

EXHIBIT A1 - SCOPE OF WORK

**CITY OF STEVENSON
ROCK CREEK INTAKE INVESTIGATION
JULY 2024**

Proposed Scope of Work

Grayling Engineers (Grayling) has an existing agreement with the City of Stevenson (City) for investigating the cause of the diminished capacity at the Rock Creek raw water intake. This amendment supplements the original scope of work with the following tasks:

Task 1 – Project Management

Subtask 1.1 - Project Management & Administration

This task includes correspondence and coordination with the City, tracking and updating the delivery schedule, and tracking the project budget. Included with this task are email and phone correspondence, preparation of monthly invoices, and preparation of monthly progress reports.

Assumptions

- This task does not include in-person meetings.

Deliverables

- Monthly invoices
- Monthly progress reports

Task 2 – Rock Creek Intake Investigation

Additional effort to investigate the Rock Creek intake, coordinate drawdown testing with Aspect Consulting, and coordinate with the Washington Department of Health (DOH).

Task 3 – Short-Term Supply Analysis

Grayling completed a Corrosion Control Recommendation Report (CCRR) for Hegewald Well in 2021 as a result of exceeding the Action Level (AL) for lead. The CCRR identified the preferred method of implementing corrosion control. In January 2022, Grayling provided a Technical

Memorandum (TM) documenting treatment alternatives for the well for both pH adjustment and iron removal. That TM used a design flow of 350 gpm and identified recommendations for constructing permanent treatment facilities at the well. Recently completed testing of the well showed it can reliably supply the full water-right capacity of 600 gpm.

The purpose of this task is to provide a recommended treatment design that can be incorporated in the summer of 2024 so the well can be used as a permanent source in the event Rock Creek is unable to provide sufficient capacity.

Due to the limited timeline, iron removal treatment will not be incorporated into the short-term analysis. The feasibility and desirability of iron sequestration may be considered as part of the short-term work.

Subtask 3.1 - Develop Preliminary Treatment Conceptual Design

The following work will be performed:

- Identify the well capacity needed to support the community on a short-term basis.
- Size treatment facilities to correspond with the well capacity.
- Provide an Opinion of Probable Construction Cost for the proposed improvements.

Assumptions

- The well capacity to be used as the basis of design will be coordinated through email correspondence.

Subtask 3.2 - DOH Project Report

Grayling will prepare a project report and related documents required for review by the Washington Department of Health (DOH). Following receipt of review comments, Grayling will prepare written responses in letter format.

Assumptions

- DOH review fees will be invoiced directly to the City.
- Budget includes one round of comment responses to DOH. Additional submittals will be completed on a time and materials basis, at our current labor rates.

Deliverables

- Plans, project report and supporting documents in electronic (PDF) format.

Subtask 3.3 - Start-up and Testing

Grayling will assist the City with start-up and testing of the proposed treatment facilities.

Assumptions

- Up to two (2) Grayling representatives will attend up to two (2) site visits following completion of construction.
- The City is responsible for laboratory testing fees.

Deliverables

- Construction Completion Report will be prepared by Grayling and sent to DOH..

Task 4 - Subconsultant Services

Task 4.1 - Hydrogeologic Analysis (Aspect Consulting)

Geosyntec Consultants, Inc. dba Aspect Consulting (Aspect) is providing Grayling Engineers with hydrogeologic technical assistance for the City of Stevenson's (City's) Hegewald Well located in Skamania County, Washington. Aspect understands the City would like to determine if the well could be utilized as an additional source of water supply to supplement their aging surface water sources. The well is currently classified as a seasonal source and has only been used intermittently in the past. It is the City's understanding that the well has capacity, but the yield of the well has not yet been determined.

As part of this investigation, the City is seeking funding through the Washington State Department of Health's (DOH) Source Water Protection Local Assistance Grant Program. This grant is available for projects that protect public drinking water sources (Group A). To meet the grant's guidelines, the City has requested Aspect include additional hydrogeologic analyses in this scope of work relating to the development of a wellhead protection area (WHPA) for the Hegewald well as part of a wellhead protection program.

See the attached scope of work for a detailed description of individual tasks.

Task 4.2 - Ongoing Hydrogeologic Services (Aspect Consulting)

Under this scope of work, Aspect will continue water level monitoring at the Hegewald Well to determine seasonal low groundwater levels. This information will be used to assess minimum available drawdown in the well and inform reliability during peak summer demands. This scope of work included two site visits (one for equipment maintenance and data download; another for retrieval of equipment in the fall), data reduction and analysis, and reporting in an email format including groundwater hydrographs.

See the attached scope of work for a detailed description of tasks.

Exclusions

- Services and deliverables not defined herein.

Estimated Fee

A fee of **\$55,612** is proposed to complete the work described above. Work will be invoiced monthly on a time and materials basis, not to exceed the agreed upon total without prior approval from the City. Please refer to **Exhibit B** for a detailed breakdown of the estimated fee by task.

