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# Willamette Water Supply System Commission
# Board Meeting Agenda
# Thursday, May 7, 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.

• If you wish to attend via conference call and need dial-in information, please contact Faye.Branton@tvwd.org or call 503-969-0031. • 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.**

**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 April 2, 2020 meeting minutes.

4. **BUSINESS AGENDA**

   A. Approve RWF_1.0 Contract Amendment for Guaranteed Maximum Price for Phase 1 Construction – *Mike Britch*
   B. Approve WTP_1.0 Design Amendment for Scope Modifications – *Mike Britch*
   C. Acting as Local Contract Review Board: Approve Findings for Exemption from Competitive Bidding for RES_1.0/PLM_5.3 – *Mike Britch*
   D. Approve RES_1.0 Site Emergency Responder Training Agreements – *Christina Walter*

5. **INFORMATION ITEMS**

   A. Planned June Business Agenda Items – *Joelle Bennett*
   B. The next Board meeting is scheduled on June 4, 2020, at Hillsboro Civic Center, Room 113B/C, 150 E. Main Street, Hillsboro, Oregon or via Conference Call

6. **COMMUNICATIONS AND NON-AGENDA ITEMS**

   A. None scheduled.

**ADJOURNMENT**

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Safety Minute:

# Hand Sanitizer Safety

1

## Hand Sanitizer Safety

Hand sanitizers can help prevent the spread of germs and harmful bacteria, but there are potential dangers to keep in mind.



2

## Alcohol Poisoning

- At 60% ethyl alcohol, even a small dose can be dangerous
- If ingested, can lead to dizziness, slurred speech, headaches and, in extreme cases, brain damage or death

## Safety Tips

- Always supervise children's use
  - Use a pea-sized amount
  - Rub hands together until dry
  - Keep hands out of mouths
- Avoid sweet smelling sanitizers
- Store out of children's reach
- Use soap and water whenever possible

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3

## Potential Fire Hazard

- Alcohol-based hand sanitizers are classified as Class IC flammable liquid
- Liquid, gel, and vapors can be flammable
- If ignited, can burn very hot, very quickly

## Safety Tips

- Only use dime sized amount
- Rub hands until dry
- Never use near a heat source or open flame
- Beware of static electricity
- Store away from all heat and ignition sources

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# Hand Sanitizer Safety

- Use soap and water instead
- Supervise children using it
- Use sparingly and rub hands until dry
- Avoid ingestion
- Keep and store away from flame and heat

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# MEMO

**Date:** May 7, 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

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

1. **Remote Meetings Etiquette**:
    a. Please mute your microphone when you are not talking to prevent adding echoes and background noise to the sound of the meeting.
    b. Please identify yourself before you speak because it is important for the record that we know who is speaking.
    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 April 2020 through June 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 the June Board meeting will be busy with seven business items currently planned for the agenda. One of the most notable is the approval of an annual update to the WWSP Baseline budget and schedule. WWSP staff will provide a thorough presentation of the development of the Baseline, including how it compares to previous versions and the forecast for the future. Joelle Bennett will present a staff report later in this meeting on this and the other June business agenda items.

    The forecast also lists various real estate activities and intergovernmental agreements that are in process, and contract change orders that are being negotiated. These items are largely the same as they were presented last month.

4. **Projects Planning, Permitting, and Communications Updates** – With the on-going COVID-19 pandemic, every agency has had to modify its practices including closing many public buildings and switching to remote work. So far, this transition does

not appear to be impacting our ability to get needed permits on time. We have received several permits for both the RWF_1.0 project and the PLW_1.3 project. Additional permit applications have been submitted for the PLW_1.3, PLM_1.2, and MPE_1.0 projects with more submittals on the horizon in May. We will continue to monitor agencies' responses to the COVID-19 pandemic situation and adjust our practices, as necessary, to keep our projects proceeding according to schedule.

5. **Projects Design Status Updates** – Work continues on multiple design projects, including nine pipeline projects, the Water Treatment Plant (WTP_1.0), the Distributed Controls System (DCS_1.0), and the terminal storage project (RES_1.0).

   In April, we received best-value proposals from seven contractors bidding on the PLW_1.3 project. The best-value procurement process allows the WWSP to consider contractor approach and qualifications along with price in the selection process. On April 27, following detailed review of the proposals, the WWSP published a Notice of Intent to Award the project to Tapani, Inc. Tapani's bid for the work came in approximately 10 percent below budget.

6. **Projects Construction Status Updates** – There are four projects actively under construction:

   1. PLM_1.1 – our raw water pipeline project in Wilsonville that extends from our RWF_1.0 project to Wilsonville Road,

   2. PLM_1.2 – another raw water pipeline project being completed in partnership with the City of Wilsonville's Garden Acres Road project,

   3. PLM_5.1 – a finished water pipeline project being completed in partnership with Washington County's Roy Rogers Road project, and

   4. PLM_5.2 – a 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.

   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.

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## Approvals and Procurement Forecast: April 2020 through June 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 | Projected Action | Body/Position (projected action date) | | |
|---|---|---|---|---|---|---|
| | | | | Program Director | WWSS Committees | WWSS Board |
| **Program Baseline or Related Plans** | 1. | WWSP 2020 Rebaseline Schedule and Budget | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| | | | Execute | N/A | N/A | N/A |
| **Real Estate** | 2. | MPE_1.0 Resolution of Need | Approve | N/A | MC: 3/19/2020 a | 4/2/2020 a |
| | 3. | PLM_4.3 Resolution of Need | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| **IGAs, MOUs, Permit Commitments, & Similar Agreements** | 4. | PLW_1.3 Hagg Lane (Butternut Creek) Agreement Amendment | Approve | N/A | N/A | N/A |
| | | | Execute | 3/27/2020 a | N/A | N/A |
| | 5. | PLM_5.2 Metropolitan Land Group Developer Agreement | Approve | N/A | N/A | N/A |
| | | | Execute | 3/30/2020 a | N/A | N/A |
| | 6. | PLW_1.2 WCLUT Design IGA Amendment 1 | Approve | N/A | MC: 10/16/2019 a | 12/5/2019 a |
| | | | Execute | 5/19/2020 t | N/A | N/A |
| | 7. | RES_1.0 Emergency Responder (Sheriff) Training Exercise Agreement | Approve | N/A | MC: 4/23/2020 t | 5/7/2020 t |
| | | | Execute | 6/5/2020 t | N/A | N/A |
| | 8. | WWSS IGA Exhibit 1 Amendment to add a City of Beaverton Turnout on Grabhorn Road | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| | | | Execute | 6/5/2020 t | N/A | N/A |
| | 9. | 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: 5/21/2020 t | 6/4/2020 t |
| | | | Execute | 6/5/2020 t | N/A | N/A |
| | 10. | WWSS IGA Exhibit 1 to modify Allocation of Reservoir Capacity | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| | | | Execute | 6/5/2020 t | N/A | N/A |

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| Type | Description | Projected Action | Body/Position (projected action date) | | |
|---|---|---|---|---|---|
| | | | Program Director | WWSS Committees | WWSS Commission Board |
| **Contracts** | 11. PLW_1.3 Construction Contract<br>• Goal: Construction Contractor for waterline construction from Farmington to Kinnaman<br>• Approximate value: $32 M<br>• Contractor: TBD<br>• Publish Request for Proposals: 2/21/2020 a<br>• Proposal Due Date: 4/16/2020 t<br>• Rec. of Award: 4/22/2020 t<br>• Notice of Intent to Award: 4/27/2020 t<br>• Limited Notice to Proceed: 6/5/2020 t<br>• Notice to Proceed: 7/6/2020 t | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| | | Execute | 6/5/2020 t | N/A | N/A |
| **Contract Amendments and Change Orders *continued*** (above Program Director's Authority) | 12. PLM_1.2 Construction Contract Change Order to add Day Road Crossing<br>• Goal: Change order to Construction contract to add Day Road Crossing (Wilsonville Contract)<br>• Value: $2.1M<br>• Contractor: Moore Excavation | Approve | N/A | MC: 3/19/2020 a | 4/2/2020 a |
| | | Execute | 4/20/2020 t (by Wilsonville) | N/A | N/A |
| | 13. WTP_1.0 Design Amendment for Scope Modifications<br>• Goal: Amend contract for design services related to additional engineering services<br>• Value: $885,133<br>• Engineer: CDM Smith | Approve | N/A | MC: 4/23/2020 t | 5/7/2020 t |
| | | Execute | 5/8/2020 t | N/A | N/A |
| | 14. RWF_1.0 Contract Amendment for Guaranteed Maximum Price (GMP) for Phase 1 Construction<br>• Goal: Amend contract to include GMP for phase 1 construction<br>• Value: $50M<br>• Contractor: Kiewit | Approve | N/A | MC: 4/23/2020 t | 5/7/2020 t |
| | | Execute | 5/8/2020 t | N/A | N/A |
| | 15. WWSP Program and Construction Management Services FY 2021 Annual Work Plan<br>• Goal: Approve scope, staffing, and fee for program and construction management services for FY 2021<br>• Value: $13M<br>• Contractor: Stantec | Approve | N/A | MC: 5/21/2020 t | 6/4/2020 t |
| | | Execute | 6/5/2020 t | N/A | N/A |
| **Local Contract Review Board (LCRB) Actions** | 16. Findings for Exemption from Competitive Bidding for RES_1.0, PLM_5.3<br>• Board approval to initiate public comment 5/7/2020 t | Approve | N/A | MC: 4/23/2020 t | 7/2/2020 t |
| | | Execute | N/A | N/A | N/A |
| **Other Actions** | 17. WWSP Management Authority Matrix Revisions | Approve | N/A | MC: 3/19/2020 a | 4/2/2020 a |
| | | Execute | N/A | N/A | N/A |

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# Willamette Water Supply System Commission
# Board Meeting Minutes
# Thursday, April 2, 2020

**Commissioners present:**

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

**Committee Members present:**

| | |
|---|---|
| TVWD: | Tom Hickmann, Management Committee |
| | Paul Matthews, Finance Committee |
| | Justin Carlton, Finance Committee |
| | Carrie Pak, Operations Committee |
| Hillsboro: | Niki Iverson, Management Committee |
| 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
Bill Van Derveer, WWSP Program Manager
Lisa Houghton, WWSP Finance Manager
Clark Balfour, TVWD General Counsel
Faye Branton, WWSP Administrative Assistant; WWSS Commission Recorder

**Other Attendees:**

Mike Britch, WWSP Engineering and Construction Manager
Christina Walter, WWSP Permitting and Outreach Manager
Joel Cary, TVWD Water Resources Division Manager
Chris Wilson, City of Hillsboro-JWC Water Treatment Manager
Tommy Brooks, Partner, Cable Huston, LLP

No members of the public were present.



## CALL TO ORDER

Chairman Duggan called the regular Willamette Water Supply System (WWSS) Commission meeting to order at 12:09 p.m.

## ROLL CALL

Ms. Branton administered the roll call and noted attendance.

## 1. GENERAL MANAGER'S REPORT

Mr. Kraska presented a safety moment on staying safe online and avoiding hacker traps, such as malware. *(presentation attached)*

The General Manager's report included an overview of etiquette for remote meetings; the Approvals and Procurement Forecast for March through May 2020; updates on projects planning, permitting, and communications; and status updates on the design and construction of projects.

## 2. PUBLIC COMMENT

There were no public comments.

## 3. CONSENT AGENDA

**A.** Approve the March 5, 2020 meeting minutes.

**B.** Approve the March 17, 2020 special meeting minutes.

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

## 4. BUSINESS AGENDA

**A.** Consider adopting Resolution No. WWSS-05-20, a resolution modifying the established WWSS Commission Management Authority Matrix for additional clarity related to the right of way acquisition process. *– Staff Report – Dave Kraska*

Mr. Kraska presented the staff report requesting the Board's adoption of Resolution No. WWSS-05-20. Mr. Brooks offered additional clarification regarding the requested modifications to the WWSS Commission Management Authority Matrix (MAM).

In response to Commissioner's question, staff replied that the MAM is a part of the Program Management Plan, and as such will be complete when the WWSS is commissioned. The MAM contains language describing that the subject authority applies during the capital delivery phase. The Commission will determine in the future how it will continue authorizations going forward.

Motion was made by Judah, seconded by Doyle, to adopt Resolution No. WWSS-05-20, a resolution modifying the established WWSS Commission Management Authority Matrix for additional clarity related to the right of way acquisition process. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

**B.** Consider adopting Resolution No. WWSS-06-20, an updated resolution declaring public necessity to acquire permanent and temporary construction easements over, upon, under, and through real property for pipeline section MPE_1.0 for the Willamette Water Supply System. *– Staff Report – Joelle Bennett*

Ms. Bennett presented the staff report requesting the Board's adoption of Resolution No. WWSS-06-20.

Motion was made by Doyle, seconded by Judah, to adopt Resolution No. WWSS-06-20, an updated resolution declaring public necessity to acquire permanent and temporary construction easements over, upon, under, and through real property for pipeline section MPE_1.0 for the Willamette Water Supply System. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

**C.** Consider approving an amendment to the City of Wilsonville construction contract (No. 2020-028) in the amount of $2,157,060.00 and with a contract term extension of four (4) days for the addition of 540 feet of 66-inch steel pipeline and 145 feet of bore-and-jack pipeline casing to the PLM_1.2 pipeline construction project of the Willamette Water Supply Program.

Mr. Britch presented the staff report requesting the Board's approval of an amendment to the City of Wilsonville construction contract (No. 2020-028) in the amount of $2,157,060.00, including a contract term extension of four (4) days to enable the addition of 540 feet of 66-inch steel pipeline and 145 feet of bore-and-jack pipeline casing to the PLM_1.2 pipeline construction project of the Willamette Water Supply Program.

Motion was made by Judah, seconded by Doyle, to approve an amendment to the City of Wilsonville construction contract in the amount of $2,157,060.00 and extending the contract term for four (4) days, as presented, for the PLM_1.2 pipeline construction project of the Willamette Water Supply Program. The motion passed unanimously with Doyle, Duggan, and Judah voting in favor.

## 5. INFORMATION ITEMS

**A.** Planned May Business Agenda items – *Staff Report – Joelle Bennett*

Ms. Bennett presented information on anticipated business agenda items for the May 7, 2020 WWSS Commission Board meeting. Staff anticipates recommending approval of a WTP_1.0 design contract amendment; the WWSP 2020 rebaseline schedule and budget; a RWF_1.0 contract amendment for guaranteed maximum price; and RES_1.0 Emergency Responder agreements.

**B.** The next Board meeting is scheduled on May 7, 2020, at the Hillsboro Civic Center, Room 113B/C, 150 E. Main Street, Hillsboro, OR or via dial-in conference, to be determined based on the COVID-19 situation.

## 6. COMMUNICATIONS AND NON-AGENDA ITEMS

**A.** None scheduled.

Commissioners urged everyone to stay home and stay safe.

## ADJOURNMENT

There being no further business, Chairman Duggan adjourned the meeting at 12:43 p.m.

_____ _____

James Duggan, Chair Denny Doyle, Vice Chair

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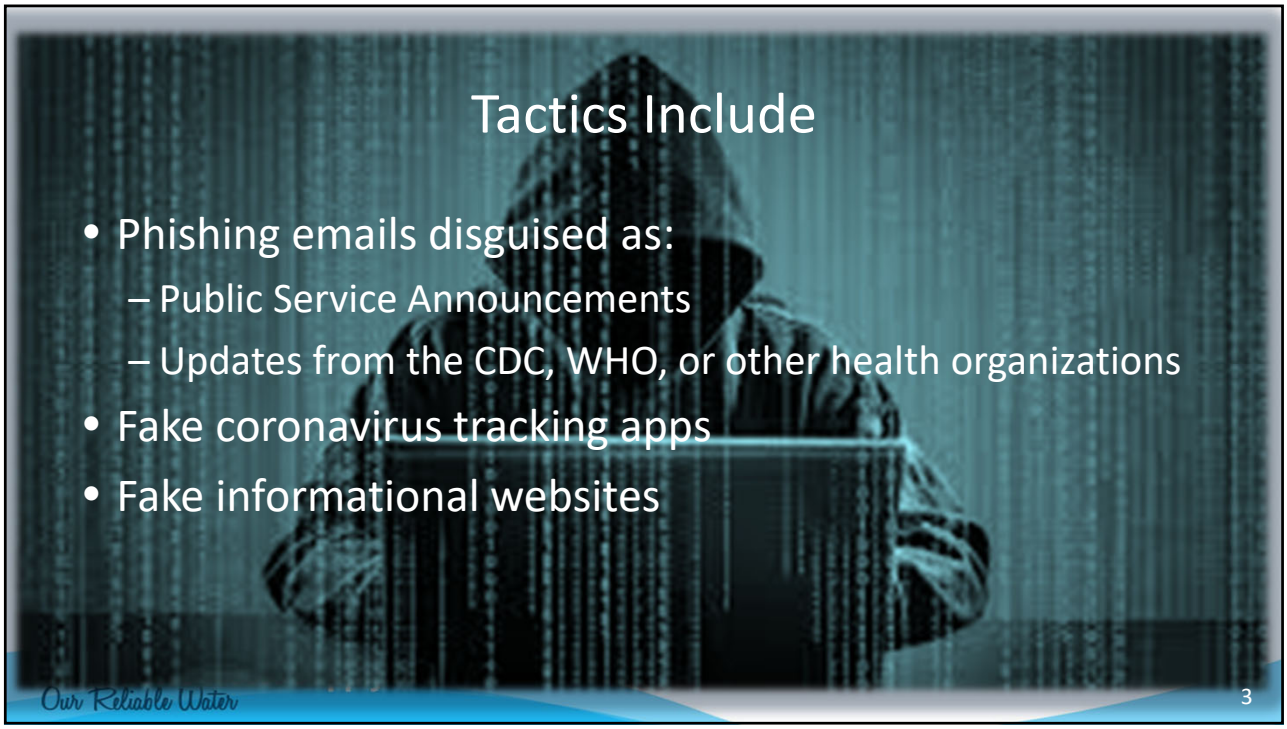
Safety Moment:

**Be Alert – Be Suspicious – Be Safe**

1


2


Tactics Include
• Phishing emails disguised as:
– Public Service Announcements
– Updates from the CDC, WHO, or other health organizations
• Fake coronavirus tracking apps
• Fake informational websites
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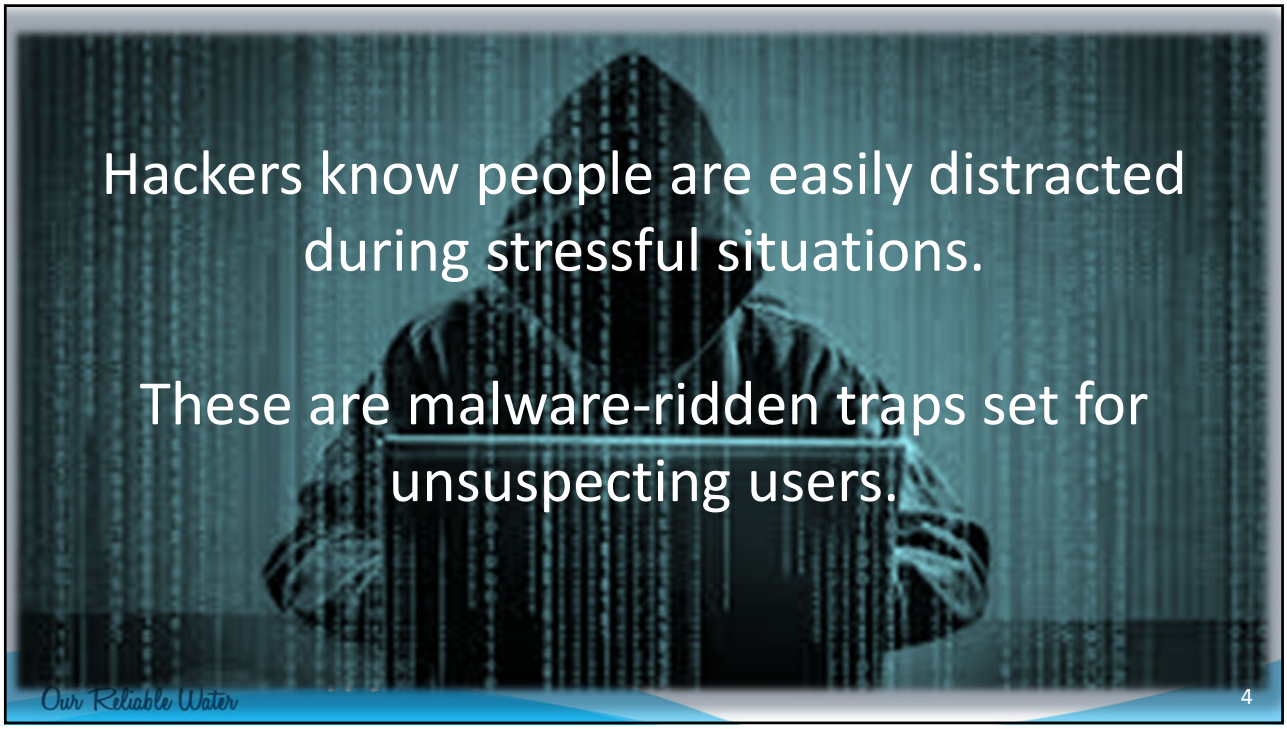
3


Hackers know people are easily distracted during stressful situations.
These are malware-ridden traps set for unsuspecting users.
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4


How to Avoid Malware
• Stay alert. Don't let your guard down.
• Don't click on links from unknown sources.
• Only download or install software from trusted sources.
• Verify that the URL of any website that asks for a password is accurate.
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5

5


Be Alert
Be Suspicious
Be Safe
Our Reliable Water
6

6

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**STAFF REPORT**

**To:** WWSS Board of Commissioners

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

**Date:** May 7, 2020

**Subject:** Recommend Approval of RWF_1.0 CM/GC Contract Amendment (Contract No. 2018-013 Amendment 4)

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**Requested Board Action:**
Consider approving an amendment in the amount of $49,026,130 to the Kiewit Infrastructure West, Co. (Kiewit) for Guaranteed Maximum Price (GMP) of phase 1 of construction of the Raw Water Facilities (RWF_1.0) Project of the Willamette Water Supply Program (WWSP).

