

**HIGHLINE WATER DISTRICT  
King County, Washington**

**RESOLUTION 19-8-7A**

**RESOLUTION AUTHORIZING AMENDMENT #2 TO CONTRACT #19-50-11 WITH SHANNON & WILSON, INC. FOR ADDITIONAL PROFESSIONAL SERVICES TO ADDRESS THE CONTAMINATED SOILS REMEDIATION RELATING TO PROJECT 16-3 MANSION HILL RESERVOIR RELOCATION**

**WHEREAS**, the District retained Shannon & Wilson to prepare an Independent Remedial Action Plan and assisted the District with the Department of Ecology Voluntary Cleanup Program; and

**WHEREAS**, the District requested Shannon & Wilson, Inc. submit a Scope of Services and Fee Estimate proposal for additional services at the Mansion Hill Reservoir site (referenced as Exhibits A & B of Attachment -1 and incorporated herein); and

**WHEREAS**, the professional services tasks included in Amendment #2 are as follows:

Task	Description
1	Supplementary Delineation at 2.5MG Water Tank
2	Observation and Sampling During Excavation
3	Regulatory Interaction
4	Report of Independent Remedial Action

**WHEREAS**, the General Manager and District Engineer reviewed the 7/9/19 Scope of Services and Fee Estimate submitted by Shannon & Wilson, Inc. and recommend approval of this resolution.

**NOW, THEREFORE, BE IT RESOLVED:**

1. The Board of Commissioners approves Amendment #2 for a not to exceed amount of \$56,552.00 to Contract 19-50-11 with Shannon & Wilson, Inc.
2. The General Manager or Designee is authorized to execute Amendment #2 (referenced as Attachment-1 and incorporated herein) for Project 16-3 Mansion Hill Reservoir Relocation.
3. The General Manager and/or the District's legal counsel are authorized to make minor changes to the Amendment if required.

**ADOPTED BY THE BOARD OF COMMISSIONERS** of Highline Water District King County, Washington, at an open public meeting held on this **7th** day of **August 2019**.

**BOARD OF COMMISSIONERS**

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**Kathleen Quong-Vermeire**, President

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**Todd Fultz**, Commissioner

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**George Landon**, Commissioner

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**Vince Koester**, Secretary

\_\_\_\_\_  
**Daniel Johnson**, Commissioner



**ATTACHMENT 1**

**AMENDMENT #2**

**CONSULTANT AGREEMENT FOR SERVICES  
SHANNON & WILSON, INC. – CONTRACT #19-50-11  
MANSION HILL SOILS REMEDIATION**

Shannon & Wilson, Inc. has requested the following additional compensation (**Exhibits A and B**), incorporated herein, to address the contaminated soils remediation relating to project 16-3 Mansion Hill Reservoir Relocation

<b>Task</b>	<b>Description</b>	<b>Amount</b>
1	Supplementary Delineation at 2.5MG Water Tank	\$ 6,221.00
2	Observation and Sampling During Excavation	\$ 29,281.00
3	Regulatory Interaction	\$ 3,520.00
4	Report of Independent Remedial Action	\$ 17,530.00
	Revisions	\$ 56,552.00
	Previous Contract Amount	\$ 33,021.00
	<b>Revised Contract Amount</b>	<b>\$ 89,573.00</b>

Shannon & Wilson, Inc. will undertake the above-referenced additional work on a time-and-expense basis. The same standard general terms and conditions will apply as agreed to in Contract #19-50-11 dated 4/03/19.

**Effective Date.** The effective date of this Amendment shall be the date signed by an authorized representative of the District.

**SHANNON & WILSON, INC.**

By: \_\_\_\_\_

Ryan Peterson, PE

Title: Environmental Engineer

Date: \_\_\_\_\_

**HIGHLINE WATER DISTRICT**

By: \_\_\_\_\_

Matt Everett

Title: General Manager

Date: \_\_\_\_\_

July 9, 2019

**EXHIBIT A**

Mr. Jeremy DelMar, PE  
Highline Water District  
23828 30<sup>th</sup> Avenue S.  
Kent, WA 98032

RE: SCOPE AMENDMENT AND FEE ESTIMATE FOR ADDITIONAL SERVICES AT  
MANSION HILLS RESERVOIR, SEATAC, WASHINGTON

Dear Mr. DelMar:

We appreciate the opportunity to submit this scope amendment for additional services at Mansion Hills Reservoir in SeaTac, Washington (subject property).

Since several of our tasks are dependent on the contractor's capabilities and schedule, we have made assumptions to provide a reasonable fee estimate. The actual fee may be higher or lower.

