_1.0 12-inch pipeline parallels the PLW_2.0 48-inch pipeline and the projects will be constructed together under a single construction contract.

The WWSP will lead the procurement of the PLW_2.0 and COH_1.0 construction package and the applicable delivery method for that construction package is low bid to prequalified contractors. Under ORS 279C.300, construction contractors are selected through bidding low bid, open-competitive, or low bid with prequalification, unless an exemption is adopted by the Local Contract Review Board (“LCRB”).

Unlike the Competitive Bidding process typical to construction projects, selection employing a “best value” process may include other factors in addition to price. Procuring construction contractor services and awarding an agreement based on best value is permissible under ORS Chapter 279C and LCRB rules; however, the exemption process described in ORS 279C.335 must be completed by the WWSP and approved by the LCRB prior to publishing a Request for Proposals (RFP) using the exempted process. The exemption process can be specific to a single contract or for a class of public improvement contracts (e.g., pipelines).

The PLW_2.0 and COH_1.0 construction project was evaluated to determine the recommended selection method.

The recommended selection method for this project is best value with prequalification. While prequalification assures firms have met minimum standards, some of these firms and their subcontractors may be better suited for a given project, as further described below.

III. EVALUATION AND BASIS FOR SELECTION

The PLW_2.0 and COH_1.0 project was evaluated for technical and logistical aspects that may benefit from consideration of bidding contractor’s technical proposal and additional qualifications. This evaluation considered the following questions for project-specific elements:

- Public Benefits – Are there opportunities to propose a work approach that minimizes disruption and/or increases safety for businesses, residents, emergency services, and the traveling public?
- Schedule – Are there opportunities to propose advantageous alternate schedules?
- Value Engineering – Are there opportunities to offer significant value engineering proposals?
- Specialized Expertise – Does the project require specialized expertise beyond WWSP’s minimum requirements for prequalification (e.g., substantial trenchless work or facility construction)?
- Technical/planning complexity – Does the project’s complexity warrant evaluation and comparison of each contractor’s technical approach to executing the work (e.g., substantial trenchless work, traffic management, or facility construction)?

For the PLW_2.0 and COH_1.0 construction project, evaluating the contractors' responses to technical and logistical aspects such as the trenchless subcontractor's qualifications and/or value engineering ideas are advantages provided by a best value approach. For PLW_2.0 and COH_1.0, a best value selection would enable an evaluation that includes a contractor's approach to crossing complex intersections on Cornelius Pass Road which is a heavily trafficked arterial road and busy utility corridor (three separate trenchless crossings), a trenchless crossing of light rail tracks, critical resource crossings (two separate open-cut creek crossings with adjacent trenchless pipe sections), an evaluation of proposed tunneling contractors (not prequalified), an evaluation of the contractor's qualifications and approach for construction of the PRV facility while not interrupting operations at an existing facility on the same site, and an evaluation of traffic control and pipe installation methods that could prove beneficial to the schedule, traffic impacts, and local business impacts.

Using best value, contractors are evaluated on both price and qualitative criteria such as project team experience and performance, safety records, project personnel, and overall project approach. Relative weighting of criteria would be tailored to the specific requirements of the project and published in the RFP.

IV. LOCAL CONTRACT REVIEW BOARD (LCRB)

ORS 279C.335(1) requires, with certain exceptions, that all public contracts be based on competitive bidding and, under ORS 279C.375, be awarded to the lowest responsive and responsible bidder. ORS 279C.335(2) permits an exemption from this general requirement pending approval from a local contract review board. An exemption may be granted for a public improvement project or a class of public improvement contracts if the conditions described in ORS 279C.335(2) are met. The findings in this document demonstrate that those conditions are met and that the projects may be procured through a best value selection approach.

Approval of this exemption allows for the PLW_2.0 and COH_1.0 construction contract to be entered using alternative procurement methods rather than through a low-bid competitive bidding process.

This specific request is for approval to utilize a best value selection method for the PLW_2.0 and COH_1.0 construction project.

To seek approval of a contract-specific procurement, a written request must be submitted to the WWSS Commission that describes the proposed contracting procedure and the circumstances that justify the use of a special procurement, whereby the special procurement is unlikely to encourage favoritism in the awarding of a public contract or substantially diminish competition. An exemption must also show that awarding the exemption will likely result in substantial cost savings or other substantial benefits. The following section presents WWSP staff findings relative to each of the factors required to be addressed by ORS 279C.335.

V. FINDINGS REGARDING COMPETITION

ORS 279C.335(2) requires that an agency make certain findings as a part of exempting certain public contracts or classes of public contracts from competitive bidding. ORS 279C.335(2)(a) requires an agency to find that: *"It is unlikely that such exemption will encourage favoritism in the awarding of public contracts or substantially diminish competition for public contracts."*

Favoritism will not play a role in the selection of a contractor. The selection will be based on a fair and unbiased process. Proposals will be evaluated based on clearly stated criteria that are not tailored to any specific contractor. A team of appointed WWSP, Tualatin Valley Water District, Hillsboro, and Beaverton staff will establish the criteria and perform the evaluation of each proposal according to the criteria identified in the RFP. All qualified firms will be able to participate in the bidding.

Prequalified contractors will be selected through a competitive proposal process. No reduction in competition is expected since the proposed process is open to the same prequalified contractors as the default low bid method. In September 2019, WWSP solicited statements of qualification from interested contractors and updated its prequalified list to include a large pool of contractors, both local and national.

To mitigate the risk that prequalified contractors prefer the traditional low bid method and will not bid on a best value solicitation, WWSP will give public notice of the proposed LCRB exemption, conduct pre-bid outreach to contractors to promote awareness to the prequalified contractors, and emphasize the transparency in the selection process.

VI. FINDINGS REGARDING COST SAVINGS AND OTHER SUBSTANTIAL BENEFITS

ORS 279C.335(2) requires that a public agency make certain findings as part of exempting certain public contracts or classes of public contracts from competitive bidding. ORS 279C.335(2)(b) requires an agency to find that: “Awarding a public improvement contract under the exemption will likely result in substantial cost savings and other substantial benefits to the contracting agency or the state agency that seeks the exemption.”

In addition to the findings above, the selection of qualified contractors possessing the required experience and expertise is expected to result in overall cost savings to the Owner. Selecting the best contractor with an innovative approach to the project through a value-based selection method should optimize the construction and minimize challenges for the combined PLW_2.0 and COH_1.0 project. Specifically, selecting the highest-scoring contractor should result in fewer change orders and claims because the selection will be evaluated with appropriate weight provided to non-pricing criteria as WWSP staff determines should be prioritized for the project. Fewer change orders and claims should result in cost savings for the project. Selection considering the qualifications and experience of the proposer’s key staff is expected to lead to more collaboration, which minimizes challenges and enables a focus on value engineering.

This type of project is well-suited to the best value selection method because evaluating proposers based on criteria such as value engineering and overall approach is expected to lead to benefits to the public including reducing disruption to businesses, residents, emergency services, and the traveling public throughout the project. Selecting the highest-scoring contractor provides the best overall value. WWSP has experience using this same best value procurement method for other contracts and has been able to achieve these increased benefits and reduced risks from that process.

VII. CONCLUSION

In accordance with ORS Chapter 279C, an exemption from competitive bidding for the PLW_2.0 and COH_1.0 public improvement contract and approval of a best value construction selection method will allow for the evaluation of contractors using price and technical factors with relative weighting of

criteria tailored to the specific requirements. Using prequalified contractors, with experience best suited for the project based on specific criteria provides many benefits. The use of a competitive proposal process will not diminish competition or result in favoritism or increased cost. Additionally, this approach is expected to contribute to public benefit including minimized disruption to businesses, residents, emergency services, and traveling public.

DRAFT

Willamette Water Supply System Commission

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Willamette Water Supply
Our Reliable Water

4D. Recommendation to Use Best Value Selection
for PLW_2.0/COH_1.0 Construction Contract

October 1, 2020

1

Outline

- Background
- PLW_2.0 and COH_1.0 project status
- Best value selection approach
- Implementation steps
- Recommendation

2

Background

- WWSP evaluated and recommended contractor procurement methods for WWSP-led construction projects (late 2019)
- LCRB approved class exemption for 3 projects (January 2020)
 - Best value selection
 - Among WWSP’s prequalified contractors
- Evaluation and decision for 3 other projects, including PLW_2.0, was deferred until more information was available

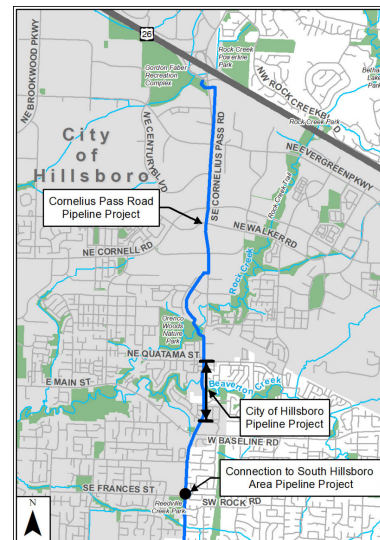
PLM_1.3, PLM_4.3, PLW_1.3

- ✓ RES_1.0/PLM_5.3
- ✓ MPE_1.0/COB_1.0
- PLW_2.0/COH_1.0

3

Readiness for Selecting Contractor Procurement Method for PLW_2.0/COH_1.0

- Design is sufficiently advanced to understand construction details
 - Currently 60% design level
- Delivery method is confirmed
 - Design-bid-build
- Project phasing is established
 - Delivery in one phase

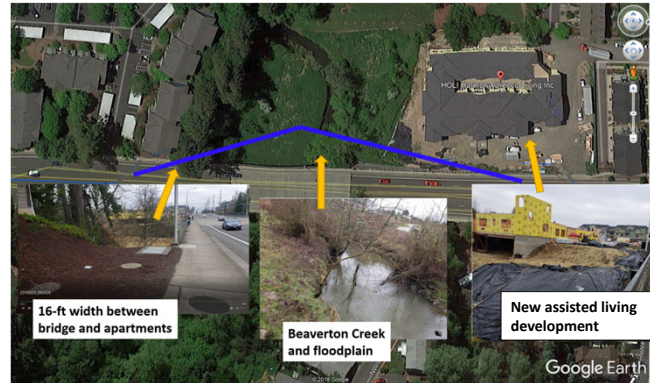


4

Best Value Selection Benefits for PLW_2.0/COH_1.0

Best value selection would enable evaluation of:

- Contractor's approach to:
 - Constructing new facility without interrupting operations at existing facility on shared site
 - Overall traffic control
 - Open cut and trenchless methods
- Contractor's facility construction qualifications (firm and personnel)
- Trenchless subcontractor's qualifications (firm and personnel)
 - Total of six (6) trenchless crossings



Beaverton Creek: open-cut resource crossing, two trenchless segments

5

Potential Risks of Using Best Value Selection

- Additional level of effort for bidders
 - Mitigation: Limit length and complexity of proposals
- Increased potential for protest
 - Mitigation: Public notice of proposed LCRB exemption
 - Mitigation: Pre-bid outreach to contractors to promote awareness
- Potential for higher initial construction contract pricing*
 - Mitigation: Apply a high relative weight to price
 - Opportunity: May result in fewer change orders/claims

* Recent PLW_1.3 bid:
Lowest price was identified as providing the best value

6

Exemption Summary

The use of best value selection for construction contractor for PLW_2.0 and COH_1.0:

- Is unlikely to encourage favoritism or reduce competition
- Will likely result in cost savings and other substantial benefits

7

Implementation Steps



8

Recommendation

Consider approving a draft resolution declaring an exemption from competitive bidding for the PLW_2.0 and COH_1.0 project and approving the use of best value selection method for the construction contractor, receive oral testimony or written comments and direct that the resolution be brought back for adoption at the November 5, 2020 Board meeting.

QUESTIONS

Willamette Water Supply System Commission

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STAFF REPORT

To: WWSS Board of Commissioners
From: David Kraska, P.E., Willamette Water Supply System General Manager
Date: October 1, 2020
Subject: Recommend Approval of PLM_1.0 Design Contract Amendment HDR, Inc. (Contract No. 2017-013 Amendment 14)

Requested Action:

Consider approving an amendment to the PLM_1.0 design contract in the amount of \$617,929.17 to HDR, Inc. (HDR). This amendment allows for additional design services on the PLM_1.0 Project of the Willamette Water Supply Program (WWSP).

Key Concepts:

- Implementation of the WWSP requires assistance of design consultants with expertise in waterline design, geotechnical investigations and analysis, seismic design, and other areas of engineering.
- HDR was procured through a competitive process to provide design consulting services for the PLM_1.0 project.
- The PLM_1.0 pipeline project comprises three work packages. Work packages PLM_1.1 and PLM_1.2 are currently under construction. HDR has progressed the design of PLM_1.3 through the 30 percent phase.
- Proposed design changes represent an expanded scope for the project and the estimated design costs have increased accordingly.
- The proposed contract amendment would establish a scope of work to complete 100% design.

Background:

HDR was selected through a competitive process to provide the WWSP with professional design and construction support services for the PLM_1.0 pipeline project. The professional services agreement contract 2017-013 was approved and awarded May 2017 with an expiration date of October 2022.

The PLM_1.0 pipeline project was planned for design and construction in three phases. A summary of work performed to date and work remaining is as follows:

- The design of PLM_1.1 was completed and bid in May 2019. The project is currently under construction through a contract administered by the WWSP. Pipeline installation is expected to be complete in November 2020.
- The design of PLM_1.2 was completed and bid in April 2019. The opportunity project is currently under construction through a contract administered by the City of Wilsonville (City). Pipeline installation is expected to be complete in January 2021.
- The design of PLM_1.3 is approaching the 60 percent completion level. Since the 30 percent design was submitted, pipeline alignment and installation options have been evaluated in addition to the evaluation of traffic control options.

Recommend Approval of PLM_1.0 Design Contract Amendment HDR (Contract No. 2017-013 Amendment 14)

Based on the evaluation of the PLM_1.3 alignment options after the 30 percent design submittal, the WWSP staff identified two significant changes to the pipeline design: providing an option of a trenchless construction method for the pipeline crossing of Wilsonville Road and realigning the pipeline north of the SW 95th Avenue and SW Boeckman Road intersection. These changes are the basis of the contract amendment under consideration and are further described, below.

Trenchless Construction Option at Wilsonville Road

As HDR prepares the PLM_1.3 construction documents for the 60 percent submittal, they are continuing the design of the open-cut trench for the portion of the 66-inch pipeline alignment that crosses Wilsonville Road. The design addresses the requirements of the Ground Lease for Raw Water Pipeline, an agreement between the WWSS and the City of Wilsonville, and other City requests. These requirements include:

- Trenching work across the Wilsonville Road and Kinsman Road intersection must occur at night between the hours of 8:00 p.m. and 5:00 a.m.
- During those hours, one lane of traffic in each direction must be maintained.
- During non-construction hours, all lanes must be open to traffic to the extent practicable.

As witnessed with the construction of the PLM_1.1 pipeline in Kinsman Road south of Wilsonville Road, the top of the contractor's trench boxes and trench support slide rail system were two to three feet above the road grade as the pipe was installed. This was primarily due to the depth of the trench and the depth the slide rail supports were driven into the bottom of the trench. These construction conditions would prove challenging within Wilsonville Road if the contractor had to remove the trench supports during non-construction hours to maintain safe traffic flow.

An option for installing the pipeline across Wilsonville Road using a trenchless construction method, estimated to be 200 feet in length, could reduce the impact to traffic at the Wilsonville Road intersection and could provide the following additional benefits:

- The bidding contractors will have a choice of construction methods allowing them to choose the method for which they are best suited and can deliver cost-effectively. The PLM_1.3 bidding process will utilize the Best Value selection process allowing the contractors to make a proposal for using trenchless or open-cut construction.
- The relocation of the City's existing 14-inch water main to accommodate open-cut construction would not be necessary using a trenchless method.
- There may be safety considerations and benefits if the contractor is allowed to work during the day instead of night hours.
- Providing the crossing options leverages contractor experience and creativity, which would, in turn, provide cost and non-cost benefits to WWSS and the City.

The WWSP requested HDR to provide a scope and budget proposal for investigating the viability of a trenchless crossing and for the design of the crossing. Their scope of work includes an additional geotechnical investigation; a technical memorandum for evaluating trenchless construction options; tree protection planning; traffic control design; coordination meetings with City staff; and 60-, 90-, and 100-percent design submittals.

Recommend Approval of PLM_1.0 Design Contract Amendment HDR (Contract No. 2017-013 Amendment 14)

Pipeline Alignment Changes in 95th Avenue

The 30 percent design for the PLM_1.3 pipeline at the SW 95th Avenue and SW Boeckman Road intersection approximates the alignment of the Preliminary Design drawings (completed in 2016). Approximately 1,050 feet of 66-inch pipeline is shown crossing two private properties within permanent easements. After the initial Constructability Review by the WWSP, HDR provided a pipeline alignment analysis that considered impacts to the businesses on the private properties, traffic routing required within 95th Avenue, and any required utility relocations. After reviewing the alignment analysis and after further refinements to the alignment, the WWSP decided to relocate the pipeline from the private properties to the 95th Avenue right of way.

HDR provided a scope and budget proposal for amending the pipeline alignment. Their scope of work includes the design of the relocation of approximately 600 feet of 12-inch City water main to accommodate the 66-inch pipeline; the 66-inch pipeline realignment design; modified traffic control plans; cathodic protection report and design modifications; and coordination meetings with City staff.