**Key Concepts:**

- The Kiewit contract for construction manager/general contractor (CM/GC) services was executed on June 19, 2018 and was planned to be amended to include separate GMPs for phase 1 and phase 2 of construction.
- Phase 1 of construction has a planned Notice to Proceed (NTP) date of June 5, 2020 and completion date of February 24, 2022.
- Phase 1 of construction includes underground, high risk project elements such as seismic improvements, the 66" pipeline and tie-in to existing infrastructure, and in-water work in the Willamette River.
- The proposed phase 1 GMP was developed using a competitive, open-book process and includes CM/GC contingency and owner's contingency for changed conditions and potential risks encountered during construction.
- The process for developing a phase 2 GMP is planned to start in March of 2022.

**Background:**

***Project and Phasing***

The RWF_1.0 project is an expansion of the existing raw water facilities at the Willamette River Water Treatment Plant (WRWTP) in Wilsonville, OR. The initial capacity is 60 million gallons per day. Major scope elements include:

- New vertical turbine pumps and motors with variable frequency drives (VFDs)
- Relocation of existing vertical turbine pumps
- Electrical switchgear and power distribution facilities
- Hydraulic surge tank system
- Standby power generators and fuel storage
- Seismic improvements
- A section of raw water pipeline leading to the Willamette Water Supply System (WWSS) treatment plant
- Raw water pipeline crossing at Arrowhead Creek

Kiewit was selected, through a competitive, best value selection process in mid 2018, to provide the WWSP CM/GC services for the RWF_1.0 Project. The scope of work (SOW) includes design phase, construction phase, and post construction services. Only design phase services have been authorized to date. Construction phase and post construction services were to be included in GMPs for two work phases – phase 1 and phase 2. The following is a breakdown of work between phase 1 and phase 2:

**Phase 1**
Intake screen replacement
Intake screen protection pile improvements
Intake screen protection catchment fence
76" existing intake pipeline modifications
12" existing air pipeline modifications
Existing air bust system modifications
Existing caisson stability
Existing pump station building modifications
66" raw water pipeline
Small diameter utilities
Electrical and I&C ductbank
Chemical conduit
Park restoration
Viewing platform restoration
WRWTP pump improvements

**Phase 2**
New upper site electrical building
Surge equipment
Upper site civil improvements
WWSS pumps, motors drives,
WWSS pump mechanical equipment
WWSS pump bearing lubrication system

***Phase 1 Construction Procurement Process***

The bid process for phase 1 of construction was completed in accordance with a procurement plan prepared by Kiewit and reviewed by WWSP, including legal counsel. The process included two outreach meetings to promote interest and understanding among potential bidders. Request for proposal (RFP) packages for 23 separate work packages were developed by Kiewit and reviewed by the WWSP. The work packages were organized into the following categories reflecting the basis of selection:

- 4 best value (technical and cost), with prequalification, as basis of selection
- 13 minimum qualifications with low bid as basis of selection
- 5 minimum requirements to bid with low bid as basis of selection
- 1 Kiewit self-performed work with a negotiated price. This work package was considered high risk with added value to the WWSP for Kiewit to perform the work.

WWSP administered key procurement activities, including selections, for the work packages for which Kiewit planned to submit a competitive bid.

***Phase 1 GMP Development and Review***

In the CM/GC delivery method, the bid review is an "open book process" where the owner's review all of the detailed back up information provided by the CM/GC. Kiewit submitted an initial draft GMP on March 13, 2020 and several updates and refinements over the subsequent 4 weeks. A thorough review of the GMP information was completed by WWSP staff and subject matter experts (SME).

Bidder response, as determined by the quantity of bids received for each work package, was low to moderate. Following submittal of the draft GMP, Kiewit was directed to obtain additional bids for several work packages. The bidding process ultimately resulted in 83 percent of work packages having more than one bid and 38 percent of work packages having three or more bids. Low bidder participation is consistent with local and national trends experienced prior to the recent COVID-19 pandemic. Nonetheless, all of the highest value work packages (i.e., greater than $28.43 million) had two to four bidders.

The table below summarizes the components of the GMP for phase 1 and the basis for each component.

| Component | Amount | Basis |
|---|---|---|
| Work Packages | $35,461,682 | Competitive procurement process for GMP 1 (see above) |
| General Conditions and Bonds | $7,124,453 | Allowable cost types included in current contract |
| CM/GC Fee (8%) | $3,406,891 | Competitive procurement of CM/GC in 2018; included in current contract |
| CM/GC Contingency | $1,345,120 | Systematic review of CM/GC's risks; allowable cost types included in current contract |
| Owner's Contingency | $1,687,984 | Systematic review of owner's risks; allowable cost types included in current contract |
| **Total** | **$49,026,130** | |

WWSP has implemented numerous actions to manage the cost of the RWF_1.0 project. During the CM/GC procurement, cost was a major component of the selection process. CM/GC fees and rates for professional staff were established through that competitive process. During the design phase, the design consultant, CM/GC, and WWSP staff engaged in extensive value engineering; specialized groundwater and geotechnical evaluations were completed to inform the design and bidding; external budgetary quotes were used to inform the CM/GC's opinions of probable construction cost; bid alternates were accommodated in the bidding documents; and an intergovernmental agreement was established to define the scope of improvements at the WRWTP and enable on-time construction. During development of the GMP for phase 1, CM/GC construction staffing levels were negotiated early, bidder outreach was extensive; open-book competitive bidding was used; sealed-bids were required for potential self-perform work; supplemental bids were sought for packages with low responsiveness; best and final offers were obtained for selected packages; prices were negotiated downward; and the process and results were subjected to a comprehensive review.

**Budget Impact**

The following is a summary of GMP 1 and an estimate for GMP 2 compared to the current Baseline Budget[1]:

[1] Kiewit is continuing outreach and receiving bids for portions of the work that do not start immediately after the NTP. This could result in small reductions to the GMP.

| | |
|---|---|
| **Current Budget (Baseline 4.1) – Phase 1** | **$41,779,232** |
| GMP No. 1 (including contingency*) | $51,095,816 |
| Amount over Baseline 4.1 Budget – Phase 1 | $9,316,584 |
| **Current Budget (Baseline 4.1) – Phase 1 and 2** | **$77,322,406** |
| Projected GMP Total - Phase 1 and 2** (including contingency*) | $92,132,198 |
| Amount over Baseline 4.1 Budget | $14,809,792 |

*Contingency includes:
- CM/GC contingency – 2.9% (held within Kiewit contract)
- Owner's contingency – 3.7% (held within Kiewit contract)
- Additional contingency budget – 4.5% (held outside Kiewit contract)

** Phase 2 GMP is estimated, not yet competitively, procured

Primary drivers for the increase in cost for Phase 1 of construction fall within three categories; scope changes associated with an intergovernmental agreement for WRWTP improvements and permitting requirements (29 percent), scope changes to during final design (18 percent), and market conditions (48 percent). The remaining portion of the increase (5 percent) is contingency for the increased cost items. The phase 1 work includes constructing Willamette Intake Facilities (WIF) project elements. The cost for that work is within the WIF budget.

The projected increase for phase 2 is a result of a budgetary quotes for major work components; the upper site electrical building and WWSS pumps, motors, and drives. Quotes received for the building and equipment from one supplier may not reflect the future bidding and market conditions.

Potential cost savings opportunities have been identified for both phases of construction, with the most significant potential savings in phase 2 associated with the bidding and procurement strategy for the upper site electrical building and WWSS equipment. The proposed amendment would increase the total contract value to $49,592,100 as shown in the table below.

| | |
|---|---|
| **Initial Contract Value** | **$565,970** |
| Amendments 1 through 3 | $0 |
| **Current Contract Value** | **$565,970** |
| Proposed Amendment 4 | $49,026,130 |
| **Proposed Contract Value** | **$49,592,100** |

An update to the overall RWF_1.0 project budget, reflective of the GMP for phase 1 and estimated GMP for phase 2, is anticipated to be included within the forthcoming annual update to the WWSP Baseline budget. WWSP standard practice is to fund the budget shortfall from Management Reserve. The Management Reserve budget is evaluated as part of the annual baseline process and adjusted based on the level of risk anticipated.

The increase in RWF_1.0 project budget is expected to have a cost impact to the WWSS partners. Based on the cost shares established in Exhibit 1 of the WWSS Intergovernmental Agreement (IGA), the approximate increase for the City of Beaverton, City of Hillsboro, and Tualatin Valley Water District is $0.9, $4.6, and $8.8 million, respectively.

**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 Amendment 4 to RWF_1.0 CM/GC Contract No. 2018-013

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*Amendment 4[1] to RWF_1.0 CM/GC Contract No. 2018-013*
*May 7, 2020 WWSS Board meeting.*



[1]*Amendment attachments are available upon request*

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**Change Title:** Guaranteed Maximum Price (GMP) Phase I RWF_1.0 **Change Order#** 4
**Project:** RWF_CMGC **Date:** 4/27/2020
**To:** **Contract #** 2018-013

The following PCOs are hereby incorporated into the Contract:

| PCO# | Description | Time Impact (Days) | Change Amount |
|---|---|---|---|
| PCO - 5 | Guaranteed Maximum Price (GMP) Phase I RWF_1.0 | 0 | $49,026,129.30 |

| | |
|---|---|
| The Original Contract Sum was | $565,970.00 |
| Net Change by Previously Authorized Requests and Changes | $ 0.00 |
| The Contract Sum Prior to this Change Order was | $565,970.00 |
| The Contract Sum will change by | $49,026,129.30 |
| The New Contract Sum including this Change Order | $49,592,099.30 |
| The Contract Time will change by | 0 Days |
| The Date of Contract Completion as of this Change Order Therefore is | 12/3/2024 |

The compensation amount of this Change Order, including time and price, comprises the total compensation due the Contractor, its Subcontractors, Suppliers, or any other party for whom Contractor is responsible, for the work or change defined in the Change Order, including impact on unchanged Work, and is all inclusive of any additional costs incurred by the Contractor to date. By executing this Change Order, the Contractor acknowledges and agrees on behalf of itself, its Subcontractors, Suppliers, and any other party for whom Contractor is responsible, that the stipulated compensation includes payment for all work contained in the Change Order, plus all payment for the interruption of schedules, extended field overhead costs, delay, and any costs resulting from, arising out of, in connection with, or impacting all other Work under this Contract. The execution of this Change Order constitutes full satisfaction and total equitable adjustment for the change. No further claim or request for equitable adjustment of any type for any reasonably foreseeable cause shall arise out of or as a result of this Change Order on the remainder of the Work under this Contract.



**OWNER**

**By:** _____ **By:** _____

**Name:** _____ **Name:** _____

**Title:** _____ **Title:** _____

**Date:** _____ **Date:** _____

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**PCO-5 Contract No. 2018-013**
**RWF_1.0 Construction Management / General Contractor Services**

In accordance with the contract agreement, this change authorizes the not to exceed, Guaranteed Maximum Price (GMP) for RWF_1.0 Construction Phase 1 (one).

Modify Contract Agreement SECTION 8 – CONTRACT DOCUMENTS, ADD the following at the end:

8.14 - Conformed 100% drawings and specifications
8.15 – Phase 1 GMP
- A. – GMP 1 Summary Sheets
- B. - GMP 1 Progress Schedule
- C. - GMP 1 Backup
- D. - GMP 1 Corporate Activity Tax

Modify Contract Agreement SECTION 4 – CONTRACT PRICE, Paragraph 4.03. ADD the following at the end (refer to SECTION 8 CONTRACT DOCUMENTS for additional details on each item):

| Item | Description | Quantity | Units | Unit Price | Net Amount |
|---|---|---|---|---|---|
| 101 | Intake Screen Replacement | | | $ 0.00 | $209,474.08 |
| 102 | Intake Screen Protection Piles Improvements | | | $ 0.00 | $122,288.00 |
| 103 | Intake Screen Protection Catchment Fence | | | $ 0.00 | $7,861.00 |
| 104 | 76" Intake Pipe Modifications - Steel Pipe | | | $ 0.00 | $102,525.03 |
| 105 | 76" Intake Pipe Modifications - Permalock Pipe | | | $ 0.00 | $144,617.48 |
| 106 | 12" Airline Pipe, inside 76" Intake Pipe | | | $ 0.00 | $209,474.09 |
| 107 | Air Burst System Modifications | | | $ 0.00 | $653,230.22 |
| 108 | Existing Caisson Stability | | | $ 0.00 | $4,629,193.00 |
| 109 | New 66" Raw Water Pipeline Stability | | | $ 0.00 | $4,175,140.00 |
| 110 | New Electrical Buildings and Associated Facilities - NA | | | $ 0.00 | $ 0.00 |
| 111 | Existing Pump Station Building Modifications | | | $ 0.00 | $521,143.49 |

| | | | |
|---|---|---|---|
| 112 | WWSS Pumps, Motors, Drives | $ 0.00 | $ 0.00 |
| 113 | WWSS Pump Mechanical Equipment | $ 0.00 | $ 0.00 |
| 114 | WWSS Bearing Lubrication System | $ 0.00 | $ 0.00 |
| 115 | WWSP Pump Valve Vault | $ 0.00 | $ 0.00 |
| 116 | WRWTP Pump Improvements | $ 0.00 | $700,462.00 |
| 117 | Raw Water Pipeline | $ 0.00 | $17,031,087.70 |
| 118 | Small diameter utilities required for upper site buildings w/ Elect Bldg | $ 0.00 | $ 0.00 |
| 119 | Electrical and I&C Ductbank | $ 0.00 | $1,388,181.00 |
| 120 | Chemical Pipeline - NA | $ 0.00 | $ 0.00 |
| 121 | Lower Site Electrical Building - NA | $ 0.00 | $ 0.00 |
| 122 | Lower Site Stormwater Improvements - NA | $ 0.00 | $ 0.00 |
| 123 | Lower Site Civil Improvements | $ 0.00 | $221,350.75 |
| 124 | Park Restoration | $ 0.00 | $279,913.79 |
| 125 | New Park Stormwater Rain Garden feature | $ 0.00 | $ 0.00 |
| 126 | Viewing Platform Restoration | $ 0.00 | $152,632.01 |
| 127 | Relocation of Existing Utilities | $ 0.00 | $70,051.00 |
| 128 | Upper Site Electrical Building | $ 0.00 | $726,290.61 |

| | | | |
|---|---|---|---|
| 129 | Upper Site Stormwater Improvements | $ 0.00 | $ 0.00 |
| 130 | Standby Power and Fuel Tank | $ 0.00 | $174,635.54 |
| 131 | Surge Equipment | $ 0.00 | $251,634.73 |
| 132 | Upper Site Chemical Building - NA | $ 0.00 | $ 0.00 |
| 133 | Upper Site Operations Area w/ Elect Bldg | $ 0.00 | $ 0.00 |
| 134 | Upper Site Civil Improvements | $ 0.00 | $1,834,853.00 |
| 135 | Communications | $ 0.00 | $ 0.00 |
| 136 | Portland General Electric Modifications - NA | $ 0.00 | $ 0.00 |
| 137 | Small Tools and Supplies | $ 0.00 | $51,000.00 |
| 138 | General Conditions | $ 0.00 | $6,848,496.00 |
| 139 | Bond | $ 0.00 | $275,957.00 |
| 140 | Site and Support Services | $ 0.00 | $1,804,643.00 |
| 141 | Profit | $ 0.00 | $3,406,891.00 |
| 142 | Contingency (CM/GC) (Allowance) | $ 0.00 | $1,345,120.00 |
| 143 | Contingency (Owner Controlled) (Allowance) | $ 0.00 | $1,687,983.78 |
| **Total** | | **$** | **49,026,129.30** |

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Willamette Water Supply
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# 4A-3 RWF_1.0 Contract Amendment for Guaranteed Maximum Price for Phase 1 Construction

May 7, 2020

1

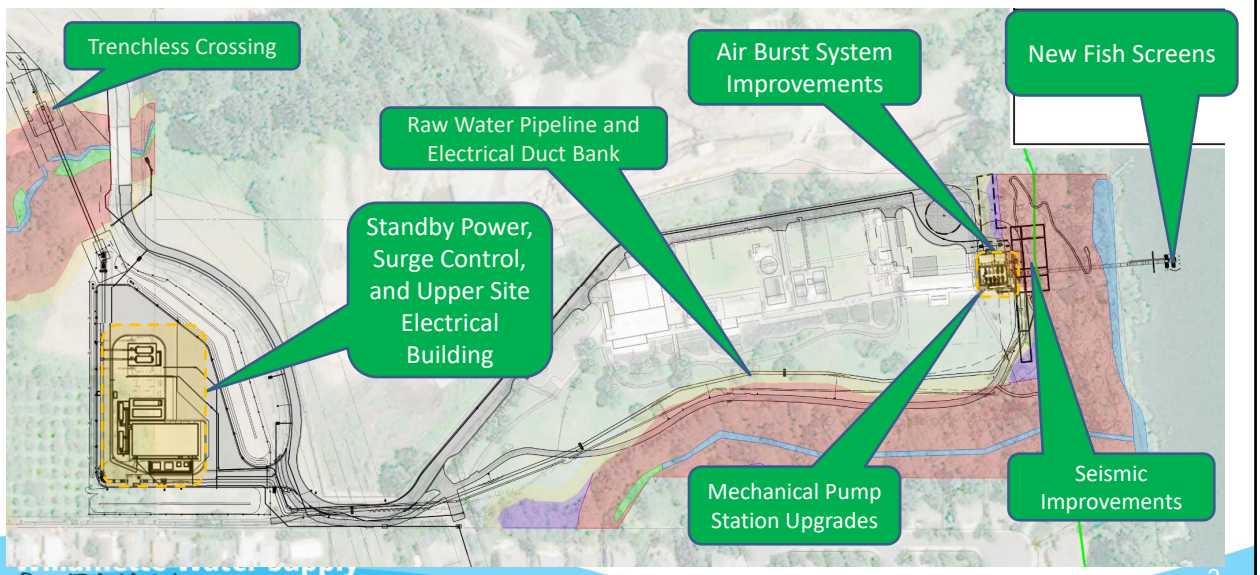
## Agenda

- Project and cost management background
- Bid process
- GMP review
- GMP comparison to Baseline budget
- Requested Board action



2

# RWF_1.0 Project Background

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3

3

# RWF_1.0 Background

- Kiewit contract for CM/GC services was executed in June 2018
  - Included design phase services
  - Planned to be amended to include separate GMPs for phase 1 and 2 of construction
- Phase 1 includes underground, high risk elements
- Phase 1 NTP planned for June 5, 2020
- Phase 2 GMP development planned to start in March 2022

