Joint Water Commission

General Manager
Kevin Hanway
150 E. Main Street
Hillsboro, OR 97123
503-615-6585

HILLSBORO/FOREST GROVE/BEAVERTON/
TUALATIN VALLEY WATER DISTRICT
JOINT WATER COMMISSION (JWC)
PRELIMINARY AGENDA

City of Hillsboro — **July 14, 2017**
Civic Center — **12:30 p.m.**
150 East Main St., **Room 113B** — Regular Meeting

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Assistive Listening Devices (ALD) and sign language interpreters are available, at no cost, and can be scheduled for this meeting. Please provide at least 72 hours notice prior to the meeting. To obtain these services, call (503) 681-6100 or TTY (503) 681-6284.

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ALL TESTIMONY IS ELECTRONICALLY RECORDED.

The Commission lunches at 12:00 p.m.

CALL TO ORDER

Introductions.

1. **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 regular meeting minutes from Friday, April 14, 2017.

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

   A. None scheduled.

3. **UNFINISHED BUSINESS**

   A. None scheduled.

4. **NEW BUSINESS**

   A. Consider approval of the Guaranteed Maximum Price for the Early Work Grading Package. *Staff Report – Tyler Wubbena*

   B. Consider approval of contract renewal with Univar USA, Inc. for Caustic Soda. *Staff Report – Sophia Hobet*

5. DISCUSSION ITEMS (These items may result in action by the Commission.)

A. Water Quality Program update. *Staff Report – Jessica Dorsey*

B. Water Quality LT2 test results. *Staff Report – Jessica Dorsey*

C. Stored water status. *Staff Report – Kristel Fesler*

D. Scoggins Project Presentation. *Staff Report – Tom VanderPlaat, CWS*

E. General Manager's Report. *Staff Report – Kevin Hanway*

6. EXECUTIVE SESSION

A. Consider convening into Executive Session under:

1. ORS 192.660(2)(e) for deliberation with persons designated by the governing body to negotiate real property transactions, and ORS 192.660(2)(f) to consider information or records that are exempt by law from public inspection; and ORS 192.660(2)(h) to consult with counsel concerning the legal rights and duties of a public body with regard to current litigation or litigation likely to be filed.

B. Take action(s) related to Executive Session, if needed.

7. ADVICE/INFORMATION ITEMS

A. The next JWC and BRJOC meetings are scheduled on Friday, October 13, 2017 at the Civic Center in Room 113B. The BRJOC meeting will be held at 12:30 p.m. with the JWC meeting following.

HILLSBORO/FOREST GROVE/BEAVERTON
TUALATIN VALLEY WATER DISTRICT
JOINT WATER COMMISSION (JWC)

MINUTES

City of Hillsboro April 14, 2017
Civic Center Room 113B 12:30 p.m.
150 East Main St. Regular Meeting
****

Commissioners Present:

Hillsboro:	Dave Judah and Deborah Raber
Forest Grove:	Rod Fuiten
Beaverton:	Marc San Soucie, Mark Fagin and Denny Doyle
Tualatin Valley Water District:	Jim Doane, Dick Schmidt and Mark Knudson

Staff Present:

Hillsboro:	Kevin Hanway, Niki Iverson, Tyler Wubbena, Sophia Hobet, Tacy Steele, Erika Murphy, Mellisa Franklin, Kristel Fesler, Chris Wilson, Nesh Mucibabic and Tonya Bilderbeck
Beaverton:	David Winship
Forest Grove:	Rob Foster, Bryce Baker and Derek Robbins
Tualatin Valley Water District:	Carrie Pak
Clean Water Services:	Mac Martin

Others:	Clark Balfour – TVWD Attorney
	Tommy Brooks - Attorney

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The Commission lunches at 12:00 p.m.

CALL TO ORDER

Introductions.

1. **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 regular meeting minutes from Friday, April 14, 2017.

Motion by Doyle and seconded by Judah, to approve the Consent Agenda, as presented. Motion carried unanimously with Commissioners Judah, Raber, Fuiten, San Soucie, Fagin, Doyle, Doane, Schmidt and Knudson all voting in favor.

2. COMMUNICATIONS AND NON-AGENDA ITEMS

A. None scheduled.

3. UNFINISHED BUSINESS

A. None scheduled.

4. NEW BUSINESS

A. Consider approval of proposed FY 2016-17 supplemental budget. *Staff Report – Mellisa Franklin*

Franklin reported approval of a supplemental budget is required when unanticipated expenditures and corresponding revenues occur after adoption of the budget. After the Commission approved the proposed budget for the current FY 2016/17, a few events have occurred that require the approval of a supplemental budget, as briefly discussed at the January 13, 2017, Commission Meeting. The total adjustment is less than 10% of the FY 2016/17 Adopted Budget. The net effect of these events total an additional $795,000 over the FY17 budget in the Projects Capital Outlay Category. These events include:

- Acceleration of the Water Treatment Plant Facility Plan and Expansion Project
- Unanticipated cost of purchasing the Fairway Fund Land
- Rollover cost of the Standby Power Generation that were completed in FY17, versus FY16 as budgeted
- Rollover cost of Install Flow Meter project expenditures that were budgeted in FY 17 but rolled over to FY17, versus FY16

Schmidt asked what is included in Special Payments. Franklin said it includes items such as insurance and fuel.

San Soucie asked if the WTP Facility Plan and Expansion acceleration changes the amount of the expenditure or timing of the expenditure. Hanway said it does not change the amount, however, cost estimates are coming in higher than budgeted.

Motion by Doane and seconded by Fagin, to approve the proposed FY 2017 Supplemental Budget Amendment and Summary of Estimated Additional Revenues and Expenditures by Partner, as presented. Motion carried unanimously with Commissioners Judah, Raber, Fuiten, San Soucie, Fagin, Doyle, Doane, Schmidt and Knudson all voting in favor.

B. Consider approval of proposed FY 2017-18 budget. *Staff Report – Mellisa Franklin*

Franklin presented the proposed 2017-18 budget. The proposed budget includes the following:

Total Expenditures: The overall proposed budget total expenditures are $25,967,002. The total budget figure includes water production costs of $8,567,002 (15% increase from prior year budget) and capital outlay of $16,900,000.

- Plant Production Volume: Water production unit costs are projected to increase by 13.61% to $0.49/unit as compared to the $0.43/unit budget of FY 16/17. Budget estimates for many expenditures correlate to projected plant production volume. Total Projected Plant Production (average day) for Fiscal year 2017-2018 is 35 MGD, an overall production increase of 5% from the current year's budget estimates. All of the JWC partners increased their demand estimates (Hillsboro - 0.65 MGD, Forest Grove - 0.17 MGD, Beaverton - 0.5 MGD, and TVWD - 0.5 MGD) for an overall estimated increase of 1.82 MGD in average daily demand. (Note: Water production costs in the approved budgets for the past two fiscal years have estimated costs of $0.43/unit; actual costs in FY 2016 were $0.35, and actual costs for year-to-date FY 2017 are $0.27/unit.)

- Personnel Services: The proposed budget includes a 21% increase ($534,942) in personnel costs. The proposed budget includes:
    - A 5% overall increase in total personnel services to include: (1) estimated increases in Medical and Dental costs for half the year; (2) Hillsboro's estimated Cost of Living Adjustments (COLA) (final figures are not yet determined)
    - Increase in PERS contribution rates, effective July 1, 2017.
    - Employee cost allocations increase from a total of 21.7 to 24.0 FTE. Employee count at the water treatment plant is unchanged, remaining at 17 FTE. Updated employee allocations for other Hillsboro Water Department employees accounts for the balance of the effective FTE total. The increase in effective FTE from the prior year results from the net of increases and decreases in employee cost allocations, with the largest increases flowing from increased allocation of Project Manager and Engineering Coordinator time during design and construction of the water treatment plant expansion project; and increased allocation of time for Water Department Administration Division staff.

- Materials and Services: The proposed Materials and Services budget includes an increase of $678,000 (approximately18%) from FY 16/17 budget amounts. The majority of the variance is due to two major studies to be performed that will guide maintenance plans and activities on the transmission pipelines: Cathodic Protection Study ($160,000) and assessment of the South Transmission Line ($250,000). There are also additional services needed next fiscal year that are not normally budgeted for, such as: Water Rights study to meet fish screening requirements on the JWC permit S-54737 ($110,000), and Chlorine Scrubber Maintenance ($33,000).

- Operating Capital Outlay: The proposed Operating Capital Outlay budget increased by $45,000 to $170,250. Budgeted items include: replacement of a Water Treatment Plant truck; purchase of a water quality program boat/trailer/canopy; purchase of HACH WIMS database program (previously budgeted in FY17); improvements to intake gate, gravel parking lot and shop area; and equipment purchases. Additional information on each of the purchases is provided on page six of the proposed budget packet.

- Special Payments: The proposed budget includes a decrease of $160,000 (18%) in Special Payments from the current budget of $899,686. The decrease is due to lower estimated lease revenues. (The category of "special payments" also includes items such as insurance, facilities depreciation, support services charges, equipment depreciation, facilities charges, insurance, and payments to other governments. Actual costs will be determined once the cost allocation for the City of Hillsboro has been completed at year-end.)

- Capital Projects: The proposed capital budget includes two projects with a total expenditure of $14,900,000, plus an additional $2,000,000 budgeted for Emergency Equipment Repair.

  The primary capital project is the continuation of the WTP Expansion Project, which began in FY 16/17. The expansion project is expected to continue into FY 18-19, with a small rollover to FY 19-20. The current estimate for the total construction cost of these improvements is approximately $35 million.

  The proposed budget also includes $150,000 for a project to clean up the Fairway Fund property that was purchased this year.

Doane stated he thought the Cathodic Protection Study had a program, and questioned the $160,000 budget in Materials and services.

Wubbena responded that there are test stations on the North Transmission line, however there is not an active study. He said staff proposed the study to protect transmission mains.

Motion by San Soucie and seconded by Schmidt, to approve the proposed Fiscal Year (FY) 17/18 budget as presented, subject to final modifications not to exceed 5% of Personnel Service and Special Payments costs as determined by the City of Hillsboro, as presented. Motion carried unanimously with Commissioners Judah, Raber, Fuiten, San Soucie, Fagin, Doyle, Doane, Schmidt and Knudson all voting in favor.

5. DISCUSSION ITEMS (These items may result in action by the Commission.)

A. Stored water status. *Staff Report – Kristel Fesler*

Fesler reviewed the climate outlook for the area, reporting average temperatures are projected over the next four months. She said Scoggins is almost 98% full with a target fill date of May 1.

B. Water Treatment Plant Upgrade and 85 MGD Expansion. *Status Update – Erika Murphy*

Murphy reviewed Package 1 construction progress and Package 2 design efforts. Package 1 is currently under construction. She said filter media replacements are being replaced in filters 1-12. The contractor is stockpiling the old media for reuse for sludge dry bed in Package 2. Murphy said rapid mix pumps and chemical metering equipment have been ordered and are schedule to arrive onsite in May. Once the system is in place and tested, staff will decommission the old system.
Murphy reviewed Package 2 design elements and said package 2 is currently at 30% complete. Design is scheduled to continue through the summer.

In order to reduce the project cost and align with the budget, a series of Value Engineering (VE) sessions were held. Value engineering /seismic decisions from JWC Operations Committee meeting in February included:

- clarification and prioritization of project objectives
- potential scope reduction and cost savings
- weighing advantages and risks of deferring or deleting work from the project scope
- permitting and procurement consequences of delaying construction work
- options for achieving seismic resiliency consistent with target levels of service

After the seismic workshop and value engineering workshops, the Operations Committee approved removal of some project elements from the scope that are not essential to the capacity improvements, and modification of the specifications for some of the project elements. Based on the design changes made to date, the most recent cost estimate provided by Slayden is a $35.5M total project cost for Package 2, including construction, engineering, and staff time.

Murphy reviewed the next steps in the project. She said staff will present an early grading work package estimated at $900,000 and GMP 2 update at the July meeting.

Winship asked if there is a breakdown by partner, with the wide range of projects happening simultaneously. Murphy said she will send out spreadsheets that outline partners cost breakdowns.

Doyle said based on the update, he is impressed with staff efforts to keep costs down.

Judah asked how staff will budget after July 1, since the project is at 30% of costs. Murphy said the project is budgeted on a $35 million budget cost, she said that is the maximum target staff is basing the numbers on.

C. General Manager's Report. *Staff Report – Kevin Hanway*

Fesler presented watershed display. She said staff wanted a display that was visually eye catching and was easy to identify drinking water sources. The display will be used at events and in classrooms. Fesler said a grant from source water protection fund covered the majority of costs for design work and production.

Hanway updated the Commission on the Standby Power Generation Facility that was completed last summer. He said the WTP lost power during the wind storm last week; standby power turned on as expected.

Hanway reported Wapato Lake is full. He said the pumps are all working, however, with the continued rain, TVID will not meet DEQ requirement to complete pumping by April 30th.

6. ADVICE/INFORMATION ITEMS

A. The next JWC and BRJOC meetings are scheduled on Friday, July 14, 2017 at the Civic Center in Room 113B. The BRJOC meeting will be held at 12:30 p.m. with the JWC meeting following.

There being no further business to come before the Commission, the meeting adjourned at 1:54 p.m.

Chairman _____
Hillsboro/Forest Grove/ Beaverton/
TVWD Joint Water Commission

ATTEST:_____
Secretary

HILLSBORO/FOREST GROVE/BEAVERTON
TUALATIN VALLEY WATER DISTRICT
JOINT WATER COMMISSION (JWC) EXECUTIVE COMMITTEE

MINUTES

City of Hillsboro June 9, 2017
Civic Center Room 516 and Conference Call 10:00 a.m.
150 East Main St. Executive Committee Meeting
****

Commissioners Present via conference call:

Hillsboro:	John Godsey
Forest Grove:	Peter Truax
Beaverton:	Marc San Soucie
Tualatin Valley Water District:	Jim Doane

Staff Present:

Hillsboro:	Kevin Hanway, Nesh Mucibabic and Tonya Bilderbeck. Tyler Wubbena via conference call
Tualatin Valley Water District:	Mark Knudson via conference call

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CALL TO ORDER

Introductions.

1. NEW BUSINESS

A. Consider approval of an amendment to the contract for the Flow Meter Replacement project. *Staff Report – Kevin Hanway*

Hanway said staff is requesting a contract amendment for the Flow Meter Replacement project. He said the project replaces flow meters that have been in for an extended period. New meters will ensure accurate reads of water volume per partner.

Hanway reported once excavation began, it was realized pipe depths were below what the as-built indicated. In addition, Water Treatment Plant staff requested to delay the work during peak season, to ensure there were no delays in water delivery to partners. Project work was moved to the fall which caused changes in the design to the vaults due to the wet ground. The project was completed in late March, with a final addendum invoice for $74,000. Staff worked with SubCom to negotiate the price of the additional work. The final addendum was negotiated to $57,146, bringing the total project cost to $402,146. The original budget amount for the project was $500,000.

Doane asked if the addendum was over the signature authority for the General Manager (GM). Hanway confirmed that it was over the GM signature authority, and that it is a FY 16-17 expense and should be paid in the current fiscal year.

Doane asked if any potholing was done prior to design to verify depths. Hanway responded that design was based solely on as-built from the 1970's. Doane replied potholing should be done prior to work as opposed to relying on 40-year-old as-built.

Motion by Doane, seconded by San Soucie to approve the amendment to the contract for the Flow Meter replacement project, in the amount of $57,146, as presented. Motion was passed unanimously with Commissioners Godsey, Truax, San Soucie and Doane all voting in favor.

2. ADVICE/INFORMATION ITEMS

A. The next JWC and BRJOC meetings are scheduled on Friday, July 14, 2017 at the Civic Center in Room 113B. The BRJOC meeting will be held at 12:30 p.m. with the JWC meeting following.

There being no further business to come before the Commission, the meeting adjourned at 10:22 a.m.

Chairman _____
Hillsboro/Forest Grove/ Beaverton/
TVWD Joint Water Commission

ATTEST:_____
Secretary

STAFF REPORT

To: Joint Water Commission

From: Erika Murphy, Project Manager

Date: July 14, 2017

Subject: Agenda Item 4A – Consider approval of Guaranteed Maximum Price (GMP) for Early Work Grading Package for JWC WTP Expansion to 85 MGD Project

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Staff Recommendation:
Consider award of Guaranteed Maximum Price (GMP) for the Early Work Grading Package for the JWC Water Treatment Plant (WTP) Expansion to 85 MGD Project in the amount of $872,451.

Background:
JWC's FY 2017-18 capital projects budget includes the continuation of a water treatment plant project to complete capacity upgrades, expansion, and seismic improvements at the water treatment plant. The project is scheduled for completion in 2019.

The project has been broken into two work packages. Package 1 construction is on-going, with a scheduled completion of November 30, 2017. Package 2 is anticipated to be approved in October for a construction start in November 2017. Each bid package includes work related to both achieving a sustainable 75 MGD capacity (costs shared at current JWC ownership percentages) and upgrades to achieve 85 MGD capacity (costs shared only by Hillsboro and TVWD).

In order to benefit from the dry weather this summer, an Early Work Package was prepared to begin deep excavations in late July. The new filter and surge basin structures require excavations over 25' deep and dewatering wells. The Early Work Package expedites work that would originally have been included in Package 2 and the JWC anticipates significant cost savings by expediting this work in the summer months.