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7/22/24

EXHIBIT B1 - FEE ESTIMATE
CITY OF STEVENSON
ROCK CREEK INTAKE INVESTIGATION
JULY 2024

Task	Description	Engineer, Grade VIII	Engineer, Grade VII	Engineer, Grade VI	Engineer, Grade V	Engineer, Grade IV	Engineer, Grade III	Engineer, Grade II	Engineer, Grade I	Senior Scientist	PM / CM	CAD / GIS Technician	DO	Total Hours	Labor Cost	Expenses			Total	
		\$242	\$226	\$210	\$194	\$178	\$162	\$146	\$130	\$210	\$210	\$130	\$150			Mileage	Printing	Subconsultants		
1	Project Management	8	0	0	0	0	0	0	0	0	2	0	0	10	\$ 2,356	\$ -	\$ -	\$ -	\$ 2,356	
1.1	Project Management and Administration	8									2			10	\$ 2,356				\$ 2,356	
2	Rock Creek Intake Investigation	4	0	0	0	0	12	0	0	0	0	0	0	16	\$ 2,912	\$ -	\$ -	\$ -	\$ 2,912	
2.1	Rock Creek Intake Investigation	4					12							16	\$ 2,912				\$ 2,912	
2	Short-Term Supply Analysis	28	0	0	0	0	64	0	0	0	0	0	0	92	\$ 17,144	\$ 200	\$ -	\$ -	\$ 17,344	
2.1	Conceptual Design	16					24							40	\$ 7,760				\$ 7,760	
2.2	DOH Project Report	6					20							26	\$ 4,692				\$ 4,692	
2.3	Start- up and Testing	6					20							26	\$ 4,692	\$ 200			\$ 4,892	
4	Subconsultant Services	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -	\$ 33,000	\$ 33,000	
4.1	Hydrogeologic & Water Right Services (AC)													0	\$ -				\$ 27,500	\$ 27,500
4.2	Ongoing Hydrogeologic Services (AC)													0	\$ -				\$ 5,500	\$ 5,500
	Total	40	0	0	0	0	76	0	0	0	2	0	0	118	\$ 22,412	\$ 200	\$ -	\$ 33,000	\$ 55,612	



Contract Order

Client: Grayling Engineers Attn: Mr. Kyle Thompson, President 654 Officers Row Vancouver, WA 98661	Date: January 24, 2024
	Contract No.: 1
	Project No.: AS230406
Project Name: City of Stevenson Well Evaluation Skamania County, Washington	
Subject: Hegewald Well Evaluation	

Description of Work	Cost
<p>Geosyntec Consultants, Inc. dba Aspect Consulting (Aspect) is providing Grayling Engineers with hydrogeologic technical assistance for the City of Stevenson’s (City’s) Hegewald Well located in Skamania County, Washington. Aspect understands the City would like to determine if the well could be utilized as an additional source of water supply to supplement their aging surface water sources. The well is currently classified as a seasonal source and has only been used intermittently in the past. It is the City’s understanding that the well has capacity, but the yield of the well has not yet been determined.</p> <p>As part of this investigation, the City is seeking funding through the Washington State Department of Health’s (DOH) Source Water Protection Local Assistance Grant Program. This grant is available for projects that protect public drinking water sources (Group A). To meet the grant’s guidelines, the City has requested Aspect include additional hydrogeologic analyses in this scope of work relating to the development of a wellhead protection area (WHPA) for the Hegewald well as part of a wellhead protection program.</p> <p>Based on this understanding, Aspect will conduct the following tasks:</p> <p><i>Task 1 – Conduct Document Review</i></p> <p>As part of this task, Aspect will review background documentation related to the Hegewald well including available pump and motor information, pump curves, pumping test records, operational and maintenance records, and water quality data. Aspect will interview City staff regarding system operation, observations of recent issues and performance of the well to supplement the available data prior to testing the well to identify any trends in aquifer (i.e., water levels), well yield, and performance or water quality.</p> <p>Aspect will also review relevant hydrogeological reports, nearby well logs, and aquifer water level mapping in the area vicinity to support delineation of boundaries for the Hegewald WHPA.</p> <p><i>Task 2 – Instrumentation, Testing, and Sampling of Hegewald Well</i></p> <p>Aspect staff will coordinate with the City to inspect, test, and sample the Hegewald well. Prior to testing, Aspect will instrument the well with a pressure transducer datalogger to collect continuous measurements of background water levels. Aspect</p>	<p>Time and Materials, not to exceed:</p> <p>Total: \$25,000</p> <p>To be billed according to the attached Schedule of Charges</p> <p>Task 1: \$3,000</p> <p>Task 2: \$10,500 (including \$2,000 WSE analytical fees)</p>

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will also deploy a barometric pressure datalogger for monitoring atmospheric changes (barometric pressure data is necessary for correction of the water level transducer data).

Initial testing will be minimally invasive, completed without removal of well pumps or downhole equipment, and will establish the current condition and provide an initial diagnosis of the available yield. Testing the well will require coordination with the City so the most representative test results are obtained. Access to the well head, a system pressure gauge, a water quality access port, and the ability to test the well at multiple flow rates are necessary for this evaluation.