Budget Impact:

The proposed amendment would increase the total contract value to \$7,755,282.61 as shown in the table below. The estimated cost share per WWSS member agency shown below is based on ownership percentages within the WWSS IGA (7/1/19). The contract amendment amount will be funded from the project contingency.

Initial Contract Value	\$ 5,982,149.77
Amendments 1 - 13	\$1,155,203.67
Current Contract Value	\$7,137,353.44
Proposed Amendment 14	\$617,929.17
<i>TVWD Estimated Share¹</i> \$364,104.10	
<i>Hillsboro Estimated Share¹</i> \$223,021.06	
<i>Beaverton Estimated Share¹</i> \$30,804.01	
Proposed Contract Value	\$7,755,282.61

1. Based on overall project ownership percentage from Baseline 5.2 budget and WWSS IGA

Schedule Impact:

The WWSP is currently coordinating with HDR on potential schedule impacts to the design contract and project completion. Any schedule revisions will be completed through a separate process and managed in conformance with the WWSS Management Authority Matrix.

Staff Contact Information:

David Kraska, P.E., WWSP Program Director; 503-941-4561; david.kraska@tvwd.org
Mike Britch, P.E., WWSP Engineering & Construction Manager; 503-941-4565; mike.britch@tvwd.org

Attachments:

1. Exhibit A: Amendment 14 to Agreement 2017-013
2. Exhibit B: Engineer Fee and Rates

Willamette Water Supply System Commission

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Amendment 14 to Agreement 2017-013

FOR
 DESIGN, BIDDING PHASE, AND SERVICES DURING CONSTRUCTION PLM_1.0
 FOR
 THE WILLAMETTE WATER SUPPLY PROGRAM

This Amendment, effective the date as signed by Owner, is entered into by and between Willamette Water Supply System Commission ("Owner") and HDR ENGINEERING INC ("Engineer").

WHEREAS, the Owner and Engineer entered into this Agreement for Engineer to provide PLM_1.0 Design, Bidding Phase, and SDC for the Willamette Water Supply Program.

WHEREAS, the Owner and Engineer desire to amend the Agreement by modifying the terms of the Agreement as follows:

This amendment incorporates PCO-34.

PCO#	Description	Time Impact (Days)	Change Amount
PCO - 34	PLM_1.3 added design for Trenchless crossing of Wilsonville Road and pipe realignment on 95th	0	\$617,929.17

The Original Contract Sum was	\$5,982,149.77
Net Change by Previously Authorized Requests and Changes	\$1,155,203.67
The Contract Sum Prior to this Amendment was	\$7,137,353.44
The Contract Sum will change by	\$617,929.17
The New Contract Sum including this Amendment	\$7,755,282.61
The Contract Time will change by	0 Days
The Date of Contract Completion as of this Amendment Therefore is	10/10/2022

Except as modified or changed herein, all other terms and conditions of the original Agreement, or as previously amended, shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment 14 effective as of the date signed by Owner.

OWNER

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: _____
Title: _____
Date: _____

**PCO-34 Contract No. 2017-013
PLM_1.0 Design, Bidding Phase, and SDC**

Wilsonville Area Pipeline Project

Add the scope and fee as identified in the attached documents to Schedule A - Statement of Work and Exhibit B - Engineer Fee and Rates.

Attachments:

Exhibit A - Scope PLM_1.3 added design_07172020 rev2.docx

PCO_1.3 Trenchless and 95th 08.17.20.xlsx

Item	Description	Quantity	Units	Unit Price	Net Amount
005	Task 1.4 - Design Process Meetings (PLM_1.0)			\$	\$17,012.12
009	Task 1.8 - Monthly Pay Applications and Progress Reports			\$	\$22,815.81
011	Task 1.10 - Schedule Development and Monthly Update			\$	\$8,601.38
014	Task 2.1 - Basis of Design and Project Phasing Technical Memorandum			\$	\$40,420.47
024	Task 2.10 - PLM_1.3 Design 60%			\$	\$164,780.68
025	Task 2.12 - PLM_1.3 Design 90%			\$	\$82,633.01
026	Task 2.1 - PLM_1.3 Design 100%			\$	\$58,647.26
036	Task 3.1.3 - Subsurface Exploration PLM_1.3			\$	\$20,655.03
040	Task 3.5.3 - Trenchless Crossing Design Technical Memorandum PLM_1.3			\$	\$20,177.74
060	Task 7.2.3 - Grading, Erosion, and Stormwater Quality Control Plans PLM_1.3			\$	\$15,359.14
061	Task 7.3.3 - Traffic Control Plans PLM_1.3			\$	\$73,191.99
062	Task 7.4.3 - Tree Protection Plans PLM_1.3			\$	\$24,328.76
074	Task 10.3 - Coordination with Others PLM_1.3			\$	\$38,305.77

101	Lump Sum ODCs	\$	\$2,000.00
102	Invoiced ODCs Allowance	\$	\$5,000.00
103	Labor Escalation (Owner Controlled)	\$	\$24,000.01
Total		\$	617,929.17

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

Introduction

Tualatin Valley Water District ("District" or "TVWD") and the City of Hillsboro ("City" or "Hillsboro"), collectively referred to as ("Owners"), contracting with HDR Engineering, Inc. ("Engineer") to perform design, bidding phase services, and services during construction for a section of the Willamette Water Supply System ("WWSS"), under the management and control of the Willamette Water Supply Program ("WWSP"). References to the WWSS and WWSP may be interchangeable throughout the Statement of Work and should be read in context.

Scope of Work

The purpose of this amendment is evaluate and design the trenchless crossing of Wilsonville Road in PLM_1.3. The crossing design will be added to the PLM_1.3 overall design and the contractor will be allowed to select either an open –cut or a trenchless option for construction for the pipeline through Wilsonville Road. Additionally, the alignment on SW 95th Ave will be moved from private property alignment shown in the 30% design into the road right-of-way. This amendment includes scope to update the 60% design to adjust the alignment.

This amendment scope of work covers the following additional work elements:

- Task 1.0 Project Management and Administration
- Task 2.0 Design Phase Services
- Task 3.0 Geotechnical Exploration, Evaluation, and Design
- Task 7.0 Permitting/Land Use Support
- Task 10.0 Coordination with Others

1.0 Project Management and Administration

Engineer shall provide project management services to deliver the additional work described herein within the established budget in accordance with the agreed-to schedule. These tasks include the project controls, budget reporting, invoicing, and other tasks, required for the management and administration of the work. Engineer's Project Manager shall be responsible to manage Engineer staff, Subconsultants, and Subcontractors, internal QA/QC, and communications during the duration of this Agreement, and shall be the primary point of contact for Engineer and District.

2.0 Design Phase Services

The purpose of this task is evaluate the trenchless crossing of Wilsonville Road in PLM_1.3 and confirm a preferred alignment and shaft staging areas.

2.1 Design Technical Memorandum

The purpose of this task is to prepare the preliminary design of the trenchless crossing at Wilsonville Road.

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

1. Engineer shall provide a trenchless construction concept considering feasibility, mitigation and cost information. Evaluate the crossing location considering traffic impacts, conflicting utilities, property acquisition, community and business impacts and tree removals. Develop the preliminary trenchless design concepts.
2. Visit site to confirm layout and alignment considerations.
3. Prepare a graphic showing plan and profile with existing utilities, surface impacts.
4. Prepare an equipment layout figure at both shafts to determine area needed for construction and temporary easements.
5. Prepare for and facilitate up to two meetings with the program to review the conceptual design.
6. Prepare Technical Memorandum for the trenchless crossing concept including:
 - Trenchless design criteria and assumptions;
 - Preliminary horizontal and vertical alignments;
 - Feasible and recommended trenchless construction methods;
 - Preliminary construction staging requirements and restrains for each crossing;
 - Potential shoring and dewatering schemes for trenchless crossing shafts;
 - Incorporate findings from the geotechnical memorandum of task 3.53 into the design concept; and
 - Conceptual level cost estimate for each trenchless crossing.

Develop the draft trenchless crossing technical memorandum and submit for review and comments. Revise and finalize the technical memorandum based on the review comments.

Assumptions

1. Engineer to submit conceptual exhibits and graphics with basic notes to highlight key design elements and constraints.

Deliverables

1. Site visit summary documenting potential design constraints based on field observations, available as built data, discussion, and relevant photos.
2. Draft and final Wilsonville Road Trenchless Crossing Evaluation Technical Memorandum.
3. Conceptual exhibits and graphics with basic notes to highlight key design elements and constraints.

2.11 60% Design for PLM_1.3

The purpose of this task is to prepare the 60% design of the trenchless crossing alternative at Wilsonville Road. This task also includes revising the waterline alignment in SW 95th Ave and associated appurtenances as well as resolving existing utilities relocations to accommodate the new alignment.

1. Prepare 60% Design Drawings for trenchless crossing at Wilsonville Road and realigned waterline on SW 95th Ave.
 - a. Prepared, reviewed, and revised in compliance with the Design Guide.
 - b. Update design details per WWSP updated standards.
2. Draft technical specifications

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

- a. Prepared, reviewed, and revised in compliance with the Design Guide.
 - b. Updated to address trenchless issues.
3. Engineer's Opinion of Probable Construction Cost
 - a. Prepare and submit the 60% Design OPCC as an alternative bid item for the trenchless crossing of Wilsonville Road.
 4. Update typical cross sections showing construction work zones.

Assumptions

1. Drawing list assumptions for Wilsonville Road crossing
 - a. Revised index
 - b. Revised South Key map
 - c. Plan and Profile (2)
 - d. Pipeline details (2)
 - e. Cathodic protection (2)
 - f. Traffic control (4) and Pedestrian Detour Plan (1). Traffic control details not included and will utilize details from open-cut plans. (completed in task 7.0)
 - g. TESC (3) (completed in task 7.0)
 - h. Landscaping (3)
2. Drawing list assumptions for SW 95th Ave
 - a. Revised North Key map
 - b. Plan and Profile (4)
 - c. Utilities relocations Plan and Profile (2)
 - d. Water relocation details (2)
 - e. Pipeline details (2)
 - f. Cathodic protection (2)
 - g. Traffic control (4) and Pedestrian Detour Plan (1). Traffic control details not included and will utilize details from open-cut plans. (completed in task 7.0)
 - h. TESC (2) (completed in task 7.0)
 - i. Landscaping (2)
3. Up to four, two-hour internal design team meetings with six staff attending.
4. Up to four, two-hour external design team meetings with WWSP and City with three staff attending.
5. Utilities relocations include 600 feet of 12-inch diameter waterline.
6. The Wilsonville trenchless crossing is approximately 275 feet.

Deliverables

1. 60% drawings and specifications
2. Typical cross sections
3. 60% Design OPCC
4. 60% Constructability Review agenda and notes

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

2.12 90% Design for PLM_1.3

The purpose of this task is to prepare the 90% design of the trenchless crossing at Wilsonville Road. Update the 60% design and prepare a 90% submittal. The following deliverables are expected with the 90% design milestone submittal.

1. 90% Design Drawings
 - a. Prepared, reviewed, and revised in compliance with the Design Guide
 - b. Update design details per WWSP updated standards.
 - c. Comment log showing how the 60% design comments were addressed.
2. 90% Specifications, including Bid Form and Divisions 1 through 43, as applicable
 - a. Prepared, reviewed, and revised in compliance with the Design Guide.
3. Engineer's Opinion of Probable Construction Cost
 - a. Submit the 90% Design OPCC as an alternative bid item.

Assumptions

1. Up to four, two-hour internal design team meetings with six staff attending.
2. Up to two, two-hour external design team meetings with WWSP and City with three staff attending.

Deliverables

1. 90% drawings and specifications as part of the PLM_1.3 90% design submittal
2. Comment log
3. Engineer's Opinion of Probable Construction Cost as part of the PLM_1.3 90% design submittal

2.13 100% Design (Bid Ready) for PLM_1.3

The purpose of this task is to prepare the 100% design and final bid documents of the trenchless crossing at Wilsonville Road. Update the 90% design and prepare a 100% submittal. The following deliverables are expected with the 100% design milestone submittal.

1. 100% Design Drawings
 - a. Prepared, reviewed, and revised in compliance with the Design Guide.
 - b. Comment log showing how the 90% design comments were addressed.
 - c. Final sign and stamped drawings.
2. 100% Specifications, including Bid Form and Divisions 1 through 43, as applicable
 - a. Prepared, reviewed, and revised in compliance with the Design Guide.
 - b. Specification list per Design Guide Section 4.0 and its Appendix B.
3. Engineer's Opinion of Probable Construction Cost
 - a. Submit the final 100% Design OPCC as an alternative bid item.

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

Assumptions

1. Up to four, two-hour internal design team meetings with six staff attending.
2. Up to four, two-hour external design team meetings with WWSP and City with three staff attending.

Deliverables

1. 100% drawings and specifications as part of the PLM_1.3 90% design submittal
2. Final stamped and signed drawings and specifications as part of the PLM_1.3 90% design submittal
3. Comment logs addressing the 90% and 100% comments
4. Engineer's Opinion of Probable Construction Cost as part of the PLM_1.3 90% design submittal

3.0 Geotechnical Exploration, Evaluation, and Design

The purpose of this task is to support design of the trenchless crossing at Wilsonville Road. Perform two additional soil borings and geotechnical investigation and analysis to support the proposed Wilsonville Road trenchless crossing.

3.1.3 Subsurface Exploration

Geotechnical Explorations for Wilsonville Road Trenchless Crossing

Install a geotechnical boring to support design of a trenchless crossing of Wilsonville Road:

1. Drill a soil boring to a depth of 50 feet.
2. Incorporate geotechnical investigation into existing report.
3. Laboratory testing consisting of moisture content, gradation, and Atterberg limits.
4. Backfill soil boring. Asphalt patch in the parking lot. Replace disturbed sod in the grassed area.
5. Stake soil boring location.
6. Survey the ground elevations of soil boring to accurately establish on site exploration plans.

Assumptions

1. Environmental testing and assessments are not needed.
2. WWSP will coordinate with property owners for permission to access property.

Deliverables

1. Soil boring log and geotechnical investigation and evaluation will be included in the existing geotechnical report
2. Updated Geotechnical Data Report and Geotechnical Design Report for PLM_1.3
3. Updated Specifications for Trenchless Crossing, Excavation Support, Trenching and Backfilling

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

3.5.3 Trenchless Crossing Design Technical Memorandum

Update the trenchless crossing technical memorandum for PLM_1.3 adding Wilsonville Road crossing. The memorandum shall summarize subsurface conditions and present a profile at each crossing, summarizing geotechnical and environmental constraints, review likely applicable trenchless methods, evaluate the application of trenchless methods including construction issues and risks, present preliminary recommendations for trenchless crossing methodology and equipment, evaluate ground loss and settlement, and make recommendations for backfill and grouting requirements, construction access, and staging and easement requirements, both permanent and temporary.

This technical memorandum will be the basis for proceeding with real estate acquisition, if necessary, for all trenchless crossings, including any temporary construction access or staging areas. Engineer shall submit a draft report to Owners for review and comment at the 60% and 90% design milestones. Real estate needs must be defined in the 60% draft to allow WWSP Real Estate team to initiate easement acquisition. The final Trenchless Crossing Design TM shall incorporate responses to Owners' comments and shall be submitted at the 100% design milestone.

Deliverables

1. Draft and Final Trenchless Crossing Design Technical Memorandum for PLM_1.3.

7.0 Permitting/Land Use Support

7.1.3 Grading, Erosion, and Stormwater Quality Control Plans

Prepare grading, erosion, and stormwater quality control plans, including drainage calculations, and grading, erosion, and sediment control for the Wilsonville Road Crossing.

Deliverables

1. Draft and final erosion and sediment control plans, submitted with 90% and 100% design milestone deliverables for PLM_1.3.

7.3.3 Traffic Control Plans

Prepare traffic control plan(s) and specifications conforming to applicable standards of the Manual on Uniform Traffic Control Devices (MUTCD) for the Wilsonville Road Crossing and the revised alignment on SW 95th Ave.

1. Evaluate traffic control options and prepare a summary table and PowerPoint presentation with graphics, to be used for coordination meetings with City of Wilsonville staff, summarizing the following 3 options:
 - a. One lane of traffic southbound with northbound traffic detoured.
 - b. One lane of traffic with flaggers for 2 way traffic.
 - c. Night work with backfilled or plated trench during the daytime.
2. Prepare 60%, 90% and 100% traffic control plans. The traffic control plans and specifications shall be prepared by a certified traffic control supervisor or professional engineer. Engineer shall include

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

drawings in the plan showing phases of the project, a list of posted speed limits throughout the project, and traffic control measures to be employed at the project site. Traffic control plans are required for all work which will impact traffic on public, private roadways or driveways, including vehicle, bicycle, and pedestrian traffic. Plans and specifications will include detailed information on lane closure restrictions and accommodations for all users including businesses, residents, bicycles, pedestrians, transit, emergency services, garbage collectors, and school buses. In the case of any full closures, detour routes will be identified.

Assumptions

1. Engineer will provide the plans and drawings for construction contractor to obtain the permits.
2. The traffic control and haul route drawing list is below:
 - a. Wilsonville Road - Traffic control (4) and Pedestrian Detour Plan (1). Traffic control details not included and will utilize details from open-cut plans.
 - b. SW 95th Ave -Traffic Control Plan (5) , Detour Plan (2), Pedestrian Detour Plan (6)

Deliverables

1. Draft and final traffic control plans, submitted with 60%, 90%, and 100% design milestone deliverables for PLM_1.3.
2. Summary table and PowerPoint presentation with graphics summarizing the 3 options.