The cost allocations for this work are listed in the table below. The work activities included in the Early Work Amendment are in preparation for construction of the new filters and surge basin. At this time, the estimated allocation of work is 80% to the 85 MGD expansion and 20% to achieving a sustainable 75 MGD capacity. These cost allocations will be reviewed and confirmed by Operations Committee staff.

Early Work Amendment (EWA2)		**GMP: $872,451**
85MGD Expansion (new surge basin, portion of new filters)	**80% of EWA2**	**$697,961**
Hillsboro	80%	$558,369
Tualatin Valley Water District	20%	$139,592
Sustainable 75MGD (portion of new filters, new recycle pump station)	**20% of EWA2**	**$174,490**
Hillsboro	45%	$78,520
Tualatin Valley Water District	16.67%	$29,088
Beaverton	25%	$43,622
Forest Grove	13.33%	$23,260

The Early Work Package includes:

- Deep excavation (performed by a competitively bid sub-contractor)
- Erosion control
- Construction of haul road
- Installation of dewatering wells (performed by a sub-contractor)
- Utility relocations (decant, thickened solids, underdrain, electrical, fiber)
- Auger cast pile preparation (but NOT auger cast piles)
- Placement of excavated spoils into stockpile for Package 2 sludge drying bed construction

The GMP that is proposed for award is $872,451. The complete GMP is attached in Exhibit A.

WTP Expansion Project Updates:

Package 1 Construction

Construction activities for Package 1 ($4.87M) began in February 2017. Work completed to date includes:

- Filter media replacement (sand and anthracite) in all existing filters
- Filter gallery pipe rehabilitation for filters 1-8
- Installation of new rapid mix pumps
- Flow meter vault installed for sedimentation (sed) basins D-G
- Import fill material for new sludge drying beds

Construction activities have slowed down for the peak season. JWC does not allow major construction works or WTP shut-downs during the peak season. Any outstanding items will be completed between September 1 and November 30. This work includes:

- Complete the seismic life safety improvements
- Install of new flow meters for sed basins D-G and sed basins A & B
- Complete of new rapid mix piping
- Remove rapid mix baffle wall

Package 2 Design and Cost Estimates

CH2M completed 90% design drawings and specifications in early June 2017. An independent cost estimating team at CH2M prepared a 90% engineer's estimate, and Slayden constructors prepared a 90% construction estimate. Both cost estimates were received on June 20, 2017. The cost estimates provided are for total project cost, which include: the CH2M design contract, Slayden pre-construction services, Package 1 GMP, JWC overhead costs, and estimated Package 2 costs.

The engineer's estimate provided by CH2M totaled $34.26M. The estimating team at CH2M was completely independent and unaware of Slayden's previous construction estimates.

The 90% construction cost estimate from Slayden totaled $34.99M. Slayden's cost estimate includes 9% contingency, 5% construction contingency, and 4% design contingency. The design contingency will cover any additional design details that are added to the project between 90% and 100% design (due late July). In addition, this contingency will cover any overages that may result from Slayden sub-contracting or materials procurement.

Please note that both cost estimates exclude the gravity surge basin overflow pipe. At the time of the cost estimating, the Technical Advisory Committee (TAC) was evaluating options for surge basin overflow protection. The Operations Committee made a decision to include the gravity overflow pipe in the project on June 22. Slayden's estimate for this work is $305,000.

Slayden estimated their costs based on preliminary material quotes received from local suppliers and estimating the percentage of work they intend to self-perform. In the next two months, Slayden will competitively bid several sub-contractor work packages and materials procurement, including but not limited to:

- Electrical sub-contractor
- Painting sub-contractor
- HVAC sub-contractor
- Auger cast piles sub-contractor
- Instrumentation and controls
- Concrete rebar
- Concrete pumping
- Masonry
- Earthwork sub-contractor
- Earthquake resistant ductile iron pipe (ERDIP)

Slayden will prepare a Guaranteed Maximum Price (GMP) for Package 2 by early September. The price will be based on the 90% design plus any additions or savings resulting from the competitively bid sub-contractors and material quotes.

Attachments:

1. Exhibit A: Early Work Amendment 2 Contract

EXHIBIT F – EARLY WORK AMENDMENT

CONSTRUCTION MANAGER/GENERAL CONTRACTOR CONTRACT
Contract No. 80054200-7040-10571
Between JOINT WATER COMMISSION

and

SLAYDEN CONSTRUCTORS, INC.

AMENDMENT No. 3

for the following PROJECT:
JWC WTP Expansion to 85 MGD
Joint Water Commission Water Treatment Plant
4475 SW Fern Hill Road
Forest Grove, OR 97116

Joint Water Commission
c/o City of Hillsboro
150 E. Main Street
Hillsboro, OR 97123

THE CM/GC:
Slayden Constructors, Inc.
PO Box 247
Stayton, OR 97383

EXHIBIT F.1
F.1.1 Early Work Amendment
Pursuant to Article 6. of the Contract, the Joint Water Commission and CM/GC hereby amend the Contract to execute an Early Work Amendment. As agreed by the Joint Water Commission and CM/GC, the Early Work Amendment is an amount that shall not exceed the accepted price of Early Work. The Early Work shall include excavation and stockpiling of site material for new filter and surge basin structures, dewatering wells and pumps, erosion control, and associated improvements.

F.1.1.1 The Early Work Sum is guaranteed by the CM/GC not to exceed eight hundred seventy-two thousand, four hundred fifty-one dollars ($872,451).

F.1.1.2 Itemized Statement of the Early Work Amendment. Provided below is an itemized statement of the Early Work Amendment organized by trade categories, allowances, contingencies, alternates, the CM/GC's Fee, and other items that comprise the Early Work Price.

Attachment 1: JWC Early Work Amendment 2 submittal dated June 2, 2017

F.1.1.3 The Early Work Amendment is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Joint Water Commission:

No Alternatives

F.1.1.4 Allowances included in the Early Work Amendment, if any:

Item	Price ($0.00)
N/A	N/A

F.1.1.5 Assumptions, if any, on which the Early Work Amendment is based:

1. Reference Section Four of JWC Early Work Amendment 2 submittal dated June 2, 2017

F.1.1.6 The Early Work Amendment is based upon the following Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
N/A	N/A	N/A	N/A

F.1.1.7 The Early Work Amendment is based upon the following Specifications:

Section	Title	Date	Pages
Complete Document	Package 2 Early Grading Work Amendment	May 2017	1 - 200

F.1.1.8 The Early Work Amendment is based upon the following Drawings:

Number	Title	Date	Pages
Complete Document	Package 2 Early Grading Work Amendment	May 2017	1 - 9

F.1.1.9 The Early Work Amendment is based upon the following other documents and information:

N/A

ARTICLE F.2
F.2.1 In accordance with paragraph 5.b of the Contract, the anticipated date of Substantial Completion established by this Amendment is:

October 31, 2017

If this date is different than the date established in paragraph 5.b of the Contract, the date in this Early Work Amendment will control.

ARTICLE F.3
F.3.1 As permitted by paragraph 6.d. of the Contract, the CM/GC will continue providing pre-construction services after execution of this Early Work Amendment and Joint Water Commission will compensate CM/GC for such continued pre-construction services as follows:

Pre-construction Services for Package 2 as described in Exhibit B – RFP for CM/GC Services and authorized in Contract dated July 14, 2016.

For the JWC	**For the CM/GC**
Joint Water Commission *(Signature)* *(Date)*	**Slayden Constructors** *(Signature)* *(Date)*
Kevin Hanway, JWC General Manager *(Printed name and title)*	*(Printed name and title)*

Attachment 1

Joint Water Commission

JWC Water Treatment Plant Expansion to 85MGD
Early Work Amendment 2
June 2, 2017

Submitted to:
Joint Water Commission
c/o City of Hillsboro Water Department
150 E Main St, 3rd Floor
Hillsboro, OR 97123

Submitted by:
Slayden Constructors Inc.
PO Box 247, Stayton, OR 97383
(503) 769-1969
OR: CCB 208848
www.slayden.com

June 6, 20107

Mrs. Erika Murphy
City of Hillsboro Water Department
150 E. Main St. 4th Floor
Hillsboro, OR 97123

RE: EWA #2 Proposal – Early Grading Work Amendment
Joint Water Commission WTP Expansion to 85 MGD

Dear Ms. Murphy:

Slayden Constructors is pleased to be given the opportunity to submit the attached Proposal for Early Work Amendment #2 for the Joint Water Commission WTP Expansion to 85 MGD project.

We believe the contents of this proposal accurately reflect the cost to construct the Early Grading Work for the Joint Water Commission WTP Expansion to 85 MGD project as depicted in the 100% design set of contract documents dated “May 2017”.

We hope this proposal meets your needs and expectations – please contact us with any additional comments or questions. It has been a pleasure working with you and your team to date and we look forward to reaching an agreement and moving forward with this work.

Sincerely,
SLAYDEN CONSTRUCTORS INC.

Steve Flett
Vice President – Preconstruction Services
Email: Stevef@slayden.com
Office: 503-769-1969
Cell: 503-313-6954

JWC WTP Expansion to 85 MGD

Early Work Amendment 2

Table of Contents

June 2, 2017

Section One: EWA2 Cost Summary

Early Work Amendment 2 Budget Estimate

July 5, 2017

Description	Value		Notes
EWA 2 Cost of work	$	789,474	See detailed estimate
Phase 1 Construction Contingency (5%)	$	39,474	
Phase 1 total	**$**	**828,948**	
OH&P (4.0%)	$	33,158	
Subtotal	**$**	**862,106**	
Bonds (0.6%)	$	5,173	
Insurance (0.6%)	$	5,173	
Total GMP 1 Value	**$**	**872,451**	

Section Two: Detailed Estimate Cost Report

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 92000				Land Item	SCHEDULE: 1 100						
Description = MANAGMENT				Unit = LS	Takeoff Quan: 1.000				Engr Quan: 1.000		
1030	**Division Manager**			**Quan: 3.00**	**MOS Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
3HRS/WK											
ZDIV	==> Division Manager	1.00	39.00 MH	165.840	6,468						6,468
$6,467.76	13.0000 MH/MOS		39.00 MH	[2155.92]	6,468						6,468
1031	**Project Manager - Construction**			**Quan: 3.00**	**MOS Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
8TRPU	==> Pickup truck %25	0.75	132.00 HR	18.894					1,212		1,212
94CELL	Cell Phones	0.75	0.75 MOS	70.000				53			53
ZPM2	==> Proj Manager - Senior	0.75	132.00 MH	126.270	16,668						16,668
$17,932.09	44.0000 MH/MOS		132.00 MH	[5555.88]	16,668			53	1,212		17,932
1034	**Project Superintendent**			**Quan: 3.00**	**MOS Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
8TRPU	==> Pickup truck %25	1.00	528.00 HR	18.894					4,848		4,848
94CELL	Cell Phones	1.00	3.00 MOS	70.000				210			210
ZSUP2	==> Project Superintendent	1.00	528.00 MH	104.050	54,938						54,938
$59,996.23	176.0000 MH/MOS		528.00 MH	[18312.8]	54,938			210	4,848		59,996
1037	**Project Engineer 2**			**Quan: 3.00**	**MOS Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
8TRPU	==> Pickup truck %25	0.75	132.00 HR	18.894					1,212		1,212
94CELL	Cell Phones	0.75	0.75 MOS	70.000				53			53
ZPE2	==> Senior Proj Engineer	0.75	132.00 MH	88.390	11,667						11,667
$12,931.93	44.0000 MH/MOS		132.00 MH	[3889.16]	11,667			53	1,212		12,932
1042	**Monthly Safety Inspection/Training**			**Quan: 3.00**	**MOS Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
ZSAFEVP	==> Safety VP	1.00	24.00 MH	123.920	2,974						2,974
$2,974.08	8.0000 MH/MOS		24.00 MH	[991.36]	2,974						2,974
=====> Item Totals: 92000 - MANAGMENT											
$100,302.09	855.0000 MH/LS		855.00 MH	[92715.36]	92,715			315	7,272		**100,302**
100,302.090	1 LS				92,715.36			315.00	7,271.73		100,302.09
BID ITEM = 93000				Land Item	SCHEDULE: 1 100						
Description = GENERAL SERVICES				Unit = LS	Takeoff Quan: 1.000				Engr Quan: 1.000		
1043B	**Safety Supplies**			**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
3*DH	Direct Labor Hours	1.00	1,081.46 LBHR	0.750				811			811
1085	**Surveying**			**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**				
93SURVH	Surveying - Hourly	1.00	24.00 HR	180.000				4,320			4,320
93SURVP	Project Surveyor	1.00	8.00 HR	115.000				920			920
$5,240.00				[ ]				5,240			5,240
=====> Item Totals: 93000 - GENERAL SERVICES											
$6,051.10				[ ]				6,051			**6,051**
6,051.100	1 LS							6,051.10			6,051.10

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 96000				Land Item	SCHEDULE: 1 100						
Description =	GENERAL EQUIPMENT				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		1.000
1053	**General Equipment**				**Quan: 3.00 MOS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
Spread below does not include subcontracted earthwork.											
8D5	==> Dozer - 20K LB %75	0.50	88.00	HR	61.577				4,757		4,757
8EX030ZS	==> Exc 30K LB (PC1 %75	0.75	132.00	HR	73.939				8,706		8,706
8EX050ZS	==> Exc 50K LB (PC2 %50	0.50	88.00	HR	100.538				6,720		6,720
8FLRT9	==> RT-9k LB Forkli %25	3.00	528.00	HR	53.665				17,782		17,782
8LW3	==> Wheel Loader 2. %50	1.00	176.00	HR	62.926				8,536		8,536
8RSV84	==> Steel Vib Rolle %75	0.25	44.00	HR	57.328				2,142		2,142
8RTCR	==> R:Trench Compac %50	0.75	132.00	HR	13.541				1,606		1,606
8TRHT20	==> Haul Truck-20CY %75	1.25	220.00	HR	89.507				17,214		17,214
8TRUTK	==> Utility Truck %20	2.00	352.00	HR	19.768				3,312		3,312
8TRWT2	==> Water truck, 25 %50	0.50	88.00	HR	27.901				1,714		1,714
$72,487.01					[ ]				72,487		72,487
1056	**Earthwork Equipment Mob/Demob**				**Quan: 14.00 LDS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
OP2	Operator crew -2man			28.00 CH	**Prod:**	**2.0000 HU**	Lab Pcs:	2.00	Eqp Pcs:		0.00
3TLSTSS	STS-Standard	1.00	56.00	MHR	4.000		224				224
5TRSCGL	SCG Trucking LD	1.00	14.00	LD	750.000		10,500				10,500
OPEX3	Op - Excavator 80-130K Lb	2.00	56.00	MH	36.440	3,617					3,617
$14,341.31	4.0000 MH/LDS		56.00	MH	[145.76]	3,617	10,724				14,341
=====> Item Totals:	**96000**	**- GENERAL EQUIPMENT**									
$86,828.32	56.0000 MH/LS		56.00	MH	[2040.64]	3,617	10,724		72,487		**86,828**
86,828.320	1 LS					3,617.31	10,724.00		72,487.01		86,828.32
PARENT ITEM = 200000	CLIENT# = 2										
Description =	85 MGD				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		1.000
Listing of Sub-Biditems of Parent Item 200000:											
BID ITEM = 200100				Land Item	SCHEDULE: 1 100						
Description =	Earthwork				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
10000.1	**Earthwork Sub**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
4EWEX	Excavation - Sub	1.00	1.00	LS	261,750.000					261,750	261,750
10000.2	**Deduct for 1:1 Excavation Slope**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
4EWEX	Excavation - Sub	1.00	1.00	LS	-10,750.000					-10,751	-10,751
10000.3	**Clear and Grub Under Stockpile**				**Quan: 115,800.00 SF**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
OP4	Operator crew -3man			28.95 CH	**Prod:**	**4,000.0000 UH**	Lab Pcs:	4.00	Eqp Pcs:		0.00
3TLSTSS	STS-Standard	1.00	115.80	MHR	4.000		463				463
LAB1	Laborer - General	1.00	28.95	MH	27.720	1,535					1,535
OPEX3	Op - Excavator 80-130K Lb	2.00	57.90	MH	36.440	3,740					3,740
OPF	Operator Foreman	1.00	28.95	MH	40.580	2,020					2,020
$7,757.92	0.0010 MH/SF		115.80	MH	[0.035]	7,295	463				7,758
=====> Item Totals:	**200100**	**- Earthwork**									
$258,757.92	115.8000 MH/LS		115.80	MH	[4087.16]	7,295	463		251,000		**258,758**
258,757.920	1 LS					7,294.72	463.20		251,000.00		258,757.92