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4

4

# Actions Taken for Cost Management through GMP 1

**CM/GC Procurement**

- Competitive process
- Cost included in selection
- Established CM/GC fees
- Established CM/GC professional staff rates

**Design Phase**

- Value Engineering with Design Consultant & CM/GC
- Groundwater and geotechnical evaluations
- CM/GC OPCCs (70% & 90%) informed by external budgetary quotes
- Scope & schedule control through IGA
- Enabled bid alternates

**GMP 1 Development**

- CM/GC staffing negotiated early
- Early bidder outreach
- Open-book competition
- Sealed-bids for potential self-perform
- Supplemental bids obtained
- BAFOs obtained
- Price negotiations
- Comprehensive review
- Ongoing optimization



5

# Bidding Process

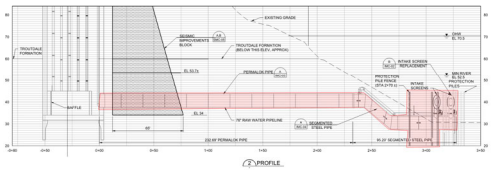
- Two outreach meetings were held
  - November 19
  - January 28, included site walk
- Questions jointly addressed
  - All technical questions routed to design team
  - Kiewit responded to scoping questions



6

# Bidding Process

- 4 best value (technical and cost) work packages
  - WWSP developed evaluation criteria
  - Prequalification step
- 18 minimum requirement and qualifications (low bid)
- 1 Kiewit self-performed work package with a negotiated price
- WWSP administered key procurement activities
- No bid protest
- “Open Book Approach” to bid review

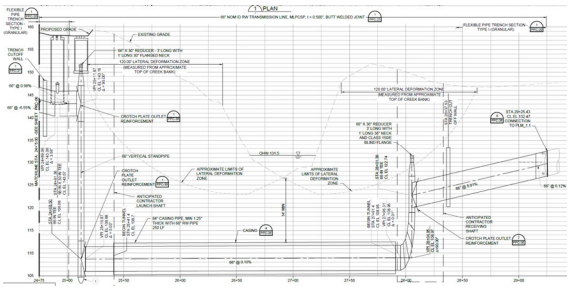




7

# Best Value Work Packages: Trenchless Crossing

- Pump test to quantify groundwater conditions
- Multiple technologies: Auger bore and pipe ramming
- 4 prequalified firms
- 2 responsive bidders
  - Fowler – Pipe ramming
  - Gonzales – Auger bore
- Tunneling Company and Northwest Boring did not submit bids





8

# Bid Results for Trenchless Crossing

| Bidders | Bid | After Bid Leveling / BAFO | Total Score |
|---|---|---|---|
| 1. Fowler | $8,350,000 | $8,181,000 | 961 |
| 2. Gonzalez | $ 7,866,759 | $7,991,759 | 914 |
| Baseline 4.1 | $4,610,000 | N/A | N/A |

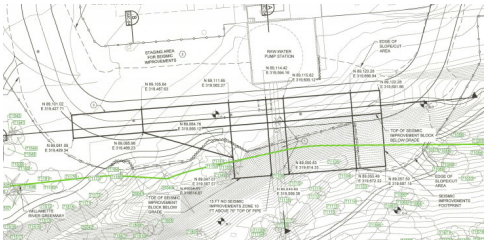
- Budget based on Kiewit OPCC (and consistent with WWSP experience (e.g., PLM_5.1 trenchless crossing is ~$3.8M))
- High risk work package with potential to encounter boulders (Kiewit carried $1 million in contingency)

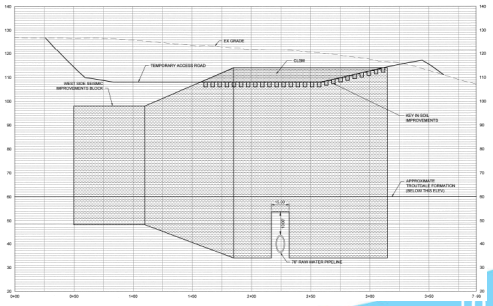


9

# Best Value Work Packages: Seismic Improvements

- Deep Soil Mixing (DSM) added to supplement jet grout
- Footprint reduced throughout design
- 3 prequalified firms
- 2 responsive bidders
  - Condon Johnson
  - Keller
- 1 non-responsive bidder
  - Malcolm
  - Submitted an alternative approach
  - Did not meet RFP requirements







10

# Bid Results for Seismic Improvements

| Bidders | Bid | After Bid Leveling / BAFO | Total Score |
|---|---|---|---|
| 1. Condon Johnson | $4,997,310 | $5,492,700 | 1000 |
| 2. Keller | $9,060,000 | $9,060,000 | 693 |
| 3. Malcolm – Non-responsive | N/A | N/A | N/A |
| Baseline 4.1 | $9,362,964 | N/A | N/A |

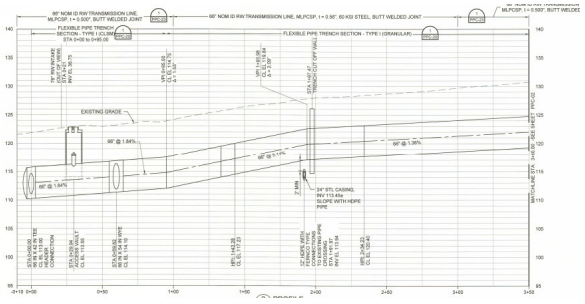
- Condon Johnson's original bid was for a lower bench elevation
- Increased risk with Keller's approach
- Keller's approach resulted in larger volumes of treatment and spoils
- VE in final design helped reduce costs



11

# Best Value Work Packages: 66" Pipeline

- 11 prequalified firms, including Kiewit
- 4 responsive bidders
- Bids received by WWSP
- Bids evaluated by WWSP only





12

# Bid Results for 66” Pipeline

| Bidders | Bid | Total Score |
|---|---|---|
| 1. Kiewit | $8,800,552 | 952 |
| 2. Emery and Sons | $9,854,725 | 925 |
| 3. James W. Fowler | $9,700,000 | 917 |
| 4. MEI | $9,085,073 | 924 |
| Baseline 4.1 | $5,106,569 | N/A |

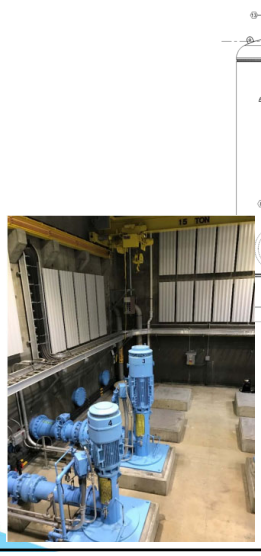
- Unit cost of pipeline submitted with 70% OPCC (single supplier budgetary quote) was inconsistent with actual, competitively-procured WWSP pipeline bids; Baseline 4.1 used adjusted unit cost
- Unique project elements
  - Pipe wall thickness and joints
  - Pinch point construction
  - Tie-in to existing pipe header
  - Flow meter and vault

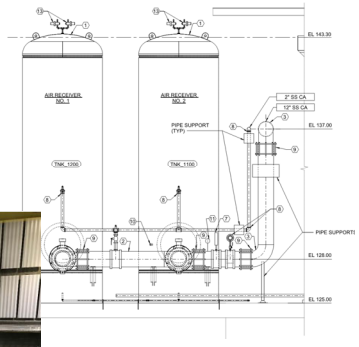


13

# Best Value Work Packages: Mechanical

- 2 prequalified firms, including Kiewit
- 2 responsive bidders
- Bids received by WWSP
- Bids evaluated by WWSP only







14

# Bid Results for Mechanical

| Bidders | Bid | Total Score |
|---|---|---|
| 1. Kiewit | $1,301,397 | 641 |
| 2. Harder | $1,483,576 | 549 |
| Baseline 4.1 | $1,161,235 | N/A |

- Revised specification requirements for pump improvements
  - IGA required to advance land use
  - WWSP staff negotiated WRWTP pump movement scope



15

# GMP 1 Refinements During Negotiation Phase

- Draft submitted on March 13
- Review by WWSP and SMEs
- Several updates and refinements over 4 weeks
  - CM/GC contingency
  - Continued outreach efforts
    - Received additional bids for upper site civil work
    - Received additional bid for underground infrastructure (ductbank and utilities)
  - Addition of summary sheets with outreach information, bids received, and bid leveling
- Confirmation of Owner's contingency



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# GMP 1 Review Summary

| Summary of Bid Information (74% of GMP 1) | | |
|---|---|---|
| 1 bidder | $1.04 M | 3% |
| 2 bidders | $15.31 M | 45% |
| 3 (or more) bidders | $13.12 M | 38% |
| 1 source fixed or value | $4.72 M | 14% |

- Majority of items had 2 bidders, representing slightly higher bids
- Small quantity of interested bidders is a local and national trend
- Kiewit is continuing outreach and receiving bids



17

# GMP vs. Baseline 4.1 Budget

| Cost Item | Amount |
|---|---|
| Current Budget (Baseline 4.1) – Phase 1 | $41,779,232 |
| GMP No.1 total (including contingency*) | $51,095,816 |
| **Amount over Baseline 4.1 Budget – Phase 1** | **$9,316,584** |
| Current Budget (Baseline 4.1) – Phase 1 and 2 | $77,322,406 |
| Projected GMP total – Phase 1 and 2** (including contingency*) | $92,132,198 |
| **Amount over Baseline 4.1 Budget – Projected Total** | **$14,809,792** |

* Contingency includes:
  - CM/GC contingency – 2.9% (held within contract)
  - Owner's contingency – 3.7% (held within contract)
  - Additional contingency budget – 4.5% (held outside contract)

** Phase 2 GMP is estimated, not yet competitively, procured

*Baseline 4.1*
- *Prepared Q4 2018*
- *Used Class 2 OPCC for RWF_1.0 (+20% to -15% accuracy)*
- *Post-70% design scope additions not included*

*Budgets to be adjusted in Baseline 5.2*



18

# GMP vs. Baseline 4.1 Budget – Phase 1

- Major work packages under budget ($2.8M)
  - Intake water work package
  - Upper site civil improvements
  - Lower site valve vault



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# Primary Drivers for GMP 1 $9.3M above Baseline 4.1

**$2.7M**

**IGA and Permitting-required Scope Additions**

- Increase site security
- WRWTP pump rehab and seismic improvements
- Wilsonville 8” waterline
- Wilsonville fiber conduit
- Overlook replacement
- Riverbank trails
- Re-design of potable water system

**$1.7M**

**Other Scope Additions**

- Intake protection piles for slope movement
- Pump station seismic retrofit
- Pump station vibration monitoring
- Temporary bypass system
- Electrical duct bank realignment (added piles under vault)
- Chemical conduit
- Bike trail modifications for temporary road
- Sewer line directional drilling

**$4.9M**

**Other Factors**

- Market conditions
  - Small quantity of interested bidders — *$4.4M*
  - High bids
- Contingency increase — *$0.5M*
  - For scope additions
  - For market conditions

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# Potential Savings Opportunities – Phase 1

- VE discussions with Condon Johnson
- Opportunity for additional quotes for underground work in 2021
- Reuse of fill above clean fill criteria - $150K
- Fencing options in Park
- One pipe supplier versus two
- *Open cut alternative to trenchless crossing vetted but determined not feasible*
- *Additional quotes since Management Committee review resulted in $100K savings*



21

# GMP vs. Baseline 4.1 Budget – Phase 2

- Major work packages with projected cost increase
  - Upper site electrical building (1 quote)
  - WWSS pumps, motors, drives (1 quote per item)
  - Communications (not reflective of current WWSP DCS_1.0 approach)
- Basis
  - Kiewit 70% OPCC
  - Non-competitive, budgetary quotes



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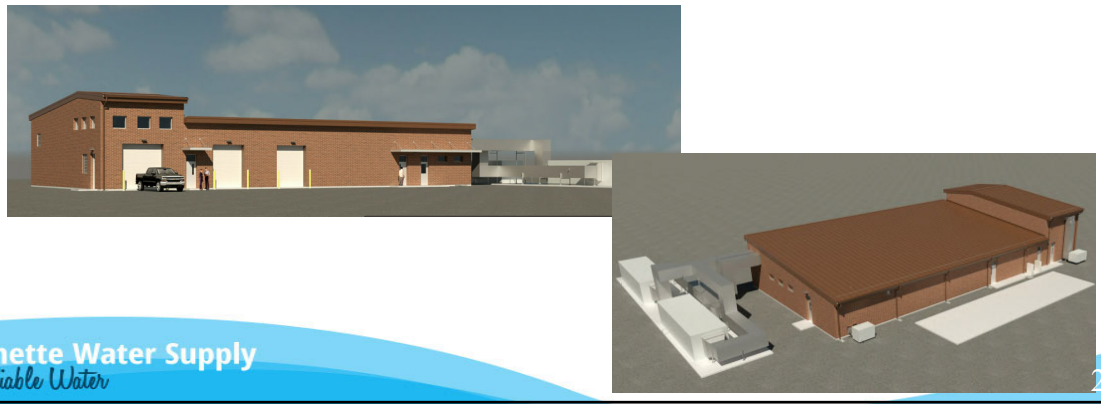
# Potential Savings Opportunities – Phase 2

- Conduct early and robust bidder outreach for upper site building
  - Increase WWSP participation in procurement process
- Procure equipment with WTP
- Communication system procurement







# Schedule

| Major Project Milestones | Latest Approved Baseline | Latest Monthly Forecast | Variance (days) |
|---|---|---|---|
| WWSS Board Approval | 05/07/20 | 05/07/20 | 0 |
| Construction NTP | 06/05/20 | 06/05/20 | 0 |
| Stage Gate 4: Substantial Completion | 09/06/24 | 09/06/24 | 0 |
| Stage Gate 5: Final Acceptance | 12/03/24 | 12/03/24 | 0 |

## Requested Board Action

Approve amendment in the amount of $49,026,130 to the Kiewit Infrastructure West, Co. for the GMP of Phase 1 of construction of the RWF_1.0 Project



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## QUESTIONS



26

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Willamette Water Supply
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**STAFF REPORT**

**To:** WWSS Board of Commissioners

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

**Date:** May 7, 2020

**Subject:** Recommend Approval of WTP_1.0 Design Contract Amendment (CDM Smith Contract No. 2018-014 Amendment 8)

---

**Requested Board Action:**
Consider approving an amendment in the amount of $885,133.00 (with no contract term extension) to the CDM Smith contract to provide additional design services for the water treatment plant (WTP_1.0) project of the Willamette Water Supply Program (WWSP).

**Key Concepts:**

- Implementation of the WWSP requires assistance of design consultants with expertise in water treatment plant design, geotechnical investigations and analysis, seismic design, and other areas of engineering.
- CDM Smith was procured through a competitive process to provide design consulting services for the WTP_1.0 project.
- The WTP_1.0 project originally consisted of a scope of work that, during contract negotiations, was based on the preparation of 1,038 drawings. Increased project scale and complexity has resulted in the net addition of 179 drawings, for a total current drawing count of 1,217 drawings.
- CDM Smith has maintained the original project schedule and successfully completed the 60% design of the WTP_1.0 project on time.
- The subject amendment would establish scope of work and corresponding fee to complete WTP_1.0, with no modification to the contract term.

**Background:**
CDM Smith was selected, through a competitive process, to provide the WWSP with professional design and construction support services for WTP_1.0. The professional / technical services contract 2018-014 was approved and awarded in July 2018 with an expiration date of February 2026.

CDM Smith's original scope of work included design, bidding support, and engineering services during construction for construction of WTP_1.0. The negotiated scope of work was based on a June 2018 drawing list (submitted during the negotiation process) that included 1,038 drawings.

Preliminary design of WTP_1.0 was started in August 2018, culminating in a 30% design submittal submitted by CDM Smith in March 2019. CDM Smith submitted the 60% design submittal for WTP_1.0 in February 2020. The 90% design submittal is anticipated in December 2020.

Additional design scope related to increased scale and complexity of the project has resulted in the addition of 231 drawings and the deletion of 52 drawings for a net change of 179 drawings. A detailed analysis completed by CDM Smith (and reviewed by the WWSP) compared the June 2018 drawing list against a January 2020 drawing list. The CDM Smith analysis accounted for different degrees of complexity

amongst added and deleted drawings and also accounted for other adjustments to scope and budget (other PCOs) that impacted drawing count. The January 2020 drawing list included 1,217 drawings.

Based on the original negotiated drawing list and CDM Smith's fee for design efforts, the resulting cost per drawing was approximately $10,700 per drawing. The calculated cost per drawing for the net additional 179 drawings is approximately $4,900 per drawing.

The increased scale and complexity of the project is reflected by the following:

1. A "lean" scope of work was provided by CDM at the time of negotiations. This scope of work assumed that the design work would generally proceed in line with the recommendations of the Conceptual Design Report.
2. Increase in WTP_1.0 design capacity (from 60 mgd to 72 mgd after the subject contract was executed)
3. The complexities created by the need for a compact core process facility due to the site constraints.
4. Anticipated increase in WTP_1.0 construction cost (based on estimates prepared after the subject contract was executed)

CDM Smith required no change to future deliverable dates as part of this change.

**Budget Impact:**
The proposed amendment would increase the total contract value to $25,004,813.58 as shown in the table below. The proposed contract value for design and engineering services during construction (ESDC) is 10.8% of the current baseline construction cost of $232 million, which is still a good value to the Owner. Depending on the complexity of the project, the range of costs for these services for a WTP project is typically 10 to 15% of the construction cost. Funds for Proposed Amendment 8 would be drawn from the existing WTP_1.0 project contingency budget. An update to the overall WTP_1.0 project budget is anticipated to be included within the forthcoming annual update to the WWSP Baseline budget.

| | |
|---|---|
| **Initial Contract Value** | **$22,698,796.09** |
| Amendments 1 through 7 | $1,420,884.49 |
| **Current Contract Value** | **$24,119,680.58** |
| Proposed Amendment 8 | $885,133.00 |
| **Proposed Contract Value** | **$25,004,813.58** |

**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: CDM Smith Amendment 8 to 2018-014
2. Exhibit B: Consultant Fee and Rate Schedule

# Amendment 8 to Agreement

FOR

WTP_1.0 DESIGN, GMP DEVELOPMENT, AND SDC

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 ("Engineer").

WHEREAS, the Owner and Engineer entered into this Agreement for Engineer to provide WTP_1.0 Design, GMP Development, 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:

Incorporates PCO-18.

| PCO# | Description | Time Impact (Days) | Change Amount |
|---|---|---|---|
| PCO - 18 | To accommodate the increased design content density and complexity of the WTP_1.0 project, including but not limited to changing the design capacity from 60 mgd to 72 mgd, Engineer shall utilize the January 2020 project drawing list provided to Owner, which reflects the following changes from the previous drawing list:<br>1) Deletes 52 drawings;<br>2) Adds 231 drawings; and<br>3) Results in a net increase of 179 drawings. | 0 | $885,133.00 |

| | |
|---|---|
| The Original Contract Sum was | $22,698,796.09 |
| Net Change by Previously Authorized Requests and Changes | $1,420,884.49 |
| The Contract Sum Prior to this Amendment was | $24,119,680.58 |
| The Contract Sum will change by | $885,133.00 |
| The New Contract Sum including this Amendment | $25,004,813.58 |
| The Contract Time will change by | 0 Days |
| The Date of Contract Completion as of this Amendment Therefore is | 2/28/2026 |

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 8 effective as of the date signed by Owners.