7.4.3 Tree Protection Plans

The purpose of this task is to support design of the trenchless crossing at Wilsonville Road.

1. Evaluate trees to be impacted or removed during construction. Prepare a table for the trees and show the proposed removed or impacted trees.
2. Incorporate tree protection plans/design into each phase the proposed PLM_1.3 design drawings and specifications. -

Assumptions

1. Existing tree field survey, prepared previously under this design contract, is sufficient to prepare the evaluation.

Deliverables

1. Incorporate tree protection plans into 60%, 90% and 100% design milestone deliverables for PLM_1.3.

10.0 Coordination with Others

Engineer shall be required to incorporate work performed by others into their respective project designs and to coordinate with other consultants to verify project interface points and conditions. Some

EXHIBIT A – STATEMENT OF WORK (SOW)
Willamette Water Supply Program
PLM_1.0 Design, Bidding Phase, and Services During Construction

coordination may be required at meetings that are in addition to the bi-weekly project coordination meeting.

Deliverables

1. Draft and final meeting minutes for meetings organized by Engineer for PLM_1.3.

Compensation

Our proposed additional compensation for this amendment is an additional \$617,929.17.

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4E. PLM_1.0 Design Contract Amendment
(Contract No. 2017-013 Amendment 14)

October 1, 2020

1

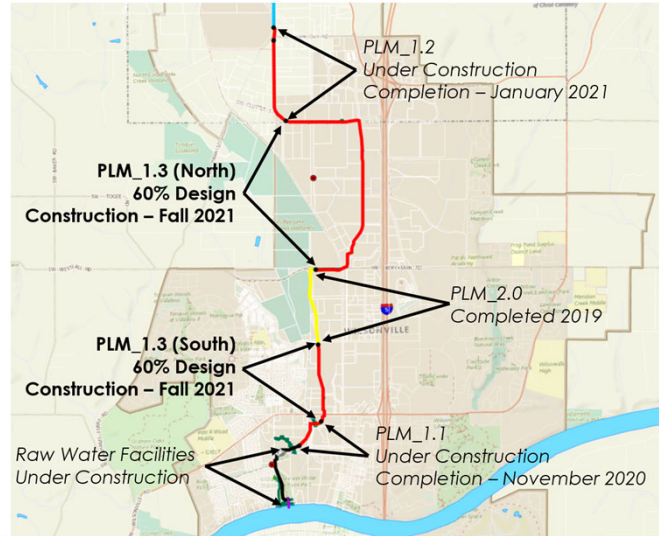
Outline

- Purpose: Request approval of design contract amendment
- Major scope changes
 - Wilsonville Road trenchless crossing option
 - SW 95th Avenue alignment change
- Cost and budget
- Requested Board action

2

PLM_1.0 Pipeline

- Three phases of work:
 - **PLM_1.1** includes 1,370 feet of 66" pipeline in easements within private property and in SW Kinsman Rd
 - **PLM_1.2** includes 3,556 feet of 66" pipeline in Ridder Rd and Garden Acres Rd (Partner project with City of Wilsonville)
 - **PLM_1.3** includes 12,151 feet of 66" pipeline in Kinsman Rd, Boeckman Rd, 95th Ave, and Ridder Rd



3

PLM_1.3 Open-Cut Pipeline Construction

- Trenching across Wilsonville Road must occur at night from 8 p.m. to 5 a.m.
- One traffic lane each direction must remain open
- During non-construction hours, all lanes must be open to traffic to the extent practicable
- Ground Lease allows open-cut and trenchless methods



4

PLM_1.1 Observations

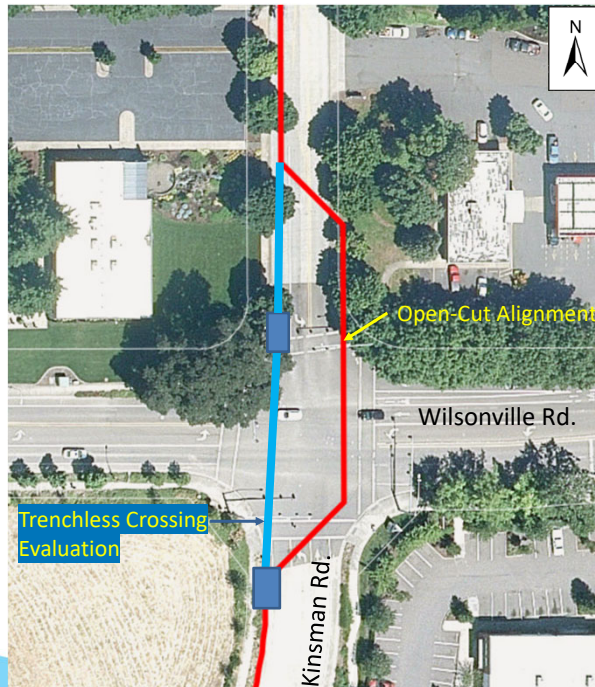


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5

PLM_1.3 Trenchless Construction Evaluation

- Trenchless option in addition to open-cut
- Trenchless option would be part of the Best Value selection
- Benefits
 - Accommodates trench shoring and traffic control (PLM_1.1 information)
 - Less Wilsonville Rd. traffic impacts compared to open-cut
 - Allows construction during the day
 - Leverages contractor experience and creativity -> cost/non-cost benefits



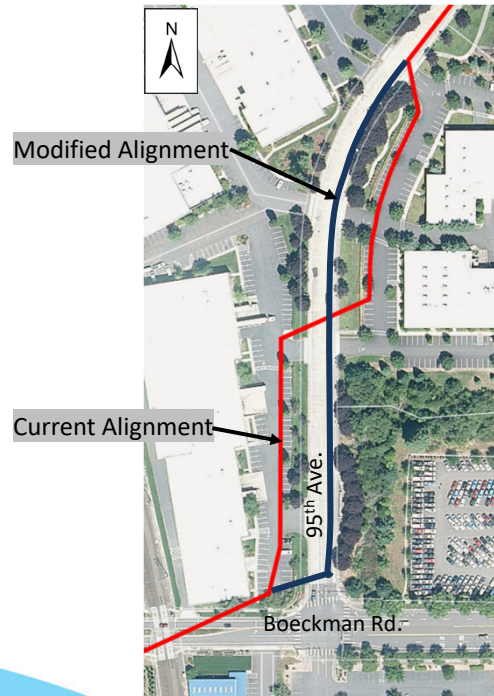
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6

6

PLM_1.3 Alignment Change

- Current alignment crosses private property in easements
- Proposed alignment moves pipe into the 95th Ave. right of way
- Benefits
 - Minimizes impacts to local businesses
 - Reduces impacts to private property
 - Consistent with Wilsonville preferences



Summary of Changes

- Scope Additions
 - Trenchless construction option for crossing Wilsonville Rd
 - Revised alignment along SW 95th Ave
 - Two technical memoranda and 26 new drawing sheets
 - Traffic control design along SW 95th Ave and relocation of 600 feet of existing water main
 - Supplemental constructability reviews and progress meetings
 - Supplemental support for WWSP coordination with City of Wilsonville
- Budget Impact:

Initial Contract Value		\$ 5,982,149.77
Amendments 1 - 13		\$1,155,203.67
Current Contract Value		\$7,137,353.44
Proposed Amendment 14		\$617,929.17
TVWD Estimated Share ¹	\$364,104.10	
Hillsboro Estimated Share ¹	\$223,021.06	
Beaverton Estimated Share ¹	\$30,804.01	
Proposed Contract Value		\$7,755,282.61

Requested Board Action

Approve amendment in the amount of \$617,929.17 to the HDR contract to continue to provide design services for the PLM_1.0 Project of the Willamette Water Supply Program (WWSP)

QUESTIONS

Willamette Water Supply System Commission

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STAFF REPORT

To: WWSS Board of Commissioners
From: Christina Walter, WWSP Permitting and Outreach Manager
Date: October 1, 2020
Subject: Thermal Trading Plan Update

Key Concepts:

- A final revised Thermal Trading Plan for the WWSS was submitted to the Oregon Department of Environmental Quality (DEQ) on September 1, 2020. Formal approval of the plan by DEQ is anticipated in early October 2020.
- WWSP staff has publicly identified two ongoing projects to offset the WWSS's impacts to the Willamette River with its future withdrawals: the Molalla River State Park Floodplain Forest and Riparian Area Health Restoration Project; and the Chicken Creek Habitat Project.
- Once the plan is officially approved, WWSP staff will continue to work closely with DEQ to analyze the credits achieved through the two projects and determine whether full credit needed has been fully achieved or if additional credits need to be generated.

Background:

A Thermal Trading Plan is a plan to offset temperature impacts to a river from either a discharge to or withdrawal of water from waters of the state. The WWSP was required to submit a plan to the Oregon Department of Environmental Quality (DEQ) as a requirement of the Clean Water Act, Section 401 Water Quality Certification (Permit) for its withdrawal of water from the Willamette River. DEQ has been certifying Thermal Trading Plans since 2004 but until this point, only as conditions of National Pollutant Discharge Elimination System (NPDES) Permits for wastewater dischargers. DEQ is setting a precedent with the WWSS in that it will be the first entity required to submit/implement a Thermal Trading Plan for a water withdrawal.

The WWSP staff submitted its proposed plan to DEQ in November 2019. DEQ conducted its internal review of the plan then held an open public comment period February 14 – April 3, 2020. During that period, DEQ received written public comments on the plan from the following:

- City of Portland, Bureau of Environmental Services
- Oregon Department of Agriculture
- Northwest Environmental Advocates
- WaterWatch of Oregon
- Willamette Riverkeeper
- Melissa Houlberg
- Dale Feik

The comments received could be broken down into two groupings – those with technical questions/concerns on the plan (such as the methodology for calculating the trading ratio); the second grouping was basic challenges to DEQ’s administration of thermal trading plans. At the request of one of the commenters, DEQ held a virtual public hearing on July 1, 2020 regarding the plan.

During the public comments/testimony of the hearing, WWSP staff provided an overview of the two ongoing projects identified to offset the WWSS’s impacts to the Willamette River with its future withdrawals. These projects will generate thermal credits as defined by the water quality trading rules and best practices approved by DEQ for other trading plans. The two plans include:

- **Molalla State Park Project:** The first project is the Molalla River State Park Floodplain Forest and Riparian Area Health Restoration Project (Molalla State Park Project) throughout the Molalla River State Park. The site is located at the confluence of the Molalla, Pudding, and Willamette Rivers. It will involve 450 acres of floodplain forest and channels within the 2-year inundation zone of the Willamette River. Native vegetation in the Molalla River State Park has been significantly impacted by large stands of knotweed and other invasive species, resulting in loss of riparian habitat, canopy shade over the river, and necessary riverbank stabilization. The project will include removal of invasive species and replanting of native trees to increase stream shading. Habitat restoration will be incorporated where replanting occurs. The project addresses several factors limiting habitat health identified in the Upper Willamette River Recovery Plan for Chinook salmon and steelhead. The project involves extensive temperature and vegetation data collection, analysis, and interpretation to guide restoration activities, weed removal and replanting with native species, and then maintenance of replanted areas. This project is a partnership with Molalla River Watch, which Oregon State Parks has contracted to do habitat improvements in the park.
- **Chicken Creek Project:** The second project is the Chicken Creek Habitat Project within the Tualatin River National Wildlife Refuge. This project would restore the lower reach of the historic Chicken Creek Channel to a more historical alignment through its former floodplain as well as restore its associated floodplain wetlands. By realigning the creek to a more natural meander and eliminating some levee and other water management infrastructures, natural physical and biological process will be restored to 2 miles of the stream channel and 280 acres of floodplain, benefiting a broad suite of aquatic and wetland dependent native flora and fauna as well as substantially reducing sediment and nutrient inputs to the Tualatin River. This project is a partnership with the Friends of the Tualatin Wildlife Refuge, which supports Clean Water Services in the project design and implementation.

Following the conclusion of the hearing and closure of this final opportunity for public comment, DEQ provided WWSP staff a short list of requested modifications to the plan. The focus of DEQ’s requested modifications were the following:

- Adjustment of the mitigation trading credit ratio from the proposed ratio of 1.7:1 to 2:1. This aligns with the typical ratio carried in other trading plans, as well as mitigation requirements of other environmental permits. Staff anticipated that DEQ would request this change and was comfortable with integrating the change into the plan.

- A restriction of mitigation project locations to areas along the Willamette River and/or along its tributaries below reservoirs. The rationale for this restriction is that any project above a reservoir would have limited (if any) temperature reductions downstream due to the length of time water sits in the reservoir and would, therefore, not achieve the goal of cooling the water downstream of the WWSP's point of diversion. Again, staff felt the WWSP could easily accommodate this proposed change and incorporated it into the plan.
- All other modifications were minor editorial changes/a few language clarifications within the document. Staff inserted these modifications as requested by DEQ.

WWSP staff resubmitted the plan with the requested modifications on September 1, 2020. The plan is currently being reviewed by DEQ's senior management. DEQ staff anticipates the final approval of the plan to occur by early October. Once approved, the plan, along with DEQ's official written responses to all public comments, will be posted on their website.

Once the plan is approved, WWSP staff will continue to work closely with DEQ to analyze the credits achieved through these Molalla State Park and Chicken Creek Habitat Projects and determine whether full credit needed has been fully achieved. If not, staff will seek additional similar projects/options as outlined in the plan.

Budget Impact:

No immediate budget impacts are anticipated at this time. With DEQ's adoption of the plan, staff will work with DEQ to confirm and validate the number of credits already earned and determine what/if any additional mitigation project funding must be allocated in future budgets.

Staff Contact Information:

Dave Kraska, WWSP Program Director; 503-941-4561; david.kraska@tvwd.org
Christina Walter, Permitting and Outreach Manager; (503) 840-3830; christina.walter@tvwd.org

Attachments:

WWSS Thermal Trading Plan

Willamette Water Supply System Commission

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WILLAMETTE WATER SUPPLY SYSTEM: THERMAL TRADING PLAN

Contents

Regulatory Background Supporting Trading in Oregon.....	2
Eligibility.....	3
OAR 340-039-0015: ELIGIBILITY.....	3
Trading Plan	3
OAR 340-039-0025(5)(A): TEMPERATURE TRADING	3
OAR 340-039-0025(5)(B): BASELINE	3
OAR 340-039-0025(5)(C): TRADING AREA	5
OAR 340-039-0025(5)(D): BMPS.....	6
Stored Water	7
OAR 340-039-0025(5)(E): TRADING RATIOS	7
OAR 340-039-0025(5)(F): CREDITS	7
Credits Needed	8
Methods Used	10
Credit Duration	12
OAR 340-039-0025(5)(G): MONITORING.....	12
OAR 340-039-0025(5)(H): TRADING PLAN PERFORMANCE VERIFICATION	14
OAR 340-039-0025(5)(I): TRACKING AND REPORTING	14
OAR 340-039-0025(6): ADAPTIVE MANAGEMENT	15
OAR 340-039-0025(7): TRADING PLAN REVISION	15
Consistency with Water Quality Trading Purpose and Policy	15
OAR 340-039-0001: PURPOSE AND POLICY.....	15
Consistency with Water Quality Trading Objectives	16
OAR 340-039-0003: WATER QUALITY TRADING OBJECTIVES.....	16

Regulatory Background Supporting Trading in Oregon

The Oregon Department of Environmental Quality (DEQ) has been issuing permits that include thermal credit trading since 2004, when a permit was issued to Clean Water Services that allowed two publicly owned treatment works (POTWs) to receive thermal credits by restoring and managing riparian areas to create shade and releasing cold water from an upstream reservoir. The thermal trading credits allowed the POTWs to comply with water quality-based effluent limitations for temperature in their National Pollutant Discharge Elimination System (NPDES) permits.

In 2015, the Oregon Environmental Quality Commission (EQC) approved Oregon Administrative Rule (OAR) 340 Division 039, a set of rules outlining the basic requirements for a viable water quality trading program. Following this, in 2016, DEQ updated its Water Quality Trading Internal Management Directive (IMD)¹ to complement the changes in the new rules.

The Willamette Water Supply System Commission (WWSS Commission) is an Oregon intergovernmental entity formed by Tualatin Valley Water District (TVWD), the City of Hillsboro, and the City of Beaverton. The WWSS Commission was formed to build the Willamette Water Supply System (WWSS) in response to planned growth in their service areas. The WWSS will provide an additional, resilient water supply for Washington County. When complete, the WWSS will be one of Oregon's most seismically-resilient water systems—built to better withstand natural disasters, protect public health, and speed regional economic recovery through restoring critical services more quickly.

The Willamette River, one of Oregon's largest rivers, is the WWSS's new supply source. The raw water intake is located at the Willamette River Water Treatment Plant in Wilsonville. From there, raw water will be pumped to the WWSS Water Treatment Plant, a new state-of-the-art water filtration plant where multiple treatment processes will produce high quality drinking water. Drinking water will be pumped to reservoir facilities on Cooper Mountain, then will be gravity-fed to additional storage and customers in the TVWD, Hillsboro, and Beaverton service areas. The new system will be completed by 2026.