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200200				Land Item	SCHEDULE: 1 100						
Description = Erosion Control					Unit = LS	Takeoff Quan: 1.000			Engr Quan: 0.000		
200200.3	**Cover Soil Stockpile**				**Quan: 140,000.00 SF**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
Sandbags quoted @ $2.95/EA from ACF West											
OP3	Operator crew -3man		28.00	CH	**Prod: 5,000.0000 UH**		Lab Pcs: 3.00		Eqp Pcs: 0.00		
3EPCPS	Plastic Sheeting (4Mil)	1.20	18,816.00	SY	0.330		6,209				6,209
3EPCSB	Filled Sandbags - Standard	1.20	1,680.00	EA	3.000		5,040				5,040
3TLSTSS	STS-Standard	1.00	84.00	MHR	4.000		336				336
OPEX3	Op - Excavator 80-130K Lb	2.00	56.00	MH	36.440	3,617					3,617
OPF	Operator Foreman	1.00	28.00	MH	40.580	1,953					1,953
$17,155.86	0.0006 MH/SF		84.00	MH	[0.023]	5,571	11,585				17,156
200200.3.1	**Maintain Stockpile Cover**				**Quan: 2.00 MOS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
OP2	Operator crew -2man		16.00	CH	**Prod: 8.0000 HU**		Lab Pcs: 2.00		Eqp Pcs: 0.00		
3TLSTSS	STS-Standard	1.00	32.00	MHR	4.000		128				128
OPEX3	Op - Excavator 80-130K Lb	2.00	32.00	MH	36.440	2,067					2,067
$2,195.04	16.0000 MH/MOS		32.00	MH	[583.04]	2,067	128				2,195
200200.4	**Erosion Control Install**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
Includes dewatering discharge area											
OP3	Operator crew -3man		16.00	CH	**Prod: 16.0000 HU**		Lab Pcs: 3.00		Eqp Pcs: 0.00		
3EPCB	Bark Bags	1.00	1.00	PAL	165.000		165				165
3EPCI	Inlet Protection	1.00	10.00	EA	35.000		350				350
3EPCS	Silt Fence	1.00	1,900.00	LF	0.484		920				920
3EPCST	Fir Stakes	1.00	6.00	BNDL	17.600		106				106
3EPCSW	Straw Wattle	1.00	3.00	PAL	252.500		758				758
3TLSTSS	STS-Standard	1.00	48.00	MHR	4.000		192				192
OPEX3	Op - Excavator 80-130K Lb	2.00	32.00	MH	36.440	2,067					2,067
OPF	Operator Foreman	1.00	16.00	MH	40.580	1,116					1,116
$5,672.89	48.0000 MH/LS		48.00	MH	[1815.36]	3,183	2,490				5,673
200200.4.1	**Maintain Erosion Control**				**Quan: 4.00 MOS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
OP2	Operator crew -2man		16.00	CH	**Prod: 4.0000 HU**		Lab Pcs: 2.00		Eqp Pcs: 0.00		
3TLSTSS	STS-Standard	1.00	32.00	MHR	4.000		128				128
OPEX3	Op - Excavator 80-130K Lb	2.00	32.00	MH	36.440	2,067					2,067
$2,195.04	8.0000 MH/MOS		32.00	MH	[291.52]	2,067	128				2,195
200200.5	**Hydroseed disturbed areas**				**Quan: 10,000.00 SF**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
Tuefel Landscaping quoted $0.10/SF											
4LSSD	Seeding - Sub	1.00	20,000.00	SF	0.100					2,000	2,000
=====> **Item Totals: 200200 - Erosion Control**											
$29,218.83	196.0000 MH/LS		196.00	MH	[7324.4]	12,888	14,331		2,000		**29,219**
29,218.830	1 LS					12,887.85	14,330.98		2,000.00		29,218.83
BID ITEM = 200300				Land Item	SCHEDULE: 1 100						
Description = Pipe Reroute					Unit = LS	Takeoff Quan: 1.000			Engr Quan: 0.000		
200300.1	**Pothole Utilities to be relocated**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**	**Cal: 40**	**WC: NONE**			
OPC4	Composite Op crew -4man		4.00	CH	**Prod: 4.0000 HU**		Lab Pcs: 4.00		Eqp Pcs: 0.00		
3TLSTSS	STS-Standard	1.00	16.00	MHR	4.000		64				64

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200300				Land Item	SCHEDULE: 1 100						
Description =	Pipe Reroute				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
LAB2	Laborer - Pipelayer	1.00	4.00	MH	28.770	217					217
OPEX3	Op - Excavator 80-130K Lb	2.00	8.00	MH	36.440	517					517
OPF	Operator Foreman	1.00	4.00	MH	40.580	279					279
$1,077.11	16.0000 MH/LS		16.00	MH	[568.92]	1,013		64			1,077
200300.2	**Install Pipe**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OPC4	Composite Op crew -4man		48.00	CH	**Prod: 48.0000 HU**	Lab Pcs:	4.00	Eqp Pcs:			0.00
2AGDCR0.75M	3/4" Minus Delivered	1.00	433.00	TON	15.060		6,521				6,521
2PV	PIPING AND VALVES	1.00	1.00	LS	7,807.120		7,807				7,807
3MISC	Misc Adjustment	1.00	1.00	LS	1,150.000			1,150			1,150
3TLSTSS	STS-Standard	1.00	192.00	MHR	4.000			768			768
LAB2	Laborer - Pipelayer	1.00	48.00	MH	28.770	2,608					2,608
OPEX3	Op - Excavator 80-130K Lb	2.00	96.00	MH	36.440	6,201					6,201
OPF	Operator Foreman	1.00	48.00	MH	40.580	3,348					3,348
$28,403.42	192.0000 MH/LS		192.00	MH	[6827.04]	12,157	14,328	1,918			28,403
200300.2.1	**Drain and Cap Existing Lines**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OPC4	Composite Op crew -4man		4.00	CH	**Prod: 4.0000 HU**	Lab Pcs:	4.00	Eqp Pcs:			0.00
3TLSTSS	STS-Standard	1.00	16.00	MHR	4.000			64			64
LAB2	Laborer - Pipelayer	1.00	4.00	MH	28.770	217					217
OPEX3	Op - Excavator 80-130K Lb	2.00	8.00	MH	36.440	517					517
OPF	Operator Foreman	1.00	4.00	MH	40.580	279					279
$1,077.11	16.0000 MH/LS		16.00	MH	[568.92]	1,013		64			1,077
=====> **Item Totals: 200300 - Pipe Reroute**											
$30,557.64	224.0000 MH/LS		224.00	MH	[7964.88]	14,184	14,328	2,046			**30,558**
30,557.640	1 LS					14,183.54	14,328.10	2,046.00			30,557.64
BID ITEM = 200400				Land Item	SCHEDULE: 1 100						
Description =	Dewatering				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
200400.1	**Dewatering Sub (Wellpoints)**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
7 Months of Maintenance											
4DEWATER	Dewatering SUB	1.00	1.00	LS	167,779.000					167,779	167,779
200400.1.1	**Dewatering Deduct for 1:1 slopes**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
4DEWATER	Dewatering SUB	1.00	1.00	LS	-27,500.000					-27,501	-27,501
200400.1.2	**Assist Dewatering Sub with Installation**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OP2	Operator crew -2man		40.00	CH	**Prod: 40.0000 HU**	Lab Pcs:	2.00	Eqp Pcs:			0.00
3TLSTSS	STS-Standard	1.00	80.00	MHR	4.000			320			320
OPEX3	Op - Excavator 80-130K Lb	2.00	80.00	MH	36.440	5,168					5,168
$5,487.59	80.0000 MH/LS		80.00	MH	[2915.2]	5,168		320			5,488
200400.3	**Dewatering Discharge Install**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OP3	Operator crew -3man		40.00	CH	**Prod: 40.0000 HU**	Lab Pcs:	3.00	Eqp Pcs:			0.00
2AGDDRDR	Drain Rock Delivered	1.00	160.00	TON	16.060		2,570				2,570
3DWBT	Baker Tanks	1.00	4.00	MOS	1,223.000			4,892			4,892
3DWBTMOB	Baker Tank Mob	1.00	1.00	LS	780.000			780			780
3FILT	Filter Bags	1.00	4.00	EA	225.000			900			900

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200400				Land Item	SCHEDULE: 1 100						
Description =	Dewatering				Unit = LS	Takeoff Quan:		1.000	Engr Quan:		0.000
3PVPHDPE	HDPE PIPE	1.00	700.00	LF	4.370			3,059			3,059
3TLSTSS	STS-Standard	1.00	120.00	MHR	4.000			480			480
5FU0412	HDPE Fusion Machine 4"-1	1.00	5.00	DAY	250.000			1,250			1,250
8GEG055R	==> R:Generator 55K %50	1.00	40.00	HR	26.034				676		676
OPEX3	Op - Excavator 80-130K Lb	2.00	80.00	MH	36.440	5,168					5,168
OPF	Operator Foreman	1.00	40.00	MH	40.580	2,790					2,790
$22,564.93	120.0000 MH/LS		120.00	MH	[4538.4]	7,958	2,570	11,361	676		22,565
200400.6	**Dewatering Power Service**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
trench from trailor service											
OP2	Operator crew -2man		16.00	CH	**Prod: 16.0000 HU**	Lab Pcs: 2.00			Eqp Pcs: 0.00		
3TLSTSS	STS-Standard	1.00	32.00	MHR	4.000			128			128
4ELEC	ELECTRICAL - Sub	1.00	1.00	LS	10,000.000				10,000		10,000
94POWERS	Site Power	1.00	4.00	MOS	450.000			1,800			1,800
OPEX3	Op - Excavator 80-130K Lb	2.00	32.00	MH	36.440	2,067					2,067
$13,995.04	32.0000 MH/LS		32.00	MH	[1166.08]	2,067		1,928		10,000	13,995
=====> **Item Totals: 200400 - Dewatering**											
$182,326.56	232.0000 MH/LS		232.00	MH	[8619.68]	15,193	2,570	13,609	676	150,279	**182,327**
182,326.560	1 LS					15,192.60	2,569.60	13,609.00	676.36	150,279.00	182,326.56
BID ITEM = 200500				Land Item	SCHEDULE: 1 100						
Description =	Access Road				Unit = LS	Takeoff Quan:		1.000	Engr Quan:		0.000
200500.1	**Barrier at top of slope at road**				**Quan: 500.00 LF**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
4' space between blocks											
OP3	Operator crew -3man		8.33	CH	**Prod: 60.0000 UH**	Lab Pcs: 3.00			Eqp Pcs: 0.00		
3PCWBLKE	Ecology Block - Utility grad	1.00	60.00	EA	55.000			3,300			3,300
3SHIP	Shipping	1.00	5.00	LD	475.000			2,375			2,375
3TLSTSS	STS-Standard	1.00	25.00	MHR	4.000			100			100
OPEX3	Op - Excavator 80-130K Lb	2.00	16.67	MH	36.440	1,077					1,077
OPF	Operator Foreman	1.00	8.33	MH	40.580	581					581
$7,432.89	0.0500 MH/LF		25.00	MH	[1.891]	1,658		5,775			7,433
200500.2	**Main Construction Access Road**				**Quan: 730.00 CY**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
Assumed 10" depth for rock and 19,650SF of road											
OPC4	Composite Op crew -4man		24.33	CH	**Prod: 30.0000 UH**	Lab Pcs: 4.00			Eqp Pcs: 0.00		
3AGDCR2.5PR	2 1/2" Minus Pit Run Deliv	1.75	1,057.00	TON	15.060			15,918			15,918
3SIGTNW	NON-WOVEN GEOTEXTI	1.10	2,402.53	SY	0.810			1,946			1,946
3TLSTSS	STS-Standard	1.00	97.33	MHR	4.000			389			389
LAB2	Laborer - Pipelayer	1.00	24.33	MH	28.770	1,322					1,322
OPEX3	Op - Excavator 80-130K Lb	2.00	48.67	MH	36.440	3,144					3,144
OPF	Operator Foreman	1.00	24.33	MH	40.580	1,697					1,697
$24,416.66	0.1333 MH/CY		97.33	MH	[4.741]	6,163		18,254			24,417
200500.2.1	**Strippings Stockpile Access Road**				**Quan: 70.00 CY**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
based on 1900SF of road 10" deep											
OP4	Operator crew -3man		2.33	CH	**Prod: 30.0000 UH**	Lab Pcs: 4.00			Eqp Pcs: 0.00		
3AGDCR2.5PR	2 1/2" Minus Pit Run Deliv	1.75	103.25	TON	15.060			1,555			1,555
3SIGTNW	NON-WOVEN GEOTEXTI	1.10	229.90	SY	0.810			186			186
3TLSTSS	STS-Standard	1.00	9.33	MHR	4.000			37			37
LAB1	Laborer - General	1.00	2.33	MH	27.720	124					124

Cost Report

Activity / Resource	Desc	Pcs	Quantity	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200500				Land Item	SCHEDULE: 1 100						
Description =	Access Road				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
OPEX3	Op - Excavator 80-130K Lb	2.00	4.67	MH	36.440	302					302
OPF	Operator Foreman	1.00	2.33	MH	40.580	163					163
$2,366.25	0.1332 MH/CY		9.33	MH	[4.704]	588		1,778			2,366
=====> **Item Totals:**	**200500**	**- Access Road**									
$34,215.80	131.6600 MH/LS		131.66	MH	[4735.6]	8,409		25,807			**34,216**
34,215.800	1 LS					8,408.52		25,807.28			34,215.80
BID ITEM = 200600				Land Item	SCHEDULE: 1 100						
Description =	Reroute Electrical Conduit				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
T260100.1	**Trench New Conduit**				**Quan: 1.00 LF**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OP3	Operator crew -3man		48.00	CH	**Prod: 48.0000 HU**	Lab Pcs: 3.00		Eqp Pcs: 0.00			
2AGDBRS	Sand Delivered	1.00	68.00	TON	22.880		1,556				1,556
2AGDCR0.75M	3/4" Minus Delivered	1.00	68.00	TON	15.060		1,024				1,024
3CORM3.0PSI	3,000 PSI Concrete	1.00	21.00	CY	150.000			3,150			3,150
3TLSTSS	STS-Standard	1.00	144.00	MHR	4.000			576			576
OPEX3	Op - Excavator 80-130K Lb	2.00	96.00	MH	36.440	6,201					6,201
OPF	Operator Foreman	1.00	48.00	MH	40.580	3,348					3,348
$15,855.49	144.0000 MH/LF		144.00	MH	[5446.08]	9,550	2,580	3,726			15,855
T260100	**Electrical SUB**				**Quan: 1.00 LS**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
4ELEC	ELECTRICAL - Sub	1.00	1.00	LS	39,975.000					39,975	39,975
=====> **Item Totals:**	**200600**	**- Reroute Electrical Conduit**									
$55,830.49	144.0000 MH/LS		144.00	MH	[5446.08]	9,550	2,580	3,726		39,975	**55,830**
55,830.490	1 LS					9,549.57	2,579.92	3,726.00		39,975.00	55,830.49
BID ITEM = 200700				Land Item	SCHEDULE: 1 100						
Description =	Fencing				Unit = LS	Takeoff Quan:	1.000		Engr Quan:		0.000
200200.2	**Install Hi-Vis Construction Fence**				**Quan: 1,000.00 LF**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
for Wetland Boundary											
OPC2	Composite Op crew - 2man		10.00	CH	**Prod: 100.0000 UH**	Lab Pcs: 2.00		Eqp Pcs: 0.00			
3TLSTSS	STS-Standard	1.00	20.00	MHR	4.000			80			80
3TRPF	Orange Pedestrian Fence w/	1.00	1,000.00	FT	0.800			800			800
LAB2	Laborer - Pipelayer	1.00	10.00	MH	28.770	543					543
OPEX3	Op - Excavator 80-130K Lb	1.00	10.00	MH	36.440	646					646
$2,069.23	0.0200 MH/LF		20.00	MH	[0.652]	1,189		880			2,069
200300.5	**Install Temp Security Fence**				**Quan: 350.00 LF**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
94FENCE	Temp Fence	1.00	350.00	LF	5.000			1,750			1,750
200300.6	**Fence Removal**				**Quan: 300.00 LF**	**Hrs/Shft: 8.00**		**Cal: 40**	**WC: NONE**		
OP3	Operator crew -3man		6.00	CH	**Prod: 50.0000 UH**	Lab Pcs: 3.00		Eqp Pcs: 0.00			
3SIDTR	Dump Fee - Trash	1.00	1.00	LS	300.000			300			300
3TLSTSS	STS-Standard	1.00	18.00	MHR	4.000			72			72
OPEX3	Op - Excavator 80-130K Lb	2.00	12.00	MH	36.440	775					775
OPF	Operator Foreman	1.00	6.00	MH	40.580	419					419

Cost Report

Activity / Resource	Desc	Quantity / Pcs	Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200700			Land Item	SCHEDULE: 1 100						
Description = Fencing				Unit = LS	Takeoff Quan:		1.000	Engr Quan:		0.000
$1,565.70	0.0600 MH/LF	18.00	MH	[2.269]	1,194		372			1,566
=====> **Item Totals: 200700 - Fencing**										
$5,384.93	38.0000 MH/LS	38.00	MH	[1332.86]	2,383		3,002			**5,385**
5,384.930	1 LS				2,382.93		3,002.00			5,384.93
				Total of Above Sub-Biditems						
=====> **Item Totals: 200000 - 85 MGD**										
$596,292.17	**1,081.4600 MH/LS**	**1,081.46**	**MH**	**[39510.66]**	**69,900**	**19,478**	**62,984**	**676**	**443,254**	**596,292**
596,292.170	**1 LS**				**69,899.73**	**19,477.62**	**62,984.46**	**676.36**	**443,254.00**	**596,292.17**
$789,473.68	***** Report Totals *****	1,992.46	MH		166,232	19,478	80,075	80,435	443,254	**789,474**

>>> **indicates Non Additive Activity**
------Report Notes:------
The estimate was prepared with TAKEOFF Quantities.
This report shows TAKEOFF Quantities with the resources.