**OWNER**

| | | | |
|---|---|---|---|
| **By:** | | **By:** | |
| **Name:** | | **Name:** | |
| **Title:** | | **Title:** | |
| **Date:** | | **Date:** | |

**PCO-18 Contract No. 2018-014**
**WTP_1.0 Design, GMP Development, and SDC**

To accommodate the increased design content density and complexity of the WTP_1.0 project, including but not limited to changing the design capacity from 60 mgd to 72 mgd, Engineer shall utilize the January 2020 project drawing list provided to Owner, which reflects the following changes from the previous drawing list:

1) Deletes 52 drawings;

2) Adds 231 drawings; and

3) Results in a net increase of 179 drawings.

| Item | Description | Quantity | Units | Unit Price | Net Amount |
|---|---|---|---|---|---|
| 003 | 2.1.2 - Project Management | | | $ | $8,500.00 |
| 063 | 5.10.1 - 60% Drawings and Specifications | | | $ | $401,000.00 |
| 089 | 7.3.2 - 90% Drawings and Specifications for GMP Package 1 | | | $ | $356,000.00 |
| 096 | 8.1.1 - 100% Drawings and Specifications GMP Package 1 | | | $ | $119,633.00 |
| **Total** | | | | **$** | **$885,133.00** |

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# Exhibit B2 - Engineer Fee and Rates

RFP-WTP-0200318 Willamette Water Supply Program WTP_1.0 Design, GMP Development, and Services During Construction

ENGINEER: **CDM Smith**

| Task Section | Task Description | Total Cost | Total Labor | Total Hours | Billing Rate Multiplier | Project Manager Greg Lindstadt | Project Engineer Mike Hyland | Yard Piping Task Lead Neill Hampton | Insturmentation & Controls Task Lead Paul Malachowski | Structural Task Lead Chuen-Shiow Chen | Filtration Lead Ben Finnegan | Residuals Mgt. Lead Rodney Mutter | Chemical Systems Lead Jenny Strehler | CAD/BIM Task Lead Misti Burkman | Specification Writer Rita Smith | CFD Modeling Task Lead Carrie Knatz | Physical Modeling Task Lead Mark Allen | Administrative Support (avg) | Engineer 7 (avg) | Engineer 5 (avg) | Engineer 3 (avg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Direct Hourly Rate | | | | | | | | | | | | | | | |
| | | | | | | $96.50 | $90.40 | $79.70 | $66.55 | $74.46 | $51.38 | $57.94 | $90.79 | $64.44 | $45.87 | $65.46 | $73.75 | $28.81 | $77.18 | $51.45 | $36.02 |
| | | | | | 3.10 | $299.15 | $280.24 | $247.07 | $206.31 | $230.83 | $159.28 | $179.61 | $281.45 | $199.76 | $142.20 | $202.93 | $228.63 | $89.31 | $239.26 | $159.50 | $111.66 |
| **Section 2.0** | **Project Management and Administration** | | | | | | | | | | | | | | | | | | | | |
| 2.1.2 | Project Management | $8,500.00 | $8,500.00 | 41 | | 12 | 12 | | | | | | | | | | | 17 | | | |
| | **2.0 Subtotal** | **$8,500.00** | **$8,500.00** | **41** | | **12** | **12** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **17** | **-** | **-** | **-** |
| **Section 5.0** | **60% Design** | | | | | | | | | | | | | | | | | | | | |
| 5.10.1 | 60% Drawings and Specifications | $401,000.00 | $312,800.00 | 1,781 | | 40 | 60 | | 32 | 18 | 32 | 32 | 80 | 32 | 40 | | 40 | | 215 | 200 | 360 |
| | **5.0 Subtotal** | **$401,000.00** | **$312,800.00** | **1,781** | | **40** | **60** | **-** | **32** | **18** | **32** | **32** | **80** | **32** | **40** | **-** | **40** | **-** | **215** | **200** | **360** |
| **Section 7.0** | **90% Design** | | | | | | | | | | | | | | | | | | | | |
| 7.3.2 | 90% Drawings and Specifications for GMP Package 1 | $356,000.00 | $288,800.00 | 1,658 | | 40 | 60 | | 30 | | 32 | 32 | 64 | 30 | 40 | | 36 | | 198 | 170 | 320 |
| | **7.0 Subtotal** | **$356,000.00** | **$288,800.00** | **1,658** | | **40** | **60** | **-** | **30** | **-** | **32** | **32** | **64** | **30** | **40** | **-** | **36** | **-** | **198** | **170** | **320** |
| **Section 8.0** | **100% Design (Ready for GMP Development)** | | | | | | | | | | | | | | | | | | | | |
| 8.1.1 | 100% Drawings and Specifications for GMP Package 1 | $119,633.00 | $95,483.00 | 550 | | 16 | 20 | | | | 12 | 12 | 24 | 10 | 12 | | 12 | | 68 | 60 | 92 |
| | **8.0 Subtotal** | **$119,633.00** | **$95,483.00** | **550** | | **16** | **20** | **-** | **-** | **-** | **12** | **12** | **24** | **10** | **12** | **-** | **12** | **-** | **68** | **60** | **92** |
| | **PROJECT SUBTOTAL** | **$885,133.00** | **$705,583.00** | **4,031** | | **108** | **152** | **-** | **62** | **18** | **76** | **76** | **168** | **72** | **92** | **-** | **88** | **17** | **481** | **430** | **772** |

| | |
|---|---|
| **Lump Sum ODCs** | |
| **Total Cost (Less Allowances)** | **$885,133.00** |
| **Labor Rate Escalation Allowance** | |
| **Invoiced ODCs Allowance** | |
| **Property Acquisition Assistance Allowance** | |
| **Water Quality Testing Allowance** | |
| **Plant Tours Allowance** | |
| **PROJECT TOTAL COST** | **$885,133.00** |

**1) Engineer shall include documentation and assumptions for total labor hours, subconsultant costs, and Lump Sum ODCs after fee estimate has been requested by Owners.**

**2) Billing Rates and markups shall comply with Section 5 of the Agreement.**

**3) Reallocation of labor hours, fee, and other costs must be approved by Owners via Amendment.**

**4) Engineer shall provide written notification to Owners in accordance with Section 11.1 of the Agreement of potential changes to the Work that may affect the cost.**

ENGINEER: **CDM Smith**

| Task Section | Task Description | CAD (avg) | Accounting (avg) | I&C Alex Aquino | Paul Taurasi | Jordan Morris | Raman Gopalan | ADD STAFF HERE | | Total Sub Consultant | Subconsultant Markups | MWA Architectural | Interface Building Mechanical | Green Works Landscaping | Murray Smith Civil |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $39.10 | $51.45 | $68.75 | $76.57 | $54.80 | $62.50 | | | | Markup | 5.00% | 5.00% | 5.00% | 5.00% |
| | | $121.21 | $159.50 | $213.13 | $237.37 | $169.88 | $193.75 | $0.00 | | | Subconsultant Cost | | | | |
| **Section 2.0** | **Project Management and Administration** | | | | | | | | | | | | | | |
| 2.1.2 | Project Management | | | | | | | | | $0.00 | $0.00 | | | | |
| | **2.0 Subtotal** | **-** | **-** | | | | | **-** | | **$0.00** | **$0.00** | **$0.00** | **$0.00** | **$0.00** | **$0.00** |
| **Section 5.0** | **60% Design** | | | | | | | | | | | | | | |
| 5.10.1 | 60% Drawings and Specifications | 320 | | 40 | 90 | 110 | 40 | | | $88,200.00 | $4,200.00 | $ 24,000 | $ 20,000 | $ 20,000 | $ 20,000 |
| | **5.0 Subtotal** | **320** | **-** | **40** | **90** | **110** | **40** | **-** | | **$88,200.00** | **$4,200.00** | **$24,000.00** | **$20,000.00** | **$20,000.00** | **$20,000.00** |
| **Section 7.0** | **90% Design** | | | | | | | | | | | | | | |
| 7.3.2 | 90% Drawings and Specifications for GMP Package 1 | 342 | | 48 | 74 | 82 | 60 | | | $67,200.00 | $3,200.00 | $ 20,000 | $ 16,000 | $ 12,000 | $ 16,000 |
| | **7.0 Subtotal** | **342** | **-** | | | | | **-** | | **$67,200.00** | **$3,200.00** | **$20,000.00** | **$16,000.00** | **$12,000.00** | **$16,000.00** |
| **Section 8.0** | **100% Design (Ready for GMP Development)** | | | | | | | | | | | | | | |
| 8.1.1 | 100% Drawings and Specifications for GMP Package 1 | 140 | | 12 | 24 | 20 | 16 | | | $24,150.00 | $1,150.00 | $ 8,000 | $ 5,000 | $ 5,000 | $ 5,000 |
| | **8.0 Subtotal** | **140** | **-** | | | | | **-** | | **$24,150.00** | **$1,150.00** | **$8,000.00** | **$5,000.00** | **$5,000.00** | **$5,000.00** |
| | **PROJECT SUBTOTAL** | **802** | **-** | **100** | **188** | **212** | **116** | **-** | | **$179,550.00** | **$8,550.00** | **$52,000.00** | **$41,000.00** | **$37,000.00** | **$41,000.00** |

| | |
|---|---|
| **Lump Sum ODCs** | |
| **Total Cost (Less Allowances)** | |
| **Labor Rate Escalation Allowance** | |
| **Invoiced ODCs Allowance** | |
| **Property Acquisition Assistance Allowance** | |
| **Water Quality Testing Allowance** | |
| **Plant Tours Allowance** | |
| **PROJECT TOTAL COST** | |

**1) Engineer shall include documentation and assumptions for total labor hours, subcons**

**2) Billing Rates and markups shall comply with Section 5 of the Agreement.**

**3) Reallocation of labor hours, fee, and other costs must be approved by Owners via Am**

**4) Engineer shall provide written notification to Owners in accordance with Section 11.1**

Willamette Water Supply
Our Reliable Water

# WTP_1.0 Design Contract Amendment (Contract No. 2018-014 Amendment 8)

May 7, 2020

1

## Background

- Additional design scope related to increased scale and complexity of the project:
  - "Lean" scope of work from CDM at the time of negotiations
  - Increase in WTP_1.0 design capacity (60 mgd to 72 mgd)
  - Compact main process facility
- Effects on design were known but difficult to quantify beyond a parametric approach until the 60% design submittal (enhanced water quality and level of service goals)

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2

2

# Change Negotiation

| | Date | Amount |
|---|---|---|
| Initial Meeting with CDM | 09/04/2019 | $1,900,000 |
| WWSP Response (after mid-60% OPPC received) | 11/29/2019 | N/A |
| Meeting with CDM (where backup from CDM was requested) | 01/30/2020 | N/A |
| CDM Justification for Additional Costs (including backup) | 02/19/2020 | $1,510,212 |
| WWSP Response (with our estimate of cost) | 02/28/2020 | $821,337 |
| Final Meeting with CDM | 03/12/2020 | $885,133[1] |

[1] Represents a 3.9% increase to the $22.7 million contracted fee negotiated in July 2018



3

# Scope Impact to Design Contract

- Drawing count used to demonstrate increased scale and complexity of the project (net increase of 179 drawings – see table below)
- Analysis of drawing quantity accounted for:
  - Different degrees of complexity across added and deleted drawings

| Milestone | Number of Drawings |
|---|---|
| Negotiations (June 2018) | 1,038[1] |
| 60% Design (January 2020) | 1,217[2] |
| Net Change | 179 (231 added, 52 deleted) |

[1]Based on the original negotiated drawing list and CDM Smith's fee for design efforts, the resulting cost per drawing was approximately $10,700 per drawing.

[2]The calculated cost per drawing for the net additional 179 drawings is approximately $4,900 per drawing (45% of the cost of a negotiated drawing).



4

# Budget Impact to Design Contract

| | |
|---|---|
| **Initial Contract Value** | **$22,698,796.09** |
| Amendments 1 through 7 | $1,420,884.49 |
| **Current Contract Value** | **$24,119,680.58** |
| Proposed Amendment 8 | $885,133.00 |
| **Proposed Contract Value** | **$25,004,813.58** |

- Initial contract value for design and ESDC (with no amendments) was 9.9% of the current baseline construction cost ($232M)
- Proposed contract value for design and ESDC including Amendments 1 through 8 is 10.8% of the current baseline construction cost
- Design and ESDC fees for a typical WTP project range from 10 to 15%
- Still a good value due to the complexity of the design that includes HAZOP, ALM, seismic criteria, resiliency, etc. that would push fees more towards the 15% value



5

# Schedule Impact

- Despite additional design scope related to increased scale and complexity of the project, design consultant has maintained the original project schedule, successfully completing the 60% design on time.
- These changes are expected to have no impact on future schedule.
- The 90% design submittal is anticipated in December 2020.



6

## Continued Cost Reduction

- Continuous VE efforts
- Identified and implementing deductive alternates
- Implementing lessons learned from other CM/GC contracts (RWF)
- Planning for procurement optimization (e.g., drill and blast, concrete mix design, aggregates, etc.)
- Drive CM/GC's rigorous pursuit of cost control, transparency, and accuracy during estimating
  - Upcoming 60% OPCC in mid-May (and subsequent vetting)
  - Evaluate construction delivery options



7

## Requested Board Action

Approve an amendment in the amount of $885,133.00 (with no contract term extension) to the CDM Smith contract to provide additional design services for the water treatment plant (WTP_1.0) project of the Willamette Water Supply Program (WWSP).



8

# QUESTIONS



9

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Willamette Water Supply
Our Reliable Water

**STAFF REPORT**

**To:** WWSS Board of Commissioners

**From:** David Kraska, P.E., WWSP Program Director, WWSS Commission General Manager

**Date:** May 7, 2020

**Subject:** Request to Local Contract Review Board for Exemption from Competitive Bidding for RES_1.0 (Combined with PLM_5.3)

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**Requested Board Action:**
Acting as the Local Contract Review Board (LCRB), consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for RES_1.0 Storage Reservoirs[i] and approving the use of the Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.

**Key Concepts:**
- The draft declaration of an exemption from competitive bidding under ORS 279C.300 allows the use of CM/GC delivery method for construction contractors for Willamette Water Supply System RES_1.0 project.
- The project is recommended for CM/GC delivery method based on evaluations by WWSP and the engineer for the RES_1.0 project, Black & Veatch.
- CM/GC approach would enable value engineering at 60% design and an early Phase 1 construction.
- Both local and national contractors with bonding capacity of over approximately $121 million would be eligible to submit proposals for the project.
- The declaration of an exemption from competitive bidding must occur after public notice. The second reading and opportunity for public comment prior to enactment is scheduled to occur at the July 2, 2020 regular Board meeting

**Background:**
The delivery method for the RES_1.0 project was evaluated by WWSP and Black & Veatch and the CM/GC approach was selected over the design-bid-build, lump sum design-build, and progressive design-build approaches. 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 CM/GC delivery for the RES_1.0 project that would enable CM/GC contractor participation during design and consideration of cost (CM/CG fees) and non-cost factors such as technical approach and specialized expertise in the selection of a CM/CG contractor.

**Budget Impact:**
There are no known budgetary impacts anticipated from this item. CM/GC was not anticipated in the baseline plan; therefore, the professional services portion of CM/GC delivery were not anticipated. The cost associated with professional services range in value but are typically less than one percent of the

expected construction cost. During construction, CM/GC profit margins and labor cost are typically higher than low-bid projects. While these items could negatively impact the project budget, CM/GC input during design may produce value engineering and constructability solutions that reduce overall construction cost.

**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 RES_1.0 CM/GC approach
3. RES_1.0 Construction Delivery Approach Evaluation

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[i] RES_1.0 Storage Reservoirs consist of two new pre-stressed concrete water reservoirs, each with capacity of 15 million gallons (MG), located on the parcel east of the intersection of SW Grabhorn Road and SW Stone Creek Drive on Cooper Mountain, near the western edge of the City of Beaverton. This project includes the construction of PLM_5.3, approximately 20,280 linear feet of new 66-inch steel pipeline.

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**RESOLUTION NO. WWSS-XX-20**

A RESOLUTION BY THE LOCAL CONTRACT REVIEW BOARD DECLARING AN EXEMPTION FROM COMPETITIVE BIDDING FOR THE RES_1.0 PROJECT (COMBINED WITH THE PLM_5.3 PROJECT) AND APPROVING A CONSTRUCTION MANAGER/GENERAL CONTRACTOR (CM/GC) DELIVERY 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 RES_1.0 project and PLM_5.3 project; and

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

WHEREAS, the WWSP staff and design consultant evaluated the RES_1.0 project, which includes construction of the PLM_5.3 project, and determined it is best suited for a CM/GC delivery method; and

WHEREAS, based on WWSP staff's and design consultant's evaluation, CM/GC provides the greatest degree of owner control and enables value engineering input during design and an early construction phase; and

WHEREAS, the WWSP staff developed findings required by ORS 297C.335 for an exemption from competitive bidding, 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 June 1, 2020 and conducted a public hearing on July 2, 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 RES_1.0 project (combined with the PLM_5.3 project); and

Section 2: The Commission hereby directs and authorizes WWSP staff to take all action to adopt CM/GC delivery method for the RES_1.0 project (combined with the PLM_5.3 project).

Approved and adopted at a regular meeting held on the 2nd day of July 2020.

_____ James Duggan, Chair

_____ Denny Doyle, Vice Chair

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**Exhibit 1 to Resolution WWSS-XX-20**

**FINDINGS IN SUPPORT OF AN EXEMPTION FROM COMPETITIVE BIDDING**

**WILLAMETTE WATER SUPPLY SYSTEM**

**RES_1.0 (COMBINED WITH PLM_5.3) CONSTRUCTION MANAGER/GENERAL CONTRACTOR (CM/GC) DELIVERY METHOD**

## I. BACKGROUND

Willamette Water Supply System Commission ("Owner") 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.

### A. Project Description – Willamette Water Supply System, RES_1.0 and PLM_5.3 Projects

The RES_1.0 project consists of two new pre-stressed concrete water reservoirs, each with capacity of 15 million gallons, located east of the intersection of SW Grabhorn Road and SW Stone Creek Drive on Cooper Mountain, near the western edge of the City of Beaverton. The primary elements of the project include:

- Two 15 million-gallon circular pre-stressed concrete storage tanks (AWWA D110).
- Four vaults for 66-inch diameter finished water pipelines and appurtenances.
- Yard piping to allow parallel and/or series operation of the two tanks, if elected by WWSP.
- A building to house a chemical feed system, electrical, and supervisory control and data acquisition (SCADA) equipment.
- Site grading, including extensive rock excavation.
- Soil nail and rock bolt reinforcement walls at the north, east, and west areas of the site.
- Stormwater basin retention, treatment, and conveyance.
- Site access roadways.

The PLM_5.3 project consists of approximately 21,000 feet of 66-inch diameter welded steel pipeline to convey treated water to and from the RES_1.0 project. This reach of pipeline will travel north along Grabhorn Road to the RES_1.0 project, and then west to an alignment approximately parallel to Clark Hill Road, then north across Farmington Road along the alignment of a proposed future extension of Cornelius Pass Road to SW Rosedale road that connects to PLW_1.3 pipeline project.

The RES_1.0 and PLM_5.3 projects are being designed by different design consultants; however, as explained below, they will be constructed together under a single construction contract. The combined RES_1.0 and PLM_5.3 projects are hereinafter referred to as "RES_1.0/PLM_5.3".

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 the 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 draft findings in this document demonstrate that those conditions are met and that the project may be delivered through the CM/GC approach.

## B. The Construction Manager/General Contractor (CM/GC) Approach

The CM/GC delivery approach is a type of alternative delivery that secures contractor involvement earlier, during the design phase, and establishes a relationship between the owner and contractor that is carried through all phases of the project, from design through construction and startup of the facility. Generally with this approach, the owner procures a design firm to develop the design documents. A CM/GC contractor is procured in the design phase (often around 60% design) to provide input during design to enhance constructability of the project and mitigate construction risks that may lead to schedule and cost overruns. A request for proposal (RFP) is typically used for obtaining the CM/GC contractor, which allows selection to be based on qualifications, experience, and cost.

The expected benefits of the CM/GC delivery approach include:

- Providing the owner the ability to select the CM/GC contractor based, in part, on qualifications.
- Inclusion of a CM/GC firm in workshops with the WWSP and future operations staff to understand the operational preferences for the reservoirs and, thereby, enable safe and thorough planning for the WWSS commissioning and startup.
- Mitigating potential schedule delays and cost overruns by including the contractor during design, thereby achieving higher confidence that the project will be completed on time and within the project budget.
- Shifting some project delivery risk to the CM/GC contractor, thereby encouraging the contractor to work collaboratively and focus on avoiding construction issues.
- Obtaining value engineering input from the CM/GC contractor throughout the design, resulting in cost savings, reduction of claims, and reduced project risk.
- Having a CM/GC contractor involved early in design to identify and mitigate possible safety and public outreach concerns early on, creating a safer construction environment.
- Allowing for an early phase 1 of construction for required earthwork for site preparation.

CM/GC has been implemented on the WWSP, as well as many projects across the United States and in the Pacific Northwest. It has also been used successfully by TVWD and Hillsboro for their individual projects and by the Joint Water Commission, of which they are members. This delivery approach is desirable for the WWSS RES_1.0 /PLM_5.3 project because CM/GC enables engagement of a highly-qualified contractor throughout the design and construction phases to mitigate and manage delivery risks for this complex project.