TVWD has been designated the Managing Agency for the WWSS Commission, and TVWD operates the Willamette Water Supply Program (WWSP) to plan, design, and construct the WWSS.

The WWSS will include more than 30 miles of water transmission pipelines ranging in diameter from 36 inches to 66 inches from the raw water facilities in Wilsonville north to Hillsboro and the TVWD service areas. The WWSS also includes constructing two finished-water storage tanks (terminal storage) and expanding the raw water facilities, including replacing the fish screens and seismic improvements at the existing intake facility on the Willamette River. The WWSS will provide the Partners and the region with a seismically resilient water supply to meet future water demands and provide redundancy in case of a future emergency event.

This Thermal Trading Plan (TTP) seeks to fulfill the temperature offset requirement of the Clean Water Act (CWA), Section 401 water quality certification (WQC) as it pertains to the WWSS.

Previous TTPs have been used to address discharges under NPDES permits. This TTP differs because it describes the plan for offsetting the temperature impact of a water withdrawal, as opposed to a discharge, and because it is associated with a Clean Water Act (CWA) Section 401 water quality certification (WQC), rather than a NPDES permit. While discharges typically result in their maximum impact at the discharge point, a withdrawal is different—its impact is likely to occur well downstream of the withdrawal after atmospheric conditions have had

¹ Oregon Department of Environmental Quality (2016), Water Quality Trading Internal Management Directive. March 31. Available at <https://www.oregon.gov/deq/Filtered%20Library/WQTradingIMD.pdf>

time to act on the reduced volume of water remaining in the river. These impacts are further discussed below in the section describing the trading area.

This TTP is consistent with OAR 340 Division 039 and the 2016 Water Quality Trading IMD.

Eligibility

OAR 340-039-0015: ELIGIBILITY

The WWSS Commission is pursuing this trading program as part of its Section 401 WQC and is therefore eligible to trade under OAR 340-039-0015(1). Temperature is one of the water quality parameters eligible for trading under OAR 340-039-0015(2). The Willamette River is eligible for trading under OAR 340-039-0015 (3) because it is consistent with water quality management plan in the 2006 temperature TMDL.²

Trading Plan

The following subsections describe how the WWSS Commission's trading plan aligns with each of the required components of a trading plan, as described in OAR 340-039-0025(5).

OAR 340-039-0025(5)(A): TEMPERATURE TRADING

A trading plan must identify the parameter for which water quality trading is developed. The WWSS Commission's trading plan is developed for water temperature.

OAR 340-039-0025(5)(B): BASELINE

Oregon defines the "trading baseline" as the "pollutant load reductions, BMP requirements, or site conditions that must be met under regulatory requirements in place *at the time of trading project initiation.*" OAR 340-039-0005(6). A trading plan must identify "any applicable regulatory requirements from OAR 340-039-0030(1) that apply within the trading area and that must be implemented to achieve baseline requirements." Credits are generated when the trading project results in water quality benefits above the trading baseline. Establishing a baseline ensures that credits are not used to meet an existing regulatory obligation or used by more than one entity at any given time. Applicable regulatory requirements can include³:

- NPDES permit requirements
- CWA section 401 certifications
- Agricultural water quality management area rules
- Oregon Board of Forestry rules
- Federal management plans or agreements between the state and a federal agency
- Local ordinances
- Tribal laws or rules
- Requirements derived from a TMDL by designated management agencies responsible for TMDL implementation.

The WWSS Commission will evaluate whether any of the baseline requirements described in the rule apply to the potential trading sites. If affirmative requirements do apply to trading project sites, baseline BMPs can be installed or deductions to site thermal benefit totals can be made to ensure that credit is not being taken for actions that were required under baseline obligations. If no baseline obligations exist at the trading project site (described

² Oregon Department of Environmental Quality, (2006). The Willamette Basin Total Maximum Daily Load (TMDL) documents. *Available at* <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Willamette-Basin.aspx>

³ Draft City of Ashland Trading Plan v3 (March 2018)

below), the baseline obligation would be equal to current conditions. Table 1 provides an overview of the baseline requirements listed in the trading rule that might apply to the trading projects.

Table 1. Overview of Baseline Requirements Potentially Applicable to WWSS Commission Proposed Trading Projects within the Trading Area.

ORS 340-039-0030(1)	BASELINE REQUIREMENT
(a) NPDES permit requirements	None
(b) Rules issued by Oregon Department of Agriculture for an agricultural water quality management area under OAR chapter 603 division 095	The WWSS Commission has identified potential trading projects in the Tualatin River Watershed Agricultural Water Quality Management Area Rules and the Molalla/Pudding/French Prairie/North Santiam Agricultural Water Quality Management Area Rules. Requirements will be evaluated on a case-by-case basis as trading projects are further defined.
(c) Rules issued by Oregon Board of Forestry under OAR chapter 629 divisions 610-680	Not currently applicable; forestry-zoned sites are not currently under consideration for implementation.
(d) Requirements of a federal land management plan, or an agreement between a federal agency and the state	Any projects within National Wildlife refuges will follow associated Comprehensive Conservation Plans. Other requirements will be evaluated on a case-by-case basis as trading projects are further defined.
(e) Requirements established in a Clean Water Act Section 401 water quality certification	Other than the Section 401 WQC, which this Thermal Trading Plan is intended to address, the WWSS Commission is not aware of any WQCs applicable to the proposed trading projects.
(f) Local ordinances	Not currently applicable. No applicable local ordinances have been identified that would impact the potential trading projects. The WWSS Commission will continue to evaluate any applicable local ordinances on a case-by-case basis as trading projects are further defined.
(g) Tribal laws, rules, or permits	Not currently applicable. The WWSS Commission is not aware of Tribal laws, rules or permits applicable to the potential trading projects. Requirements will be evaluated on a case-by-case basis as trading projects are further defined.
(h) Other applicable rules affecting nonpoint source requirements	Not currently applicable. The WWSS Commission is not aware of any other applicable rules affecting nonpoint source requirements at the potential trading projects. Requirements will be evaluated on a case-by-case basis as trading projects are further defined.

<p>(i) Projects completed as part of compensatory mitigation, or projects required under a permit or approval issued pursuant to Clean Water Act section 404, or a supplemental environmental project used to settle a civil penalty imposed under OAR chapter 340 division 012 of the Clean Water Act</p>	<p>Project sites are being evaluated. On a case-by-case basis, the WWSS Commission will verify that the baseline requirements for a CWA or Supplemental Environmental Project site are met prior to calculating credits.</p>
<p>(j) Regulatory requirements a designated management agency established to comply with a DEQ-issued TMDL, water quality management plan or another water pollution control plan adopted by rule or issued by order under ORS 468B.015 or 468B.110.</p>	<p>The WWSS Commission will ensure that projects comply with baseline requirements associated with the Willamette River TMDL prior to calculating credits. Oregon State Parks is a designated management agency in the Willamette Temperature TMDL and may have requirements related to their land management activities. If any trading projects occur on state parks land, the associated baseline requirements will apply. Requirements will be evaluated on a case-by-case basis as trading projects are further defined.</p>

The WWSS Commission will verify that all baseline requirements identified in Table 1 for its trading projects are met before calculating credits for its trading BMPs.

OAR 340-039-0025(5)(C): TRADING AREA

A trading plan must include a “description of the trading area including identification of the location of the discharge to be offset, its downstream point of impact, if applicable, where trading projects are expected to be implemented, and the relationship of the trading projects to beneficial uses in the trading area.” Trades must occur within the same watershed or area covered by a TMDL so that the benefits of the trades occur in same waterbody where the discharge is occurring.⁴ A trading area is also required to “encompass the location of the discharge to be offset, or its downstream point of impact, if applicable, and the trading project to be implemented.”⁵ Trading areas must also be consistent with the TMDL water quality management plans (WQMP), where they exist.⁶

The WWSS withdrawal is located at Willamette River Mile (RM) 38.7, approximately 3 miles upstream of the point where the Molalla River enters the Willamette (RM 35.6). The point of maximum impact of the WWSS withdrawal is located at RM 27.1, approximately 11.6 miles downstream of the withdrawal. The trading area will be the full Willamette River basin upstream of the point of maximum impact (see the map in Appendix A). The map indicates the location of the withdrawal, the point of maximum impact and the location of the reservoirs associated with the U.S. Army Corps of Engineers Willamette Valley Project, from which stored water may be available. The map also indicates the location of the Tualatin River, Pudding River and Molalla River, which enter the Willamette River between the withdrawal and the point of maximum impact. Riparian Shading, Floodplain Resiliency and In-stream Habitat Restoration BMPs (discussed below) may be identified and conducted on the Willamette River mainstem and its tributaries upstream of the point of maximum impact. The map in Appendix A also indicates HUC-12 watersheds which either include Willamette Valley Project reservoirs or are above Willamette Valley Project

⁴ U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. at 1610. OAR 340-039-0040(1)

⁵ OAR 340-039-0005(5)

⁶ OAR 340-039-0035(2)

reservoirs. The map also indicates as HUC-12 watersheds above Trail Bridge Reservoir, part of the Carmen-Smith Hydroelectric Project on the McKenzie River. There are also other small reservoirs on minor Willamette River tributaries not shown on the map. The WWSS will not conduct Riparian Shade, Floodplain Resiliency or In-stream Habitat Restoration BMP projects upstream of reservoirs. These BMP project types are described in the next section. Additionally, as discussed below, purchase of stored water that would enter the Willamette upstream of the point of maximum impact would be quantitatively demonstrated to reduce the temperature impact at the point of maximum impact. The full trading area is within the Willamette River basin and covered by the 2006 Temperature TMDL.

OAR 340-039-0025(5)(D): BMPS

Pursuant to the trading rule, a trading plan must include a “description of the water quality benefits that will be generated, the BMPs that will be used to generate water quality benefits, and applicable BMP quality standards.” A BMP is defined as “in-water or land-based conservation, enhancement or restoration actions that will reduce pollutant loading or create other water quality benefits. BMPs include, but are not limited to, structural and nonstructural controls and practices and flow augmentation.”⁷ A BMP quality standard must include “specifications for the design, implementation, maintenance and performance tracking of a particular BMP that ensure the estimated water quality benefits of a trading project are achieved, and that allow for verification that the BMP is performing as described in an approved trading plan.”⁸

The primary BMP that will be used to generate thermal benefits under this thermal trading plan is the riparian shade BMP (Appendix B) at the proposed trading projects. The main purpose of the riparian shade BMP is to reduce thermal loading by blocking solar radiation. The methodology for calculating thermal credits will be discussed in the next section.

The BMP quality standard proposed by the WWSS Commission for riparian shade will include the following components:

- Projects will be implemented on public lands that have an established restoration plan and the intent of the land is for restoration and similar public benefit purposes. Conducting restoration on such properties will allow the associated benefits to be adequately preserved. If projects are to be implemented on private property, the appropriate easements and encumbrances will be acquired.
- Riparian Shade BMPs will be designed, implemented, monitored, verified, and tracked consistent with the TTP Standards for Riparian Restoration Projects (see Appendix B), which are based on the Willamette Partnership’s Performance Standards for Riparian Revegetation (Willamette Partnership 2016).
- In accordance with maintenance plans developed at the outset of credit projects, BMPs will be visited regularly for maintenance, especially in early “establishment” years. During site establishment, minimum maintenance on most sites will usually include one spring ring spray, one summer mow or cut, and one fall spot spray. In irrigated riparian areas with water rights, irrigation may be an appropriate option during the first several years. Once a site has become established, maintenance activities will continue, but may occur at less frequent intervals.
- Details on the performance tracking and verification aspects of the WWSS Commission’s proposed BMP quality standards are described below in the subsections corresponding with OAR 340-039-0025(5)(G) verification, and (H) tracking/reporting.

⁷ OAR 340-039-0005(1)

⁸ OAR 340-039-0005(2)

- Projects will include the removal of invasive species and replanting of native trees to increase stream side shading. Habitat restoration will be incorporated where replanting occurs.
- In addition to riparian shading, consideration will be given to increasing instream habitat complexity, enhancing riparian habitat, and reconnecting off-channel habitats. Where possible, efforts will be made to create cold water refugia, which are identified in the 2006 Willamette River TMDL as an important consideration because of the importance of offering migrating salmonids refugia from warmer river temperatures in the summer.

Two additional types of BMPs, Floodplain Resiliency and In-stream Habitat Restoration BMPs, are discussed in Appendix C. The floodplain habitat resiliency BMP focuses on habitat improvements along floodplains (generally within the 100-year floodplain and consisting of riparian and upland habitats) to improve the functions of native aquatic ecosystems. These improvements will allow for continued stream shading after a channel migrates across the floodplain, rather than channel migration into more degraded areas. The in-stream habitat BMP focuses on activities within the stream channel, including side channels inundated with at least a 2-year return interval. Key activities may include increasing stream habitat complexity, reconnecting or creating new side channels, improving cold water refugia access to fish and other activities supporting habitat for key species.

Additional BMP types may be proposed during the life of this TTP. Each new BMP type will be detailed in an addendum to this TTP, with review and approval by DEQ prior to implementation.

Stored Water

Water stored behind U.S. Army Corps of Engineers (USACE)-operated dams as part of the Willamette River Valley Project is in the process of being allocated; some of this water will be allocated to municipalities, including the WWSS partners. This water will become available for water supply and releasing some of this stored water may be a potential mitigation strategy for river water temperature impacts and augmenting summer water supplies for the WWSS partners.

The impact of utilizing stored water could be quantified through CE-QUAL-W2 model simulations. The releases would be added to the model(s) at the appropriate upstream locations and the impact on water temperatures, particularly at the point of maximum impact, could be evaluated using the CE-QUAL-W2 models developed for the Willamette River Temperature TMDL.

OAR 340-039-0025(5)(E): TRADING RATIOS

Trading ratios are “a numeric value used to adjust the number of credits generated from a trading project, or to adjust the number of credits that a credit user needs to obtain.” In Oregon, trading ratios can be used to account for time lags, attenuation of water quality benefits, among other uncertainties.⁹ A trading plan must include a “description of applicable trading ratios, the basis for each applicable trading ratio, including underlying assumptions for the ratio, and a statement indicating whether those ratios increase or decrease the size of a credit obligation or the number of credits generated from an individual trading project.”

To date, in Oregon riparian shade restoration trading programs, DEQ has approved a 2:1 trading ratio. The WWSS proposes to use the same 2:1 trading ratio for its projects.

OAR 340-039-0025(5)(F): CREDITS

The trading rule requires that a trading plan include a “description of the credits needed to meet water quality-based requirements of an NPDES permit or 401 water quality certifications, including:

⁹ OAR 340-039-0005(10)

- Quantity and timing: The number of credits needed and any credit generation milestones, including a schedule for credit generation;
- Methods used: How credits will be quantified, including the assumptions and inputs used to derive the number of credits; and
- Duration of credits: A description of the length of time credits are expected to be used.”

Credits Needed

This subsection identifies the projected excess thermal load exceedance(s) throughout the year. For a discharge, thermal exceedance is equal to: *(Facility Excess Thermal Load) – (Excess Thermal Load Limit)*, or ETL – ETLL, where:

$$ETL = (\text{Flow}_{\text{effluent (cfs)}}) \times ({}^{\circ}\text{C}_{\text{effluent}} - {}^{\circ}\text{C}_{\text{Temperature Criteria}}) \times (\text{Conversion Factor})$$

$$ETLL = (\text{Flow}_{\text{river (cfs)}} + \text{Flow}_{\text{effluent (cfs)}}) \times (\text{Human Use Allowance}) \times (\text{Conversion Factor})$$

Because the WWSS Commission’s trading plan is for a withdrawal rather than a discharge, the credits to be offset must be calculated differently. Calendar year 2001 was a very dry year in which Willamette River flows were below the 7Q10 flows for much of the summer, making it an appropriate year for consideration of the water temperature impacts of the WWSS withdrawal. Calendar year 2002 was a more typical year, and previous modeling¹⁰ indicated smaller water temperature increases. For each day during the modeled period for Calendar Year 2001 (April through October), a heat load was calculated as follows:

$$\Delta T * Q * 1000 \frac{kg}{m^3} * 86400 \frac{s}{day} * \frac{1 kcal}{kg * {}^{\circ}C} = \text{Heat Load (kcal/day)}$$

Where:

ΔT is the increase in Daily Maximum water temperature (above the baseline scenario discussed below), in degrees C

Q is the Daily Average flow in the river at the location of maximum impact, in cubic meters per second (cms)

The previous analysis considered two baseline scenarios:

- TMDL model, with no adjustment
- TMDL model, with 70 MGD of withdrawal to account for the already-permitted WRWTP withdrawal (Baseline-1)

For this analysis, an additional baseline scenario was considered (Baseline-2):

- TMDL model, with the 70-MGD WRWTP withdrawal and a 56-cfs (1.586 cms) withdrawal at the upstream end of the Middle Willamette River model to account for the 56-cfs water right purchased by the City of Hillsboro under Permit S-45565 (GSI, 2017).

The purchase of the 56 cfs water right guarantees that this amount of water remains in the river downstream to the point of the WWSS withdrawal under future conditions. This is analogous to flow augmentation and comparing the maximum WWSS withdrawal scenario to a baseline scenario which includes the 56 cfs of withdrawal upstream of the WWSS withdrawal provides an accurate assessment of the net impact of the increased WWSS withdrawal, which is partially offset by the augmentation of river flows in the middle Willamette River upstream of the withdrawal.