Bid Date: 09/09/16 Owner: Joint Water Commission Engineering Firm: CH2M
Estimator-In-Charge: EB

JOB NOTES

```
Estimate created on: 04/06/2015 by User#: 16 - Erik Brahmer
Source estimate used: H:\EST\ESTMAST

************Estimate created on: 09/16/2015 by User#: 3 - Erik Brahmer
Source used: C:\USERS\ERIKB\DESKTOP\TO DO\MASTERS\SCGHC2015.zip (a backup) from 09/15/2015  7:49:24 AM

************Estimate created on: 12/17/2015 by User#: 3 - Erik Brahmer
Source used: C:\USERS\ERIKB\DESKTOP\2015.DEC SCG MASTERS\SCGTPD2015.zip (a backup) from 12/17/2015
10:18:18 AM

************Estimate created on: 08/12/2016 by User#: 7 - David Philips
Source estimate used: H:\EST\SCI-DIR-2016

************Estimate created on: 10/16/2016 by User#: 3 - Erik Brahmer
Source estimate used: H:\EST\1602-PH2-30

************Estimate created on: 10/28/2016 by User#: 3 - Erik Brahmer
Source estimate used: H:\EST\1602-PH2-33

************Estimate created on: 02/15/2017 by User#: 7 - David Philips
Source used: C:\USERS\PHILIPD\DESKTOP\ACTIVE JOBS\JWC\PHASE 2 30%\ESTIMATE BACKUP\1602-PH2-35.zip (a
backup) from 02/15/2017  3:37:58 PM

************Estimate created on: 03/01/2017 by User#: 3 - Erik Brahmer
Source estimate used: H:\EST\1602-PH2-30V

************Estimate created on: 04/12/2017 by User#: 3 - Erik Brahmer
Source estimate used: H:\EST\1602-P2-VE-1

************Estimate created on: 05/18/2017 by User#: 7 - David Philips
Source estimate used: H:\EST\1602-P2-EWA2
```

Cost Report

Activity / Resource	Desc	Quantity Pcs	Quantity Unit	Unit Cost	Labor	Perm Material	Constr Matl/Exp	Equip Ment	Sub-Contract	Total
BID ITEM = 200700			Land Item	SCHEDULE: 1 100						
Description = Fencing			Unit = LS	Takeoff Quan: 1.000				Engr Quan: 0.000		

* on units of MH indicate average labor unit cost was used rather than base rate.
[ ] in the Unit Cost Column = Labor Unit Cost Without Labor Burdens
In equipment resources, rent % and EOE % not = 100% are represented as XXX%YYY where XXX=Rent% and YYY=EOE%

------Calendar Codes------

40	**40 Hour Week (5x8) (Default Calendar)**
45	45 Hour Week (5x9)
50	50 Hour Week (5x10)
605	60 Hour Week (5x12)
606	60 Hour Week (6x10)
70	70 Hour Week (7x10)
W	Weekend Work Only

Section Three: Subcontractor and Supplier Quotes

Analyze Quotes

Folder: 4EARTH Earthwork - Sub

Vendor Code:								**WESTECH**		K&E		
Vendor Name:								**WESTECH**		K&E		
Vendor Phone:												
Bid	**Activity**	**Resourc**	**Description**	**Quantity**	**Unit**	**Plug Price**	**Ext**	**UP**	**Ext.**	**UP**	**Ext.**
200100	10000.1	4EWEX	Earthwork Sub	1.00	LS	325,000.000	325,000.00	**261,750.000**	**261,750.00**	297,000.000	297,000.00
200100	10000.2	4EWEX	Deduct for 1:1 Excavation Slope	1.00	LS	-10,000.000	-10,000.00	**-10,750.000**	**-10,750.00**	-21,000.000	-21,000.00
Totals:							315,000.00		**251,000.00**		276,000.00
Difference From Plug:									**-64,000.00**		-39,000.00

Note:
A "P" beside a price indicates a plug price.
Bold indicates that the vendor is selected.

Westech Construction, Inc.
2204 NE 194th Avenue
Portland, OR 97230
Ph. (503) 777-7000 Fax. (503) 774-3191
OR CCB 99833 * WA WESTECI969PQ

May 25, 2017

REVISED 6/01/2017

Kerry Larsen
Slayden Constructors, Inc
PO Box 247
Stayton, OR 97383
Phone: (503) 339-6422
Fax: (503) 769-4525

Dear Kerry,

Please find our bid for the JWC Water Treatment Plant Expansion - Early Earthwork Package

INCLUSIONS:

Dust Control
Clearing
Earthwork - Mass Excavation w/Offroad Trucks to Onsite Location
6" Rock Base Under Structure Areas,
Increased to 24" @ Access Ramp & Center Access Strip
Cover Excavated Slopes w/6Mil plastic
Orange Safety Fence around Perimeter of Excavated Area

EXCLUSIONS:

Fees, Permits, Testing
Erosion Control Items other than Dust Control
Night work
Traffic Control
Survey
Surveying shall be provided by a licensed surveyor and shall include:
One set of rough grade staking @ top of slope
One set of staking/verification @ top of slope
One set of staking for subgrade of all areas to be rocked
All necessary offsets as determined by WESTECH CONSTRUCTION, INC.
Rock Excavation
Removal of Buried Debris and/or Structures not specifically included above.
Any Handling and/or Disposal of Hazardous Material
Site Dewatering
Excavation of Unsuitable Material below Subgrade Elevation
Backfill, Removal of Material, or Compaction of Work done by Others

STIPULATIONS

Retention to be released 30 days after completion of our work
Retention to NOT Exceed Percentage Held by Owner
Rock will meet ODOT spec, may contain more than 5% on 200 sieve
Westech to be responsible for on-going cleanup of only work covered under this proposal

Grades to be accepted as within acceptable tolerances prior to others performing work on grades established by Westech. Proceeding with work on Westech's established grades shall constitute acceptance of these grades

Our Price includes two mobilizations. Additional mobilizations to be billed on a time and material basis

This Proposal assumes the Excavated Material is Stable & Moveable by Off Road Trucks

Work Described Above **$ 261,750.00**

This price is good for thirty days from the date submitted.

Respectfully Submitted,

Randy Olszewski
Estimator
estimating@wtc-inc.com
www.wtc-inc.com

BID FORM

Project: Water Treatment Plant Expansion to 85MGD
RFP: 1.13 Earthwork
Subcontract

The undersigned, having carefully examined the Bid Documents and the site of the proposed Work, and being familiar with existing conditions and obstacles and conditions under which the Work is to be performed, hereby offers and agrees to furnish all labor, materials, and services necessary to execute the proposed Work in accordance with the Bid Documents, as follows. All pricing is firm, fixed for the Work as proposed and is inclusive of Payment and Performance Bonds and all applicable taxes.

LUMP SUM BASE BID PRICE:

USD (261,750-)

REQUIRED Additional Detailed Price Breakdown: Provide Price Breakdown for basis of your Lump Sum utilizing the Bid Schedule below. Note that bids submitted without the price breakdown below will be considered unresponsive.

Scope	Quantity	UOM	Field Labor Hours	Labor Cost	Material Cost	Total Cost
Excavation for New Filters and Surge Basin per Drawings	1	LS	996			
Sub-total						
8. Payment and Performance Bonds	1	LS				2827-
TOTAL BASE BID PRICE						261,750-

TAXES:
All taxes imposed by law are included in the prices, except to the extent of any tax exemption provided with this RFP.

PERFORMANCE AND PAYMENT BONDS:
The undersigned agrees to furnish the required Performance and Payment bonds if awarded the work. Such bonds will be provided by the following:

Name of Surety Company: HARTFORD INSURANCE GROUP
Telephone Number of Surety Company: 503-224-2500
Name of Surety Agent: ANCHOR INSURANCE & SURETY
Bond Rate: 1.08%

OPTIONAL PRICING:
The undersigned agrees to the following additions to or deductions from the Base Bid Sum if the Options itemized below are accepted. It is understood that these Options are Contractor defined alternates to the Base Bid Sum and may be exercised by Contractor at its sole discretion. Other alternates offered by the Bidder, if any, are set forth in the "Alternates" section.

Option Number	Description	USD Add/(Deduct)
1	Base bid assumes 1.5:1 slope. Provide deduct amount for 1:1 sloping.	<10,750>

PRICING FOR CHANGES TO THE WORK:
Should extra work or changes to the Scope of Work be required, such changes will be priced and performed as set forth in the Bid Documents made a part of the RFP. Changes to be performed on a Unit Price or Time and Material basis will be priced in accordance with the following attachments:

- Labor Rates
- Equipment Rates

ACCEPTANCE OF BID:
If written notice of acceptance of this Bid is received within 90 days after the Date of Signature of this Bid the undersigned will sign the Subcontract Agreement, and will then deliver to Contractor that document, the certificates of insurance, and the required Performance and Payment Bonds, all within seven (7) days after receipt of the Subcontract Agreement from Contractor.

COMMENCEMENT AND COMPLETION OF WORK:
If this Bid is accepted and Agreement is awarded, the undersigned agrees to promptly commence the Work by the milestone dates specified in the Scope of Work attached herein.

ADDENDA:
We acknowledge receipt of the following Addenda to the RFP and have included the associated costs in the Lump Sum Base Bid Price and all other prices set forth in this Bid as applicable:

Addendum No. 1 Dated 5/23/17 (BID CLARIFICATION)

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

ALTERNATES:
1. The following Alternates offered by Bidder in addition to the Base Bid. Decision to include or not include Alternate(s) in Work resides with Contractor.

2. If Contractor elects to include any Alternate in the Work, acceptance of the Alternate will be stated in the Subcontract Agreement or by Change Order, whichever is appropriate.

3. The undersigned agrees to the following additions to or deductions from the Base Bid Price if the Alternates itemized below are accepted:

Alternates List *(If no alternates are offered state "None")*

Alternate Number	Description	USD Add/(Deduct)

EXCEPTIONS TO BIDDING DOCUMENTS
Listed below are exceptions to the Bid Documents. NOTE THAT EXCEPTIONS MAY BE CAUSE FOR BID REJECTION. If no exceptions to the Bid Documents are proposed, state "NONE".

Technical Exceptions:

NONE

Commercial Exceptions:

NONE

ATTACHMENTS:
The following required documents must be submitted by Bidder. Incomplete bids will be considered unresponsive:

- Attachment 1 Statement of Project Experience
- Attachment 2 Sub-Subcontractors and Major Material Suppliers
- Attachment 3 Subcontractor Safety Performance Statement
- Attachment 4 Labor and Equipment Rates
- Attachment 5 Letter from Surety committing to furnish P&P Bonds

BIDDER ORGANIZATION:
The undersigned is organized as a (X) corporation, ( ) partnership, ( ) individual, ( ) sole proprietorship, ( ) joint venture, ( ) other _____ in the State of OREGON.

FEDERAL IDENTIFICATION NUMBER: 93-1139383

BIDDER'S UBI NUMBER: 391258-99 **EXPIRATION DATE:** 03/19/2018

OREGON CONSTRUCTION BOARD REGISTRATION: 99833 **EXPIRATION DATE:** 6/13/2018

AUTHORIZATION:

WESTECH CONSTRUCTION INC.
(Name of Bidder)

_____
(P. O. Box, City, State, Zip)

2204 NE 194TH AVE, PORTLAND, OR 97230
(Street, City, State, Zip)

CLESS WOODWARD
(Name of Authorized Person)

V.P.
(Title of Authorized Person)

Cless Woodward
(Signature of Authorized Person)

5/25/17
(Date)

Analyze Quotes

Folder: 4DEWATER DEWATERING - Sub

Vendor Code: **DGS**
Vendor Name: **DGS**
Vendor Phone:

Bid	Activit	Resour	Description	Quantity	Unit	Plug Pric	Ext	UP	Ext.	UP	Ext.	UP	Ext.
200400	200400	4DEW	Dewatering Sub (Wellpoints	1.00	LS	135,000.000	135,000.00	**167,779.000**	**167,779.00**				
200400	200400	4DEW	Dewatering Deduct for 1:1 s	1.00	LS	-10,000.000	-10,000.00	**-27,500.000**	**-27,500.00**				
Totals:							125,000.00		**140,279.00**				
Difference From Plug:									**15,279.00**				

Note:
A "P" beside a price indicates a plug price.
Bold indicates that the vendor is selected.

BID FORM

Project: Water Treatment Plant Expansion to 85 MGD
RFP: 1.14 Dewatering
Subcontract

The undersigned, having carefully examined the Bid Documents and the site of the proposed Work, and being familiar with existing conditions and obstacles and conditions under which the Work is to be performed, hereby offers and agrees to furnish all labor, materials, and services necessary to execute the proposed Work in accordance with the Bid Documents, as follows. All pricing is firm, fixed for the Work as proposed and is inclusive of Payment and Performance Bonds and all applicable taxes.

LUMP SUM BASE BID PRICE:

One Hundred Sixty Seven Thousand Seven Hundred Seventy Nine

USD (167,779.00)

REQUIRED Additional Detailed Price Breakdown: Provide Price Breakdown for basis of your Lump Sum utilizing the Bid Schedule below. Note that bids submitted without the price breakdown below will be considered unresponsive.

Scope	Quantity	UOM	Field Labor Hours	Labor Cost	Material Cost	Total Cost
Dewatering	1	LS	530	30,000	60,000.00	162,779.00
Sub-total						
8. Payment and Performance Bonds	1	LS				5,000.00
TOTAL BASE BID PRICE						167,779.00

TAXES:
All taxes imposed by law are included in the prices, except to the extent of any tax exemption provided with this RFP.

PERFORMANCE AND PAYMENT BONDS:
The undersigned agrees to furnish the required Performance and Payment bonds if awarded the work. Such bonds will be provided by the following:

Name of Surety Company: HUB International Northwest
Telephone Number of Surety Company: 425-489-4538
Name of Surety Agent: Chad Epple
Bond Rate: 3% of Contract Value

OPTIONAL PRICING:
The undersigned agrees to the following additions to or deductions from the Base Bid Sum if the Options itemized below are accepted. It is understood that these Options are Contractor defined alternates to the Base Bid Sum and may be exercised by Contractor at its sole discretion. Other alternates offered by the Bidder, if any, are set forth in the "Alternates" section.

Option Number	Description	USD Add/(Deduct)
	If 1:1 slope is used	(27,500.00)

PRICING FOR CHANGES TO THE WORK:
Should extra work or changes to the Scope of Work be required, such changes will be priced and performed as set forth in the Bid Documents made a part of the RFP. Changes to be performed on a Unit Price or Time and Material basis will be priced in accordance with the following attachments:

- Labor Rates
- Equipment Rates

ACCEPTANCE OF BID:
If written notice of acceptance of this Bid is received within 90 days after the Date of Signature of this Bid the undersigned will sign the Subcontract Agreement, and will then deliver to Contractor that document, the certificates of insurance, and the required Performance and Payment Bonds, all within seven (7) days after receipt of the Subcontract Agreement from Contractor.

COMMENCEMENT AND COMPLETION OF WORK:
If this Bid is accepted and Agreement is awarded, the undersigned agrees to promptly commence the Work by the milestone dates specified in the Scope of Work attached herein.

ADDENDA:
We acknowledge receipt of the following Addenda to the RFP and have included the associated costs in the Lump Sum Base Bid Price and all other prices set forth in this Bid as applicable:

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

ALTERNATES:
1. The following Alternates offered by Bidder in addition to the Base Bid. Decision to include or not include Alternate**(**s**)** in Work resides with Contractor.

2. If Contractor elects to include any Alternate in the Work, acceptance of the Alternate will be stated in the Subcontract Agreement or by Change Order, whichever is appropriate.

3. The undersigned agrees to the following additions to or deductions from the Base Bid Price if the Alternates itemized below are accepted:

Alternates List *(If no alternates are offered state "None")*

Alternate Number	Description	USD Add/(Deduct)
	NONE	

EXCEPTIONS TO BIDDING DOCUMENTS
Listed below are exceptions to the Bid Documents. NOTE THAT EXCEPTIONS MAY BE CAUSE FOR BID REJECTION. If no exceptions to the Bid Documents are proposed, state "NONE".

Technical Exceptions:

None

Commercial Exceptions:

None

ATTACHMENTS:
The following required documents must be submitted by Bidder. Incomplete bids will be considered unresponsive:

- Attachment 1 Statement of Project Experience
- Attachment 2 Sub-Subcontractors and Major Material Suppliers
- Attachment 3 Subcontractor Safety Performance Statement
- Attachment 4 Labor and Equipment Rates
- Attachment 5 Letter from Surety committing to furnish P&P Bonds

BIDDER ORGANIZATION:
The undersigned is organized as a ( ) corporation, ( ) partnership, ( ) individual, ( ) sole proprietorship, ( ) joint venture, (✓) other LLC in the State of Washington.

FEDERAL IDENTIFICATION NUMBER: 80-0378568

BIDDER'S UBI NUMBER: 602-911-176 **EXPIRATION DATE:** 01-07-2018

OREGON CONSTRUCTION BOARD REGISTRATION: 193044 **EXPIRATION DATE:** 02-09-2019

AUTHORIZATION:

Designed Groundwater Services, LLC
(Name of Bidder)

PO Box 1767 Allyn, WA 98524	6809 96th St E Puyallup, WA 98371
(P. O. Box, City, State, Zip)	(Street, City, State, Zip)
Jamie Mitchell	Jamie Mitchell
(Name of Authorized Person)	(Title of Authorized Person)
Jamie Mitchell	06-01-2017
(Signature of Authorized Person)	(Date)

Fern Hill WTP
Dewatering

Bid Date: 5-23-2017

Project # 17-41

Designed Groundwater Services, LLC (DGS), hereby submits the following proposal for the installation of a temporary vacuum wellpoint dewatering system. This bid is based on limited data. Construction and removal of the temporary dewatering system will be in conformance to requirements of the OWRD.