### Background

The subject property consists of King County parcels 0922049235 and 0922049340. The subject property is about 5.05 acres and hosts several large water tanks and a pump station.

Arsenic, lead, and lube-oil range hydrocarbons have been detected in shallow soil at locations throughout the subject property. Based on previous reporting, the source of the arsenic and lead contamination is suspected to be historical sandblast cleaning of water tanks on the subject property, although areawide contamination from the former Tacoma Smelter may have contributed. The source of lube-oil range hydrocarbons is suspected to be from vehicles or road runoff.

Sound Transit plans to acquire the eastern portion of the subject property for the Federal Way Link Extension project. Some of this land contains arsenic, lead, and lube-oil contamination. Prior to this acquisition, the 5-million-gallon (MG) water tank on the subject property will be demolished and the eastern portion of the subject property will be graded.

Highline Water District has indicated that they plan to implement cleanup actions for these contaminants during summer 2019. Highline Water District has indicated that the preferred cleanup action is described in *Independent Remedial Action Plan, Mansion Hills Reservoir*,

*SeaTac, Washington*, prepared by Shannon & Wilson, dated June 21, 2019<sup>1</sup>. The cleanup action includes excavation and offsite disposal or stockpiling of contaminated and suspect contaminated arsenic- and lead-impacted soil with excavation and offsite disposal of lube-oil-impacted soil.

## Scope Amendment

The objective of this scope amendment is to provide additional services in aid in implementation of the Independent Remedial Action Work Plan for the subject property. These services include:

- Task 1 – Supplementary Delineation at 2.5MG Water Tank
- Task 2 – Observation and Sampling During Excavation
- Task 3 – Regulatory Interaction
- Task 4 – Report of Independent Remedial Action

### Task 1 – Supplementary Delineation at the 2.5-Million-Gallon (MG) Water Tank

To investigate for the presence of contamination in areas near the 2.5MG water tank, test pitting will be conducted with hand tools every 20 feet along the circumference of the water tank. Test pitting will be conducted at the base of the berm and top of the berm down to 0.5 foot below ground surface (bgs). If sandblasting residual are observed in most areas along the circumference, we will assume the entire area near the 2.5MG water tank is contaminated above cleanup levels and sample analysis of test pit samples will not be performed.

If sandblasting residuals are not observed in most areas along the circumference, soil samples will be collected from the test pits and analyzed to verify if areas exceed cleanup levels. One sample will be collected at 0.5 foot bgs from the bottom and top of the berm and analyzed for arsenic and lead using U.S. Environmental Protection Agency (EPA) Method 6010. We will request standard turnaround time assuming the site excavation work will be started at least two weeks after sample collection.

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<sup>1</sup> Shannon & Wilson, Inc., 2019, Independent Remedial Action Plan, Mansion Hills Reservoir, SeaTac, Washington: Report prepared by Shannon & Wilson, Inc., Seattle, Wash., project 103047-004, for Highline Water District, Kent, Wash., June 21.

## Task 2 – Observation and Sampling During Excavation

Excavation of soil impacted with arsenic, lead, and lube oil range hydrocarbons will be observed by Shannon & Wilson to document progress, field screen for impacted soil, collect confirmation soil samples, and provide recommendations to Highline Water District regarding possible excavation extents.

Shannon & Wilson will mark the proposed excavation extents using stakes, marking paint, or other materials.

Shannon & Wilson will field screen excavations using visual observation for sandblasting residuals and a handheld x-ray fluorescence (XRF) analyzer. The XRF analyzer will be used to evaluate for concentrations of arsenic and lead in the excavation sidewalls and bottom. The XRF analyzer provides semi-quantitative results within seconds. Areas that the XRF analyzer indicates may have concentrations of arsenic or lead above cleanup levels will be excavated an additional 1 foot or until the XRF indicates that concentrations are below cleanup levels.

Shannon & Wilson will collection confirmation soil samples from excavation sidewalls and bottoms. Shannon & Wilson will submit soil samples for chemical analyses at a laboratory under subcontract to Shannon & Wilson. Soil samples collected from the northeast area excavation will be analyzed using Northwest Total Petroleum Hydrocarbons – Diesel Extended method. The soil samples from other excavations will be analyzed using EPA Method 6020 to achieve a method reporting limit (MRL) of about 1 milligram per kilogram. This MRL will allow the samples to be composited by combining soil from up to five locations. Sample turnaround time will be expedited such that results should be available during the day following sample collection.

Soil samples will also be collected from stockpiled suspect contaminated soil and analyzed for arsenic and lead using EPA Method 6020. Exhibit 1 provides the minimum number of samples that will be collected.