¹⁰ Geosyntec, 2018. Temperature Modeling, Summary. Memorandum to Amy Simpson and Jim Bloom, ODEQ. May 23.

For consistency with the impact quantification approach applied in other trading plans (the City of Ashland Draft Trading Plan¹¹ and the Clean Water Services Thermal Load Management Plan¹²), after calculation of the heat load for each day according to the above formula, the maximum rolling 30-day average heat load was determined.

Based on this analysis, the maximum rolling 30-day average heat load is **30.2 million kcal/day**.

More detailed results are presented in Figure 1, which shows the backwards-looking rolling 30-day average heat load increase for the maximum scenario relative to the two baseline scenarios. The value for a given date is the average of the heat load increases for the preceding 30 days. For dates where the line is not visible, the 30-day average heat load increase is negative (i.e. the maximum scenario is colder than the baseline scenario). The figure indicates that the maximum rolling 30-day average heat load increase above the “Baseline-1” scenario is 237.3 million kcal/day. The maximum 30-day average heat load increase above the “Baseline-2” scenario, which accounts for the “flow augmentation” guaranteed by the purchase of the 56-cfs water right, occurs 10-days later and is 30.2 million kcal/day, 12.7% of the increase above “Baseline-1.”

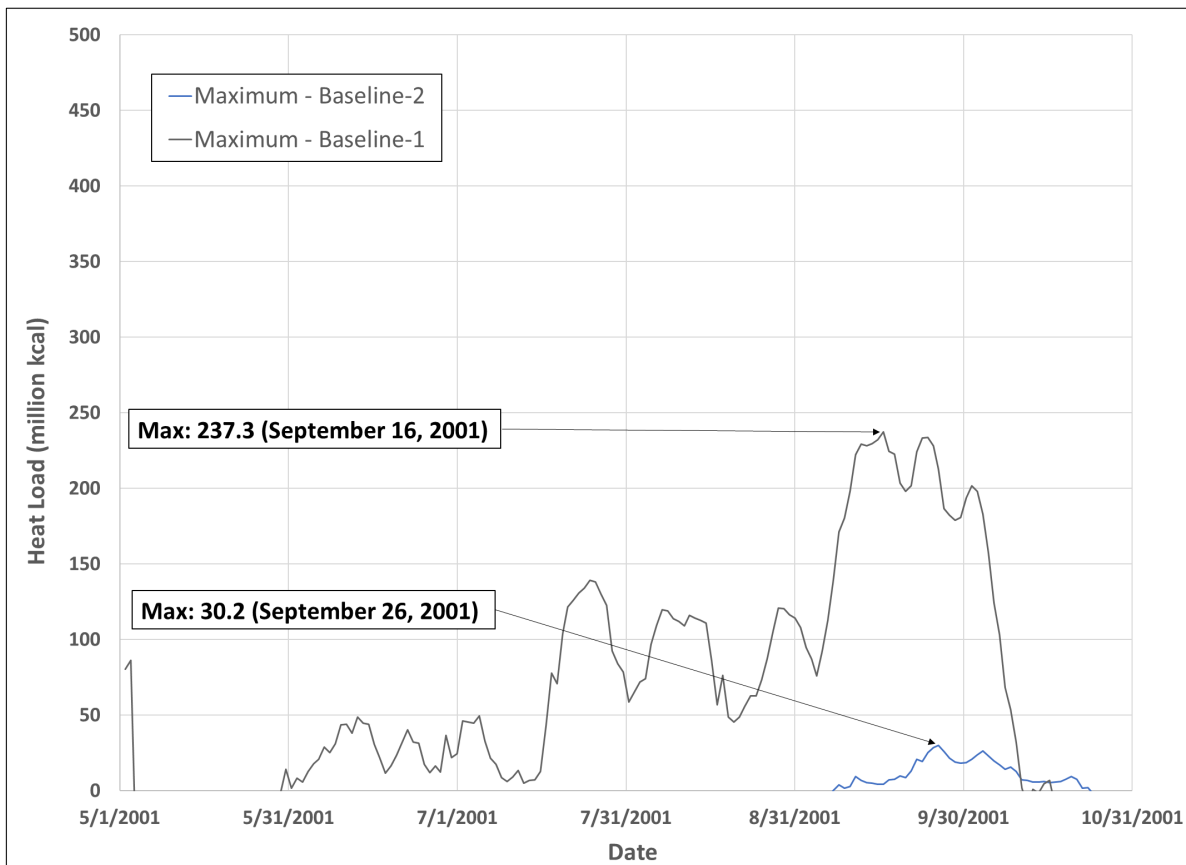


Figure 1. Rolling Backwards-Looking 30-Day Average Heat Load Increase for the Maximum Scenario above Two Baseline Scenarios, at the Point of Maximum Impact (RM 27.1).

The average values for each calendar month (average of the daily heat-load increases for each day within the calendar month) are shown in Table 2. The calendar months where the average increases are negative (i.e. a decrease) are indicated. For both scenarios, the maximum rolling 30-day average includes dates from both August and September, explaining why the maximum values in Table 2 are lower than those indicated in Figure 1.

¹¹ Draft City of Ashland Trading Plan v3 (March 2018)

¹² Clean Water Services (2016). Thermal Load Management Plan Package. Memorandum to File. May.

Table 2. Average Daily Heat Load Increase for each calendar month for the Maximum Scenario above Two Baseline Scenarios, at the Point of Maximum Impact (RM 27.1).

Month	Maximum – Baseline-1 (million kcal/day)	Maximum – Baseline-2 (million kcal/day)
April	70.2	<0
May	13.8	<0
June	24.7	<0
July	77.5	<0
August	107.7	<0
September	193.6	18.7
October	<0	<0

Table 3 presents the highest backwards-looking rolling 30-day average heat load increase for each calendar month (e.g. the value for a given date represents the preceding 30 days—the value reported for July 31 would represent the average heat load increase for July 1 – July 30). April is thus omitted from the table because the first backwards-looking 30-day average heat load is reported in May. The table indicates that the maximum values occur in September, which is also demonstrated in Figure 1.

Table 3. Highest Backwards-Looking Rolling 30-Day Average Heat Load Increase Ending in Each Calendar Month for the Maximum Scenario above Two Baseline Scenarios, at the Point of Maximum Impact (RM 27.1).

Month	Maximum – Baseline-1 (million kcal/day)	Maximum – Baseline-2 (million kcal/day)
May	86.2	<0
June	48.9	<0
July	139.2	<0
August	120.8	<0
September	237.3	30.2
October	201.7	26.3

The methodology for calculating the credits will be demonstrated in a subsequent section. As previously discussed, the WWSS Commission proposes to use a trading ratio of 2:1.

Methods Used:

The WWSS Commission will estimate the thermal benefits from riparian shade best management practice projects (BMPs) using version 8 of DEQ’s Shade-a-Lator model. Shade-a-Lator is a part of the Heat Source model, which is a stream assessment tool used by DEQ.¹³ Heat Source was developed in 1996 as a Master’s Thesis at Oregon State University in the Departments of Bioresource Engineering and Civil Engineering. DEQ currently maintains the Heat

¹³ Boyd & Kasper, Analytical Methods for Dynamic Open Channel Heat and Mass Transfer: Methodology for the Heat Source Model Version 7.0 (2003), available at <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Tools.aspx>. DEQ has posted this document on its website as a resource for generally describing the math and assumptions used in Heat Source. While the document explicitly covers Heat Source version 7 (and therefore Shade-a-Lator version 7), the math and assumptions in version 7 are mostly the same as version 8, and so DEQ considers this document appropriate for summarizing both versions 7 and 8.

Source methodology and software. TTools, an ArcGIS extension maintained by DEQ, will be used to sample geospatial data and assemble high-resolution topographic and vegetative inputs necessary to run the Heat Source model.

Shading credits will be evaluated using the Shade-a-Lator component of the Heat Source tool, not the full Heat Source model. This eliminates the need to use a model that has been calibrated to water temperature data since only the solar radiation blocked by baseline and project conditions shade will be considered.

To determine the potential reduction in solar loading that results from its project, the WWSS Commission will compare the current project area to a future conditions scenario that assumes BMP conditions at maturity. The difference in the incoming solar load (expressed in kilocalories per day) between the two scenarios represents the net thermal benefits generated from the BMPs.

Model inputs such as the upstream and downstream boundaries of the modeled stream reach, local topography, bank slope, and stream orientation will be assumed to be the same in the current condition and future condition scenarios. An exception is the wetted width of the stream, which may differ between future conditions scenarios due to the potential creation of new side channels during the project. The future conditions scenario will use the tree height and density based on the expected conditions after the project is complete.

For both the current and future conditions scenarios, the model calculates the sun angle at a series of calculation points (nodes along the center of the modeled stream reach for every model time step (typically once per minute)). At each node, the model calculates the total load of incoming solar radiation by considering the physical characteristics surrounding the node and the characteristics of the topographic and vegetation present on the streambanks (Figure 2).

Figure 2 demonstrates that the sun angle is a key parameter in the Shade-a-Lator model. The time of day and time of year affect the sun angle and the associated incoming solar radiation that reaches the surface of the stream.

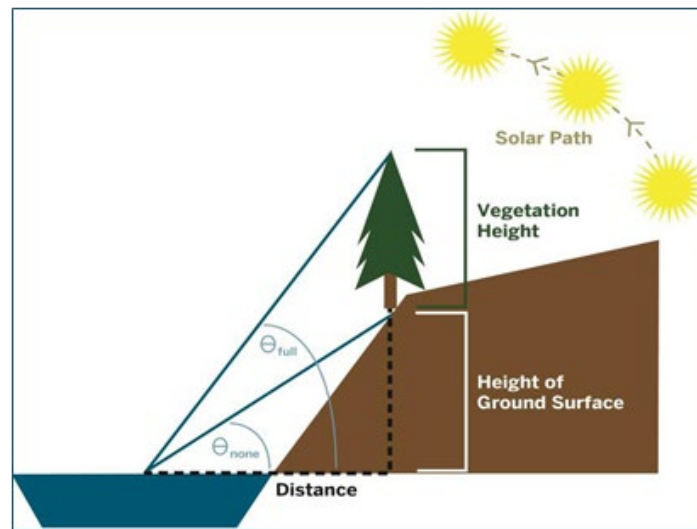


Figure 2. Schematic of the processes included in Shade-a-Lator modeling. When the sun angle is less than θ_{none} , all incoming solar radiation is blocked by the local topography. When the sun angle is greater than θ_{full} , all incoming solar radiation reaches the surface of the stream. When the sun angle is between θ_{none} and θ_{full} , vegetation attenuates a portion of the incoming solar radiation.

Credit Duration:

Credit duration refers to the “length of time credits are expected to be used.”¹⁴ This refers to the time period between when a credit becomes usable as an offset and when the credit is no longer valid. Credits are generated after a trading plan has been approved by DEQ and the restoration action has been implemented and verified. BMPs such as riparian restoration require time to realize their full benefits. Because of this, the projects must be durable and verification and ongoing monitoring and maintenance of project sites are critical parts of the program. The 2003 EPA Trading Policy provides that “credits may be generated as long as the pollution controls or management practices are functioning as expected.”¹⁵ In addition, the Oregon rule definition of a credit identifies the need to specify the period over which water quality benefits will be generated.

For the purposes of this TTP, the WWSS Commission suggests both a minimum credit life consistent with the rules, and the appropriate start date for the credit life. For reference, the City of Ashland proposed a 20-year credit life for its credits.¹⁶ The City of Medford’s program uses an average 20-year credit life, protected by long-term leasehold interests in the properties where the restoration occurs.¹⁷ Clean Water Services also uses a minimum 20-year credit life in its temperature management plan.¹⁸ Consistent with the 2003 EPA Trading Policy and these previous programs, the WWSS Commission proposes that the credits it produces from riparian vegetation projects have a minimum 20-year credit life, with the possibility of extending those credits beyond the minimum life for as long as the restoration sites and shade continue to function as expected and as long as the credits are needed to offset the temperature impact. This approach is consistent with the minimum time period for which these projects are expected to function and the 2003 EPA Trading Policy. The WWSS Commission proposes that the credit life begins in 2026, when the withdrawals will begin. This would be conservative because benefits of trading projects will begin before 2026. Implementation of credit trading projects is expected to begin in Winter 2022. Table 4 below, shows a schedule for key events relevant to the timing of trading projects and the thermal impact of the withdrawal.

Table 4. Selected events relevant to the timing of trading projects and the thermal impact of the withdrawal.

Approximate Date	Event
Winter 2020	Expected TTP Approval
Winter 2022	Beginning of Credit Generation
2026	WWSS Comes Online, Credit Life Begins
2085	Full Water Temperature Impact Reached

OAR 340-039-0025(5)(G): MONITORING

Pursuant to the trading rule, a trading plan must include a “description of the following: (A) Proposed methods and frequency of trading project BMP monitoring; and (B) Proposed methods and frequency of how water quality benefits generated by a trading project will be monitored.” In addition, an entity that engages in trading must submit an annual report that includes all of the elements described in OAR 340-039-0017(3) (See Appendix D).

The WWSS Commission will submit an annual report that includes the elements described in OAR 340-039-0017(3). In addition to submitting an annual monitoring report, the WWSS Commission proposes a monitoring schedule (Appendix B) that is based in part on the Willamette Partnership’s February 2016 riparian addendum to its General

¹⁴ OAR 340-039-0025(5)(f)(C)

¹⁵ U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1610 (Jan. 13, 2003), available at <https://www.gpo.gov/fdsys/pkg/FR-2003-01-13/html/03-620.htm>.

¹⁶ Draft City of Ashland Trading Plan v3 (March 2018)

¹⁷ City of Medford, Medford Regional Water Reclamation Facility Thermal Credit Trading Program Plan (2011). <https://www.oregon.gov/deq/FilterDocs/MedfordThermalTrading.pdf>.

¹⁸ Clean Water Services (2016). Thermal Load Management Plan Package. Memorandum to File. May.

Crediting Protocol. Consistent with that protocol, a specific combination of the following three types of monitoring approaches will be applied throughout the life of each riparian restoration project to demonstrate that the project continues to function as expected as it relates to the performance metrics identified in Appendix B:

- 1) **Quantitative monitoring:** the project developer, on behalf of the WWSS Commission, will implement a vegetation monitoring protocol (Appendix B) by sampling random plots on site; implementing repeat photo monitoring; and reporting on a comparison of monitoring data to performance standards.
- 2) **Qualitative monitoring:** an on-site, rapid, but standardized, qualitative review of site conditions and progress toward performance metrics will be accompanied by a subset of repeat photos from on-the-ground camera points used in quantitative years. The same set of camera points will be used in all qualitative monitoring years.
- 3) **Remote monitoring:** remote sensing information will be collected to provide visual evidence that the site still exists (e.g., a current year aerial image or LiDAR taken during the growing season to document site persistence). To remain consistent with Willamette Partnership approaches, the WWSS Commission proposes to monitor sites according to the schedule in Table 5.

Table 5. Monitoring and reporting approaches over the life of a project.

Monitoring Approach	Completed Growing Seasons After Planting and Initial Verification										
	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Quantitative Monitoring	•	•		•		•					•
Qualitative Monitoring			•		•		•		•		
Remote Monitoring ¹⁹								•		•	
Monitoring Approach	Completed Growing Seasons After Planting and Initial Verification										
	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	
Quantitative Monitoring					•					•	
Qualitative Monitoring		•					•				
Remote Monitoring	•		•	•		•		•	•		

In addition to this standard proposed site monitoring, if project sites are damaged by causes beyond the reasonable control of the WWSS Commission (such as wildlife damage or vandalism), the WWSS Commission will report that damage to DEQ. The WWSS Commission proposes reporting such incidents to DEQ within 90 days of learning of the damage. The reporting would include a description of the event, including an assessment of the damage; a plan for addressing the damage; and a schedule for implementing the plan. Following the City of Ashland’s Draft TTP, WWSS Commission proposes that natural restoration and/or active replanting of the damaged site be allowed if repair or continued maintenance of the damaged site provides the reasonable potential for long-term restoration of the thermal benefits of the site in an ecologically appropriate manner. Replacement with an alternative site or sites could also be pursued. The WWSS Commission proposes that damage to a project site that is beyond the reasonable control of the WWSS Commission should not in and of itself be considered a violation of its WQC requirements. Under such conditions, the WWSS Commission will demonstrate to DEQ that the sites will be restored, or alternative solutions will be implemented within a reasonable timeframe. This suggested approach follows the City of Ashland Draft TTP²⁰ and is consistent with the

¹⁹ If remote information is not available for a monitoring year designated for remote monitoring, the qualitative monitoring approach can instead be used for that year. If this occurs, a later year designated as qualitative monitoring may be remotely monitored if this does not result in more than two consecutive years of remote monitoring in the first 10 years.

²⁰ Draft City of Ashland Trading Plan v3 (March 2018)

approach outlined in the City of Medford’s NPDES permit.²¹

- 4) After the first 20 years, so long as credits are still required to offset the temperature impact of the WWSS, the WWSS Commission proposes that quantitative monitoring be conducted every 10 years. For qualitative and remote monitoring, the WWSS Commission proposes that the Year 11-20 pattern shown in Table 5 be repeated in each subsequent decade. For example, in Years 21, 23, 24, 26, 28, and 29 remote monitoring would be conducted and in years 22 and 27 qualitative monitoring would be conducted.