RESPONSIBILITIES OF DESIGNED GROUNDWATER SERVICES, LLC

1) **(1) Each Mobilization and Demobilization of proprietary dewatering equipment.**
2) **This proposal anticipates the Jetting of the wellpoints. If the installation method must be changed an adjustment to the contract price must be made.**
3) **Provide and install (1) vacuum wellpoint dewatering system for the following, in one continuous operation:**
    a. **900 LF around the perimeter of the entire excavation at elevation 178.**
4) **Provide operation and maintenance of the vacuum wellpoint dewatering system for (6) months.**
5) **Provide 10/20 Colorado Round Sand and Bentonite as required.**
6) **Provide approximately (900) LF of 8" header system with proprietary adjustable valves.**
7) **Provide up to (200) LF of 8" discharge pipe and an 8" McCrometer Flow Meter.**
8) **Provide (1) 12" Electric Vacuum Dewatering Pump.**
9) **Provide a Stamped Dewatering Design by a Licensed Hydrogeologist/PE.**
10) **Provide Oregon State Licensed Well Driller.**
11) **Provide Start Cards and Decommissioning as per OWRD requirements.**

RESPONSIBILITIES OF GENERAL CONTRACTOR / OWNER

1) **Provide access for safe and efficient jetting/drilling and decommissioning operations.**

2) **Provide (1) water truck and potable water for jetting installation and/or a fire hydrant with at least 100 psi including metering.**

3) **Provide an Operated Series (300) Track Hoe or larger for jetting/decommissioning or wellpoints.**

4) **Provide a 2' bench for the wellpoints and header at elevation 178.**

5) **Provide a prepared area at elevation 178 for the placement of the dewatering pump.**

6) **Provide Shore Power and a Licensed Electrician for wiring (1) EA 12" Electric Vacuum Dewatering Pump.**

7) **Provide power cable from transformer to the Electric Vacuum Dewatering Pump.**

8) **Obstructions to jetting/drilling including the removal of asphalt or concrete to allow for the installation.**

9) **Provide traffic control, as required.**

10) **Trenching and or Steel Plating for subsurface installation.**

11) **The existing utilities above and below ground including the protection of or damage to, relocation of, locates and marking including all pot-holing.**

12) **Provide survey and wellpoint locations, as required.**

13) **Provide City, County, State and Federal permits required for all dewatering operations and discharge water.**

14) **The contractor will be responsible for the discharge water from the dewatering pump, including permitting, monitoring, testing, treatment, reporting, disposal and settlement tanks if required.**

15) **Provide provisions to protect dewatering equipment for driveway and business access requirements.**

16) **DGS will not be responsible for any ground settling or settling of structures. Settlement monitoring will be the responsibility of the General Contractor.**

17) **Removal and control of surface and or storm water.**

18) **Provide a secured lay down area within the confines of the project for supplemental dewatering system equipment.**

19) **DGS does not guarantee dewatering to be 100% effective. The contractor will provide any additional pumps, if required, to remove pocketed or undrained water not otherwise collected or removed by the dewatering system.**

This proposal by specific reference or by inclusion as an exhibit shall be included in any contract.

QUOTATION:

Vacuum Wellpoint Dewatering System @ $167,779.00 LS

IF the slope is changed to 1-1 deduct $27,500.00

Monthly Maintenance after (6) Months @ $11,900.00 per month

- **3 weeks overage equal 1 month**
- **3 days overage equal 1 week**

ACCEPTANCE

DGS agrees to perform work specified in this proposal in accordance with all conditions herein, which the contractor acknowledges that it has read and agrees to comply with. .

All terms and conditions specified herein are to be part of the agreement and are irrevocably accepted by signature or commencement of work by DGS.

TERMS AND CONDITIONS:

1) **Final payment, including any retention shall be paid within thirty days of the removal of the dewatering system. Given DGS has provided the contractor with all required contract documents.**
2) **No sales tax included.**
3) **If bonding is required, add 2.5%.**
4) **Proposal is valid for (30) thirty days.**

Thank you for the opportunity to bid this work.

Sincerely,

Gary Fors
Owner/Operations Manager
C: 253-365-5195
gary@designedgroundwater.com

Team Electric
9400 SE Clackamas Rd. / Clackamas, OR 97015 / Phone (503) 557-7180 / Fax (503) 557-8201 / CCB # 173043

Change Order Proposal Joint Water Commission Forest Grove

Date: May 25, 2017

To: Slayden Constructructors Inc.
PO Box 247
Stayton, Oregon 97383

From: Team Electric Co
Mike Trusheim
9400 SE Clackamas Rd
Clackamas, Or 97015
(503) 557-7180
(503) 557-8201
MikeT@TeamElectricco.com

Job #: Joint Water Commission
Forest Grove Oregon

Job No. 9305

Re: Change Order Review
Area #: EWA 2
CO: 4

TEAM ELECTRIC CO No. 4
Electrical Relocate

Conclusion: Team has reviewed the facts and findings for the following Lump Sum change order request as follows:

Scope:

The work description is as the following Specification Sheets:
Electrical relocate per EWA 2

Qualifications:

We have based our Estimate on the facts and findings listed above, other information may effect the recommendation.

$39,975.00

See the attached breakdowns CO- Proposal, and the labor and material.

Thank you for the opportunity of assisting you with this project.

Respectfully,

Michael Trusheim
Team Electric

Team Electric Co
Standard Computation
For Change Order Work in Normal Progress of Project

Job Number: 9286 — Total install Hrs: 148.20

Job Name : Joint Water Commission

Project manager: — CO: 4 ADD

Date: 05/25/17

Description of work: TEAM ELECTRIC CO No. 4
Electrical Relocate

Labor Difficulty level ☐ Normal ☐ Difficult ☐ Extremely Difficult

A) Labor *Breakdown*

Hours		Composite Labor Rate Including Payroll Taxes and Insurance	
148.2	Electrician	$103.00	$15,264.60

Total cost for Labor	Labor Total	$15,264.60

Document Review RFI time

		Cost per hr		Mark up		
	Foreman	$103.00	$0.00	0%	$0.00	$0.00

C) Material Breakdown

			Markup			
Quoted Material	$ 8,340.00	Material cost	15%	$ 1,251.00	$ 9,591.00	
StandardMaterial	$ 13,147.30	Material cost	15%	$ 1,972.10	$ 15,119.40	
		5% Expendables			$0.00	
		Storage @ 1%Material Cost		$ -	$ -	
	$0.00	Freight cost		$ -	$ -	
				Total material		$24,710.40

D) Equipment Breakdown

		Markup			
$0.00	Equipment cost	12%	$ -	$ -	
$0.00	Fuel and Oil cost	12%	$ -	$ -	
$0.00	Equipment Operator	12%	$ -	$ -	
			Total equipment		$0.00

E) Fabrication Drawings / Shop Drawings / As Built Drawings

Hours		Cost per hr		Mark up		
0	Detailer	$103.00	$0.00	12%	$0.00	$0.00

F) Office Trailers / Office equipment / Office Materials

		Cost per day		Mark up		
	Day(s)	52.97	$ -	12%	$ -	$0.00

G) Subcontractors cost

$0	12%	$0	$ -	$0.00

Cost review and suppemental estimates of Subcontratcors Cost

Hours		Cost per hr		Mark up		
0.0	Consultant	$75.00	$0.00	12%	$0.00	$0.00

Total Cost per NECA 1	**$39,975.00**

Time Considerations:

#REF! Days are required to the following schedule activities as a direct result of these changes, **after approval, and delivery of the necessary materials** and/or equipment.
Days anticipated to deliver material and/or equipment.

Scheduled Activities Effected:

#REF! Days to schedule Activity #
This proposal does not include costs for extended site conditions and/or acceleration.
Over all effect of time considerations to be resolved after official approval to proceed.

Notes: Please note that the above quote is based upon the NECA level 1 compilations by using all information extrapolated from the NECA manual of labor units.

Special Note:

Exclusions:

Job Name: JWC WTP FIBER
Job Number: 1828
Extension Name: Summary #1

[Items and ByProducts]

Material Filter: <None>
Report: Price 1 & Bid Labor

Item #	Item Name	Quantity	Price 1	U	Ext Price 1	Bid Labor	U	Bid Lbr Ext	Cost Code
Label Set: PACK 2 EARLY GRADING, Combined, Combined, Combir					**$13,143.55**			**148.20**	
Cost Code: <undefined>					$140.64			2.40	
15,290	WATER PROOF SPLICE	8.00	$17.58	E	$140.64	0.30	E	2.40	
Cost Code: Branch Rough					$210.04			28.74	
1,087	1 GRC ELBOW	1.00	$485.43	C	$4.85	26.00	C	0.26	cb
2,885	1 PVC 40	700.00	$27.38	C	$191.69	4.00	C	28.00	cb
3,020	3/4 PVC BELL END	4.00	$310.30	C	$12.41	8.00	C	0.32	cb
3,056	1 PVC FEMALE ADPT	2.00	$54.27	C	$1.09	8.00	C	0.16	cb
Cost Code: Feeder Rough					$841.27			44.46	
1,090	2 GRC ELBOW	2.00	$897.50	C	$17.95	45.00	C	0.90	cf
2,888	2 PVC 40	1,400.00	$55.25	C	$773.51	3.00	C	42.00	cf
3,023	2 PVC BELL END	8.00	$569.98	C	$45.60	13.00	C	1.04	cf
3,059	2 PVC FEMALE ADPT	4.00	$105.16	C	$4.21	13.00	C	0.52	cf
Cost Code: Drill, Cutting/Core					$427.10			5.10	
14,732	CORE & GROUT	6.00	$71.18	E	$427.10	0.85	E	5.10	md
Cost Code: Underground/Civil Work					$3,642.00			8.00	
14,707	VAULT 6.6.4	1.00	$3,642.00	E	$3,642.00	8.00	E	8.00	mu
Cost Code: Branch Wire					$948.31			18.90	
70	10 XHHW CU STRANDEI	2,100.00	$367.19	M	$771.09	5.00	M	10.50	wb
98	1/4' PULL STRING	2,100.00	$84.39	M	$177.23	4.00	M	8.40	wb
Cost Code: Feeder Wire					$6,934.19			40.60	
75	2 XHHW CU STRANDED	700.00	$1,522.49	M	$1,065.74	10.00	M	7.00	wf
78	2/0 XHHW CU STRANDEI	2,100.00	$2,794.50	M	$5,868.45	16.00	M	33.60	wf
Cost Code: Romex/MC/BX					$0.00			0.00	
[Items and ByProducts] Total:					**$13,143.55**			**148.20**	

Route 26 Fiber, Inc.

19191 SE Baty Rd
Sandy, OR 97055

Estimate

Date	Estimate #
5/12/2017	174

Name / Address
Team Electric Co, 9400 SE Clackamas Rd. Clackamas, Ore. 97015

Project

Description	Qty	Rate	Total
Master Splicer			0.00
Splicing (50 - 150) This is just a guess on splice with a 24ct fiber!	84	20.00	1,680.00
Mid Sheath Entries / Cold	4	250.00	1,000.00
Prep Outdoor Cable and Case	4	325.00	1,300.00
Prep Indoor Panels or Rack Mount Cable	2	200.00	400.00
OTDR SM Test Dual Wave Length	84	10.00	840.00
Power Meters Testing	84	5.00	420.00
Materials (4 Splice Cases and 2 FDU panels for the end runs, splice trays, bulkheads,pig tails)	1	2,700.00	2,700.00

Thank you for your business.

Total $8,340.00

Team Electric Co.

To: Slayden Construction Group, Inc. **Date:** May 24, 2017

Re: EWA 2 Electrical Relocate

Attn: Bob Montgomomery

Email: bobm@slayden.com

SCOPE

Our price for electrical includes:

- Connecting new electrical in hand hole at Southwest corner drying bed 2
- Installing (1) new hand hole in new conduit run
- Furnish and install (1) 2" power conduit with (3) 2/0 AWG & (1) 2 AWG
- Furnish and install (1) 1" power conduit with 3 #10's
- Furnish and install (1) 2" fiber conduit
- Install new fiber cable single mode with (12) pairs at the final location of this run (final location is unknown at this time)
- Replace the entire length of the fiber run that goes that starts at the south end of Basin B at the Cable Vac control panel (where a fiber termination unit exists) to the decant pump station – this distance is approximately 1150' and would need to be comprised of a single mode 12 pair

TOTAL: **$39,975.00**

1) Deduct for Splice the fiber optic which is currently comprised of 3 pair multimode for the distance of the conduit replacement. <$ 960.00>

Exclusions:

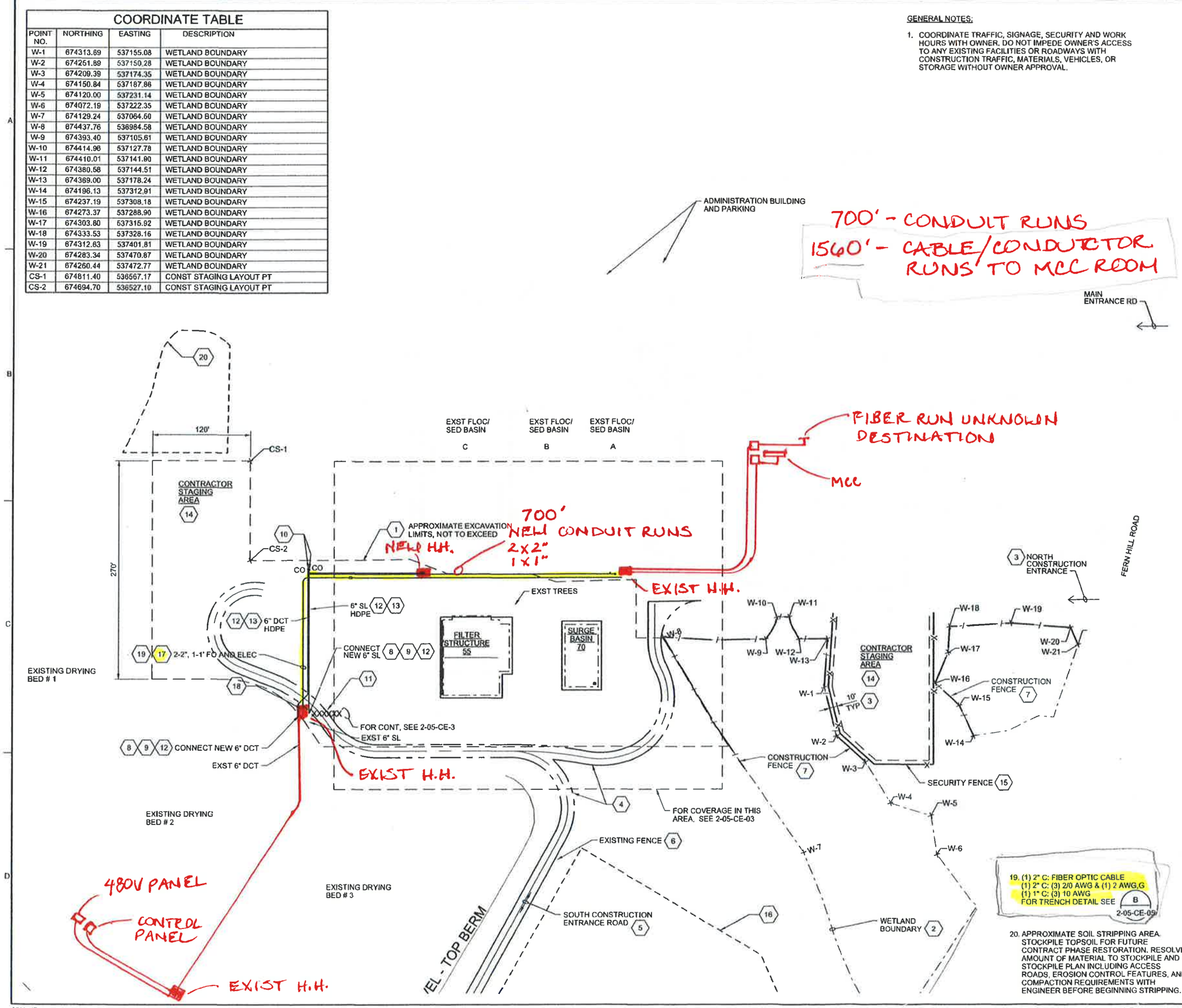
- Excavation and backfill
- Sand bedding
- Compaction

Submitted By: Mike Trusheim

9400 SE Clackamas Rd. ✓ Clackamas, OR 97015 ✓ Phone (503) 557-7180 ✓ Fax (503) 557-8201 ✓ CCB # 173043

COORDINATE TABLE

POINT NO.	NORTHING	EASTING	DESCRIPTION
W-1	674313.69	537155.08	WETLAND BOUNDARY
W-2	674251.89	537150.28	WETLAND BOUNDARY
W-3	674209.39	537174.35	WETLAND BOUNDARY
W-4	674150.84	537187.86	WETLAND BOUNDARY
W-5	674120.00	537231.14	WETLAND BOUNDARY
W-6	674072.19	537222.35	WETLAND BOUNDARY
W-7	674129.24	537064.60	WETLAND BOUNDARY
W-8	674437.76	536984.58	WETLAND BOUNDARY
W-9	674393.40	537105.61	WETLAND BOUNDARY
W-10	674414.96	537127.78	WETLAND BOUNDARY
W-11	674410.01	537141.90	WETLAND BOUNDARY
W-12	674380.58	537144.51	WETLAND BOUNDARY
W-13	674369.00	537178.24	WETLAND BOUNDARY
W-14	674196.13	537312.91	WETLAND BOUNDARY
W-15	674237.19	537308.18	WETLAND BOUNDARY
W-16	674273.37	537288.90	WETLAND BOUNDARY
W-17	674303.80	537315.92	WETLAND BOUNDARY
W-18	674333.53	537328.16	WETLAND BOUNDARY
W-19	674312.63	537401.81	WETLAND BOUNDARY
W-20	674283.34	537470.87	WETLAND BOUNDARY
W-21	674260.44	537472.77	WETLAND BOUNDARY
CS-1	674811.40	536567.17	CONST STAGING LAYOUT PT
CS-2	674694.70	536527.10	CONST STAGING LAYOUT PT



GENERAL NOTES:

1. COORDINATE TRAFFIC, SIGNAGE, SECURITY AND WORK HOURS WITH OWNER. DO NOT IMPEDE OWNER'S ACCESS TO ANY EXISTING FACILITIES OR ROADWAYS WITH CONSTRUCTION TRAFFIC, MATERIALS, VEHICLES, OR STORAGE WITHOUT OWNER APPROVAL.