## II. 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."***

### A. Procurement Approach

The WWSP intends to advertise in the Oregon Daily Journal of Commerce, the WWSP website, and other publications to notify local, regional, and national CM/GC contractors of the RFP. Based on the availability of qualified contractors and information from recent projects in the area, it is anticipated that at least three to five CM/GC contractors will submit proposals.

Using the RFP process, selection of the CM/GC contractor will be based on qualifications and cost criteria, which may include the CM/GC's health and safety record, relevant experience, proposed key staff, project understanding and delivery approach, proposed cost for preconstruction phase services, and proposed rates for construction phase services, among other criteria. A selection committee will review each proposal received and may determine a shortlist of CM/GC contractors, based on the initial evaluation of qualifications, technical approach, and cost evaluations. Shortlisted CM/GC contractors may be invited to participate in interviews to determine the final selection.

The RFP will include requirements to divide the work into packages and competitively bid the packages among subcontractors, as opposed to the CM/GC contractor presumptively self-performing the work. The CM/GC contractor would also be required to competitively bid on packages for which it desires to self-perform the work. For work packages the CM/GC contractor intends to self-perform, bids would be submitted to the Owner for full transparency to the bidding community. This further encourages competition and provides a better value to the Owner.

## FINDINGS REGARDING SUBSTANTIAL COST SAVINGS

**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 or, if the contract is for a public improvement described in ORS 279A.050(3)(b), to the contracting agency or the public.*" ORS 279C.335(2)(b) further provides that: *"In approving a finding under this paragraph, the Director of the Oregon Department of Administrative Services, the Director of Transportation or the local contract review board shall consider the type, cost and amount of the contract and, to the extent applicable to the particular public improvement contract or class of public improvement contracts, the following:***

***(A) How many persons are available to bid;***

***(B) The construction budget and the projected operating costs for the completed public improvement;***

***(C) Public benefits that may result from granting the exemption;***

***(D) Whether value engineering techniques may decrease the cost of the public improvement;***

***(E) The cost and availability of specialized expertise that is necessary for the public improvement;***

***(F) Any likely increases in public safety;***

***(G) Whether granting the exemption may reduce risks to the contracting agency, the state agency or the public that are related to the public improvement;***
***(H) Whether granting the exemption will affect the sources of funding for the public improvement;***
***(I) Whether granting the exemption will better enable the contracting agency to control the impact that market conditions may have on the cost of and time necessary to complete the public improvement;***
***(J) Whether granting the exemption will better enable the contracting agency to address the size and technical complexity of the public improvement;***
***(K) Whether the public improvement involves new construction or renovates or remodels an existing structure;***
***(L) Whether the public improvement will be occupied or unoccupied during construction;***
***(M) Whether the public improvement will require a single phase of construction work or multiple phases of construction work to address specific project conditions; and***
***(N) Whether the contracting agency or state agency has, or has retained under contract, and will use contracting agency or state agency personnel, consultants and legal counsel that have necessary expertise and substantial experience in alternative contracting methods to assist in developing the alternative contracting method that the contracting agency or state agency will use to award the public improvement contract and to help negotiate, administer and enforce the terms of the public improvement contract.***

The following section presents WWSP staff findings relative to each of the factors required to be addressed by ORS 279C.335(2)(b)(A) through (N), with captions edited for space.

**A. How Many Persons are Available to Bid**

A sufficient number of CM/GC contactors are available to respond to the RFP. Some of the qualified CM/GC contractors with offices in the Pacific Northwest that may respond the RFP are listed below:

- Hoffman Construction Company
- Kiewit Infrastructure West, Co.
- M.A. Mortenson Company
- Slayden Construction Group, Inc.

It is also anticipated that qualified national CM/GC contractors, not already located in the Pacific Northwest, may respond the RFP. WWSP's prior RFPs using the CM/GC process attracted multiple, competitive contractors.

*Finding Summary: The process the Owner intends to use to select the CM/GC contractor and the number of contractors available to propose makes the exemption unlikely to encourage favoritism in the awarding of the public improvement project or substantially diminish competition for the contract.*

**B. Construction Budget**

There are no known budgetary impacts anticipated at this time. CM/GC was not anticipated in the baseline plan; therefore, the professional services portion of CM/GC delivery were not anticipated. The cost associated with professional services range in value but are typically less than one percent of the expected construction cost. During construction, CM/GC profit margins and labor cost are typically higher than low-bid projects. While these items could negatively impact the project budget,

allowing the CM/GC contractor to participate in value engineering efforts around 60% design, provides opportunities for construction cost savings, compared to the traditional DBB approach. Additional narrative and references regarding the likely benefits to the project's construction budget through the use of value engineering with contractor participation are provided below in Section D.

*Finding Summary: Alternative delivery through CM/GC will not increase costs, and based on other regional projects of similar type and size, construction cost savings are likely.*

**C. Public Benefits**

The WWSS, including the RES_1.0/PLM_5.3 project, is expected to provide long term public benefits including:

- Seismically resilient water supply
- Sustainable water supply for future growth
- Clean, high quality water for potable use
- Redundancy in case of an emergency event

Delivery of the RES_1.0/PLM_5.3 project is a challenging component of the WWSS. An experienced contractor is necessary to complete this work to ensure the final product meets the WWSS and project-specific goals. Project-specific challenges including site excavation work involving a large volume of rock removal, traffic control, and limited site access. A CM/GC approach enables the selection of a contractor based on qualifications and previous similar technical work experience. The contractor's approach to traffic control, health and safety, and impact to the public can also be evaluated as part of the selection process.

*Finding Summary: The use of a RFP for a CM/GC contractor enables the selection of a contractor that has previously demonstrated the capability to deliver complex water storage and transmission projects on time and within budget. This will ultimately result in a higher quality product that will benefit the public for years to come.*

**D. Value Engineering**

Value engineering (VE) is an effort to independently review a project's design documents and recommend changes that decrease its construction or operations cost, reduce construction or safety risks, or otherwise improve the overall long-term value of the project. To achieve the best results, the VE efforts should be started early in the design phase. The traditional DBB approach prevents the contractor from participating in an early VE process, because the contractor does not see the design documents until the design is complete. Alternatively, the CM/GC approach uses a competitive process to procure an experienced and qualified contractor early in the design phase, so that the contractor can participate in early VE processes.

Allowing the contractor to participate in early VE of the project is beneficial, because it enables collaboration among the designer, owner and contractor before the design is finished. This effort takes advantage of the contractor's experience and construction knowledge to improve the design documents and allow for a more constructible design. This process also allows the contractor more time than the traditional DBB approach to become familiar with the design and the designer's goals and intentions. Being more familiar with these aspects of the design decreases the uncertainty of how the contractor will approach the work and reduces risk-based price increases that contractors add

when design documents are unclear. Reducing constructability risks also has the added benefit of reducing the potential for change orders and claims during construction, which likely further reduces overall project cost.

The following references provide additional discussion of the benefits of including the CM/GC contractor in VE efforts:

1. "Cost Benefits to Construction Manager/General Contractor Approach", Office of Budget and Policy, Federal Transit Administration, Washington D.C., April, 2016

   https://www.transit.dot.gov/regulations-and-guidance/cost-benefits-construction-managergeneral-contractor-approach

2. "Oregon Public Contracting Coalition Guide to CM/GC Contracting", Construction Engineering Management Program, Department of Civil, Construction, and Environmental Engineering, Oregon State University, Corvallis OR, February 2002

   https://www.agc-oregon.org/wp-content/uploads/2011/10/CM_GC_Guide_05.pdf

Granting the exemption will allow the WWSP to select a qualified CM/GC contractor to participate in value engineering efforts early and throughout the design phase. The CM/GC contractor will improve constructability of the project, likely reducing project risk and cost.

*Finding Summary: The CM/GC approach facilitates contractor-led value engineering early in the design, continuing throughout design and construction, which provides opportunity to reduce the overall cost and delivery risk of the project.*

**E. The Cost and Availability of Specialized Expertise Necessary for the Project**

Construction of the project will require specialized technical expertise to properly plan and execute work to address the complex technical and logistical challenges of the project. Using the CM/GC alternative delivery approach will allow the selection of the most qualified contractor with relevant experience in similar water storage and transmission projects.

*Finding Summary: Using a competitive RFP process for procurement of the CM/GC contractor will allow the opportunity to evaluate and select a contractor based on previous experience and key staff qualifications, securing the experience and expertise required to meet the criteria established for the project.*

**F. Public Safety**

It is important to build the project with safety foremost in the contractor's approach, to ensure safe working conditions for the contractor, neighbors, and public.

The CM/GC approach allows historical safety performance and commissioning work on similar water storage and transmission projects to be considered as a selection criterion. It also permits the WWSP to work closely with the CM/GC contractor to verify that the design and work sequences include appropriate safety measures, that the contractor understands the safety concerns, and that the contractor will take appropriate steps to address them.

*Finding Summary: The CM/GC delivery approach promotes collaboration among the WWSP safety personnel, design consultants, and the contractor during design to vet and refine construction methods, thereby enhancing construction and operational safety.*

**G. Risk Reduction**

In a traditional design-bid-build delivery approach, the design consultant develops the work sequence. Communicating that information to the contractors during the bid phase can be challenging due to the level of detail needed. However, the use of the CM/GC delivery approach enables the contractor to fully understand the work constraints during the design phase and develop a work sequence with the design consultants (RES_1.0 and PLM_5.3 have different design consultants) and WWSP staff that fits the CM/GC's available equipment and preferred methods of construction. The work sequence will also include detailed logistical planning for extensive, yet physically constrained, working conditions at and near the RES_1.0 site. This involvement during design and sequence planning reduces the risk of cost overruns, schedule delays, and safety hazards. Furthermore, the reduction in project uncertainty achieved by having the contractor involved during design translates into potential cost savings to the Owner in the form of reduced contingency within construction pricing and reduces the risk to the Owner of CM/GC-requested change orders related to design issues.

*Finding Summary: The collaboration between Owner, operations staff, CM/GC contractor, and design consultants throughout the design process will allow the involved parties to identify and mitigate risks as the project is developed.*

**H. Impact on Project Funding**

Using the CM/GC delivery approach will not impact the funding source or method of the project.

*Finding Summary: No impact.*

**I. Market Conditions**

During recent years, the demand for resources to deliver public works projects has increased as a result of commercial construction across the country and specifically in the Pacific Northwest. The recent COVID-19 pandemic may have near-term impacts on this historical trend; however, any longer-term impact that may be experienced during the life of the RES_1.0/PLM_5.3 project cannot be determined. The recent historical increase in demand has led to a shortage of construction professionals, skilled craftsmen, and laborers as well as increased costs for building materials impacting construction costs. Using the CM/GC approach, provides additional flexibility to react quickly to changes in market conditions. An example of this may be early procurement of strategic portions of the project to mitigate risks due to changing market conditions.

Further, the RFP for the CM/GC contractor will include requirements to divide the work into packages and competitively bid the packages among subcontractors, which would promote competition based on the market conditions at time of bidding.

*Finding Summary: Using the CM/GC approach offers additional flexibility to quickly react to market conditions.*

**J. Technical Complexity**

Characteristics of the project that lead to its technical complexity include four major work packages that will likely be constructed by different contractors or subcontractors. These include prestressed tanks, rock excavation and wall reinforcement, large diameter linear (pipeline) work, and balance of RES_1.0 on-site facilities. These packages are somewhat unrelated and will need to be coordinated for a smooth construction process. Additionally, the RES_1.0 site is very small for the facilities being provided, requiring that construction staging be accommodated across SW Grabhorn Road. As a result, traffic control and staging will be extremely critical aspects of the project. The CM/GC delivery approach will allow the WWSP to acquire a highly qualified general contractor with commensurate experience with complex projects. Establishing a collaborative relationship among the design consultants, WWSP, and contractor early on using CM/GC will enable the technically complex aspects of this project to be fully addressed. Furthermore, the collaborative relationship enables the CM/GC to understand the different components of the work, the site and schedule constraints and allow for an early phase of construction for the rock excavation.

*Finding Summary: The project will require an experienced contractor to understand the components of the work, site and schedule constraints, and plan accordingly. Selecting a highly qualified contractor through a RFP process will facilitate successful completion of this complex project.*

**K. New Construction, Renovation, or Remodel?**

The project includes new construction on a newly developed site. The project will require a contractor that has experience developing new sites and utilities. The design collaboration inherent in the CM/GC delivery approach allows for adequate time to develop a work sequence for planning successful construction, commissioning, startup and operations.

*Summary Finding: A CM/GC delivery approach will allow the WWSP to select a CM/GC contractor that has demonstrated capability of delivering large-scale water storage and transmission projects on new sites.*

**L. Occupied or Unoccupied During Construction?**

A chemical feed/electrical building will be constructed on the RES_1.0 site. During construction, the facility will be unoccupied, until the commissioning and startup steps. During commissioning and startup, the Owner's operations staff will be present on-site and participate in training and commissioning activities. Allowing the CM/GC contractor to work with the operators early on to address any of their concerns and receive their input on design will enhance the value of the project. CM/GC allows for this early collaboration and will likely yield a higher quality final project and ensure successful operation of the reservoir following construction.

*Finding Summary: The CM/GC contractor will be better prepared for a successful commissioning and startup phase because of early involvement with the operations staff.*

**M. Is the Construction Phased?**

Construction of the project is anticipated to be completed by one CM/GC firm in one or more work phases, depending on the best value to the Owner. It is anticipated that an early work package will be beneficial for the earthwork on this site.

**N.** *Finding Summary:*

The CM/GC delivery method is beneficial when multiple phases of work are needed as the coordination and planning can occur early in the project.

**O. Project Staff Qualifications**

The WWSP has consultants and legal counsel retained under contract that have the necessary expertise and experience in alternative delivery approaches. These resources will be utilized to develop procurement documents for obtaining a qualified CM/GC contractor and to support the delivery of both the design and construction aspects of the project.

*Finding Summary: The WWSP and its consultants have the experience to administer a CM/GC delivery approach.*

**III. Conclusion**

In accordance with ORS 279C, the WWSP finds that the use of the CM/GC alternative delivery approach for the project allows:

- Collaboration among the WWSP, Owners' operations staff, design consultants, and contractor throughout design and construction to improve the quality of decisions.
- Use of value engineering to make informed decisions that increase the opportunity to reduce the overall cost and delivery risk of the project.
- Dividing the work into smaller packages to allow for competitive bidding and selection of suppliers, equipment, materials, and subcontractors, with solicitations managed by the CM/GC contractor.
- Phasing of the work to allow for greater control of construction sequencing and coordination.
- Coordinated responsibility for worker safety.
- Selection of a contractor based on qualifications with experience in new construction of complex water storage and transmission projects.

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# SUBTASK 4.4.2 - CONSTRUCTION DELIVERY APPROACH EVALUATION

Design, Bidding Phase, and Services During Construction for RES_1.0

**B&V PROJECT NO. 404397**

Willamette Water Supply Our Reliable Water

**PREPARED FOR**

Willamette Water Supply Program

FEBRUARY 12, 2020

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# 1.0 INTRODUCTION

The Willamette Water Supply System (WWSS) Commission is an Oregon intergovernmental entity formed by Tualatin Valley Water District (TVWD), the City of Hillsboro (Hillsboro), and the City of Beaverton (Beaverton), collectively referred to as Owner. The WWSS Commission was formed to build the WWSS in response to planned growth in the TVWD, Hillsboro, and Beaverton service areas. The WWSS will provide an additional, resilient water supply for Washington County.

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

The WWSP program team has performed an analysis of the construction delivery approach alternatives for RES_ 1.0, incorporating the decision to combine two individual projects - RES_1.0 and PLM_5.3. This evaluation by Black & Veatch reviews WWSP's analysis in light of the unique aspects and current status of the project.

## 1.1 Project Description

The RES_1.0 project consists of two new pre-stressed concrete water reservoirs, each with capacity of 15 million gallons (MG), located east of the intersection of SW Grabhorn Road and SW Stone Creek Drive on Cooper Mountain, near the western edge of the City of Beaverton. The primary elements of the project include:

- Two 15 MG circular pre-stressed concrete storage tanks (AWWA D110).
- Four vaults for 66" diameter finished water pipelines and appurtenances.
- Yard piping to allow parallel and/or series operation of the two tanks, if elected by WWSP.
- A building to house a chemical feed system, electrical, and SCADA equipment.
- Site grading, including extensive rock excavation.
- Soil nail and rock bolt reinforcement walls at the north, east, and west areas of the site.
- Storm water retention, treatment, and conveyance.
- Site access roadways.

The PLM_5.3 project, designed by Jacobs Engineering (Jacobs), consists of approximately 21,000 feet of 66-inch diameter welded steel pipeline to convey treated water from the WWSS Water Treatment Plant (WTP_1.0) to RES_1.0. This reach of pipeline will travel north along Grabhorn Road to the new water storage tanks on Cooper Mountain, and then west to Clark Hill Road then north to Farmington Road.

# 2.0 RES_1.0/PLM_5.3 CONSTRUCTION DELIVERY EVALUATION

On March 13, 2019, the Program issued its final report entitled "Willamette Water Supply Program – PLM_5.3/RES_1.0 Packaging and Delivery Alternatives Evaluation (Report)," a copy of which is included as Attachment 1. The objective of the Program's delivery alternatives evaluation was to:

- Provide background and progress on the PLM_5.3 alignment.
- Evaluate sequencing alternatives for constructing PLM_5.3 and RES_1.0 to avoid construction conflicts near the reservoir site.
- Evaluate different construction delivery approaches for the recommended alternative.

## 2.1 Summary of Program Evaluation

In the Report, the Program presented the following analysis:

*"Although PDB and, to a lesser extent, LS DB offer advantages for some criteria, those delivery approaches do not readily accommodate sustained progress on the PLM_5.3 design. A single, new procurement would be required for design and construction of PLM_5.3 and RES_1.0. Suspending the PLM_5.3 design and potentially transferring the design to a new design consultant that is part of the design-build team poses considerable schedule risk and would result in rework for PLM_5.3 design. Because of these disadvantages, PDB and LS DB were dismissed from further consideration.*

*Both DBB and CM/GC would accommodate the existing PLM_5.3 design contract and enable continued design progress. Those delivery approaches would also enable separation of PLM_5.4 from PLM_5.3 if WCLUT is able to partner on PLM_5.4.*

*CM/GC could provide some advantages over DBB, principally through the benefits of contractor involvement during design for improved VE, constructability, and pricing. CM/GC may also enable greater control of construction sequencing and coordinated (shorter duration) construction in the reservoir area.*

*DBB would secure the most competitive construction pricing. With approval of special exemptions, construction contractor qualifications and safety record could be considered as part of a DBB selection process (i.e., best-value selection).*

*During the January 31, 2019 meeting, the potential benefits of CM/GC delivery for this project were judged to be slight. Comparable project delivery outcomes could be achieved by a well-executed DBB delivery approach. Contractor selection could use a best-value approach that considers project-specific qualifications and safety record in conjunction with cost. Additional information about RES_1.0 will be developed during detailed design, which is scheduled to begin in late 2019. That information can be used to confirm a final delivery approach for PLM_5.3 and RES_1.0 construction."*

The Report made the following recommendation:

*"It is recommended that the DBB delivery approach, as reflected in the current baseline, be retained for planning delivery of PLM_5.3 and RES_1.0. However, the baseline would be modified to accommodate a best-value selection process for the construction contractor and the packaging of PLM_5.3 and RES_1.0 (as recommended in Section 3.2). After a design consultant is engaged for RES_1.0, a final review of delivery approaches would be performed to confirm or modify the plan."*

## 2.2 Delivery Options for Evaluation

Black & Veatch's analysis concurs with the recommendation to remove PDB and LS DB from further consideration for the reasons stated in the Report. Therefore, our analysis focused on the merits of DBB and CM/GC for delivery of the combined RES_1.0 and PLM_5.3 project.

## 2.3 Factors Unique to RES_1.0

In evaluating the remaining delivery options, there are a few unique aspects to this combined project that should be considered in the evaluation. These include:

- There are four major work packages that will likely be constructed by different contractors (general or sub) – prestressed tanks, rock excavation and wall reinforcement, large diameter linear work, and balance of plant. These packages are somewhat unrelated and will need to be coordinated for a smooth construction process.
- The prestressed tank construction is specialized construction with very limited companies preforming this type of work. It is possible there will be only one bidder for this portion of the work.
- The construction package will be designed by two different consultants, Black & Veatch for RES_1.0 and Jacobs for PLM_5.3.
- The site is very small for the facilities being provided, requiring that construction staging be accommodated across SW Grabhorn Road. As a result, traffic control and staging will be extremely critical aspects of the project.