OAR 340-039-0025(5)(H): TRADING PLAN PERFORMANCE VERIFICATION

Pursuant to the trading rule, a trading plan must include a “description of how the entity will verify and document for each trading project that BMPs are conforming to applicable quality standards and credits are generated as planned.”

The Oregon trading rules require an entity to verify and document that BMPs conform to quality standards, and that the credits are tracked and made available to the public. To be consistent with the Oregon water quality trading rule, the WWSS Commission will pursue a verification approach consistent with the Willamette Partnership’s standards for verification.²²

Specifically, after a project site has been implemented with BMPs, the project will undergo a review for verification. The review will include administrative review of the site’s eligibility, an independent technical review of credit calculation, and a site visit to demonstrate that the project has been implemented in a manner consistent with the BMP quality standards included in this trading plan. Prior to Year 5 of the project, verifiers will review monitoring reports and attest that the site does not appear at risk of failure. At later milestones in the project (specifically, Years 5, 10 and 15), a third-party verifier will confirm that the site is continuing to mature and develop on a trajectory that is materially consistent with the as-built site and quality standards. In the years between these milestone verifications, verifiers will review annual monitoring reports and attest that the site does not appear at risk of failure. At year 20, a third-party verifier will review originally estimated credit calculations versus final credit calculations, a comparison of predicted Year 20 site conditions versus actual Year 20 site conditions, and an on-site visit to confirm that Year 20 quality standards have been met.

OAR 340-039-0025(5)(I): TRACKING AND REPORTING

Pursuant to the trading rule, a trading plan must include a “description of how credit generation, acquisition and usage will be tracked and how this information will be made available to the public.”

Transparency is critical to a credible trading program. Therefore, in addition to completing monitoring (as described above), submitting annual compliance reports to DEQ and completing performance verification, the WWSS Commission will evaluate posting trading credit information on a publicly accessible website to disclose progress at the proposed trading project site. One example of a publicly accessible portal for information is MarkIt, an environmental credit registry being used for the City of Medford temperature compliance plan managed by the Freshwater Trust.

²¹ Oregon Department of Environmental Quality, City of Medford National Pollutant Discharge Elimination System Waste Discharge Permit, No. 100985, Schedule D(7)(b)(v) (Dec. 13, 2011).

²² Willamette Partnership, Ecosystem Credit Accounting System Third Party Verification Protocol Version 1.0 (2009), *available at* <http://willamettepartnership.org/publications/>.

Regarding tracking and reporting, the WWSS Commission will verify that:

- Individual thermal benefits and transactions are accounted for and can be tracked,
- Program implementation progress can be tracked, and
- Enough information is provided related to individual project site trajectory (i.e., annual monitoring reports).

OAR 340-039-0025(6): ADAPTIVE MANAGEMENT

Pursuant to the trading rule, a trading plan must include a “description of how monitoring and other information may be used over time to adjust trading projects and under what circumstances.” Significant program amendments may require public review and comment (see OAR 340-039-0025(7)), but other small changes will fall under the scope of adaptive management.

The WWSS Commission recognizes the importance of long-term maintenance and monitoring to verify that the overall trading program and specific projects are successful, demonstrate ecological improvement in program areas, and are meeting the temperature condition of the 401 WQC. The monitoring plan described in this TTP is a key part of evaluating progress towards achieving the needed credits and achieving the thermal benefit described in this TTP. Because the proposed project will extend over a long (multi-decade) time frame, the ability to adapt any aspect of the program (monitoring, maintenance, implementation or reporting) is important. As technologies, BMP implementation, and monitoring practices evolve, the WWSS Commission will evaluate approaches to adapt its implementation plan as appropriate.

To adapt and improve the program over time, the WWSS Commission proposes a five-year adaptive management cycle. This length of time is an appropriate cycle to review information from the previous cycle and apply any new technologies, standards or lessons learned to update the plan to maintain sufficient progress towards the goals of the project. Periodic review also affords transparency and quality control. A five-year cycle is also an appropriate length of time to take into account any time-lag in measuring the effectiveness of the BMPs and provides more flexibility to appropriately collect and analyze these data. This process will be internal, but if substantive changes are required, the requirements of OAR 340-039-0025(7) will be met.

OAR 340-039-0025(7): TRADING PLAN REVISION

The WWSS Commission will comply with the requirements in OAR 340-039-0025(7) for trading plan revision if there are substantive changes that affect one of the trading plan elements as required by OAR 340-039-0025(5). Any revised trading plan will be submitted to DEQ for review.

Consistency with Water Quality Trading Purpose and Policy

OAR 340-039-0001: PURPOSE AND POLICY

“(1) Purpose. This rule implements ORS 468B.555 to allow entities regulated under the CWA to meet pollution control requirements through water quality trading. This rule establishes the requirements for water quality trading in Oregon.

(2) Policy. The Oregon Department of Environmental Quality may approve water quality trading only if it promotes one or more of the following Environmental Quality Commission policies: (a) Achieves pollutant reductions and progress towards meeting water quality standards; (b) Reduces the cost of implementing Total Maximum Daily Loads (TMDLs); (c) Establishes incentives for voluntary pollutant reductions from point and nonpoint sources within a watershed; (d) Offsets new or increased discharges resulting from growth; (e) Secures long-term improvement in water quality; or (f) Results in demonstrable benefits to water quality or designated uses the water quality standards are intended to protect.”

This TTP is consistent with the EQC policies. The WWSS Commission trading plan is expected to create thermally

cooler water and thermal refugia for fish and will have substantial habitat benefits.

While not a discharge, the thermal impact of the WWSS withdrawal results in increased water temperatures downstream and the trading plan will offset the thermal impact of the increased withdrawal.

Consistency with Water Quality Trading Objectives

OAR 340-039-0003: WATER QUALITY TRADING OBJECTIVES

As stated in OAR 340-039-0003, Water quality trading under this rule must:

- 1) Be consistent with anti-degradation policies
- 2) Not cause or contribute to an exceedance of water quality standards
- 3) Be consistent with local, state, and federal water quality laws
- 4) Be designed to result in a net reduction of pollutants from participating sources in the trading area
- 5) Be designed to assist the state in attaining or maintaining water quality standards
- 6) Be designed to assist in implementing TMDLs when applicable
- 7) Be based on transparent and practical Best Management Practices (BMPs) quality standards to ensure that water quality benefits and credits are generated as planned
- 8) Not create localized adverse impacts on water quality and existing and designated beneficial uses.

This TTP is consistent with these objectives, as follows:

(1, 2, 4) Anti-degradation & Net Reduction in Pollutant Loading: Oregon's anti-degradation policy is found in OAR 340-041-0004. Oregon's anti-degradation policy generally prohibits the lowering of existing water quality. In line with the 2003 EPA Trading Policy²³, the 2016 water quality trading IMD²⁴ instructs DEQ staff to ensure that trades are designed to result in a net reduction of pollutants in the trading area as required in OAR 340-039-0003(4). The WWSS withdrawal has an impact only on temperature, and not other pollutants. This TTP describes how the temperature impact of the WWSS withdrawal will be mitigated and will not violate the anti-degradation or water quality standards.

(3) Consistent with local, state, and federal water quality laws:

The trading program is consistent with Oregon's anti-degradation policy, the 2006 Willamette River Temperature TMDL²⁵ and the Oregon trading rule (OAR 340-039). The TTP considers and is consistent with baseline regulations that ensure credits will be achieved above the baseline condition. A requirement for the development of this TTP is incorporated into the WWSS Commission's 401 WQC.

(5,6) Designed to Assist State in Attaining Water Quality Standards and Implementing a TMDL:

The 2006 Willamette River Temperature TMDL did not consider water temperature impacts of withdrawals, with the exception of temporary diversion along the McKenzie River. As a result, the WWSS is not assigned a heat load in the TMDL. The WWSS Commission will use water temperature credit trading, as described in this TTP, to offset its thermal impact. This TTP will assist the State in attaining water quality standards and meeting the criteria of the

²³ U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1610 (Jan. 13, 2003), available at <https://www.gpo.gov/fdsys/pkg/FR-2003-01-13/html/03-620.htm>.

²⁴ Oregon Department of Environmental Quality (2016), Water Quality Trading Internal Management Directive. March 31. Available at <https://www.oregon.gov/deq/Filtered%20Library/WQTradingIMD.pdf>

²⁵ Oregon Department of Environmental Quality, (2006). The Willamette Basin Total Maximum Daily Load (TMDL) documents. Available at <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Willamette-Basin.aspx>

Willamette River mainstem TMDL.

(8) Based on transparent and practical BMPs quality standards:

The proposed BMP quality standards are described in detail above.

(9) Avoidance of Localized Impacts on Fish:

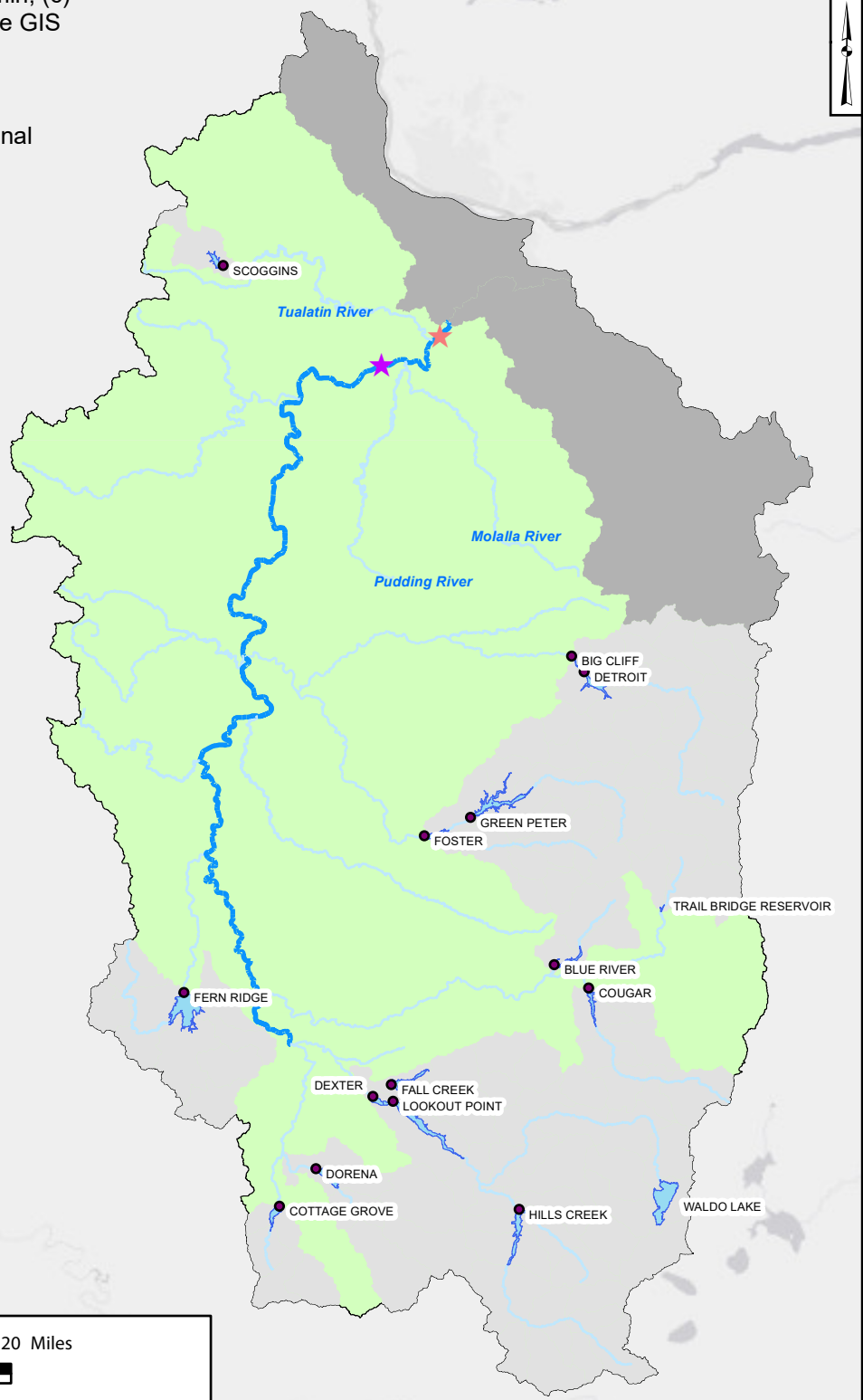
The WWSS withdrawal location is at River Mile (RM) 38.7 and the point of maximum impact is at RM 27.1. The thermal impact of the withdrawal is not localized, because it takes time for the reduced river flow to result in increased water temperatures. Therefore, this criterion is not applicable to the WWSS withdrawal. In addition, the point of maximum impact is temporary in time and space and, as noted above, the maximum water temperature increase is very small (i.e. less than one-tenth of a degree).

Appendix A: Willamette Water Supply System Trading Area Map

Basemap Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Dams: Oregon Spatial Data Library

Rivers, Lakes and Reservoirs: National Hydrography Dataset



Path: P:\Clients\Hillsboro_City_of\Projects\PMW\0340_Temperature_Modeling\GIS\Map_Trading_Area_V3.mxd

- Legend**
- ★ Point of Maximum Impact
 - ★ Withdrawal Location
 - Willamette Basin
 - Lower Willamette and Clackamas Basins
 - Willamette Valley Project Dams
 - Areas Above Reservoirs
 - Lakes and Reservoirs
 - Major Tributaries
 - Willamette River

Notes
 Scoggins Dam, owned by the U.S. Bureau of Reclamation, is not operated by the U.S. Army Corps of Engineers but provides additional storage and is often included on Willamette Project Maps.

Willamette Water Supply System Trading Area Map

Oregon



Figure

A-1

Portland, Oregon

27-Jul-2020

**Appendix B: Riparian Shade BMP Performance Standards for the
Willamette Water Supply System Thermal Trading Plan**

Riparian Shade BMP Performance Standards for the

Willamette Water Supply System Commission's Temperature Trading Plan

Introduction

The following performance standards are to be applied to the Riparian Shade Best Management Practice (BMP) associated with the Willamette Water Supply System (WWSS) Commission's Temperature Trading Program (TTP). These standards have been developed based on the Performance Standards for Riparian Vegetation (Willamette Partnership 2016). Instances where the proposed standards deviate from the Willamette Partnership's are noted below (i.e. use of reference sites).

Performance Criteria

At the end of the 5th, 10th, 15th, and 20th restoration project year, monitoring data will demonstrate that the project meets the standard performance criteria shown in Table 1. Alternate performance criteria may be allowed if supported by appropriate documentation of suitable reference site conditions. Alternate criteria should be documented and approved by the Oregon Department of Environmental Quality (DEQ) prior to restoration project implementation.

TABLE 1 STANDARD PERFORMANCE CRITERIA FOR WWSS TTP RIPARIAN SHADE PROJECTS

Criteria	Performance Criteria			
	Year 5	Year 10	Year 15	Year 20
EITHER: Mean stem density of native shrubs and woody vines * OR Site average for combined native shrub and woody vine cover	Meets or exceeds 1,600 live native woody stems per acre	80% of the native woody stem density identified at the end of the fifth growing season	70% of the native woody stem density identified at the end of the fifth growing season	Same as performance criteria for year 15
% Canopy closure or cover	N/A	N/A	≥25%	
Native trees/acres	None	≥ 100 trees/acre **		
Number of native woody species	At least 5 native woody species present			
Invasive woody and herbaceous cover	No greater than 20% cover invasive herbaceous species. No greater than 10% cover invasive woody species			
Non-native woody and herbaceous cover	Take and document actions reasonably necessary to evaluate the risk posed to project site by non-native species, where they are problematic (e.g., <i>Phalaris arundinacea</i> (reed canarygrass), <i>Hedera helix</i> (English ivy), <i>Ilex aquifolium</i> (English holly)), taking the steps			

	necessary to control those non-native species such that their presence does not prevent the successful establishment and propagation of native ecosystem characteristics and functions. This includes monitoring and reporting percent cover of such species.
<p>* Mean woody stem density is determined by counting all live woody stems taller than six inches (regardless of vigor) by species within reference sites. Count multi-stem species (e.g., <i>Symphoricarpos</i>, <i>Rosa</i>) as one stem per square foot (1' x 1').</p> <p>** Based on Willamette Partnership (2016) criteria for wet ecoregions</p>	

The following definitions are associated with the above performance criteria:

<i>Canopy closure</i>	Canopy closure is an upward-looking point estimate of the coverage of a forest canopy, and may be measured in the field with a spherical densitometer (also called a mirror optometer) or by analyzing upward-looking hemispherical photographs.
<i>Cover (or Absolute Cover):</i>	Cover is a downward-looking measure of the percentage of the ground surface covered by living plant leaves and stems. Areas not covered by vegetation are counted as unvegetated substrate. Total cover may be greater than 100% if species are present in multiple strata (i.e., tree, shrub, and herbaceous layers.)
<i>Cover (Canopy)</i>	Absolute cover as viewed from above tree height
<i>Cover (Native Shrub and Vine)</i>	Absolute cover as viewed from beneath tree height.
<i>Invasive species</i>	A plant species should automatically be labeled as invasive if it appears on the current Oregon Department of Agriculture Noxious Weed list, plus known problem species including <i>Mentha pulegium</i> (pennyroyal) and <i>Elaeagnus angustifolia</i> (Russian olive).
<i>Project year</i>	Project year is measured as the number of completed growing seasons following initial verification, starting at 0. For example, where plantings are installed in the winter, the following fall would be considered the beginning of the project year 1, because the plantings have gone through one spring and summer growing season.
<i>Shrub</i>	A perennial woody plant that is usually multi-stemmed and normally grows no taller than 16 feet
<i>Tree</i>	A perennial woody plant, usually with a single stem or few stems, that normally grows taller than 16 feet

Reference Sites

The following discussion of reference sites contains a minor deviation from that proposed by the Willamette Partnership (2016). It allows for less intensive documentation of reference sites when using the standard performance criteria provided in Table 1.