N

0 60 120 180

1"=60 FT

KEY NOTES: (DENOTED BY X)

1. LIMITS TO PROTECT EXISTING FACILITIES AND WETLAND BOUNDARY. CONSTRUCT SIDE SLOPES, BENCHING, AND IF NECESSARY PROVIDE SHORING TO STAY WITHIN LIMITS AND PROTECT ALL EXISTING UTILITIES, PIPES, AND STRUCTURES.
2. NO CONSTRUCTION, STAGING, OR OTHER DISTURBANCES ALLOWED WITHIN WETLAND BOUNDARY.
3. DELIVERIES AND ACCESS TO NON -EXCAVATION AREAS ONLY. REMOVE DIRT AND DEBRIS FROM ANY VEHICLES EXITING THIS ENTRANCE OR DRIVE AROUND TO SOUTH ENTRANCE. PROVIDE SIGN FOR DIRECTING OFF SITE DELIVERIES.
4. CONCEPT FOR ROAD ACCESS IN AND AROUND EXCAVATION SHOWN FOR INFORMATION ONLY. CONTRACTOR TO DETERMINE ACTUAL ROUTE BASED ON EXCAVATION AND CONSTRUCTION ACTIVITIES.
5. ROAD WIDTH AND LOCATION FOR ILLUSTRATION ONLY. PROVIDE ROAD AS REQUIRED FOR CONTRACTOR ACTIVITIES. DO NOT UNDERCUT OR OTHERWISE AFFECT THE EXISTING DRYING BED BERM OR PIPING. IF REQUIRED ROAD IS WIDER THAN SPACE AVAILABLE RELOCATE EXISTING FENCE TO NEW LOCATION.
6. RELOCATE EXISTING FENCE AS NECESSARY. PROVIDE AND MAINTAIN TEMPORARY FENCE FOR SECURITY. FINAL FENCE ALIGNMENT WILL BE SHOWN IN NEXT CONTRACT PHASE. ADD GATES FOR ACCESS TO SOIL STOCKPILE AREA.
7. PLACE HIGH VISIBILITY FENCE AROUND WETLAND AND OTHER AREAS NOT TO DISTURB AND AS APPROVED BY PROJECT REPRESENTATIVE.
8. FIELD LOCATE EXISTING PIPE AND VERIFY DIAMETER AND MATERIAL TYPE. PROVIDE FLANGED CONNECTION TO EXISTING PIPE WITH FLANGE CONNECTION ADAPTER NECESSARY FOR EXISTING PIPE MATERIAL AND AS APPROVED BY PROJECT REPRESENTATIVE. BEFORE CUTTING PIPE PROVIDE FOR COLLECTING ANY WATER OR SLUDGE DRAINING FROM LINE AND DISPOSE OF IN SLUDGE DRYING BEDS AS APPROVED BY OWNER. BACKFILL AREA AND GRADE UNIFORMLY TO MATCH EXISTING GROUND AND HYDROSEED.
9. TRANSITION FROM EXISTING PIPE ELEVATION AT CONNECTION POINT TO MINIMUM 4 FT COVER OVER TOP OF PIPE. FOLLOW MANUFACTURER'S MINIMUM BEND RADIUS REQUIREMENTS. GRADE PIPE TRENCH UNIFORMLY TO CONNECTION LOCATION AT SLUDGE DRYING BED WITH NO LOW POINTS OR SAGS AND MAINTAIN MINIMUM 4 FT COVER OVER TOP OF PIPE.
10. PROVIDE CLEANOUT FOR NEW PIPE. FIELD LOCATE BASED ON ACTUAL EXISTING PIPE LOCATION.
11. REMOVE EXISTING PIPES FROM CONNECTION OR CAPPING LOCATION TO THE EXTENT SHOWN ON DRAWING. FIELD VERIFY EXISTING PIPE LOCATION AND ADJUST REMOVAL LIMITS IF NECESSARY AS APPROVED BY PROJECT REPRESENTATIVE. COLLECT ANY DRAINAGE FROM PIPE DURING REMOVAL AND DISPOSE OF IN SLUDGE DRYING BED. DISPOSE OF PIPE OFF SITE. IN AREAS OF REMOVAL BEYOND EXCAVATION LIMITS, FILL PIPE REMOVAL AREA WITH CLEAN BACKFILL MATERIAL AND MATCH EXISTING SURROUNDING GRADE. HYDROSEED REMOVAL AREA AND ADJACENT AREA DISTURBED DURING CONSTRUCTION.
12. SURVEY PIPE AT NEW CONNECTION LOCATIONS, CAPPING OF EXISTING PIPE, AND NEW PIPE ALIGNMENT ELEVATIONS AND HORIZONTAL LOCATIONS AT ANGLE POINTS AND CHANGES IN GRADE. PLACE WOOD SURVEY HUBS AT CONNECTION LOCATIONS.
13. FOR TRENCH DETAIL, SEE A 2-05-CE-05
14. APPROXIMATE LIMITS FOR CONSTRUCTION STAGING SHOWN FOR CONTRACTOR PLANNING PURPOSES. STAKE AREAS DESIRED FOR STAGING IN FIELD AND DISCUSS WITH OWNER. ADJUST UPON APPROVAL.
15. SECURITY FENCE DETAILS BY CONTRACTOR FOR PROTECTION OF HIS ASSETS. CONNECT TO EXISTING FENCING AS REQUIRED. LIMITS SHOWN ARE FOR ILLUSTRATION ONLY. FINAL LIMITS AS APPROVED FOR CONSTRUCTION STAGING AREA LIMITS. PROVIDE SECURITY FENCING IN OTHER AREAS AS NEEDED AND AS APPROVED BY OWNER.
16. APPROXIMATE SOIL STOCKPILE AREA. SEE ALSO DWG 2-05-CE-01. STOCKPILE SOIL FOR NEW DRYING BED CONSTRUCTION IN FUTURE CONTRACT PHASE. RESOLVE AMOUNT OF MATERIAL TO STOCKPILE AND STOCKPILE PLAN INCLUDING ACCESS ROADS, EROSION CONTROL FEATURES, AND COMPACTION REQUIREMENTS WITH ENGINEER BEFORE BEGINNING EXCAVATION.
17. NEW 2-2", 1-1" UNDERGROUND CONDUIT AND FIBER AND ELECTRIC. MIN 2' COVER OVER CONDUITS.
18. CONNECT TO EXST HH-4. MAKE WP SPLICES IN EXST HH-4.

REGISTERED PROFESSIONAL ENGINEER 14333PE DIGITAL SIGNATURE OREGON MARCH 28, 1997 BRADLEY J. PHELPS

EXPIRES: 12/31/2018

NO.	DATE	DSGN	DR	CHK	APVD
REVISION		B THOMPSON	R BROWN	T COTTON	
BY					K ERVIN
APVD					

Joint Water Commission

PACKAGE 2 EARLY GRADING WORK AMENDMENT
WTP EXPANSION TO 85 MGD

CIVIL

STAGING AND EXCAVATION OVERVIEW

ch2m:

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	MAY 2017
PROJ	672638
DWG	2-05-CE-02
SHEET	6 of 9

Section Four: Assumptions, Qualifications and Clarifications

GMP Assumptions, Qualifications, and Clarifications

June 2, 2017

Item #	Description
1	Our proposal assumes 1:1 excavation slopes will be acceptable.
2	Our proposal assumes that all excavation spoils can be reused or disposed of onsite.
3	We will be utilizing Designed Groundwater Services for the dewatering scope of work - See attached proposal dated May 23, 2017. This proposal includes certain assumptions which we include by reference.
4	Specification Section 31 23 19.01 requires 100% emergency backup power for the dewatering system. This proposal assumes we will be able to tie into the emergency backup power at the plant to satisfy this requirement.

Section Five: Contingency and Allowance

CONTINGENCY REGISTER

Project Name: JWC WTP Expansion to 85 MGD - Early Work Amendment 2 **Date:** 7/5/2017

Prepared By: Slayden Constructors, Inc. **Cost of Work Value:** $ 789,474

Status	Estimate Code	Description of Contingency Element	Value of Element	% of COW
Open		Construction Contingency	$ 39,474	5.00%
Open		Unforeseen Conditions	$ -	above
Open		Differing Site Conditions	$ -	above
Open		Escalation	$ -	above
Open		Overtime - Acceleration	$ -	above
-				
-				
-				
		Totals:	**$ 39,474**	**5%**

Note: We have itemized the contingency amounts by element however the full amount could be applied towards any specific element depending on need.

Section Six: Labor and Equipment Rates

SCI Supervisory & Administrative Personnel Hourly Billing Rates

June 2, 2017

HCSS Code	Description	2017 Hourly Rate
ZADMIN	Proj Manager - Admin	88.39
ZDIV	Division Manager	165.84
ZPM2	Proj Manager - Senior	126.27
ZPM1	Proj Manager	112.76
ZPMA	Assistant Project Manager	100.00
ZSUP1	General Superintendent	111.82
ZSUP2	Project Superintendent	104.05
ZSUP3	Specialty Superintendent	99.78
ZPE2	Senior Proj Engineer	88.39
ZPE1	Project Engineer	65.24
ZOFFICE	Office Assistant	45.00
ZMWESB	MWESB Manager	75.00
ZSAFE1	Site Safety/QA/QC Manager	60.00
ZSAFEM	Safety Manager	63.14
ZSAFEVP	Safety VP	123.92
ZSCHED	Scheduler	117.86
ZBIM	BIM Tech Senior	75.00
ZBIM1	BIM Tech 1	40.00

Job Name JWC
City, County Washington County
Wage Publication & Date BOLI 7/1/16 * see note below
BOLI Oct. 1, 2016 Amendments

Class	Reference	PR Code	(Minimum Required Package) Base	Zone	Fringe	Pkg Total	Payroll Taxes	Workers Comp.	Hourly Cost	Employer Paid Benefits	Burden Total	Wage + Burden Actual	OT 1.5x
Carp Foreman (+ $3) (General)		CF	$ 37.76	-	14.84	52.60	5.27	4.91	62.78	6.23	16.40	**$ 69.00**	89.47
Carpenter - Grp 1	Appendix	1	$ 34.76	-	14.84	49.60	5.02	4.63	59.24	5.91	15.56	**$ 65.16**	84.00
Laborer Foreman (+ $1)		LF	$ 29.77	-	13.82	43.59	4.51	2.25	50.35	5.22	11.98	**$ 55.57**	71.70
Laborer - General	Appendix	1	$ 27.72	-	13.82	41.54	4.34	2.14	48.02	5.00	11.49	**$ 53.03**	68.05
Laborer - Grp 2 (Pipelayer)	Appendix	2	$ 28.77	-	13.82	42.59	4.43	2.20	49.22	5.11	11.74	**$ 54.33**	69.92
Laborer - Grp 3 (Flagger)	Appendix	3	$ 23.96	-	13.82	37.78	4.03	1.95	43.75	4.62	10.59	**$ 48.37**	61.35
Plumber/Pipefitter Foreman (+ $3)			$ 45.11	-	25.47	70.58	6.78	3.40	80.76	7.99	18.17	**$ 88.75**	113.20
Plumber/Pipe Fitter	Appendix	PF	$ 42.11	-	25.47	67.58	6.52	3.26	77.36	7.68	17.47	**$ 85.05**	107.87
Millwright - Grp 1 & 2	Region #2		$ 29.32	-	10.68	40.00	4.21	1.93	46.14	4.84	10.98	**$ 50.98**	66.87
Cement Mason - Grp 1	Appendix	1	$ 31.00	-	18.87	49.87	5.04	4.37	59.28	5.93	15.35	**$ 65.22**	82.01
Pile Buck/Driver Foreman (+ $3)			$ 38.77	-	14.84	53.61	5.35	3.20	62.16	6.27	14.81	**$ 68.42**	89.43
Pile Buck/Driver	Appendix	6	$ 35.77	-	14.84	50.61	5.10	3.02	58.73	5.96	14.07	**$ 64.68**	84.07
Ironworker Foreman (+ $3)			$ 39.71	-	24.16	63.87	6.21	5.15	75.23	7.38	18.74	**$ 82.61**	104.13
Ironworker	Appendix		$ 36.71	-	24.16	60.87	5.96	4.91	71.74	7.07	17.93	**$ 78.80**	98.70
Operator Foreman (+ $3)			$ 40.58	-	14.10	54.68	5.44	3.26	63.38	6.38	15.08	**$ 69.76**	91.75
Tower Crane up to 175',< 200 ft jib	Appendix	2	$ 37.58	-	14.10	51.68	5.19	3.08	59.95	6.07	14.34	**$ 66.02**	86.38
Crane, Hydraulic, 90-199 tons	Appendix	2	$ 37.58	-	14.10	51.68	5.19	3.08	59.95	6.07	14.34	**$ 66.02**	86.38
Crane, Hydraulic, 50-89 tons	Appendix	3	$ 36.44	-	14.10	50.54	5.09	3.01	58.65	5.95	14.06	**$ 64.60**	84.34
Crane, Hydraulic < 50 ton	Appendix	4	$ 35.36	-	14.10	49.46	5.00	2.95	57.41	5.84	13.79	**$ 63.25**	82.41
Loader 60,000 > 120,000 lbs	Appendix	3	$ 36.44	-	14.10	50.54	5.09	3.01	58.65	5.95	14.06	**$ 64.60**	84.34
Loader 25,000 - 60,000 lbs	Appendix	4	$ 35.36	-	14.10	49.46	5.00	2.95	57.41	5.84	13.79	**$ 63.25**	82.41
Bulldozer 70,000 - 100,000 lbs	Appendix	3	$ 36.44	-	14.10	50.54	5.09	3.01	58.65	5.95	14.06	**$ 64.60**	84.34
Bulldozer 20,000 - 70,000 lbs	Appendix	4	$ 35.36	-	14.10	49.46	5.00	2.95	57.41	5.84	13.79	**$ 63.25**	82.41
Excavator over 130,000 lbs	Appendix	2	$ 37.58	-	14.10	51.68	5.19	3.08	59.95	6.07	14.34	**$ 66.02**	86.38
Excavator 80,000 - 130,000 lbs	Appendix	3	$ 36.44	-	14.10	50.54	5.09	3.01	58.65	5.95	14.06	**$ 64.60**	84.34
Excavator 20,000 - 80,000 lbs	Appendix	4	$ 35.36	-	14.10	49.46	5.00	2.95	57.41	5.84	13.79	**$ 63.25**	82.41
Excavator < 20,000 lbs	Appendix	5	$ 34.13	-	14.10	48.23	4.90	2.87	56.01	5.71	13.49	**$ 61.72**	80.21
Bobcat, Forklift, Boat	Appendix	6	$ 30.94	-	14.10	45.04	4.63	2.68	52.36	5.38	12.70	**$ 57.74**	74.50
Mechanic	Appendix	4	$ 35.36	-	14.10	49.46	5.00	2.95	57.41	5.84	13.79	**$ 63.25**	82.41
Truck, Offroad	Appendix	5	$ 34.13	-	14.10	48.23	4.90	2.87	56.01	5.71	13.49	**$ 61.72**	80.21

REVISED 11/15/16

The BOLI prevailing wage rates that will apply to the Contract shall be those in effect on the date that construction is first authorized to begin under the contract. This could occur prior to execution of the GMP Amendment if early work is authorized by an Early Work Amendment, or, if no early work is authorized, at the time the GMP Amendment is executed. Once established, the prevailing wage rates will then be in effect for the remainder of the CM/GC Contract. The prevailing wage rates that will apply will be those set forth in the then current version of the following BOLI booklet, together with any amendments to that booklet: "Prevailing Wage Rates for Public Works Contracts in Oregon". The Construction Phase Services will take place in Washington County, Oregon. This document is available at:
http://egov.oregon.gov/BOLI/WHD/PWR/pwr_state.shtml.
The fee required by ORS 279C.825 (1) will be paid by the JWC to the Commissioner of the Bureau of Labor and Industries under the administrative rules of the Commissioner

Construction Equipment Rates

June 2, 2017

Description	Monthly Ownership Costs	Hourly Operating Cost
Exc 50k LB (PC228)Z	$9,185.00	$48.35
Dozer - 20K LB (D5) 100HP	$5,539.89	$30.10
Exc 30K LB (PC138)Z	$7,390.00	$31.95
RT-9k LB Forklift Telescoping	$4,754.70	$26.65
Generator 55KW Diesel	$1,370.00	$18.25
Steel Vib Roller - 12 Ton	$4,000.11	$34.60
Wheel Loader 2.5CY (WA270)	$5,997.42	$28.85
Haul Truck - 20CY Off-Road	$7,824.38	$45.05
Trench Compactor	$1,899.24	$2.75
Utility Truck	$1,200.00	$12.95
Water Truck, 2500 GAL	$1,945.00	$16.85
Pickup Truck	$1,046.16	$12.95

*Based on Published Oregon Blue Book Rates 2016

MONTHLY PROJECT TRACKING REPORT

June 2017

Project Name WTP Facility Plan & Expansion to 85 MGD

Project # 80054200-11011 (Facility Plan, CIMP, 75 MGD)

80054200-10571 (Expansion to 85 MGD)

Project Manager Erika Murphy

Project Description

Project objectives include making improvements to the existing WTP to achieve sustainable 75 MGD capacity. This will include removing hydraulic bottlenecks improving backwash and solids handling processes. Life safety improvements and the implementation of capital improvement and maintenance projects (CIMP) will be concurrent with this work. Additionally, a Facility Plan will be created to capture the ultimate build-out capacity of the WTP. All improvements will be borne by all JWC partners at current ownership capacity. This project also includes expansion to 85 MGD capacity. All improvements associated with the expansion will be shared by City of Hillsboro (80%) and TVWD (20%).