## 2.4 Black & Veatch Evaluation

Black & Veatch's evaluation was based on the analysis already completed while considering the unique aspects of the project. In general, we concur with the criteria, and assessment of each, made for the two delivery approaches except for the "Promotes competitive construction pricing that benefits owner".

Due to the potential sole source package for the prestressed tanks, there is a concern that it could result in premium pricing. One approach to mitigate this potential impact is to have an open book, negotiation with the subcontractor. With DBB, this approach is difficult to accommodate within the bidding process, though it can be a separate process with the negotiated contract assigned to the successful contractor. The downside of this process is the potential gaps in packaging and terms and conditions that conflict with the contractor's approach. With a CM/GC approach, this negotiation process can be a more collaborative activity.

This open book concept can be applied to the other major packages as well, providing greater assurance of reasonable pricing.

Another advantage of a CM/GC approach is early input on the site constraints/constructability issues. While the designers both have construction staff that can provide input on these issues, engaging the party that will have responsibility for implementing the requirements will result in a smoother transition into construction.

There are two additional potential advantages of a CM/GC approach. First would be coordination of the two design packages to avoid any potential conflicts or change order opportunities due to different conditions in the two packages. Second, if necessary to meet schedule, the CM/GC approach would allow for early procurement or start of individual construction packages.

## 2.5 Recommendation

Based on the unique features of this project, it appears a CM/GC approach has the potential to more effectively address the need for competitive pricing and eliminate the need for a special bidding exemption while bringing the other, already identified advantages.

# ATTACHMENT 1

# Willamette Water Supply Program – PLM_5.3/RES_1.0 Packaging and Delivery Alternatives Evaluation

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www.OurReliableWater.org

Willamette Water Supply
Our Reliable Water

Willamette Water Supply Program

# PLM_5.3/RES_1.0 Packaging and Delivery Alternatives Evaluation
# Final

**March 13, 2019**

For Internal Use Only

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# Table of Contents



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## List of Abbreviations and Acronyms

| | |
|---|---|
| BCA | Business Case Analysis |
| BPA | Bonneville Power Administration |
| DB | Design-Build |
| DBB | Design-Bid-Build |
| CM/GC | Construction Manager/General Contractor |
| GMP | Guaranteed Maximum Price |
| Hillsboro | City of Hillsboro |
| Jacobs | Jacobs Engineering Group |
| LS DB | Lump Sum Design-Build |
| mg | million gallon |
| mgd | million gallons per day |
| O&M | operation and maintenance |
| OPCC | Opinion of Probable Construction Cost |
| PDB | Progressive Design-Build |
| PLM | Pipeline Main |
| PLW | Pipeline West |
| Project Participants | Tualatin Valley Water District and the City of Hillsboro |
| RES | Reservoir |
| ROW | right-of-way |
| SW | southwest |
| TVWD | Tualatin Valley Water District |
| VE | value engineering |
| WTP | Water Treatment Plant |
| WCLUT | Washington County Land Use and Transportation |
| WWSP | Willamette Water Supply Program |
| WWSS | Willamette Water Supply System |

Section 1.0

# Introduction

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# 1.0 Introduction

Tualatin Valley Water District (TVWD) and the City of Hillsboro (Hillsboro), collectively referred to as the Project Participants, identified the Willamette Water Supply System (WWSS) as the best option for future delivery of drinking water to their service areas in Washington County. The Willamette Water Supply Program (WWSP) is led by the Project Participants to develop the WWSS. Other water providers in the region are looking at options for future participation. The mid-Willamette River at Wilsonville will be the new water supply source for the WWSS. Although current demands are met through other sources, the addition of a new source will provide improved water supply reliability and system resiliency. Developing an additional water supply through a partnership supports the region's plans for responsible growth within the urban growth boundary.

## 1.1 Overview and Purpose

Pipeline Main (PLM) 5.3 is a segment of the PLM_5.0 project (Scholls Area Pipeline Project) with approximately 20,940 linear feet of 66-inch diameter pipeline that was initially planned to extend from southwest (SW) Grabhorn Road at SW Tile Flat to SW Farmington Road at SW 209th Avenue. The pipeline would have connected to the Pipeline West (PLW)_1.3 project (South Hillsboro Area Pipeline Project) at the intersection of SW Farmington Road and SW 209th Avenue.

The Reservoir (RES)_1.0 project is located within and connected to the PLM_5.3 project (see **Figure 1-1**). RES_1.0 will consist of two aboveground water storage tanks with a total storage capacity of 30 million gallons (mg) distributed between the two. The proposed location is in the Cooper Mountain area southeast of intersection SW Grabhorn Road and SW Stone Creek Road. RES_1.0 will receive and store finished water treated at the water treatment plant (WTP)_1.0. Flows within PLM_5.3 that enter RES_1.0 from the south will be pumped, and flows exiting RES_1.0 to the west and north will leave by gravity.

Based on the current WWSP master schedule and budget, construction of PLM_5.3 and RES_1.0 is anticipated between 2022 and 2024. The concurrent construction schedule will be complex due to access to the RES_1.0 site during construction and availability of the staging area, located on a property immediately west of RES_1.0, for two contractors. As a result, WWSP staff used a Business Case Analysis (BCA) approach to evaluate several options for combining the two projects.

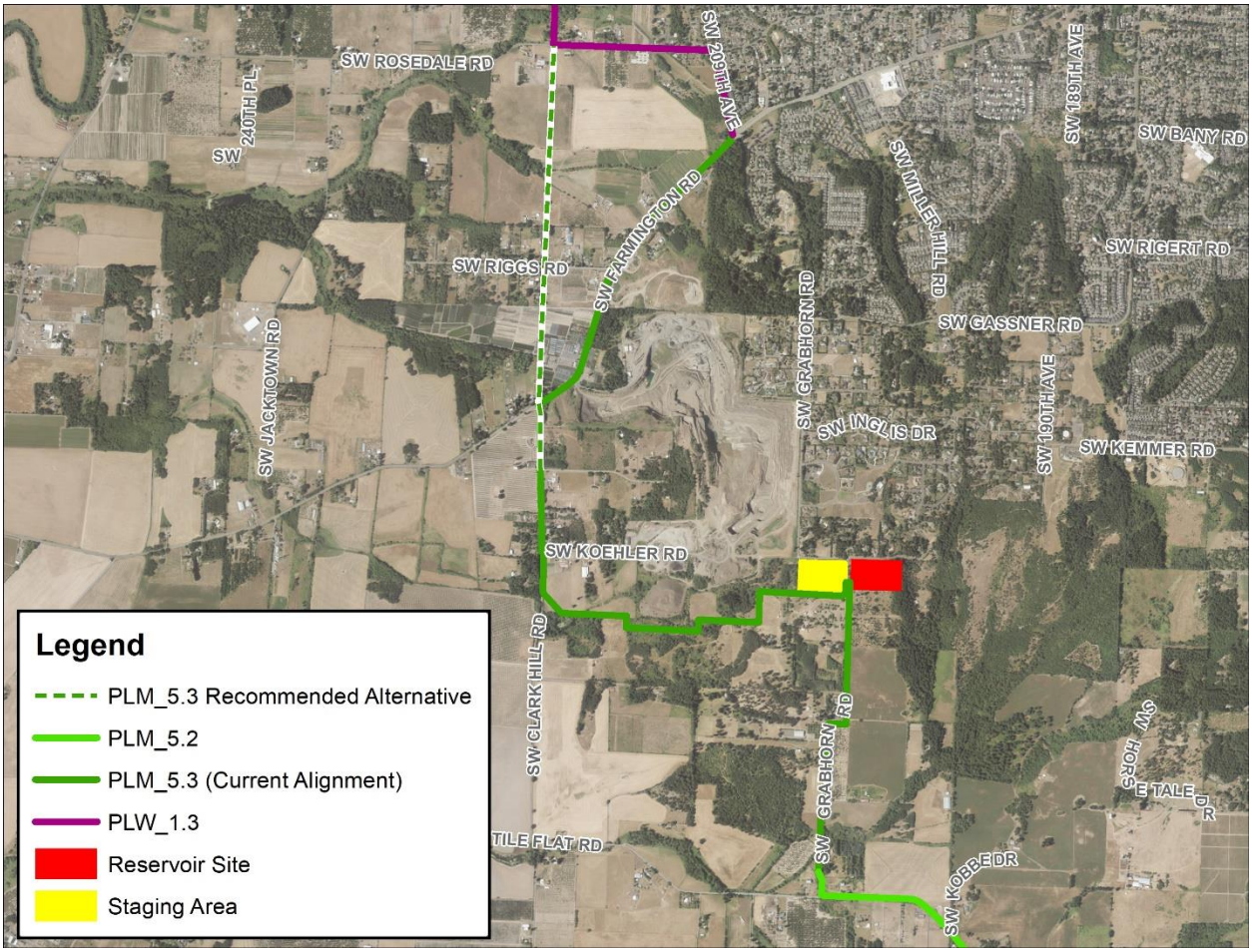


Figure 1-1. Plan Profile of PLM_5.3 and RES_1.0 Projects

The objectives of this delivery alternatives evaluation are to:

- Provide background and progress on the PLM_5.3 alignment.
- Evaluate sequencing alternatives for constructing PLM_5.3 and RES_1.0 to avoid construction conflicts near the reservoir site.
- Evaluate different construction delivery approaches for the recommended alternative.

Section 2.0

# PLM_5.3 Alignment Alternative Evaluation

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## 2.0 PLM_5.3 Alignment Alternative Evaluation

In September 2017, CH2M Hill, referred to as Jacobs Engineering Group (Jacobs) in this document and serving as the design consultant, conducted a geotechnical investigation that identified significant seismic hazards along SW Farmington Road. Jacobs determined it would require extensive ground improvements or other mitigations to protect the pipeline during a Cascadia Subduction Zone Earthquake event. To avoid and reduce the geotechnical concerns and potential mitigation requirements, WWSP explored alternative alignments for PLM_5.3.

After evaluating several alternatives using WWSP's standard alignment selection criteria, Jacobs (2018)[1] recommended the corridor shown in **Figure 2-1** as the preferred alternative for PLM_5.3. After further input from property owners and site investigations, an additional alignment was located further east, parallel to the Bonneville Power Administration (BPA) easement. This route heads north from SW Clark Hill Road to connect with the PLW_1.3 project at SW Rosedale Road. To maintain a connection to the TVWD system at SW Farmington Road and SW 209th Avenue, the PLW_1.3 pipeline alignment along SW Rosedale Road and SW 209th Avenue will be used to convey 17 mgd to the TVWD system.

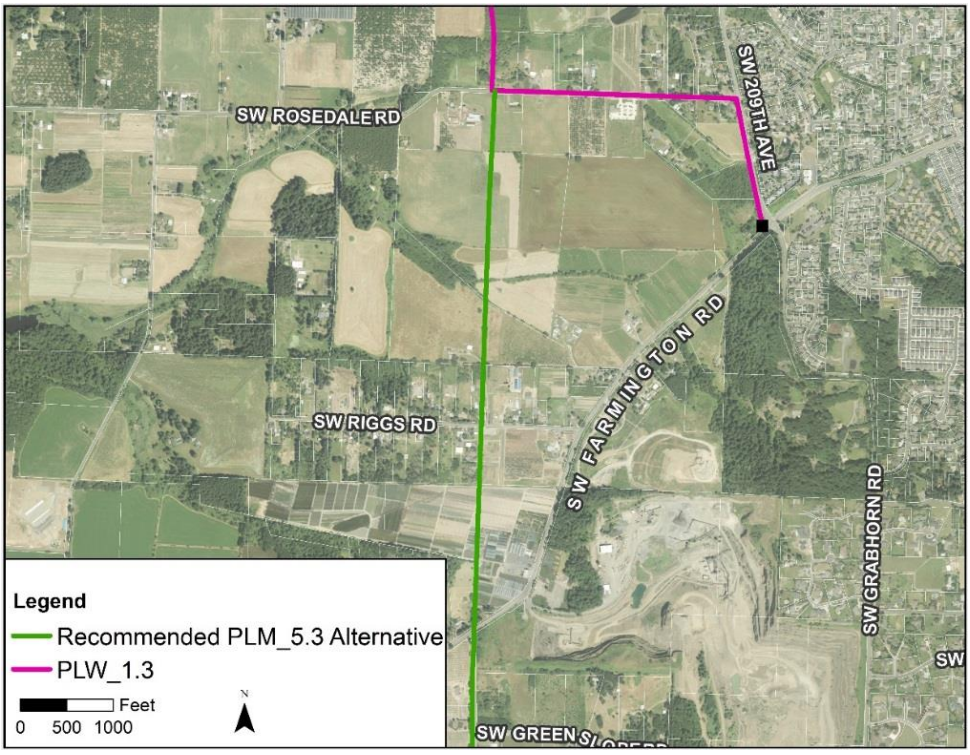


Figure 2-1. PLM_5.3 Preferred Alternative (approximate alignment)

The proposed pipeline corridor is located mainly on private property at the north/south main line between SW Farmington Road and SW Rosedale Road. It parallels the existing BPA high

[1] The recommendations in Jacob's *Farmington Road Alternatives Evaluation for PLM_5.3* (2018) apply only to the proposed pipeline corridor. These have since been refined and will be detailed as design progresses in 2019.

voltage transmission lines, but does not encroach on BPA's easement except to cross it. Due to the rural nature of the area, there are no roadway corridors like SW Farmington Road in which to site the pipeline. Therefore, this proposed alignment cannot meet WWSP's preference to use public rights-of-way (ROWs), as they are not available.

To connect PLM_5.3 to the existing TVWD system at SW Farmington Road and SW 209th Avenue, it was recommended to use the existing field work (survey, geotechnical, environmental, and cultural resources) and design to develop this smaller 17 mgd, 30-inch diameter pipeline.

Section 3.0

# Alternative Project Packaging Evaluation

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## 3.0 Alternative Project Packaging Evaluation

In the current schedule, PLM_5.3 and RES_1.0 construction phases overlap, which present many risks to WWSP. Several schedule modifications and project packaging alternatives were evaluated to address these construction phase challenges. The status of each affected project influences alternative project packaging, as follows:

- RES_1.0 is currently in pre-design; procurement of a design consultant is expected to begin in October 2019.
- PLM_5.3 is currently in early design, with field work (survey, geotechnical, environmental, and cultural resources) under way to provide base data for development of the 30% design, which is expected by April 2019.
- PLW_1.3 is currently progressing toward 60% design, with design submittals due in May 2019. However, the connection point of PLM_5.3 to PLW_1.3 on Rosedale Avenue is still unknown due to PLM_5.3 alignment not being finalized yet.

To minimize public disruption from overlapping construction, four potential alternatives and a baseline (see **Table 1, Appendix A**) were evaluated. The baseline option represents PLM_5.3 and RES_1.0 as two independent projects with overlapping construction schedules, as currently planned.

*Baseline* – PLM_5.3 and RES_1.0 construction would be procured and executed as separate projects. Because construction will overlap, there will be some spatial and temporal construction conflicts around the reservoir site related to construction traffic and staging.

*Alternative A* – RES_1.0 construction would proceed first, followed by PLM_5.3, lengthening overall construction activities on and around the reservoir site.

*Alternative B* – PLM_5.3 construction would proceed first, followed by RES_1.0, lengthening overall construction activities on and around the reservoir site.

*Alternative C* – PLM_5.3 and RES_1.0 would be procured and executed as a single construction project, maximizing coordination of construction traffic and staging (see **Figure 3-1**).

*Alternative D* – Separate PLM_5.3 alignment into two different construction projects: PLM_5.3 and PLM_5.4. To avoid construction conflicts at the reservoir site, PLM_5.3 segment from SW Tile Flat Road to SW Green Slope Road at Clark Hill Road would be combined with RES_1.0. The remaining length of pipeline from SW Green Slope Road at Clark Hill Road to SW Rosedale Road (PLW_1.3 connection) would become PLM_5.4 and constructed as a separate project (see **Figure 3-1**).

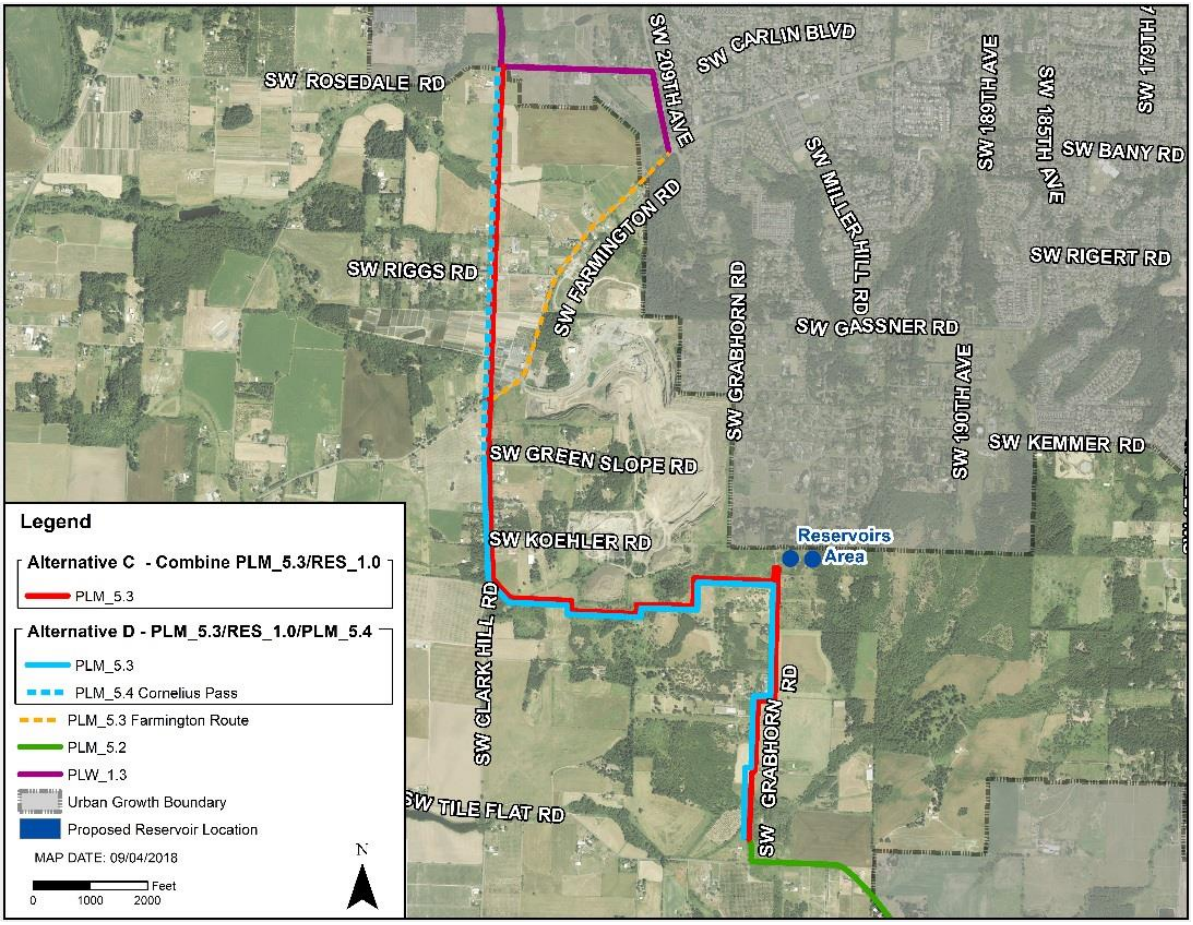


Figure 3-1. Alternative C and Alternative D

## 3.1 Evaluation: Criteria and Results

The alternatives for packaging PLM_5.3 and RES_1.0 were evaluated based on WWSP's BCA approach, which included the following criteria:

- Cost impact
- Schedule impact
- Financial capacity
- Procurement impact
- Design impact
- Construction impact
- Quality optimization
- Public disruption and public affairs
- Environmental/permitting impact
- Real estate and ROW acquisition
- Performing agency partnership
- Substantial limitation identified

An evaluation workshop was held August 14, 2018, with key WWSP staff and managers. The team discussed the benefits and challenges of packaging alternatives for each BCA criterion and, as a result, the alternative selection is based on multidisciplinary input. Results from the workshop are provided in **Table 1, Appendix A** and summarized below.

*Baseline* – By weighing the benefits and challenges, the baseline was determined to be more impactful compared to the other alternatives. This was determined because the projects would have limited coordination, and overlapping construction would complicate construction traffic and staging that may cause greater public disruption. The team's recommendation was to eliminate this option.