Reference sites should be used to develop proposed restoration plans. Reference sites should be situated in similar ecological settings as the proposed restoration site (e.g. similar soils, hydrologic regime, general elevation range, geomorphic setting). The reference sites should have plant community characteristics similar to the desired mature condition of the proposed restoration site (e.g. moderate to high plant species diversity, percent cover by invasive plants less than 20 percent). If the standard criteria provided in Table 1 are used, then collection of reference site data may be of a qualitative nature to help develop a plant species list and general proportions of each species contribution to its plant community stratum (e.g. tree stratum cover totals approximately 80 percent, with approximately 60 percent black cottonwood and 20 percent Oregon ash). However, if the standard criteria are not being used, then quantitative sampling of the reference site will be required in order to justify changes to the standard criteria.

Monitoring

Annual monitoring shall occur that documents site conditions, management actions over the past year and proposed for the upcoming year, and overall progress toward the performance standards. Monitoring efforts shall be commensurate with the performance criteria listed in Table 1, with the scheduled intensity level as noted in the WWSS Commission's TTP (i.e. quantitative, qualitative, and remote monitoring). Monitoring shall include the use of random plots, repeat photo stations, and reporting on a comparison of monitoring data to performance standards.

Other BMPs

Additional BMP types may be proposed during the life of the WWSS Commission's TTP (e.g. improved summer time connectivity to cold-water refugia, floodplain vegetation management). Each new BMP type will be detailed in an addendum to the TTP, with review and approval by DEQ to occur prior to implementation.

**Appendix C: Floodplain Resiliency BMP
and In-stream Habitat Restoration BMP**

Supplement to Willamette Water Supply System Thermal Trading Plan

Floodplain Resiliency BMP and In-stream Habitat Restoration BMP

Prepared for:

Willamette Water Supply
Our Reliable Water

City of Hillsboro Water Department
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August 2019

TABLE OF CONTENTS

1	INTRODUCTION	1
2	BMP RATIONALE	3
3	DESCRIPTION OF PROPOSED BMPS	4
3.1	FLOODPLAIN HABITAT RESILIENCY BMP	4
3.2	IN-STREAM HABITAT RESTORATION BMP	5
4	PERFORMANCE CRITERIA	6
4.1	FLOODPLAIN RESILIENCY BMP PERFORMANCE CRITERIA.....	6
4.2	IN-STREAM HABITAT RESTORATION BMP PERFORMANCE CRITERIA.....	8
5	MONITORING	9
5.1	PERFORMANCE STANDARDS MONITORING.....	9
5.2	SUPPLEMENTAL MONITORING AND DOCUMENTATION TO SUPPORT ADAPTIVE MANAGEMENT	9
6	REFERENCES	10

FIGURES

Figure 1:	Conceptual View of WWSP TSS BMPs at a Common Project Site	2
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LIST OF TABLES

Table 1	Willamette Model Watershed Program and UWR Chinook and Steelhead Recovery Plan Enhancement Strategies related to the WWSS BMPs	4
Table 2:	List of Potential Floodplain Habitat Resiliency BMP Activities and Anticipated Benefits to Aquatic Ecosystem (benefits derived from Nadeau et. al. 2018a and 2018b, and Adamus et. al. 2016)	5
Table 3.	List of Potential In-stream Habitat Restoration BMP Activities and Anticipated Benefits to Aquatic Ecosystem (benefits derived from Nadeau et. al. 2018a and 2018b)	6
Table 4.	Standard Vegetation Performance Criteria for WWSP TTP Floodplain Resiliency BMP Projects.....	7
Table 5.	Standard Non-Vegetation Performance Criteria for WWSP TTP Floodplain Resiliency BMP Projects	8
Table 6.	Design Performance Criteria for WWSP TTP In-stream Habitat Restoration BMP Projects.....	9
Table 7	Functional Performance Criteria for WWSP TTP In-stream Habitat Restoration BMP Projects.....	9

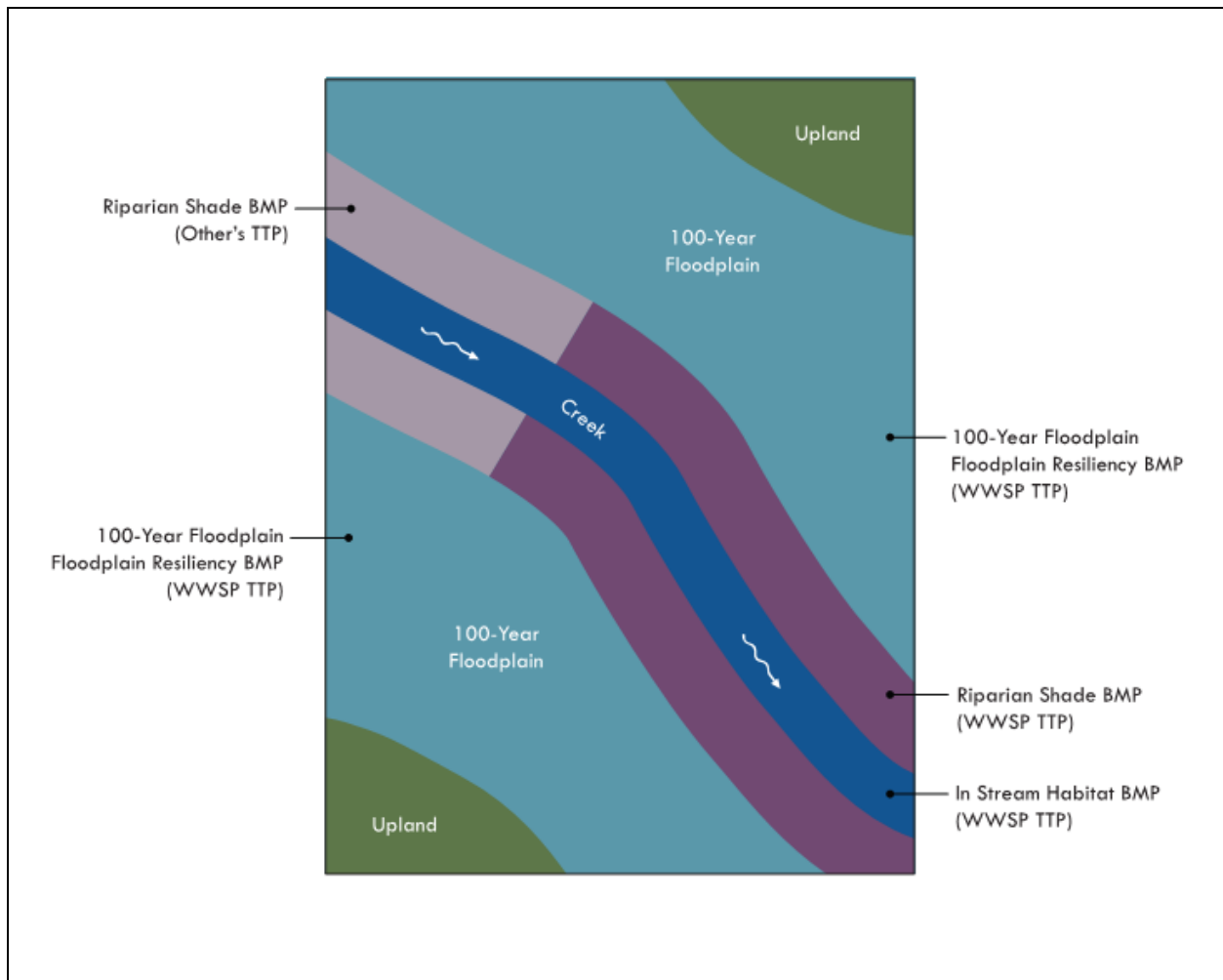
1 INTRODUCTION

This report discusses proposed floodplain and in-stream habitat restoration Best Management Practices (BMPs) associated with the Willamette Water Supply System (WWSS) Commission's Thermal Trading Plan (TTP). These habitat restoration BMPs are distinguished from the Riparian Shade BMPs that have been included in the WWSS Commission's TTP as follows: the Riparian Shade BMP is focused solely on the thermal benefits associated with direct shading of streams from revegetation projects that can be quantified through the DEQ approved Shade-a-lator model (i.e. kilocalorie heat load reduction can be calculated). The floodplain and aquatic habitat restoration BMPs discussed in this report are focused on other types of habitat restoration actions that benefit the physical, chemical, and biological aspects of aquatic ecosystems but are currently difficult to quantify directly, in terms of their thermal load reduction benefits. However, the literature (see list of resources below) reveal the important linkages between habitat restoration actions and improvements to ecosystem functions – including benefits to water quality and improved vigor of native biological communities. These benefits help to offset the potential adverse effects of increased heat load in the main stem Willamette River that may result from water withdrawals for the WWSS.

The following BMPs are reviewed in this report:

- Floodplain Habitat Resiliency BMP
- In-stream Habitat Restoration BMP

To avoid the risk of double counting thermal load reductions, different BMP types proposed by the WWSS Commission will not overlap geographically with one another. However, it is anticipated that some BMPs will often occur adjacent to one another and will also be supportive of one another (e.g., the Riparian Shade BMP will support the In-stream BMP beyond just providing thermal benefits). Figure 1 shows how this may look at a single site with multiple BMP types, including BMP's that could be part of another entity's TTP.

Figure 1: Conceptual View of WWSP TSS BMPs at a Common Project Site

The following resources have informed this effort:

- A Scientific Rationale in Support of the Stream Function Assessment Method for Oregon (SFAM, Version 1.0) (Nadeau et. al 2018a)
- Stream Function Assessment Method for Oregon (SFAM, Version 1.0) Oregon Dept. of State Lands, Salem, OR, EPA 910-D-18-001, U.S. Environmental Protection Agency, Region 10, Seattle, WA. (Nadeau et. al. 2018b)
- Oregon Rapid Wetland Assessment Protocol (ORWAP, revised): Version 3.1 calculator spreadsheet, databases, and data forms. Oregon Dept. of State Lands, Salem, OR. (Adamus et. al. 2016)
- Performance Standards for Riparian Revegetation (Willamette Partnership 2016)
- Willamette Model Watershed Program Conceptual Model (Bonneville Environment Foundation date not specified)
- Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (ODFW and NMFS 2011)

2 BMP RATIONALE

The floodplain and in-stream BMPs may include a number of different actions that result in a net benefit to the aquatic ecosystems affected by the WWSS withdrawal by improving ecological processes and functions. For example, the Floodplain Habitat Resiliency BMP could include the following types of activities: controlling invasive species, planting native species, improving off-channel habitat, improving hydrologic connectivity between floodplain and associated streams, and promoting beaver activity. The In-stream Habitat Restoration BMP could include the following types of activities: improving in-stream habitat complexity (e.g. re-meandering straightened creek channels, placing large wood), removing fish barriers, increasing the amount of cold-water refugia, and improving access to cold-water refugia. These activities are intended as examples and do not preclude other types of activities from being considered. The connection between the activities listed above for each WWSS BMP and their associated benefits to aquatic ecosystems is described for each BMP in later sections of this report. A description of how the WWSS BMPs tie in to the strategies proposed by various Willamette River watershed ecosystem improvement efforts is provided below.

The Willamette Model Watershed Program, coordinated by the Bonneville Environment Foundation (BEF), has developed a detailed conceptual model that highlights the connections between key focal targets (e.g. aquatic ecosystems and native species) in the Willamette River basin, threats to these targets, and enhancement strategies to protect and improve conditions for the focal targets (BEF date not specified). Similarly, the Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (Recovery Plan) (ODFW and NMFS 2011) provides a list of strategies to support the recovery of these species. Willamette Model Watershed Program and Recovery Plan strategies that directly relate to the proposed WWSS BMPs are listed in Table 1.

Table 1. Willamette Model Watershed Program and Upper Willamette River Chinook and Steelhead Recovery Plan Enhancement Strategies Related to the WWSS BMPs

Willamette Model Watershed Enhancement Strategies Related to WWSS BMPs	UWR Chinook and Steelhead Recovery Plan General Strategies Related to WWSS BMPs
<ul style="list-style-type: none"> • Manage invasive species • Reconnect floodplains/wetlands • Support persistence of beavers in appropriate areas • Increase hydraulic diversity and wood • Reconnect side channels, alcoves, and remeander channels • Revegetate riparian areas • Remove artificial fish passage and sediment transport barriers 	<ul style="list-style-type: none"> • Protect and conserve natural ecological processes that support the viability of wild salmon and steelhead populations and their life history strategies throughout their life cycle. • Restore floodplain connectivity and function • Restore riparian condition and large woody debris recruitment • Restore passage and connectivity to habitats blocked or impaired by artificial barriers. • Restore and maintain hydrologic regimes that support ecological needs of wild salmon and steelhead populations. • Restore channel structure and complexity. • Restore impaired food web dynamics and function. • Restore degraded water quality • Reduce the impact of non-native plants and animals on wild salmon and steelhead populations and prevent introduction of new non-native plants and animals.

3 DESCRIPTION OF PROPOSED BMPs

3.1 FLOODPLAIN HABITAT RESILIENCY BMP

The Floodplain Habitat Resiliency BMP will consist of habitat improvements along floodplains, typically within the 100-year floodplain and consisting of wetland or upland riparian habitats, that will improve the long-term functions of native aquatic ecosystems. Actions will typically involve vegetation management (i.e., invasive species removal and native plant establishment) similar to the Riparian Shade BMP.

Floodplain Habitat Resiliency BMP actions will be situated beyond the geographic extent of the Riparian Habitat BMP and, therefore, are not intended to provide direct shading/temperature benefits to the current location of an adjacent stream channel. However, such activities will still benefit the aquatic ecosystem by making it more resilient to future change. For example, as stream channels laterally migrate across the floodplain over time they will migrate into areas with high functioning riparian conditions, including forested vegetation that will continue to provide shade to the stream. Without this BMP, streams may otherwise migrate out of higher quality areas into degraded areas.

Supporting native riparian community development along the floodplain will also provide important benefits in the form of a host of important ecological functions that are highlighted by the Recovery Plan and Willamette Model Watershed Program, such as nutrient cycling; sediment retention; flood storage and delay; increased floodwater infiltration and subsequent release of cold water to the stream system; food and dam building material for beaver; and food and cover for other native wildlife. In addition to vegetation management actions, additional activities may include wetland habitat restoration or

enhancement including potential grading activities, and placement of large wood or other habitat structures. Other opportunities for floodplain improvements may also occur and will be evaluated on a case-by-case basis. Table 2 provides a list of activities that may be conducted as part of this BMP, along with the anticipated benefits to aquatic ecosystem processes.

Table 2: List of Potential Floodplain Habitat Resiliency BMP Activities and Anticipated Benefits to Aquatic Ecosystem (benefits derived from Nadeau et. al. 2018a and 2018b, and Adamus et. al. 2016)

Floodplain Habitat Resiliency BMP Activities	Example Benefits to Aquatic Ecosystem
Control of invasive species and re-planting with native species	Invasive plant species can reduce the long-term viability of existing native plant communities and prevent the successful establishment of native plant communities. Native plant communities are typically more supportive of native ecosystem functions.
Improvement of off-channel habitat	Provides off-channel habitat and refugia during times of flood. This can include side channels that are typically only connected during high flood events (e.g., greater than the ordinary high water elevation or 2-year channel forming flood event) or the broader floodplain.
Improving hydrologic connectivity between floodplain and associated streams (e.g. through levee removal)	Provides water quality benefits by allowing sediment to settle out onto floodplain, expanding area for biochemical processes to occur that support nutrient cycling processes, increased opportunity for groundwater recharge to occur with subsequent cool water return flow downstream. Allows for more diverse and complex habitat conditions to form, which support a greater diversity of native wildlife.
Promoting beaver activity (this may include activities similar to those listed above, but with emphasis on supporting beavers. For example, focusing plantings on species highly desired by beavers.)	Beavers are a keystone species in the Willamette River basin and their activities (e.g., dam building) are highly beneficial to supporting aquatic ecosystem processes. Beaver dams add complexity to streams and rivers while slowing water velocity. The ponds behind these dams store water, which is slowly released during low flow conditions (Beavers Northwest 2019). They also increase groundwater recharge and retention, store sediment and increase riparian habitat. Supporting recovery of beaver through increasing food and dam building material, particularly in protected areas, will benefit native ecosystems and water quality functions.

3.2 IN-STREAM HABITAT RESTORATION BMP

The In-stream Habitat Restoration BMP will entail restoration activities within the bed and banks of stream channels, including side channels that typically are inundated at least every other year (i.e., 2-year recurrence interval). Side channels that are inundated less frequently would likely fall within the Floodplain Resiliency BMP. As previously described, activities will include efforts that increase in-stream habitat complexity, creating new, or reconnecting old, side channels, removing fish barriers, improving cold water refugia access, and supporting beaver dam formation through installation of beaver dam analogs (i.e. simple structures that act like beaver dams and provide the scaffolding for beavers to further build upon).