Total Project Budget $ 35,000,000

Total Expenditures to Date $ 4,674,377 **Total Remaining** $ 30,325,623

Scheduled Completion Date June 30, 2019

CRITICAL MILESTONES		
Task	*Estimated Completion Date*	*Actual Completion Date*
Facility Plan	January 2017	Adopted January 13, 2017
GMP for Package 1	January 2017	Awarded January 13, 2017
GMP for Early Work Package 2	July 2017	
GMP for Package 2	October 2017	

PROJECT HIGHLIGHTS

Construction for Package 1 is over 50% complete. Work has slowed for the summer release season and will resume in September, with a substantial completion date of November 30, 2017. Work completed to date includes filter media replacement, filter gallery pipe rehabilitation, and receipt of import fill material. Work in progress includes seismic bracing, rapid mix improvements, and procurement of plate settlers and pumps. Package 2 design is currently at 90% complete, with 100% plans due by end of July. Current 90% cost estimates by Slayden are $34.99M total project cost.

FUNDING SOURCES/PAID	Facility Plan, CIMP, 75 MGD		Expansion to 85 MGD	
Agency	*% Contribution*	*Financial Stake*	*% Contribution*	*Financial Stake*
Hillsboro	45%		80%	
TVWD	16.67%		20%	
Beaverton	25%		0%	
Forest Grove	13.33%		0%	

PERSONNEL SERVICES	*Month Paid #11011*	*Paid to Date #11011*	*Month Paid #10571*	*Paid to Date #10571*
Staff Cost	$ 4,798	$ 130,458	$ 3,345	$ 54,698
Permitting	$ 920	$ 21,400	$ 1,932	$ 18,244
Miscellaneous	$ 646	$ 50,152	$ 22	$ 871

CONTRACTS					
Awarded to	*Contract #*	*Month Paid*	*Paid to Date*	*Contract Amt*	*Change Orders*
CH2M	1934	$ -	$ 1,922,280	$ 5,322,870	$ -
Slayden	1979	$ 621,916	$ 2,475,139	$ 5,193,931	$ -
PEI	2179	$ -	$ -	$ 43,520	$ -
Carlson Testing	2180	$ -	$ 1,136	$ 19,801	$ -
		$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -
TOTALS		**$ 621,916**	**$ 4,398,554**	**$ 10,580,122**	**$ -**

STAFF REPORT

To: Joint Water Commission

From: Sophia Hobet, Water Treatment and Distribution Manager

Date: July 14, 2017

Subject: Agenda Item 4B – Consider approval of contract renewal with Univar USA, Inc. for Caustic Soda

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Staff Recommendation:
Approve the chemical contract renewal for Caustic Soda with Univar USA, Inc., for a period of one year, in the amount of $429,687.50.

Background:

The Water Treatment Plant utilizes Caustic Soda (Caustic) in the treatment process for corrosion control. Injecting caustic into the finished water, just prior to delivery into the distribution system, raises the pH of the finished water above the State minimum requirement of 7.2. (The WTP treats to optimum pH of 7.6-7.8.)

In July of 2015, the JWC contracted with Univar USA, Inc. to supply and deliver Caustic for a period of two years, with an option to renew the contract for up to five years. During the renewal process, the JWC was notified by Univar of an annual price increase of 272%, escalating from the present annual value of $275,262.50, or $440.42/ton to $750,000, or $1,200/ton. This steep price escalation is apparently due to market conditions in the European Union and Asia, and changes in manufacturing processes.

Instead of accepting this increase, the Operations Committee recommended that the JWC pursue a three-year contract with optional annual renewals, by posting an Invitation to Bid, in order to potentially obtain a better price arrangement for the JWC. Before moving forward with this recommendation, Univar was asked if they are willing to reassess the price increase and remain under the current contract with JWC. Univar agreed to reconsider the price and responded with a new offer of $687.50/ton for one year renewal, in order to be able to keep up with the changing market conditions. This price is much more acceptable, representing a 157% increase from the current value of $440.42/ton. The Operations Committee recommended that JWC accept this offer and renew the contract for one year, instead of posting an Invitation to Bid.

Additional Information:

An informal price verification was conducted with two other suppliers and two neighboring water utilities, which corroborated the Caustic Soda market conditions.

Univar USA, Inc. has been supplying Caustic Soda to the JWC WTP for the last five years and have an excellent track record for maintaining the chemical's quality and keeping the product deliveries on time.

STAFF REPORT

To: Joint Water Commission

From: Jessica Dorsey, Water Program Coordinator

Date: July 14, 2017

Re: Agenda Item 5A – Water Quality Program Update

Staff Recommendation:
None, this Memo is for informational purposes only.

Cost:
No additional cost. Monitoring programs are budgeted and approved on an annual basis.

Background:
JWC water quality monitoring programs provide a great deal of value to the agency in meeting its key mission of providing high quality drinking water to its member agencies and their customers. This mission goes beyond ensuring that JWC maintains compliance with all Safe Drinking Water Act (SDWA) monitoring requirements by supporting the development of a proactive source water protection program. The JWC Water Quality Report provides information about JWC's SDWA compliance, and about water quality trends in the watershed that may impact the treatment processes. The following summary is an overview of the findings included in the report.

Source Water Programs

Barney Reservoir

Barney Reservoir, three main tributaries to the reservoir, and the reservoir's outfall to the Tualatin River, have been routinely monitored for water quality since fall of 2009. The monitoring program began in response to algal blooms identified in 2006 and 2007 during regular inspection of the reservoir. Routine monitoring has established baseline data that can be compared to future data collected. The following is information that has been gained about water quality at Barney Reservoir through the monitoring program:

- Tributary water temperatures peak in the middle of summer, as do the surface water temperatures in the reservoir. The reservoir is stratified for both temperature and dissolved oxygen for the entire summer period, including the release season.
- Tualatin Outfall temperatures are consistently highest at the end of the release season due to reservoir stratification and multi-depth withdrawal of water from the reservoir. Dissolved oxygen levels are lowest when temperatures are highest but remain in the range optimal for aquatic life.
- Total Phosphorus appears to be decreasing in the tributary known as Mile 2.75 over the last five years, as has Total Nitrogen in the Arm 4 tributary. This is a positive sign since decreases in nutrient concentrations in the tributaries can decrease the risk of algae blooms forming in the reservoir.
- Further analysis should be done on nutrient data collected in the reservoir, as well as analysis of algae samples collected during this time period.

Mid-Tualatin River

Locations in the mid-Tualatin River basin upstream of the JWC WTP have been monitored in some capacity since the Wapato Lake taste and odor event in 2008. Locations monitored include key sites on the river itself, as well as significant tributaries including Wapato and Scoggins Creeks. The following is information that has been gained about water quality in the mid-Tualatin through the monitoring program:

- Temperatures in Scoggins Creek are driven by releases from Hagg Lake. Temperatures in Scoggins Creek are lower than the other monitored tributaries in the summer, with a delayed peak temperature occurring in October. Other tributaries monitored have a more gradual annual temperature curve with peak temperatures occurring in August.
- Sites on the main stem river downstream of Hagg Lake are also influenced by releases in the summer, particularly July and August. Maximum temperatures observed in the mainstem Tualatin River have remained consistent from 2009 to 2014.
- Dissolved oxygen trends in the mid-Tualatin basin are inverse to those of temperatures. An annual uptick in dissolved oxygen at the Wapato Pumphouse in August may be due to algal growth. Mean dissolved oxygen in the mainstem Tualatin River is consistent, and the sites downstream of Hagg Lake are higher than the Tualatin River at Gaston site in summer, due to releases from Hagg Lake that enter the Tualatin River below Gaston.
- Scoggins Creek has the lowest turbidity of the tributaries with Hagg Lake acting as a buffer from upstream runoff events in spring and winter. January is the highest month for average turbidity and October has the lowest turbidity for all sites.

- Total Organic Carbon (TOC) is lowest at all tributary sites in the summer, with the exception of Scoggins Creek at Old Highway 47, where values increase over the summer and peak in October. This trend is not seen at the upstream Scoggins Creek by the dam site, and may suggest an organic carbon source between the two locations. With the exception of the Wapato Creek sites, individual locations have decreasing annual mean TOC concentrations from 2009 to 2014, with some sites showing significant decreasing trends.

JWC Water Treatment Plant (WTP)

Staff performs extensive monitoring to ensure that the JWC complies with all Safe Drinking Water Act (SDWA) requirements, and provides water that meets or exceeds all state and federal water quality standards. Staff analyzed historical data from compliance programs, as well as data from 2009 to 2014, and included their conclusions in the water quality summary. The following is information that has been gained about water quality at the JWC WTP through the monitoring and analytical program.

- Total Organic Carbon (TOC) has been monitored regularly at the JWC WTP since 1985. Grab samples have been collected monthly, for compliance with drinking water regulations, since 2004. In addition to the monthly sampling, online instruments have been installed to continuously monitor TOC at the treatment plant. In analyzing grab sample data collected from January 2010 to December 2014, the average for finished water TOC is 0.78 mg/L with values ranging from <0.5 mg/L to 1.71 mg/L. Since early 2010, JWC WTP staff have notified industrial customers when the finished water TOC concentration is above 1.0 mg/L. Between that time and the end of 2014, the notice had been sent out approximately 20 times – with highest levels normally hitting in the fall, when rains first begin, and in the spring.

- JWC has been required to test for the two groups of DBPs, Haloacetic Acids (HAAs) and Total Trihalomethanes (TTHMs), annually between July 1st and September 30th, since 2012. Results for both HAAs and TTHMs are well below the MCLs. HAAs range from 0.013 mg/L to 0.029 mg/L and TTHMs range from 0.011 mg/L to 0.02 mg/L. Maximum Contaminant Levels (MCL) set by the SDWA are 0.60 mg/L for HAAs and 0.80 mg/L for TTHMs.

Future Reporting

It is the intent of the Water Quality Program to do periodic updates of this report, as well as to add additional information regarding the analyzation of data not covered in this report. Examples of potential new reporting include: a summary of nutrient and algal data collected throughout the basin, a summary of water quality data collected as part of the Hagg Lake Monitoring program, and a partnership with Clean Water Services to characterize water quality in Hagg Lake and three of the main tributaries feeding the reservoir.

STAFF REPORT

To: Joint Water Commission

From: Jessica Dorsey, Water Program Coordinator-Water Quality

Date: July 14, 2017

Re: Agenda Item 5B – Water Quality LT2 test results

Staff Recommendation:

This Staff Report is informational only.

Cost:
$11,100 (Cost is already approved as part of JWC regular budget.)

Budget:
Budget for this project was included in JWC Analysis and Lab Services under Regulatory Sampling for both FY 16 and FY 17.

Background:

Surface water such as the Joint Water Commission's (JWC) sources, the Tualatin and Trask Rivers, often contain microorganisms capable of causing illness if not properly treated. Cryptosporidium (Crypto) is a protozoa which survives in the environment in an oocyst, or shell. Both Cryptosporidium and E. *coli* can infect the intestine of warm-blooded animals and humans. Water treatment systems using filtration and disinfection combined, such as the JWC Water Treatment Plant (WTP), is proven as an effective means of treating for Cryptosporidium and E. *coli*.

The Long Term 2 Enhanced Surface Water Treatment Rule (LT2) provides evaluation protocols for determining if a water treatment plant needs additional treatment to protect against pathogens such as Crypto or E. coli. The rule requires a water provider to collect raw water (pre-treatment) samples for analysis to determine if Cryptosporidium and/or E. *coli* are present. Raw water turbidity readings must also be taken and documented once a month for 24 months. JWC staff collected samples according to a schedule that was selected (by staff) prior to the beginning of the monitoring period, with only a two-day leeway before or after the selected monthly sample date. The highest 12-month mean of the Cryptosporidium results, collected during the

monitoring period, was used to classify the WTP into a group, called a “bin,” which determined the level of action required.

JWC complied with the first round of monitoring from 2003 to 2006. The highest 12-month mean of those results for Cryptosporidium were 0.033 oocysts/L in the raw water. Since this value was less than 0.075 oocysts/L, JWC was categorized at Bin 1 which required no additional treatment measures at that time.

As a large system, JWC was required to begin the second round of raw water monitoring for LT2 in April of 2015. Monthly sampling was completed in March of 2017. The highest 12-month mean for this second round of monitoring was 0.042 oocysts/L, also below 0.075 oocysts/L. Therefore, JWC was classified as Bin 1 again. No additional treatment methods are required at the JWC WTP and no further monitoring is needed.

Attachments:

1. Final Classification-LT2 State Letter

PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services
Kate Brown, Governor

Oregon Health Authority

800 NE Oregon Street, Suite #640
Portland, OR 97232-2162
(971) 673-0405
(971) 673-0694 – FAX
http://healthoregon.org/dwp

April 13, 2017

Chris Wilson
Joint Water Commission, PWS#4100379
150 E. Main St.
Hillsboro, OR 97123

Dear Chris,

I have reviewed the *Cryptosporidium* results from your surface water source for the second round of testing under the Long Term 2 Enhanced Surface Water Treatment Rule (LT2), taken April 2015 through March 2017 (24 samples). The highest 12-month mean *Cryptosporidium* concentration was 0.042 oocysts/L.

Since your monitoring results were below 0.075 oocysts/L, **the Tualatin River (source AA) at the Joint Water Commission falls into the "Bin 1" category** meaning that no additional *Cryptosporidium* treatment will be required for your water system at this time.

If you have any questions, please feel free to call me at (971) 673-0410.

Sincerely,

Gregg Baird, REHS
Oregon Health Authority
Drinking Water Services
http://healthoregon.org/dwp

MEMORANDUM

To: Joint Water Commission

From: Kristel Fesler, Water Resources Program Coordinator

Date: July 6, 2017

Re: Response to Wapato Lake National Wildlife Refuge Draft Environmental Assessment

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Summary

The JWC provided formal input (attached) during the public comment period on the future restoration and water management options for Wapato Lake. The United State Fish & Wildlife Service (USFWS) issued an Environmental Assessment (EA) outlining three potential future management scenarios. (A copy of the EA is available on the USFWS's Wapato Lake home page at https://www.fws.gov/refuge/wapato_lake/.) The likely outcome is Wapato Lake will be restored to native vegetation and through the continued use of the pump and levee system will support a shallow wetland. This choice is the best alternative for the JWC because the use of pumps provides flexibility and control of levels.

Background

Since the taste and odor event in summer of 2008, JWC staff has been working with the property owners of Wapato Lake, currently the US Fish and Wildlife Service (USFWS), to ensure high-quality source water. Since 2008, the Wapato Lake Improvement District was dissolved and Wapato Lake was incorporated as a National Wildlife Refuge.

Over the past several years, a team of stakeholders has been researching and evaluating potential future management scenarios for Wapato Lake. This collaborative team included staff from USFWS, the United States Geological Survey (USGS), Clean Water Services, and the Joint Water Commission. Measuring water quality and flows were crucial to the creation of a hydraulic model and water quality risk analysis framework. With these tools in hand, the team was able to understand the viability and risks of a wide variety of management scenarios and under different weather patterns.

Currently, the Wapato Lake National Wildlife Refuge is 958 acres in size and is located six river miles upstream of the JWC water treatment plant's intake. Winter rains fill the lake, and pumping drains it in spring to allow for farming in the summer.

Summary of the Environmental Assessment (EA)

Continuing the current activities into the future is not a viable option for USFWS, because it does not support the agency's mission. As stated in the EA, the USFWS's goals for Wapato Lake National Wildlife Refuge are twofold:

- "Protecting, restoring, and managing rare and native habitats for a diversity of migratory birds, fish, and other native wildlife of the Willamette Valley
- Contributing to efforts across the Tualatin River Basin to improve watershed health and function"

In addition to the No Action alternative, two restoration and management alternatives were analyzed in the EA. The first proposed removing the pump house to create a free-flowing connection to the Tualatin River (via Wapato Creek). This would create a deep lake (up to 14 feet) because, at times water would flow from Tualatin River into Wapato Lake. This option does not ensure that releases from Barney Reservoir are not unintentionally diverted into the lake bed. Additionally, an open connection precludes any options to control or limit water releases from the lake in the event of an algal bloom or other water quality issue.