*Alternative A* – This alternative was abandoned, as it presented several challenges to other alternatives, including:

- Longer construction duration near the RES_1.0 site (two years for both PLM_5.3 and RES_1.0), resulting in increased public disruption.
- Accelerating RES_1.0 design and construction could delay PLW_2.0[2] design and construction to balance WWSP cash flow.
- Accelerating RES_1.0 design could compress the duration of design, which would present quality and cost challenges.
- Creating significant challenges for testing and disinfection of the reservoir, as RES_1.0 construction would finish earlier than PLM_5.3, limiting access to and disposal of water for reservoir testing.
- Leaving RES_1.0 to spend years in long-term storage before placement into service.

*Alternative B* – This alternative was removed due to challenges similar to Alternative A, including public disruption from extended construction, potential PLW_2.0 timing and WWSP cash flow impacts, and startup and commissioning challenges.

*Alternative C* – This was chosen as the preferred alternative because it lacked substantial limitations and offered several benefits, including:

- Allows one construction procurement rather than two, as required for Alternatives A and B.
- Enables coordinated construction, limiting public disruption.
- May attract larger and more qualified contractors that can manage the work more efficiently.
- Given the large quantity of rock excavation necessary for the reservoir, a single construction contract would provide opportunities for the contractor to reuse or rebalance earth resources, create optimized haul routes for import and export of soils to and from the

[2] PLW_2.0 project (Cornelius Pass Pipeline Project) can accommodate some construction schedule adjustments to modify overall WWSP cash flow.

nearby quarry, and efficiently manage use of the staging area for pipeline or reservoir activities.

*Alternative D* – This alternative is considered a contingent variation of Alternative C, as there is a possibility of partnership with Washington County Land Use and Transportation (WCLUT) on PLM_5.4. However, there is limited likelihood of WCLUT being ready to present a road alignment and profile to coordinate with the pipeline design. Should a partnering opportunity arise, WWSP would weigh the benefits and risks of partnering with WCLUT by conducting another BCA evaluation. Implementing this alternative would entail greater complexity than Alternative C, agreements and coordination with WCLUT, additional pipeline design submittals, an additional project to manage, and, depending on timing of PLM_5.4, WWSP cash flow balancing. Nonetheless, construction in the reservoir area would be coordinated, limiting public disruption and offering similar constructability opportunities like Alternative C.

## 3.2 Recommendation

Following the BCA approach, Alternative C was selected as the preferred packaging alternative. Packaging PLM_5.3 and RES_1.0 projects together will gain the benefit of coordinated construction in an area with limited transportation routes. Alternative D will be retained as an option should WCLUT partnering become an opportunity in the future.

Section 4.0

# Alternative Delivery Approaches Evaluation

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## 4.0 Alternative Delivery Approaches Evaluation

With the preferred packaging alternative chosen, the next step was selecting a delivery approach for Alternative C. An evaluation workshop was held August 29, 2018, with key WWSP staff and managers. The team reviewed and discussed the potential delivery approaches against the evaluation criteria, which are summarized below[3]. The evaluation results were reviewed in a meeting held January 31, 2019.

### *Design-Bid-Build (DBB)*

DBB is the traditional method of delivery for most water and wastewater infrastructure projects and is the current delivery approach for this project; it is best suited for less complex projects that are budget-sensitive. It involves separate contracts between the owner and design consultant, and between the owner and construction contractor. It is a linear process, where one task follows completion of another, with no overlap. One of the primary advantages of conventional DBB is the owner controls completion of the design before advertising the project for bid. The owner selects a design consultant based on professional qualifications. The design consultant assists the owner with the detailed definition of the project and provides an Opinion of Probable Construction Cost (OPCC). Plans and specifications are completed and then a construction contractor is solicited for the project. DBB is not well suited for projects that are sequence-, schedule-, or change-sensitive. Unlike Construction Manager/General Contractor (CM/GC) and Design-Build (DB), described below, the DBB method typically has no contractor input during design development. Primary disadvantages are the schedule impact or time required to proceed through the sequential DBB process and the potential for costly changes or loss of value due to the lack of contractor input.

### *Construction Manager/General Contractor (CM/GC)*

In the CM/GC process, the owner hires a contractor to provide input during the design phase before the start of construction. The CM/GC process is broken into two contract phases. The first phase, design, allows the contractor to work with the design consultant and owner to identify risks, provide cost projections, and refine the project schedule. Once design is complete, a Guaranteed Maximum Price (GMP) is established through competitive bidding of work packages and negotiation of general conditions and construction supervision. The second contract phase, construction, begins after finalizing the GMP.

CM/GC is becoming a common alternate (to both DBB and DB) delivery approach for large, complex public works contracts. The owner works with both the design consultant and construction contractor throughout the design process. The design consultant works to provide technical solutions for the design. The CM/GC provides constructability input, value management, and cost estimating throughout design, as it requires overlap of design and construction activities. The owner benefits from input and collaboration with both the design

[3] Based on current project status, some delivery options have diminishing benefits, as a design consultant is already established for the pipeline work and design currently under way.

consultant and CM/GC. The CM/GC approach provides the owner more control over the design than the DB approach, as described below.

*Lump Sum Design-Build (LS DB) and Progressive Design-Build (PDB)*

The DB delivery approach is popular when project schedule and clarity of contractual responsibility are critical. The project can be expedited by starting selected aspects of construction as the design proceeds. Within the conventional LS DB approach, the total cost for both design and construction services is developed by the DB team, which consists of the design consultant and construction contractor, and presented as part of the initial selection process. This pricing model can result in significant contingency being held in the DB price to accommodate risks inherent in pricing construction for an unfinished design (typically 30% completion).

More recently, a hybrid approach between CM/GC and conventional DB, known most commonly as PDB, has been employed. This approach still provides contractor input into design, but defers fixing the construction price until near the end of design. This approach allows the owner continued input on the design. This approach also allows for the reduction of risk contingencies, but subjects the owner to less certainty of cost until design is complete.

The primary advantage with DB is the speed of completion. A secondary advantage is the single source responsibility for design and construction activities on the project. The main disadvantage to DB is the owner must focus early on its project objectives and communicate performance criteria in the project definition. Otherwise, the owner relinquishes a greater degree of control to the DB.

Some of the benefits typically attributed to the CM/CG delivery approach can be obtained from the PDB approach by employing innovative contractual requirements. Terms and conditions that establish two distinct contract phases (i.e., first contract phase - design through GMP and second contract phase - construction), separate pricing structures for each agreement, and open book subcontractor qualification and bidding procedures can be used in PDB contracts.

## 4.1 Evaluation: Criteria and Results

During the evaluation workshop, the team reviewed and discussed the following potential delivery approaches for Alternative C:

- Owner Control
- Operations
- Contractor Input
- Cost
- Risk Allocation
- Safety
- Schedule
- Other (added to accommodate unique considerations for PLM_5.3 and RES_1.0)

A screening-level comparison of the delivery approaches was conducted against the above-mentioned criteria; each delivery approach was assigned one of the following: "- / + / 0." The "-" indicated inability or significant drawbacks to meeting the criteria; "+" indicated the ability to meet the criteria with advantages relative to the other alternatives; "0" indicated a neutral ranking to meet the criteria. Results are presented in **Table 4-1**.

Rankings were determined by comparing the number of "+" benefit scores each option received while considering the "-" challenges scores. No weighting was applied to individual criteria. The team recognized that some "-" challenges would be more difficult to overcome than others.

Table 4-1. Delivery Approaches Evaluation Criteria

| CRITERIA | DBB | CMGC | LS DB | PDB |
|---|---|---|---|---|
| **OWNER CONTROL** | | | | |
| Enables owner to control decision-making throughout design (i.e., maintain ability to affect design changes without incurring extra cost) | + | + | - | + |
| Enables owner to use qualifications in selection of design consultant | + | + | 0 | 0 |
| Enables owner to use qualifications in selection of construction contractor | 0 (+ with exemption approvals) | + | 0 | 0 |
| Ability to separate work into distinct packages for design and/or construction delivery, including cash flow | - | + | - | + |
| **OPERATIONS** | | | | |
| Ability to incorporate owner's O&M staff review and input during design and construction | 0 | + | - | + |
| Ability to facilitate owner's O&M staff training during construction | 0 | + | 0 | + |
| **CONTRACTOR INPUT** | | | | |
| Secures contractor input on innovation, efficiency of design, constructability, and VE concepts throughout design | - | + | + | + |
| Secures contractor input on pricing and schedule | - | + | - | + |
| **COST** | | | | |
| Enables owner to accrue innovation and VE savings during design | 0 | + | 0 | + |
| Maximizes owner's share of innovation and VE savings during construction | - | + | - | + |
| Promotes competitive construction pricing that benefits owner | + | 0 | + | 0 |
| Minimizes risk and contingency pricing within construction bids | 0 | + | - | + |
| Promotes competitive design pricing that benefits owner | - | - | + | + |

| CRITERIA | DBB | CMGC | LS DB | PDB |
|---|---|---|---|---|
| Maximizes long-term value / lower life cycle costs | 0 | + | - | + |
| **RISK ALLOCATION** | | | | |
| Enables owner to define role in resolving changes and disputes among parties | + | + | 0 | 0 |
| Contracting arrangement enables allocation of risk to party best able to manage risk (operations, performance design, warranty, permit compliance) | 0 | + | + | + |
| **SAFETY** | | | | |
| Enables owner to require and coordinate "Safety by Design" | + | + | - | + |
| Enables owner to consider safety record in contractor selection | 0 (+ with exemption approvals) | + | 0 | + |
| Contracting arrangement enables owner to influence construction safety program | 0 | + | - | + |
| **SCHEDULE** | | | | |
| Enables project (PLM_5.3 and RES_1.0) to achieve construction completion by Q3 2024 | + | + | + | 0 |
| **OTHER** | | | | |
| Accommodates existing PLM_5.3 design contract and enables continued design progress | + | + | - | - |
| Enables separation of PLM_5.4 from PLM_5.3 to partner with WCLUT if an opportunity develops | + | + | - | - |
| Enables greater owner control of public outreach and compliance with land use and permitting requirements | 0 | + | - | + |

Key: CMGC – Construction Manager/General Contractor; DBB – Design-Bid-Build; LS DB – Lump Sum Design-Build; O&M – operation and maintenance; PDB – Progressive Design-Build; Q3 – quarter 3; VE – value engineering; WCLUT – Washington County Land Use and Transportation

Although PDB and, to a lesser extent, LS DB offer advantages for some criteria, those delivery approaches do not readily accommodate sustained progress on the PLM_5.3 design. A single, new procurement would be required for design and construction of PLM_5.3 and RES_1.0. Suspending the PLM_5.3 design and potentially transferring the design to a new design consultant that is part of the design-build team poses considerable schedule risk and would result in rework for PLM_5.3 design. Because of these disadvantages, PDB and LS DB were dismissed from further consideration.

Both DBB and CM/GC would accommodate the existing PLM_5.3 design contract and enable continued design progress. Those delivery approaches would also enable separation of PLM_5.4 from PLM_5.3 if WCLUT is able to partner on PLM_5.4.

CM/GC could provide some advantages over DBB, principally through the benefits of contractor involvement during design for improved VE, constructability, and pricing. CM/GC may also enable greater control of construction sequencing and coordinated (shorter duration) construction in the reservoir area.

DBB would secure the most competitive construction pricing. With approval of special exemptions, construction contractor qualifications and safety record could be considered as part of a DBB selection process (i.e., best-value selection).

During the January 31, 2019 meeting, the potential benefits of CM/GC delivery for this project were judged to be slight. Comparable project delivery outcomes could be achieved by a well-executed DBB delivery approach. Contractor selection could use a best-value approach that considers project-specific qualifications and safety record in conjunction with cost. Additional information about RES_1.0 will be developed during detailed design, which is scheduled to begin in late 2019. That information can be used to confirm a final delivery approach for PLM_5.3 and RES_1.0 construction.

## 4.2 Recommendation

It is recommended that the DBB delivery approach, as reflected in the current baseline, be retained for planning delivery of PLM_5.3 and RES_1.0. However, the baseline would be modified to accommodate a best-value selection process for the construction contractor and the packaging of PLM_5.3 and RES_1.0 (as recommended in Section 3.2). After a design consultant is engaged for RES_1.0, a final review of delivery approaches would be performed to confirm or modify the plan.

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Section 5.0

# Conclusion and Summary

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## 5.0 Conclusion and Summary

Combining PLM_5.3 and RES_1.0 construction would give WWSP greater control over the construction schedule and sequencing. Based on results from the BCA criteria evaluation and multidisciplinary input from key WWSP staff, Alternative C (combined PLM_5.3 and RES_1.0 projects) has more benefits and less challenges compared to the other alternatives. It offers the advantage of coordinated construction in an area with limited transportation routes and less public disruption. Therefore, Alternative C is selected as the preferred alternative for constructing PLM_5.3 and RES_1.0. Alternative D is preserved as an option to Alternative C due to the possibility of partnership with WCLUT.

WWSP has determined to continue with a DBB delivery approach for the combined projects. However, the baseline will be modified to accommodate a best-value selection process for the construction contractor. Additionally, CM/GC will remain an option for further review, when the RES_1.0 design process has progressed and more details are available.

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Section 6.0

# Next Steps

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## 6.0 Next Steps

Implementing recommendations from **Section 5** includes the following near-term steps:

- Validate the recommendations to (1) combine construction of the PLM_5.3 and RES_1.0 projects and (2) plan for a best-value contractor selection through the WWSP change process.
- Commence the procurement process for a RES_1.0 design consultant in October 2019.
- Continue coordination with WCLUT concerning the potential PLM_5.4 project to determine if packaging Alternative D should be pursued.

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Section 7.0

# References

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## 7.0 References

Jacobs Engineering Group. 2018. Willamette Water Supply Program (WWSP), Farmington Road Alternatives Evaluation for PLM_5.3. July 2018

Willamette Water Supply Program. 2016. Opportunity Project Business Case Analysis Approach. January 2016

Willamette Water Supply Program. 2016. Raw Water Facilities (RWF 1.0) Delivery Approach Evaluation Process and Recommendation. October 2016

Willamette Water Supply Program. 2018. Water Treatment Plant (WTP_1.0) Delivery Approach Evaluation and Recommendation. September 2018

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Appendix A

# PLM_5.3 and RES_1.0 Packaging Alternatives Evaluation Criteria

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## Appendix A- Table 1: PLM_5.3 and RES_1.0 Packaging Alternatives

| Criterion | Baseline | A | B | C | D |
|---|---|---|---|---|---|
| | **RES_1.0 and PLM_5.3 construction proceed per current plan (complex spatial and temporal construction coordination required)** | **RES_1.0 construction proceeds first, followed by PLM_5.3** | **PLM_5.3 construction proceeds first, followed by RES_1.0** | **Combined RES_1.0/PLM_5.3 construction (total PLM_5.3 length)** | **Combined RES_1.0/ PLM_5.3 construction (from Tile Flat to Clark Hills) (Create PLM_5.4 from Clark Hill at Green Slope RD to Rosedale at the future CPR)** |
| **Cost Impact** | No significant impact | No significant impact | No significant impact | No significant impact | Additional pipeline design submittal, another project phase to manage |
| **Schedule Impact** | • No schedule change | • Require procuring design consultant in 2019 for RES_1.0<br>• Results in RES_1.0 having several years of long-term storage prior to system startup | • Balance cash flow (to extent practicable) by delaying PLW_2.0 to construct PLM_5.3 earlier<br>• Changes to RES_1.0 schedule, TBD | • No schedule change, but need to make sure water is available for RES_1.0 testing | • No schedule change required for RES_1.0<br>• New schedule for PLM_5.4 TBD<br>• Washington County schedule may affect PLM_5.4 schedule (Clark Hill Extension) |
| **Financial Capacity** | No cash flow change | Balance cash flow (to extent practicable) by delaying PLW_2.0 to construct RES_1.0 earlier | Balance cash flow (to extent practicable) by delaying PLW_2.0 to construct PLM_5.3 earlier | Assuming no extra cost | Depending on timing of PLM_5.4, cash flow balancing may be necessary |
| **Procurement Impact** | • Pipeline: DBB Low-bid or DBB Best Value<br>• RES_1.0: CM/GC; DBB Low-bid; or DBB Best Value | • Pipeline: DBB Low-bid or DBB Best Value<br>• RES_1.0: CM/GC; DBB Low-bid; or DBB Best Value | • Pipeline: DBB Low-bid or DBB Best Value<br>• RES_1.0: CM/GC; DBB Low-bid; or DBB Best Value | • CM/GC<br>• DBB Low-bid<br>• DBB Best Value | • Pipeline: DBB Best Value<br>• RES_1.0: CM/GC; DBB Low-bid; or DBB Best Value |
| **Design Impact** | Changes in pipeline project boundaries for PLM_5.3 and PLW_1.3 | Accelerated RES_1.0 design could require compressed design duration presenting challenges to quality or cost of design | Greater chance of retaining same design team for completing PLM_5.3 | Combined projects will require coordinated specifications | Combined projects will require coordinated specifications |
| **Construction Impact** | • Overlapping construction traffic on limited local routes<br>• Pipe construction will restrict construction traffic<br>• RES_1.0 staging area property will not be available for the pipeline contractor<br>• Lack of coordination between construction contractors | • Late PLM_5.3 construction could limit finished water pump station (FWPS) startup<br>• Late PLM_5.3 construction could limit RES_1.0 testing (access to testing water) | • Late RES_1.0 construction could limit FWPS startup | • More control over sequencing of work<br>• Larger project may attract larger, more sophisticated contractor<br>• Combined project is large enough to attract CM/GC contractors<br>• CM/GC approach may provide greater control over neighborhood impacts<br>• Single procurement phase and coordinate with one contractor versus two | • Larger project may attract larger, more sophisticated contractor<br>• Combined project is large enough to attract CM/GC contractors<br>• CM/GC approach may provide greater control over neighborhood impacts<br>• Depend upon PLM_5.4 timing, could bundle construction with PLW_1.3 (brings challenges, two designers for one construction package, the Butternut Creek development may preclude this) |
| **Quality Optimization** | No significant impact | Accelerated RES_1.0 design could present challenges to quality of design | No significant impact | No significant impact | No significant impact |
| **Public Disruption and Public Affairs** | • Construction duration 2.5 years (projects completely overlap)<br>• High neighborhood impact due to overlapping but separate construction projects)<br>• No coordination between construction contractors | • Construction duration 4 years (2 years RES, 2 years PLM_ 5.3)<br>• High neighborhood impact | • Construction duration 4 years (2 years RES_1.0, 2 years PLM_ 5.3)<br>• High neighborhood impact | • Construction duration 2 years (assumes two teams)<br>• Lower neighborhood impact because of coordination between contractor's teams | • 2 years + 1 year (possibly overlapping)<br>• Disperses the neighborhood impact |
| **Environmental/ Permitting/ Impact** | • Concerns about haul routes or excavations impacting seasonal stream west of staging area, more difficult to control with two contractors (assumes that pipeline corridor will be used as an access route)<br>• Provide description of construction sequencing in PLM_5.3 land use application | • Same as the baseline | • Same as the baseline<br>• Schedule challenges related to modifying the permitting schedule (may force Clark Hill Ext. to be own package) | • Same as the baseline | • Same as the baseline |
| **Real Estate & ROW Acquisition** | No significant difference between alternatives | No significant difference between alternatives | No significant difference between alternatives | No significant difference between alternatives | No significant difference between alternatives |
| **Performing Agency Partnership** | • No difference between alternatives<br>• No opportunity projects<br>• Utilizes WWSP-owned property<br>• No known development projects outside UGB | • Same as the baseline | • Same as the baseline | • Same as the baseline | • Same as the baseline |
| **Substantial Limitation Identified** | Yes, overlapping construction periods will complicate construction traffic and staging and cause considerably greater community disruption than other alternatives | Yes, the sequence does not support RES_1.0 startup & commissioning, changes to cash flow | Yes, the sequence does not support RES_1.0 startup & commissioning, changes to cash flow | No, however WWSP would need to secure approvals for alternative delivery approach | No, however, may require changing of pipeline project boundaries |

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Willamette Water Supply
Our Reliable Water

# RES_1.0 (Combined with PLM_5.3) Project Delivery Approach

May 7, 2020

1

## Outline

- Recommendation preview
- Project overview
- Evaluation process and results
- Implementation steps
- Recommendation



2

# Recommendation Preview

Consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for RES_1.0 Storage Reservoirs and approving the use of the Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.