**Exhibit 1: Minimum Number of Stockpile Samples**

Volume of Soil (cubic yards)	Minimum Number of Samples
0 – 100	3
101 – 500	5
501 – 1,000	7
1,001 – 2,000	10
Greater than 2,000	10+1 for each additional 500 cubic yards

Daily reports of field activities during excavation will be submitted via email to Highline Water District using Shannon & Wilson's Field Activity Report (FAR) form. The daily reports will include a summary of daily activities, photographs, and recommendations, if appropriate.

### Task 3 – Regulatory Interaction

Regulatory interaction includes upload of sample information to the Washington State Department of Ecology's (Ecology's) Environmental Information Management (EIM) system and notification of dangerous waste disposal via Ecology's TurboWaste reporting system.

Ecology requires all environmental monitoring data generated during contaminated site investigations and cleanups to be submitted to Ecology in both written form and electronically through EIM per Ecology's Policy 840.

Highline Water District will register the Site with Ecology as a generator of dangerous waste in order to obtain an EPA/State ID number. Shannon & Wilson will notify Ecology of the dangerous waste disposal activities using the EPA/State ID number and Ecology's TurboWaste electronic report system.

### Task 4 – Report of Independent Remedial Action

Shannon & Wilson will prepare a report to document the remediation activities for the Site. If the disposition of the stockpile of suspect contaminated soil is pending comment from Ecology (likely to take several months), then this report will be submitted to Highline Water District once excavation and backfilling are complete. Another report will need to be created for Ecology using this report as a template once actions are taken for the stockpile.

If sampling results indicate that the soil stockpile is unsuitable for mixing, therefore the stockpile is disposed of offsite, then this Report of Independent Remedial Action will be the Site Closure Report.

This Report of Independent Remedial Action will be in general conformance with the Model Toxics Control Act. We will prepare a formal, written report that will include:

- A site description.
- A summary of previous investigations.
- Methods and results for excavation, stockpiling, and offsite disposal of contaminated and suspect contaminated soil.
- Methods and results of confirmation sampling of excavated areas.

- Methods and results of characterization sampling of stockpiled suspect contaminated soil.
- Disposal records for contaminated soil disposed of off-site.
- Recommendations for further actions, if any.

The report will be finalized after one round of comments. Both the draft and final reports will be provided to you electronically.

## SCHEDULE

We are prepared to begin work immediately upon receiving notice to proceed. We estimate that Task 1 (Supplementary Delineation of the 2.5MG Water Tank) will require one day of fieldwork. Daily FARs will be emailed to you after review by the principal-in-charge during the following business day.

The draft Report of Independent Remedial Action will be submitted for your review within three weeks of completion of field activities, including final disposition of the stockpiled suspect contaminated soil, and finalized within two weeks of receipt of comments.

## FEE ESTIMATE

We are prepared to undertake the services described above on a time-and-expense basis using the previously authorized hourly rates and fees<sup>2</sup>. Since our observation and sampling activities during the excavation (Task 2) are dependent on the contractor's capabilities and schedule, we have assumed that Task 2 will take approximately ten working days. Additional budget may be required if Task 2 takes longer than ten working days.

Based on our understanding of the proposed activities, we estimate that the fee for these services will be \$56,552, which will bring the total fee (including the services previously authorized) to \$89,573. A summary of the fee estimate is provided in the enclosed Table 1.

## LIMITATIONS

Shannon & Wilson has prepared this scope amendment and fee estimate in a professional manner, using that level of skill and care normally exercised for similar projects under

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<sup>2</sup> Highline Water District, 2019, Mansion Hill soils investigation, agreement for consulting services: Contract between Highline Water District, Kent, Wash., HWD Contract No. 19-50-11, Ref. #136, and Shannon & Wilson, Inc., Seattle, Wash., April 3.

similar conditions by reputable and competent environmental consultants currently practicing in the area.

We look forward to providing services to Highline Water District and will commence work on receipt of an authorized amendment. If have any questions, please contact the undersigned at (206) 695-6673.

Sincerely,

SHANNON & WILSON



Ryan Peterson, PE  
Environmental Engineer



Scott Gaulke, PE, LHG  
Vice President

RBP:SWG/rbp

Enc. Table 1 – Fee Estimate (2 pages)