A second alternative preferred by USFWS retains the levee and pumping infrastructure to control water levels. The lake would fill as it does today, and pumping would stop short of a complete dewatering and retain up to three feet of water depth. Native wetland vegetation would be planted and the farming operations would cease.

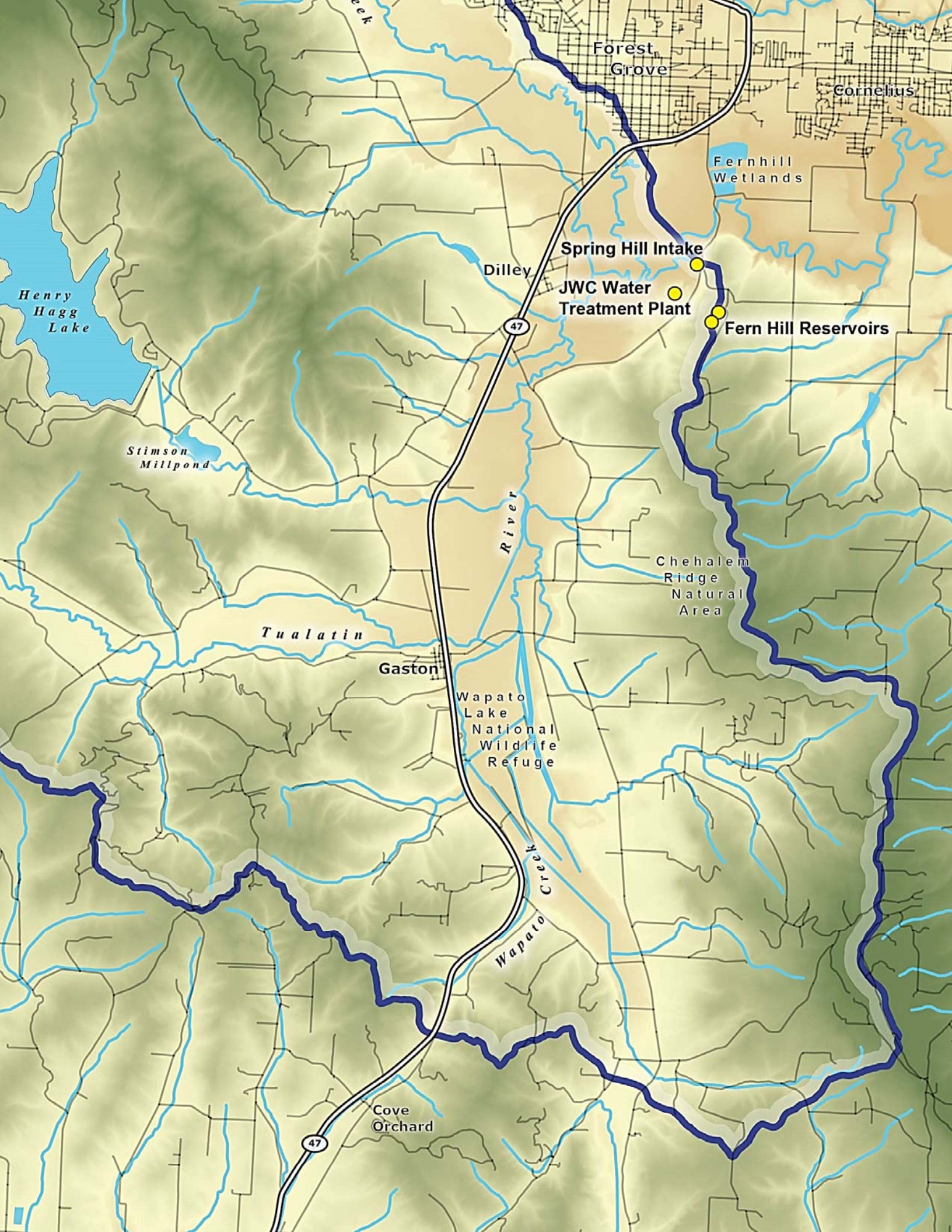
The JWC comment letter expresses support for this alternative. It is the best option to support USFWS's mission and create a low-risk environment for harmful algal blooms. The establishment of a varied plant community that shades the water from the sun and provides oxygen are risk criteria that would improve under this alternative.

Anticipated Future Work

Before restoration can begin, the local USFWS office will respond to the received comments and the restoration decision will be reviewed by officials in the USFWS's federal office.

A grant application has been submitted to the North American Wetlands Conservation Act program to replace the current pump house. Award notifications will be announced in early 2018. The JWC has agreed to contribute to the project through in-kind donations in the form of staff time.

Discussions on the future public uses at Wapato Lake National Wildlife Refuge are anticipated to begin in early 2018. The discussions will focus on the types of uses (hiking, hunting, kayaking, dog-walking), the allowed areas (throughout the entire refuge or restricted to certain zones), and the allowed times of year (restrictions for wildlife needs or water level). These discussion will be with the public and a wide variety of agency stakeholders. The JWC will be involved to assess the risks to water quality.


Forest Grove
Cornelius
Fernhill Wetlands
Spring Hill Intake
Dilley
JWC Water Treatment Plant
Fern Hill Reservoirs
Henry Hagg Lake
47
Stimson Millpond
River
Chehalem Ridge Natural Area
Tualatin
Gaston
Wapato Lake National Wildlife Refuge
Wapato Creek
Cove Orchard
47

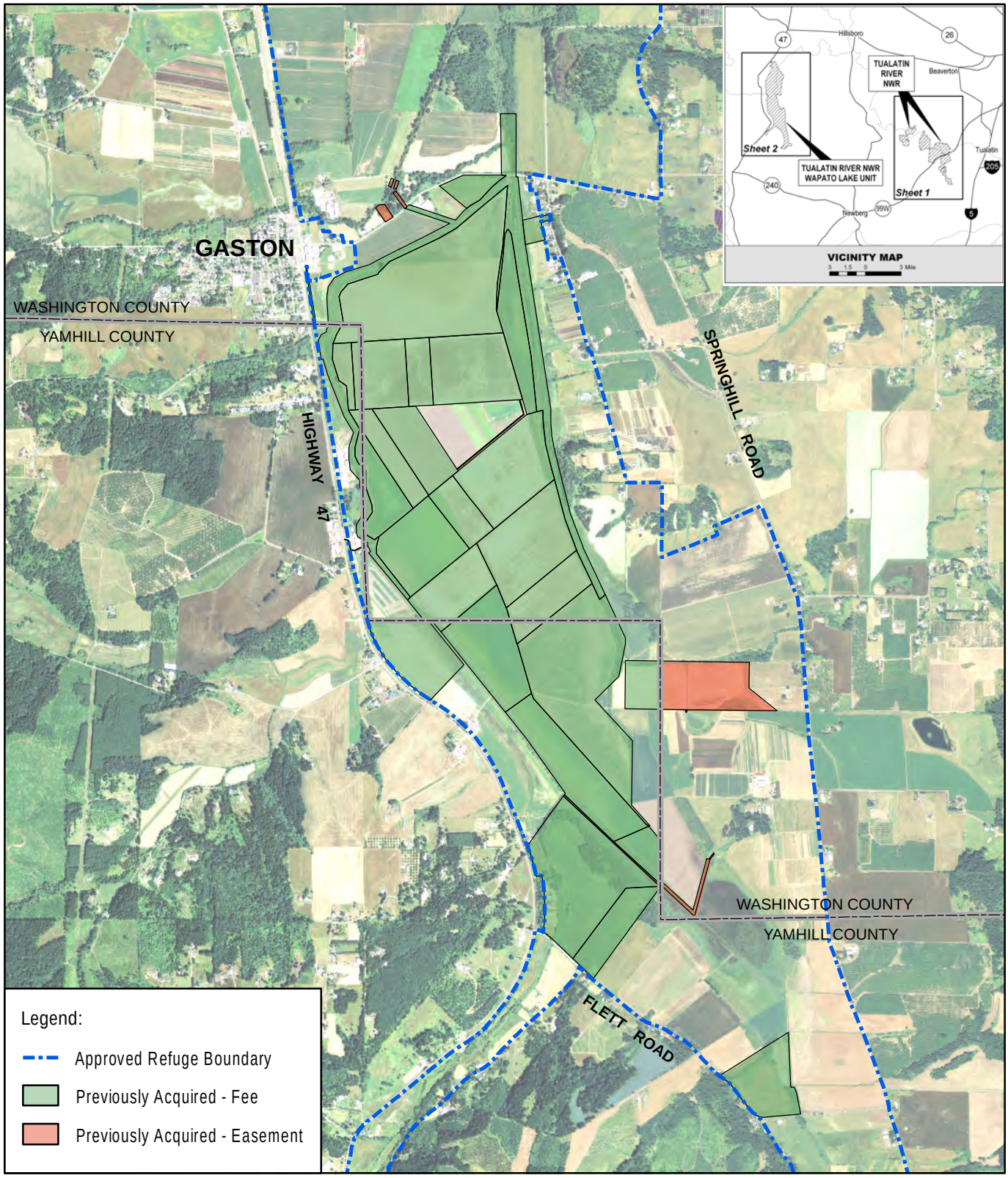
U.S. Fish & Wildlife Service

Wapato Lake National Wildlife Refuge

Washington & Yamhill Counties, Oregon

Proposed New Refuge

Site Map



PRODUCED IN THE DIVISION OF REFUGE PLANNING
PORTLAND, OREGON
LAND STATUS CURRENT TO: 04/10/2013
MAP DATE: 04/10/2013
BASEMAP: NAIP 2012
MERIDIAN: WILLAMETTE
FILE: 13-073-2.MXD

0 0.25 0.5 1 Miles

0 0.25 0.5 1 Kilometers

UTM ZONE 10
NAD 83

Joint Water Commission

General Manager
Kevin Hanway
150 E. Main Street
Hillsboro, OR 97123
503-615-6585

June 1, 2017

Larry Klimeck
Refuge Manager
Wapato Lake National Wildlife Refuge
19255 SW Pacific Hwy
Sherwood, OR 97140

Mr. Klimeck:

Thank you for preparing the Draft Environmental Assessment (EA) for the Wapato Lake National Wildlife Refuge (NWR). The Joint Water Commission (JWC) appreciates the time and effort which the United States Fish and Wildlife Service (USFWS) has put into developing this assessment of the Wapato Lake NWR, and we are eager to participate in the public comment period.

The JWC is a drinking water supply agency comprised of the cities of Hillsboro, Forest Grove, Beaverton, and the Tualatin Valley Water District. Wapato Lake is located only four river miles upstream of the JWC drinking water treatment plant (JWC WTP). The JWC is involved in activities at Wapato Lake because water from the Lake which flows through the Tualatin River and into the JWC WTP can highly impact the treatment process used to produce drinking water.

The JWC supports USFWS's choice of Alternative #3: Lakebed restoration of palustrine wetlands with water levels managed with pumping infrastructure, as the preferred alternative. This option best supports USFWS's mission while also supporting the JWC's mission of providing high-quality drinking water to over 365,000 residents and several high-tech industrial customers in Washington County, which is often referred to as the "economic engine" of Oregon.

We have appreciated working together to find commonality in all the involved agencies' interests, and are pleased to submit the following comments.

Algal Blooms

In December of 2007, there was a failure and breach to the dike surrounding Wapato Lake from a severe storm event. This failure resulted in water retention on the lake beyond the typical timeframe to drain the lake, which resulted in a significant algal bloom that caused an extended taste and odor event at JWC. Taste and odor events involve impacts to the aesthetic qualities of potable water; although they do not have public health impacts, they do impact the public's trust in the quality of their drinking water supplies. Since the algal bloom event in 2008, the Tualatin River National Wildlife Refuge Complex developed a Total Maximum Daily Load Implementation Plan at the request of the Oregon Department of Environmental Quality (DEQ), in order to set pumping rates which would minimize downstream impacts to water quality when the lakebed is being dewatered, typically from January to April. Any additional pumping beyond April 30th is permitted by the Implementation Plan only upon DEQ's approval of a Water Quality Monitoring Plan.

Algal blooms can also produce algal toxins that can pose threats to public health which can neither be eliminated by the water supplier through water

treatment processes nor by the end user through boiling the water. The Environmental Protection Agency (EPA) and Oregon Health Authority (OHA) have developed best management practices for drinking water providers operating with an algal bloom underway. The EPA has developed guidelines for monitoring algal toxins which could potentially be present at Wapato Lake. Under these guidelines, if algal toxins are detected in drinking water, the JWC would follow the EPA's health advisory and issue a 'Do Not Drink' notice, similar to what occurred in Toledo, Ohio during a 2014 algal event. Occurrence of algal toxins requiring the issuance of a 'Do Not Drink' notice would be a serious threat to public health, and would also be severely detrimental to economic productivity in Washington County, as changes in JWC's treated water caused by water quality at Wapato Lake can result in negative impacts on industrial processes. These potential impacts are not discussed in the Draft EA, and should be included in the final EA.

Within the realm of water quality, the JWC also suggests that USFWS consider a partnership with the United States Geological Survey (USGS) for installation of a permanent water quality monitoring station within the wetland and/or lake bed area. Continuous water quality monitoring would further support the overarching goals of the proposed action while also providing valuable data at a critical point of the Tualatin Basin for downstream stakeholders.

Infrastructure

The JWC supports USFWS' pump house and bridge infrastructure replacement efforts which are required for successful implementation of Alternative #3. Maintenance of a supervisory control and data acquisition (SCADA) connection from the pump house to the JWC WTP would allow the JWC to better monitor pump operations. Alternative #3 best supports risk management for both water quality and the Tualatin River basin, and also limits USFWS' infrastructure, operations, and maintenance needs.

Levee Maintenance

Water quality conditions at Wapato Lake can have a severe impact on the JWC's ability to provide effective treatment of drinking water. Local USFWS staff have demonstrated commitment to working with JWC and others agencies to address the these water quality concerns; however, it is also critical that USFWS provide the Wapato Lake Refuge with adequate funding and resources to ensure that the risks to water quality from potential levee failure are reduced in the future. A central element of USFWS fulfilling this commitment to water quality risk management is to fully fund an ongoing program for preventative levee maintenance and coordination of operations with JWC and other stakeholders.

Specifically, the JWC requests that USFWS increase annual funding for levee maintenance to an amount greater than $5,000 for Alternatives #3 (Table 1). At a minimum, the JWC requests an increase in funding for preventative maintenance for the first five years of the project in order to compensate for the deferred maintenance of the levee system.

The JWC would like to emphasize that the root cause of the 2008 algal bloom event was a levee breach, not malfunction of pumping infrastructure. In the preferred Alternative and Alternative #1, the pumps would be ineffective after a levee breach occurs because the lakebed is hydrologically connected to the Tualatin River. In the event of a levee breach, repairs could not occur until the Tualatin River drops substantially, to about 60 cubic feet per second. The pumps can only be used to completely dewater the lakebed after the Tualatin River level drops and hydrologically disconnects from Wapato Lake. A complete dewatering would likely be needed to repair a broken levee, therefore, maintenance and functionality of the levee is critical to protect downstream water quality.

The JWC also suggests that USFWS develop a unique cost estimate for levee maintenance for each of the three alternatives. Currently, Table 1 of the Draft EA provides an annual levee maintenance cost estimate of $5,000 under all alternatives. Levee maintenance costs under Alternative #2 (engineered breach of the levee) will most likely differ from levee maintenance costs under Alt #3 (wetland management through pump operations), and the JWC urges USFWS to include consideration of these differences in cost for the final EA.

Development of a unique scope and cost estimate for maintenance of the levee system under each alternative is especially critical considering the potential costs which could be incurred if another levee breach were to occur. During the 2008 levee breach which caused an algal bloom event, the JWC incurred a cost of approximately $250,000 at the WTP for additional treatment and analysis of impacted water from Wapato Lake.

The JWC also donated approximately 800 cubic yards of dirt and covered moving expenses for trucking the dirt from the WTP to Wapato Lake to support levee repairs after the breach. The total estimated value for the dirt and moving expenses in 2008 was approximately $14,000. The JWC also provided $10,000 to support repair of the large pump at the pump house in 2016. In light of the support which JWC has provided for the above mentioned and other USFWS projects at Wapato Lake, the JWC suggests USFWS further develop costs and sources of funding for the alternatives with respect to levee maintenance and pump infrastructure.

Finally, there is a discrepancy between the annual levee maintenance cost estimates provided in Table 1, and the following statement at the bottom of page 20, "cost estimates for any levee work have not been formulated."

Water Rights

The JWC also supports implementation of Alternative #3 because it provides for better management of water rights than Alternative #2. The water rights analysis under Alternative #2 omitted consideration of how Wapato Lake would be managed to assure that water in the Tualatin River would bypass Wapato Lake and remain available to downstream users that are senior water right holders, or that are users of stored water released from Barney Reservoir. Also, under Alternative #2 it is unclear how USFWS could ensure that diversion under its own water rights would not exceed the allowed rate and volume.

Vegetation

The JWC supports the use of Integrated Pest Management strategies to establish native vegetation communities in the Wapato Lake NWR. This method limits pesticide use in the Tualatin Basin and protects drinking water quality.

In conclusion, the JWC supports the implementation of Alternative #3: Lakebed restoration of palustrine wetlands with water levels managed with pumping infrastructure. We support USFWS' efforts to be a partner in the Tualatin Basin and firmly believe that the needs for all water users in the Basin can be accommodated. The JWC is grateful for the opportunity to work with USFWS for the past nine years and strives to continue strengthening this partnership.

Sincerely,

Kevin Hanway
JWC General Manager