The activities described above are highlighted by the Recovery Plan and Willamette Model Watershed Program as providing important functions that benefit the stream system and recovery of listed fish species. These activities also work hand in hand with the other WWSS BMPs. For example, restoring in-stream channel characteristics will help restore connectivity between the stream and its floodplain. Similarly, supporting native plant communities as part of the Floodplain Resiliency BMP and Riparian

Shade BMP will provide dam building materials for beavers within the active stream channel. Table 3 provides a list of activities that may be conducted as part of this BMP, along with the anticipated benefits to aquatic ecosystem processes.

Table 3. List of Potential In-stream Habitat Restoration BMP Activities and Anticipated Benefits to Aquatic Ecosystem (benefits derived from Nadeau et. al. 2018a and 2018b)

In-stream Habitat Restoration	Example Benefits to Aquatic Ecosystem
Improving in-stream habitat complexity (e.g. re-meandering straightened creek channels, restoring channel form, placement of large wood)	Provides habitat for a more diverse array of native species and also better provides the variety of habitats needed by individual species (e.g., formation of deep pools provides cold water refuge for fish, while riffles provide sediment free substrates and oxygenated water for macroinvertebrates which are food sources for fish and amphibians and also improved spawning habitat for fish.).
Creation of side channel habitat	Provides for expanded in-stream habitat area. Provides refuge during periods of high flows.
Removing fish barriers	Allows fish and other aquatic species to migrate freely up and down the stream network. Also allows for geomorphic processes to occur more naturally (e.g., sediment transport).
Creation of and/or improved access to cold-water refugia	Allows fish and other native aquatic species to access areas of colder water during times of overall high water temperatures. High water temperatures can be adverse to the health and survival of individual organisms.
Beaver dam analogs	These features act as artificial beaver dams and also provide the scaffolding for beavers to further build upon. Beaver dams provide a host of ecological functions to the aquatic ecosystem (see Table 2 -Promoting Beaver Activity for additional details).

4 PERFORMANCE CRITERIA

Each BMP project will be required to meet a set of performance standards that can be readily monitored. These are described for each BMP below.

4.1 FLOODPLAIN RESILIENCY BMP PERFORMANCE CRITERIA

The majority of Floodplain Resiliency BMP project activities will consist of invasive vegetation control and establishment of native plant communities. These activities are similar to those described for the Riparian Shading BMP and, therefore, the same performance criteria are proposed. For some projects, additional activities may be proposed, such as installation of large woody debris habitat features or grading to improve hydrologic conditions. Performance criteria for such activities will be based on successful construction of such features in the approximate locations and quantities specified in the design plans (i.e. comparison of design to as-built conditions).

For vegetation management projects, the following performance criteria are provided and are the same as for the Riparian Shade BMP. At the end of the 5th, 10th, 15th, and 20th restoration project year, monitoring data will demonstrate that the project meets the standard vegetation performance criteria shown in Table 4. Alternate performance criteria may be allowed if supported by appropriate documentation of suitable reference site conditions or based on documented standard vegetation management practices (e.g., Clean Water Services Design and Construction Standards planting requirements). Table 5 provides the

performance criteria for potential non-vegetation related project elements. Alternate criteria, if proposed, should be documented and approved by DEQ prior to restoration project implementation.

Table 4. Standard Vegetation Performance Criteria for WWSP TTP Floodplain Resiliency BMP Projects

Criteria	Performance Criteria			
	Year 5	Year 10	Year 15	Year 20
EITHER: Mean stem density of native shrubs and woody vines *	Meets or exceeds 1,600 live native woody stems per acre	80% of the native woody stem density identified at the end of the fifth growing season	70% of the native woody stem density identified at the end of the fifth growing season	Same as performance criteria for year 15
OR: Site average for combined native shrub and woody vine cover	Site average for combined native shrub and woody vine cover \geq 25%			
% Canopy closure or cover	N/A	N/A	\geq 25%	
Native trees/acres	None	\geq 100 trees/acre **		
Number of native woody species	At least 5 native woody species present			
Invasive woody and herbaceous cover	No greater than 20% cover invasive herbaceous species. No greater than 10% cover invasive woody species			
Non-native woody and herbaceous cover	Take and document actions reasonably necessary to evaluate the risk posed to project site by non-native species, where they are problematic (e.g., <i>Phalaris arundinacea</i> (reed canarygrass), <i>Hedera helix</i> (English ivy), <i>Ilex aquifolium</i> (English holly)), taking the steps necessary to control those non-native species such that their presence does not prevent the successful establishment and propagation of native ecosystem characteristics and functions. This includes monitoring and reporting percent cover of such species.			

* Mean woody stem density is determined by counting all live woody stems taller than six inches (regardless of vigor) by species within reference sites. Count multi-stem species (e.g., *Symphoricarpos*, *Rosa*) as one stem per square foot (1' x 1').

** Based on Willamette Partnership (2016) criteria for wet ecoregions

The following definitions are associated with the above performance criteria:

<i>Canopy closure</i>	Canopy closure is an upward-looking point estimate of the coverage of a forest canopy, and may be measured in the field with a spherical densitometer (also called a mirror optometer) or by analyzing upward-looking hemispherical photographs.
<i>Cover</i> (or <i>Absolute Cover</i> <i>Cover</i>)	Cover is a downward-looking measure of the percentage of the ground surface covered by living plant leaves and stems. Areas not covered by vegetation are counted as unvegetated substrate. Total cover may be greater than 100% if species are present in multiple strata (i.e., tree, shrub, and herbaceous layers.)
<i>Cover (Canopy)</i>	Absolute cover as viewed from above tree height

<i>Cover (Native Shrub and Vine)</i>	Absolute cover as viewed from beneath tree height.
<i>Invasive species</i>	A plant species should automatically be labeled as invasive if it appears on the current Oregon Department of Agriculture Noxious Weed list, plus known problem species including <i>Mentha pulegium</i> (pennyroyal) and <i>Elaeagnus angustifolia</i> (Russian olive).
<i>Project year</i>	Project year is measured as the number of completed growing seasons following initial verification, starting at 0. For example, where plantings are installed in the winter, the following fall would be considered the beginning of the project year 1, because the plantings have gone through one spring and summer growing season.
<i>Shrub</i>	A perennial woody plant that is usually multi-stemmed and normally grows no taller than 16 feet
<i>Tree</i>	A perennial woody plant, usually with a single stem or few stems, that normally grows taller than 16 feet

Table 5. Standard Non-Vegetation Performance Criteria for WWSP TTP Floodplain Resiliency BMP Projects

Criteria	Performance Criteria		
	Year 0	Year 1	Years 5, 10, 15, and 20
Design feature intent has been met	As-built matches design	Constructed features remain stable within project design parameters (e.g. fixed rootwads remain in place, excessive erosion not observed). ¹	Same as Year 1

¹ This criterion acknowledges that floodplains are dynamic systems and that conditions are likely to change over time. So long as the constructed features function as intended, then they have met this criterion.

4.2 IN-STREAM HABITAT RESTORATION BMP PERFORMANCE CRITERIA

In-stream habitat restoration projects are likely to consist of several different activities (e.g., grading, installation of root wads and beaver dam analogs, removal of structures impeding fish passage, and potentially plantings). Due to the diverse nature of potential activities and because the proposed activities are likely to be very site dependent, it is not practical to provide a discreet set of performance criteria similar to the revegetation performance criteria provided for the Floodplain Resiliency and Riparian Shade BMPs. Therefore, performance criteria for the In-stream Habitat Restoration BMP will be tied more to a comparison of designed conditions to constructed conditions. In addition, performance criteria will be tied to a demonstration of increased stream function over time. Table 6 provides the proposed design elements performance criteria and Table 7 provides the functional performance criteria for the In-stream Habitat Restoration BMP.

Table 6. Design Performance Criteria for WWSP TTP In-stream Habitat Restoration BMP Projects

Criteria	Performance Criteria		
	Year 0	Year 1	Years 5, 10, and 20
Design feature intent has been met	As-built matches design	Constructed features remain stable within project design parameters (e.g. fixed rootwads remain in place, excessive erosion not observed). ¹	Same as Year 1

¹ This criterion acknowledges that streams are dynamic systems and that conditions are likely to change over time. So long as the constructed features function as intended, then they have met this criterion.

Table 7. Functional Performance Criteria for WWSP TTP In-stream Habitat Restoration BMP Projects

Criteria	Performance Criteria		
	Pre-project Baseline	Year 5	Years 10 and 20
Stream functional assessment shows increased functions relative to pre-project baseline conditions ¹	A functional assessment will be conducted to establish pre-project baseline conditions.	Functional assessment results show a net increase in stream function relative to pre-project baseline, with the majority of functions rating moderate or higher.	Functional assessment results show the same or increased stream function relative to Year 5 conditions.

¹ Stream Functional Assessment Method (SFAM) to be used or other method if in the future SFAM is no longer supported.

5 MONITORING

5.1 PERFORMANCE STANDARDS MONITORING

Annual monitoring shall occur that documents site conditions, management actions over the past year and proposed for the upcoming year, and overall progress toward the performance standards. Monitoring efforts shall be commensurate with the performance criteria. Monitoring shall include, as appropriate to the specific criteria, the use of random vegetation plots, repeat photo stations, comparison of design intent to as-built conditions, and reporting on a comparison of monitoring data to performance standards.

Monitoring and reporting during in-between years (i.e. years not specified in Performance Criteria) will typically be of a lower intensity with the intent of directing management activities as needed in order to meet the Performance Criteria at the next specified Performance Criteria year. Reporting of monitoring results will be governed by the requirements provided in the TTP document.

5.2 SUPPLEMENTAL MONITORING AND DOCUMENTATION TO SUPPORT ADAPTIVE MANAGEMENT

Supplemental monitoring may occur on a voluntary basis to support management decisions and to gain a better understanding of ecological processes and project effectiveness. Such potential monitoring, along with the required monitoring described above, will support adaptive management.

Potential voluntary supplemental monitoring may include:

- Measurement of stream temperature and/or other water quality parameters
- Documentation of fish use

- Macroinvertebrate sampling

6 REFERENCES

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- Nadeau, T-L., D. Hicks, C. Trowbridge, N. Maness, R. Coulombe, N. Czarnomski. 2018b. Stream Function Assessment Method for Oregon (SFAM, Version 1.0) Oregon Dept. of State Lands, Salem, OR, EPA 910-D-18-001, U.S. Environmental Protection Agency, Region 10, Seattle, WA
- Oregon Department of Fish and Wildlife (ODFW) and National Marine Fisheries Service (NMFS). 2011. Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead. August 5, 2011.
- Willamette Partnership. 2016. Performance Standards for Riparian Revegetation. February 16, 2016.

Appendix D: Requirements for Annual Reporting

Consistent with the annual reporting requirements in OAR 340-039-0017(3), the annual reports submitted by the WWSS Commission will include:

- (a) The location of each trading project and BMPs implemented in the preceding year;
- (b) The trading project baseline;
- (c) The trading ratios used;
- (d) Trading project monitoring results;
- (e) Verification of trading plan performance including the quantity of credits acquired from each trading project, and the total quantity of credits generated under the trading plan to date;
- (f) A demonstration of compliance with OAR 340-039-0040(4), if applicable; and
- (g) Adaptive management measures implemented under the trading plan, if applicable.

STAFF REPORT

To: Willamette Water Supply System Board of Commissioners
From: Joelle Bennett, P.E., WWSP Assistant Program Director
Date: October 1, 2020
Subject: Anticipated Business Agenda Items for the November 5, 2020, Meeting of the Willamette Water Supply System Board of Commissioners

Key Concepts:

The next Willamette Water Supply System (WWSS) Commission Board meeting agenda is anticipated to include staff recommendations to approve the following business agenda items:

1. PLM_1.3 Resolution of Public Necessity
2. PLM_5.3 Supplemental Resolution of Public Necessity
3. MPE_1.1/COB_1.1 City of Beaverton Construction Intergovernmental Agreement (IGA) (SW Western Avenue from SW Beaverton-Hillsdale Highway to SW Allen Boulevard)
4. PLM_4.2 WCLUT Design IGA Amendment 2
5. PLW_1.2 Construction IGA to Relocate Existing 18-inch TVWD Pipeline
6. Findings for the Use of Alternative Contracting Methods for Construction of PLW_2.0
7. PLW_2.0 Modify Baseline Construction Duration and Resulting Increase to Project Budget

Background:

The following actions are anticipated business agenda items for the November 5, 2020, meeting of the WWSS Board of Commissioners. Due to the dynamic nature of the WWSS work, request for approval of some items may be delayed or new items may emerge on the business agenda next month. WWSS staff strive to provide preliminary information one month prior to requesting action, and a full staff report describing the recommended action during the appropriate month.

1. PLM_1.3 Resolution of Public Necessity

WWSS staff are ready to initiate property acquisition for pipeline section PLM_1.3, located within the City of Wilsonville, along SW Kinsman Road, SW Boeckman Road, SW 95th Avenue and SW Ridder Road. The WWSP has progressed the design of this pipeline section to enable identification of property requirements for construction and long-term operation and maintenance of the pipeline. The pipeline alignment was selected through an extensive alternatives evaluation, and the preferred location was selected based upon the best interests of the public and the least injury to private property owners. The proposed resolution will enable the initiation of the property acquisition process, including negotiations with the Property owner and any other applicable interest holders.

At the November WWSS Board meeting, WWSP staff will present the project area and easement needs, with a recommendation to the Board to adopt the Resolution of Public Necessity to allow WWSP staff to begin the process to acquire permanent and temporary construction easements for PLM_1.3.

2. PLM_5.3 Supplemental Resolution of Public Necessity

WWSS staff are aware of additional property needs for pipeline section PLM_5.3 that are now finalized and were not included in the first resolutions of need for this project.

At the November WWSS Board meeting, WWSP staff will present the supplemental project area and easement needs, with a recommendation to the Board to adopt the supplemental Resolution of Public Necessity to allow WWSP staff to begin the process to acquire these permanent and temporary construction easements for PLM_5.3.

3. MPE_1.1/COB_1.1 City of Beaverton Construction IGA (SW Western Avenue from SW Beaverton-Hillsdale Highway to SW Allen Boulevard)

The MPE_1.1 and COB_1.1 projects are both ancillary projects for the WWSS, approved to be designed in tandem with the intent to for future coordinated construction, if City of Beaverton and TVWD so desired. With the design of the projects reaching its end, staff are preparing an IGA to specify how the two projects will be constructed together and define each agency's specific responsibilities. For the MPE_1.1/COB_1.1 project, City of Beaverton is anticipated to be the contract manager for the combined construction effort.

At the November WWSS Board meeting, WWSP staff will present the proposed intergovernmental agreement with a recommendation to the Board to adopt it through resolution.

4. PLM_4.2 WCLUT Design IGA Amendment 2

The WWSS has strategically partnered with Washington County Land Use and Transportation (WCLUT) to deliver coordinated pipeline and roadway projects at various locations in the region. The IGA between Washington County and WWSS for the Joint Design of PLM_4.2 SW Tualatin-Sherwood Road - Teton to Langer Farms Parkway (originally executed in 2019 and amended in early 2020) requires an amendment to update the project cost shares based on the latest design efforts.

At the November WWSS Board meeting, WWSP staff will present the proposed intergovernmental agreement with a recommendation to the Board to adopt it through resolution.

5. PLW_1.2 Construction IGA to Relocate Existing 18-inch TVWD Pipeline

The final PLW_1.2 pipeline project along Cornelius Pass Road, being designed in partnership with Washington County road improvements, parallels an existing 18-inch TVWD water line. The two pipelines conflict for approximately 115 feet at undercrossing of an existing culvert. For traffic control and constructability reasons, it is more efficient to relocate the TVWD 18-inch pipeline during construction of PLW_1.2. This proposed IGA will outline the WWSS and TVWD responsibilities for the construction of the relocated 18-inch line.

At the November WWSS Board meeting, WWSP staff will present the proposed intergovernmental agreement with a recommendation to the Board to adopt it through resolution.

6. Findings for the Use of Alternative Contracting Methods for Construction of PLW_2.0

At the October WWSS Board of Commissioners meeting, the Board, acting as the Local Contracting Review Board (LCRB), is anticipated to approve a draft resolution declaring an exemption from competitive bidding for PLW_2.0 and approving the use of Best Value Selection for construction contractor procurement. In the meantime, WWSP will request oral testimony or written comments from the public in response to the proposed procurement exemption. Staff will provide the public comment and if appropriate, ask the Board, again acting as the LCRB, to adopt the final resolution at the November Board meeting.

7. PLW_2.0 Modify Baseline Construction Duration and Resulting Increase to Project Budget

The PLW_2.0 project team recently evaluated the Baseline construction schedule considering input from Washington County Land Use and Transportation and City of Hillsboro regarding traffic control requirements that will be required to manage the traveling public. The requirements are anticipated to lengthen the construction duration by approximately one year, requiring an increase to the project budget from the additional cost escalation.

At the November WWSS Board meeting, WWSP staff will present the proposed budget change for Board approval.

Budget Impact:

Anticipated costs for all of the actions described are reflected in the WWSP 2020 budget. The cost changes for ancillary projects and additional equipment (such as a turnout) are borne entirely by the requesting Partner.

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Attachments:

None.

Willamette Water Supply System Commission

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**Willamette Water Supply System Commission
Board Meeting**

October 1, 2020