**EXHIBIT B**
**Table 1 - Fee Estimate**

<b>Task 1 - Supplemental Delineation at the 2.5MG Water Tank</b>					
	<b>Unit</b>	<b>Unit Cost</b>	<b>Quantity</b>	<b>Extended Cost</b>	<b>Subtotal</b>
<b>Labor</b>					
Vice President	Hour	\$250	2	\$500	
Professional III	Hour	\$110	14	\$1,540	
Professional II	Hour	\$105	12	\$1,260	
					\$3,300
<b>Direct Costs</b>					
Hand Boring Kit	Day	\$50	1	\$50	
Misc. Disposal Sampling Equipment	Each	\$10	1	\$10	
					\$60
<b>Laboratory Analysis - Soil Sampling</b>					
Sample preparation (metals samples)	Each	\$15	52	\$780	
Arsenic (EPA Method 6010)	Each	\$12	52	\$624	
Lead (EPA Method 6010)	Each	\$12	52	\$624	
TCLP (EPA Method 1311)	Each	\$92	5	\$460	
Markup on Indirect Costs (15%)	Each	\$373	1	\$373	
					\$2,861
<b>Task 2 - Observation and Sampling During Excavation</b>					
	<b>Unit</b>	<b>Unit Cost</b>	<b>Quantity</b>	<b>Extended Cost</b>	<b>Subtotal</b>
<b>Labor</b>					
Vice President	Hour	\$250	12	\$3,000	
Professional III	Hour	\$110	120	\$13,200	
					\$16,200
<b>Direct Costs</b>					
Misc. Disposal Sampling Equipment	Ea	\$10	10	\$100	
					\$100
<b>Rental Equipment</b>					
Rental x-ray fluorescence (XRF) analyzer	Week	\$1,500	2	\$3,000	
Markup on Indirect Costs (15%)	Each	\$450	1	\$450	
					\$3,450
<b>Laboratory Analysis - Soil Sampling</b>					
Arsenic and lead (EPA Method 6020)	Each	\$45	62	\$2,790	
Lube Oil (NWTPH-Dx)	Each	\$65	5	\$325	
Same day turnaround (150% markup)	Each	\$4,673	1	\$4,673	
TCLP Extraction (EPA Method 1311)	Each	\$50	10	\$500	
Markup on Indirect Costs (15%)	Each	\$1,243	1	\$1,243	
					\$9,531
<b>Task 3 - Regulatory Interaction</b>					
	<b>Unit</b>	<b>Unit Cost</b>	<b>Quantity</b>	<b>Extended Cost</b>	<b>Subtotal</b>
<b>Reporting to Ecology via TurboWaste</b>					
Professional III	Hour	\$110	8	\$880	
					\$880
<b>Environmental Information Management System Upload</b>					
Professional III	Hour	\$110	24	\$2,640	
					\$2,640

**Table 1 - Fee Estimate**

<b>Task 4 - Report of Independent Remedial Action</b>					
	<b>Unit</b>	<b>Unit Cost</b>	<b>Quantity</b>	<b>Extended Cost</b>	<b>Subtotal</b>
<b>Draft Version of Report</b>					
Vice President	Hour	\$250	10	\$2,500	
Professional III	Hour	\$110	100	\$11,000	
Word Processing	Hour	\$110	4	\$440	
Drafting	Hour	\$65	10	\$650	
					\$14,590
<b>Final Version of Report</b>					
Vice President	Hour	\$250	2	\$500	
Professional III	Hour	\$110	20	\$2,200	
Word Processing	Hour	\$110	1	\$110	
Drafting	Hour	\$65	2	\$130	
					\$2,940
<b>TOTAL ESTIMATED COST</b>					<b>\$56,552</b>

**NOTE:**

EPA = U.S. Environmental Protection Agency; MG = million-gallon; NWTPH-Dx = Northwest Total Petroleum Hydrocarbon - Diesel Extended;  
TCLP = Toxicity Characteristic Leachate Procedure

**Agenda Item No.:** 5.1  
**Agenda Date:** 08/07/19  
**Reviewed By:** *[Signature]*

**Subject:** Authorize Amendment #2 – Shannon & Wilson, Inc. - Contract #19-50-11  
Contaminated Soils Remediation Relating to Project 16-3 Mansion Hill Reservoir Relocation

CATEGORY	
<i>Executive</i>	<input type="checkbox"/>
<i>Administrative</i>	<input type="checkbox"/>
<i>Engineering/Operations</i>	<input checked="" type="checkbox"/>

FINANCIAL						
<i>Expenditures?</i>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
<i>Budgeted?</i>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
<i>Estimated Amount:</i>		\$		<u>56,552.00</u>		
<small>Excludes sales tax</small>						

**ATTACHMENTS:**

1. Resolution 19-8-7A
2. Attachment 1 - Amendment # 2

**COMMENTS:**

The District retained Shannon & Wilson to prepare an Independent Remedial Action Plan and assisted the District with the Department of Ecology Voluntary Cleanup Program.

The General Manager and District Engineer reviewed the 7/9/19 Scope of Services and Fee Estimate submitted by Shannon & Wilson, Inc. and recommend approval of this resolution.