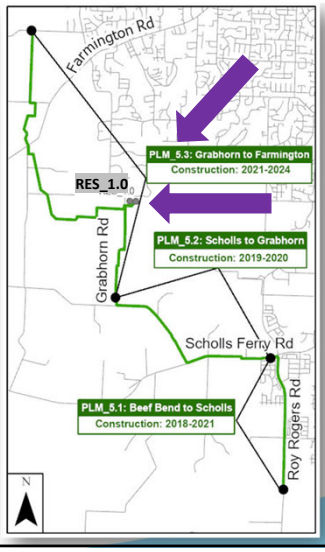
# Project Overview & Challenges

**Overview**

- Two 15 MG circular pre-stressed concrete storage tanks (AWWA D110)
- Four vaults for 66" diameter finished water pipelines and appurtenances
- Yard piping
- Building
- Site grading/rock excavation
- Soil nail and rock bolt reinforcement
- Storm water retention, treatment, and conveyance
- Site access roadways
- Approximately 21,000 feet of 66-inch diameter welded steel pipeline (PLM_5.3)

**Key Challenges**

- Coordination among specialty contractors
- Site constraints
- Rock removal
- Schedule constraints
- Public outreach
- Traffic control



# Delivery Approach Evaluation

**WWSP Packaging and Delivery Alternatives Evaluation (Mar. 2019)**

- Evaluated sequencing alternatives for constructing PLM_5.3 and RES_1.0 to avoid construction conflicts near the reservoir site
- Evaluated different construction delivery approaches
  - Progressive Design Build
  - Lump Sum Design Build
  - CM/GC
  - Design Bid Build
- Deferred delivery approach decision

**Black & Veatch Construction Delivery Approach Evaluation (Feb. 2020)**

- Reviewed updated RES_1.0 elements and schedule
- Understand delivery options
- Reviewed advantages and disadvantages of each delivery option
- **Identified recommendation for CM/GC delivery**





# Expected Benefits of CM/GC Delivery Approach

- Provides ability to select the contractor based, in part, on qualifications
- Secures contractor participation during design, including value engineering
- Enables early contractor planning to mitigate potential schedule/cost risks
- Shifts some project delivery risk to the contractor, encouraging collaboration and focus on avoiding construction issues
- Enables early identification/mitigation of safety and public outreach concerns
- Allows for an early phase of construction for schedule-critical earthwork
- Accommodates different design consultants for RES_1.0 and PLM_5.3

# Exemption Summary

The use of CM/GC delivery for construction RES_1.0/PLM_5.3:

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





# Implementation Steps

# Recommendation

Consider approving a motion to read by title only a draft resolution declaring an exemption from competitive bidding for RES_1.0 Storage Reservoirs and approving the use of the Construction Manager/General Contractor (CM/GC) delivery method for construction, receive oral testimony or written comments and direct that the resolution be brought back for a second reading and adoption at the July 2, 2020 Board meeting.

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Willamette Water Supply
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**STAFF REPORT**

**To:** WWSS Board of Commissioners

**From:** Christina Walter, WWSP Permitting and Outreach Manager

**Date:** May 7, 2020

**Subject:** RES_1.0 License Agreement for Law Enforcement Training with Washington County Sheriff's Office and Request for Authorization to Enter into Future Agreements

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**Requested Board Action:**
Consider approving a License Agreement for Law Enforcement Training between the Willamette Water Supply System Commission ("Licensor") and the Washington County Sheriff's Office ("Licensee"). This agreement will enable the Sheriff's Office to coordinate a training exercise at the RES_1.0 property prior to demolition of the existing structures.

Consider authorizing the General Manager to enter into similar agreements with other local agencies to coordinate training exercises at the RES_1.0 property prior to demolition of the existing structures.

**Key Concepts:**

- The Training Division for the Sheriff's Office expressed an interest in utilizing the Willamette Water Supply System's recently acquired RES_1.0 property for a training exercise prior to demolition of the structures at the site.
- The site offers the first responders a rare opportunity to conduct destructive training in a real-life environment slated for demolition rather than simulated training. Officers will train in a variety of circumstances as defined in Special Use of Site such as use of K9 teams, defeating barricaded doors, creating alternate entry points through the walls and windows, and treating casualties with life threatening injuries.
- The training opportunity provided by this partnership enhances public safety through improving the Sheriff's Office readiness. This partnership also exemplifies the Commission's commitment partnerships that benefit regional agencies.
- Prior to training, Willamette Water Supply Program (WWSP) staff in coordination with the Sheriff's Office will utilize existing communications channels to inform the neighbors about the exercises. WWSP staff have discussed the concept of a first responder training with the closest neighbors and the neighbors are supportive.
- After the exercise, WWSP staff would promote the successful completion of the training through its social media and other informational channels.
- WWSP staff would coordinate with other local agencies to enter into similar agreements to coordinate training exercises at the RES_1.0 property prior to demolition of the existing structures.

**Background:**
Regional first responders and WWSP staff coordinate closely as part of their ongoing proactive safety and security initiatives. Washington County Sheriff's Office staff have expressed interest in training opportunities should situations arise where a partnership could be formed. Following acquisition of the RES_1.0 site, WWSP staff initiated conversations with the agencies to evaluate the potential for first responder training(s) prior to demolition.

This agreement allows the Sheriff's Office to conduct training at the site.

**Budget Impact:**
There are no budgetary impacts associated with this item. There will be minimal staff coordination and time spent on this effort.

**Staff Contact Information:**
Christina Walter, Permitting and Outreach Manager; 503-840-3830, Christina.Walter@tvwd.org

**Attachments:**
Proposed Resolution
Exhibit 1. License Agreement for Law Enforcement Training (Washington County Sheriff's Office)

Willamette Water Supply
Our Reliable Water



**RESOLUTION NO. WWSS-07-20**

A RESOLUTION APPROVING A LICENSE AGREEMENT FOR LAW ENFORCEMENT TRAINING WITH WASHINGTON COUNTY SHERIFF'S OFFICE AND AUTHORIZING FUTURE AGREEMENTS.

WHEREAS, the Tualatin Valley Water District (TVWD), City of Hillsboro (Hillsboro), and City of Beaverton (Beaverton) entered into the Willamette Water Supply System Intergovernmental Agreement creating the Willamette Water Supply System Commission (WWSS Commission), an intergovernmental entity formed under ORS Chapter 190; and

WHEREAS, the WWSS Commission is responsible to preside over and govern the design, construction, operation, maintenance, repair and replacement of the Willamette Water Supply System (WWSS); and

WHEREAS, the WWSS Commission has acquired real property for the WWSS South Beaverton Area Water Storage Tanks Project (RES_1.0) which property includes existing structures that must eventually be removed; and

WHEREAS, in an effort to support regional partnerships, the WWSS Commission and Washington County Sheriff's Office (the Parties) have determined that the existing structures on the RES_1.0 property are suitable for law enforcement training exercises prior to their removal; and

WHEREAS, the WWSS Commission has identified opportunities to coordinate with other local agencies with a desire to use the RES_1.0 property and its structures for trainings; and

WHEREAS, the Parties have developed the proposed license agreement for use in coordinating such mutually beneficial activities;

WHEREAS, the WWSS Commission wishes to approve the license agreement with the Washington County Sheriff's Office and authorize similar future agreements with other local agencies, and being advised;

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

Section 1: The License Agreement for Law Enforcement Training (Washington County Sheriff's Office), 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, including by making any non-substantive changes to the form and format, and is authorized to execute the Agreement on behalf of the Commission.

Section 3: The General Manager is hereby authorized to negotiate and to execute similar agreements with other local agencies for the use of the RES_1.0 property and its structures until those structures are removed from the property.

Approved and adopted at a regular meeting held on the 7th day of May 2020.

| | |
|---|---|
| _____ | _____ |
| James Duggan, Chair | Denny Doyle, Vice Chair |

**Exhibit 1 to Resolution WWSS-07-20**

**LICENSE AGREEMENT FOR LAW ENFORCEMENT TRAINING**
(Washington County Sheriff's Office)

THIS LICENSE AGREEMENT FOR LAW ENFORCEMENT TRAINING (this "Agreement") is made and entered into as of 07 May 2020 by and between Willamette Water Supply System Commission ("Licensor") and the WASHINGTON COUNTY SHERIFF'S OFFICE ("Licensee").

## Recitals

A. Licensor owns the real property located at 10150 SW Grabhorn Road, Beaverton, OR 97007.

B. Licensee desires to conduct law enforcement training on the Licensed Premises, and Licensor desires to grant Licensee a license to conduct such training subject to and in accordance with the terms and conditions of this Agreement.

## Agreement

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, Licensor and Licensee hereby agree as follows:

1. Grant of License. Licensor hereby grants to Licensee a revocable license to use the Licensed Premises for the sole purpose of training law enforcement officers employed by Licensee (the "License").

2. Special Use of Premise.

- ☐ Licensee may use the Licensed Premises to conduct special teams ("SWAT" or "TNT" team) training, which will:
  - involve defeating barricaded doors on the Licensed Premises; and/or
  - involve creating alternate entry points through the walls and windows of the Licensed Premises.
- ☐ Licensee will be testing law enforcement officers in treating casualties with life threatening injuries.
- ☐ Licensee will be training which involves the use of police K9 dogs.
- ☐ Licensee will not engage in live fire with real bullets at any time during the course of the training, but may use paint marking rounds, blanks, disabled and unloaded firearms, or noise making munitions or similar training aids.
- ☐ Licensor acknowledges and agrees that the Licensed Premises may be significantly damaged in the course of conducting the training exercises
- ☐ Licensee shall use best efforts to notify all neighbors in writing prior to conducting any training exercises on the Licensed Premises by sending flyers, knocking on neighbor's doors, posting signs around the training site, and/or posting messages on social media to inform neighbors of upcoming training.

3. Term. Unless terminated earlier by either party, the term of the License shall commence on 06 APR 2020 and shall continue until 31 DEC 2020. Either party may terminate this Agreement at any time, with or without cause, by providing the other party notice at least three days prior to termination. Upon expiration or termination of the License, Licensee shall have no further right to use the Licensed Premises and all of Licensee's rights hereunder shall be terminated. Neither party shall owe the other party any fee for early termination of this Agreement.

4. Release of liability and Indemnification.

4.1 Licensor shall hold harmless Licensee, and its employees, for damages to the Licensed Premises and/or the Property, provided, however, that Licensee shall not permit any damage to the licensed Premises or the Property which results in any form of environmental contamination, hazardous materials release which would adversely affect Licensor's ability to use the Property upon termination of the License, and, upon completion of the training exercises, Licensee shall return the Licensed Premises in a safe and secure condition, normal wear and tear excepted.

4.2 The License is made on the express condition that Licensor is to be free from all liability or loss by reason of injury, death, loss or damage to persons or property from whatever cause, in any way connected with the use or possession of the Licensed Premises by Licensee, including any liability for injury, death, loss or damage to Licensee. Licensee shall defend, indemnify, hold harmless and release, Licensor and their respective members, managers, officers, directors, employees, representatives and agents (collectively, the "Indemnified Parties") from and against any and all claims, damages, expenses suits, losses, liabilities for any death, injury, damage or loss caused by, arising from, or connected with, performance of this Agreement by Licensee, including the use of the Licensed Premises or the exercise of any rights hereunder by Licensee, provided, however, that nothing in this provision shall render Licensee liable or responsible for any loss or damage to property or for injury, including death, to persons caused solely by or arising solely out of the negligent or willful acts or omissions of any of the Indemnified Parties.

4.3 The obligations and liabilities of Licensee pursuant to Sections 4.1and 4.2 above are subject to all applicable limits of the Oregon Constitution and the Oregon Tort Claims Act.

5. Insurance. Licensee shall maintain the following insurance coverages throughout the term of the License **or** shall otherwise be self-insured under a plan of self-insurance as provided by Oregon law: (a) worker's compensation insurance in the amount required by Oregon law; and (b) commercial general liability insurance in the minimum amount of $2,000,000 per occurrence.

6. Governing Law/Venue/Attorney Fees. This License shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of

law. Any claim, action, suit or proceeding (collectively, "Claim") between Licensor and Licensee shall be brought and conducted solely and exclusively within the Circuit Court of Washington County for the State of Oregon; provided, however, if a Claim is brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. Each party to this License, by execution of this License, hereby consents to the in person jurisdiction of said courts. Each party shall be responsible for its own costs and attorney fees for any claim, action, suit or proceeding including any appeal.

7. Condition of Licensed Premises. Licensor makes no representations or warranties concerning the condition or safety of the Licensed Premises, including, but not limited to, the presence of any hazardous substances, structural instabilities, contamination, hidden asbestos, and utilities such as gas or electricity that may not have been properly disconnected. Licensee acknowledges that in agreeing to this License, it shall take the Licensed Premises "as-is" and that Licensee shall be solely responsible for investigating, discovering and preparing the Licensed Premises for the activities of Licensee.

8. Prohibition on Assignment. The License is personal to Licensee. Licensee shall not assign or transfer the License to any other person or entity without the prior written consent of Licensor, which consent may be granted or withheld in Licensor's sole and absolute discretion.

9. Third Party Beneficiaries. Licensor and Licensee are the only parties to this License Agreement and are the only parties entitled to enforce its terms.

10. Notices. All notices given under this Agreement shall be sent in writing to the following addresses with applicable delivery or postage charges prepaid by personal delivery, overnight courier service, registered or certified United States mail (return receipt requested), or email and such notices shall be deemed received on the earlier to occur of actual delivery or refusal of a party to accept delivery thereof:

Licensor: Name: Tualatin Valley Water Department
ATTN: David Kraska, Director, Willamette Water Supply Program
Address: 1850 SW 170th Ave, Beaverton, OR 97003
Phone Number: 503-941-4561
Email: David.Kraska@tvwd.org

Licensee: **Washington County Sheriff's Office**
Attn: Thomas Andrews, Business Manager
215 SW Adams Ave.
Hillsboro, OR 97123
Email: tom_andrews@co.washington.or.us

11. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof, fully supersedes any and all

prior understandings, representations, warranties and agreements relating thereto, and may be modified only by written agreement, signed by each of the parties.

12. Severability. If any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision, and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in this Agreement

13. Counterparts; Signatures. This Agreement may be signed in multiple counterparts, all of which, when taken together, shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first written above by individuals authorized to bind Licensor and Licensee.

LICENSOR: WILLAMETTE WATER SUPPLY SYSTEM COMMISSION

By: _____

Name: _____

Title: _____

LICENSEE: WASHINGTON COUNTY SERIFF'S OFFICE (Washington County)

By: _____

Name: _____

Title: _____

Willamette Water Supply
Our Reliable Water

5A

**STAFF REPORT**

**To:** Willamette Water Supply System Board of Commissioners

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

**Date:** May 7, 2020

**Subject:** Anticipated Business Agenda Items for the June 4, 2020, Meeting of the Willamette Water Supply System Board of Commissioners

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

1. PLM_4.3 Resolution of Public Necessity
2. WWSS IGA Exhibit 1 Amendment to Modify Allocation of Reservoir Capacity
3. WWSS IGA Exhibit 1 Amendment to Add a City of Beaverton Turnout on Grabhorn Road
4. Add a City of Beaverton Hall Boulevard 16-inch pipeline to COB_1.0
5. PLW_1.3 Construction Contract Approval
6. WWSP Program and Construction Management Services FY 2021 Annual Work Plan
7. WWSP 2020 Rebaseline Schedule and Budget

**Background:**
The following actions are anticipated business agenda items for the June 4, 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_4.3 Resolution of Public Necessity Approval Recommendation

The WWSS includes a section of pipeline along Roy Rogers Road from Sherwood city limits to approximately 2,700 feet north of Beef Bend Road (PLM_4.3), in unincorporated Washington County. 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 private 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 June 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_4.3.

2. WWSS IGA Exhibit 1 Amendment to Add a City of Beaverton Turnout on Grabhorn Road Approval Recommendation

The City of Beaverton is requesting an additional turnout off the WWSS located on Grabhorn Road, to serve future urban areas, approved in Metro's 2019 urban growth boundary expansion in the Cooper Mountain area. The requested change is progressing through WWSP Change Committee review and then Management Committee review. The additional turnout does not change the WWSS capacity ownership.

WWSP staff expect to bring the WWSS IGA Exhibit 1 amendment to the June WWSS Board meeting with a recommendation to adopt the resolution.

3. WWSS IGA Exhibit 1 Amendment to Modify Allocation of Reservoir Capacity Approval Recommendation

The WWSS partners have been negotiating a reallocation of the WWSS IGA Exhibit 1 reservoir capacity of 30 million gallons. The Management Committee anticipates that a Memorandum of Understanding (MOU) among the WWSS partners that documents the proposed changes will be executed in May 2020. To keep the WWSS IGA Exhibit 1 up to date, an amendment will be required.

WWSP staff expect to bring the WWSS IGA Exhibit 1 amendment to the June WWSS Board meeting with a recommendation to adopt the resolution.

4. Intergovernmental Agreement Between the City of Beaverton and the Willamette Water Supply Commission Design of SW Nimbus/Scholls Ferry to SW Beaverton-Hillsdale Highway Pipe Project (COB_1.0 Design IGA) Amendment 1 to add a City of Beaverton Hall Boulevard 16-inch Pipeline Approval Recommendation

The City of Beaverton has requested an additional ancillary project be added to the COB_1.0 work that is currently coordinated with TVWD's MPE_1.0 project under the executed Intergovernmental Agreement Between the City of Beaverton and the Willamette Water Supply Commission Design of SW Nimbus/Scholls Ferry to SW Beaverton-Hillsdale Highway Pipe Project (COB_1.0 Design IGA). The additional project is a 16-inch pipeline, approximately 2,500 feet, to be located in SW Hall Boulevard from SW Scholls Ferry Road to SW Oleson Road. The requested change is progressing through WWSP Change Committee review and then Management Committee review. Adding the project requires an amendment to the COB_1.0 Design IGA.

WWSS and Beaverton staff are finalizing the details and expect to bring an amendment approval recommendation to the June WWSS Board meeting.

5. PLW_1.3 Construction Contract Approval Recommendation

The construction bid for the PLW_1.3 pipeline project, located in South Hillsboro and the WWSP's first best-value procurement. After a month's extension, per multiple respondents' request due to the current COVID-19 pandemic, the price proposals were received April 9 and written proposals were received April 16. The selection team evaluated each respondent's written proposal and determined final non-cost scoring on April 21. A web-based, public opening of the price proposals was held on April 22. The highest-

scoring respondent (i.e., combined written and price proposal scores) was Tapani, Inc. Tapani's price proposal of approximately $29 M is within the WWSP budget for this project.

At the June WWSS Board meeting, WWSP staff will present the bid results with a recommendation to the Board to approve a contract with the successful bidder.

6. WWSP Program and Construction Management Services FY 2021 Annual Work Plan Approval Recommendation

Stantec Consulting Services Inc. (Stantec) is contracted to provide program and construction management services for the WWSP through 2026. Specific services are authorized on an annual basis through approval of an annual work plan. The FY 2021 annual work plan identifies Stantec's planned services, planned staffing, estimated fees, and key assumptions for delivery of program and construction management support services that are correlated to the WWSP 2020 Rebaseline Schedule and Budget. The estimated fee for the WWSP Program and Construction Management Services FY 2021 Annual Work Plan is $13 M.

WWSP staff will provide an overview of the work plan and recommend approval at the June WWSS Board meeting.

7. WWSP 2020 Rebaseline Schedule and Budget Approval Recommendation

The WWSP team has been developing a rebaseline schedule and budget that can meet partner fiscal requirements. Over the past four months, WWSP staff developed a cost management approach in collaboration with the partners and the proposed baseline is reflective of the selected cost management options.

At the June WWSS Board meeting, WWSP staff will present the updated baseline schedule and budget, with a recommendation to the Board to adopt the resolution. If the recommended rebaseline requires an update to the already approved Fiscal Year 2021 annual work plan and budget, staff will propose that change as well.

**Budget Impact:**
Anticipated costs for all of the actions described herein will be reflected in the WWSP 2020 Rebaseline Schedule and Budget that will be offered for Board approval.

**Staff Contact Information:**
Dave Kraska, P.E., WWSS General Manager, 503-941-4561, david.kraska@tvwd.org
Joelle Bennett, P.E., WWSP Assistant Program Director, 503-941-4577, joelle.bennett@tvwd.org

**Attachments:**
None.