The well assessment will include an approximate 4-hour step-rate test, followed by an approximate 24-hour constant rate pumping test to evaluate the pump, motor, and well performance. The duration of the tests may be adjusted at the discretion of Aspect field staff. The well will be tested at three to four pumping scenarios and the pumping water level, backpressure (i.e., total dynamic head), and pumping rate, will be measured and recorded. These data will be used to evaluate the following:

- Well performance as measured by specific capacity (i.e. the yield divided by the drawdown); and
- Pump condition relative to the design pump curve and target rate.

Optionally, the well assessment may also include a video camera survey of the well to determine existing construction and condition of the well casing and the installed infrastructure. Conducting the well video survey will depend on wellhead access. For this reason, the approximate cost for the well video survey is included in the Cost column in parentheses, as optional.

Additionally, during testing a water quality multiparameter meter will be used to evaluate trends in water quality parameters and observe field values during water quality and bacterial sample collection. The bacterial assessment and water quality samples will be submitted to Water Systems Engineering (WSE) in Ottawa, Kansas to evaluate the potential for bacteriological and/or chemical precipitation as causes of clogging. We assume all work will be completed in two to three long field days.

Following testing, water level transducers will be left in the well to record long term trends in pumping and static water levels.

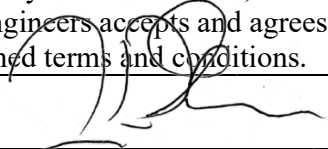
Task 3 – Data Analysis and Well Capture Zone Delineation

Aspect will analyze results of the pumping test data to estimate aquifer properties including interference drawdown, boundary effects, and well yields. Water quality data will be tabulated and compared to the state maximum contaminant level (MCLs) in WAC 246-290. Hydraulic parameters calculated during this analysis will be utilized to delineate and determine boundaries of the Hegewald WHPA.

Well capture zones can be used as the basis of the development of WHPA for the Hegewald well as part of a wellhead protection program. Under this task, Aspect will delineate 6-month, 1-year, 5-year, and 10-year times of travel capture zones for the Hegewald well using a combination of analytical methods and hydrogeologic interpretation. Delineation of the capture zone dimensions will be completed using

(not including \$1,500 fee if well video scan is completed)

Task 3: \$5,000

<p>the US Environmental Protection Agency’s (EPA, 2023) Wellhead Analytical Element Model (WhAEM).</p> <p>Task 4 – Reporting Aspect’s work on the WHPA completed under the DOH grant will be summarized throughout the project. Until the project is fully complete, Aspect will prepare quarterly reports to be submitted to DOH that include activities completed during the quarter, costs attributed to performing each work item, and contribution (match) the recipient makes to the award. A final report describing the work performed will be prepared by Aspect for submission to DOH.</p> <p>Conclusions on the well’s performance and yield as determined during the well pumping tests completed in Task 2 will be summarized in an email deliverable for your review and comment. We understand timing of the work is important; assuming a 3- to 5-week turnaround time from the WSE laboratory, we would recommend completing the well assessment (Task 2) immediately following authorization. The email deliverable will conclude with our recommendations for operation of the Hegewald well.</p> <p>Other Direct Costs (ODC) include all travel expenses, shipping, water quality sampling equipment, and water quality and outside-services bacterial assessment analytical laboratory fees.</p>	<p>Task 4: \$5,000</p>
<p>By its signature below and/or authorizing Geosyntec Consultants, Inc. dba Aspect Consulting to proceed in accordance with this Proposal Grayling Engineers accepts and agrees to the Services, Schedule and Compensation described above and the attached terms and conditions.</p>	
<p>ASPECT CONSULTING</p>	<p>By: </p> <p>Printed Name: Tyson D. Carlson, LHG Principal Hydrogeologist</p>
<p>CLIENT</p>	<p>By:</p> <p>Printed Name/Date:</p>

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Contract Change

Client: Grayling Engineers Attn: Mr. Kyle Thompson, President 654 Officers Row Vancouver, WA 98661	Date: July 22, 2024
	Change No.: 2
	Project No.: 230406
Project Name: City of Stevenson Skamania County, Washington	
Subject: Water Supply Alternative Analysis	

Description of Work	Cost
<p>Geosyntec Consultants, Inc. dba Aspect Consulting (Aspect) is pleased to provide Grayling Engineers (Grayling) with a scope of work and cost estimate to provide ongoing hydrogeologic and water right related services to the City of Stevenson (City) located in Skamania County, Washington. Under this scope of work, Aspect will continue water level monitoring at the Hegewald Well to determine seasonal low groundwater levels. This information will be used to assess minimum available drawdown in the well and inform reliability during peak summer demands. This scope of work included two site visits (one for equipment maintenance and data download; another for retrieval of equipment in the fall), data reduction and analysis, and reporting in an email format including groundwater hydrographs.</p>	<p>Time and Materials, not to exceed:</p> <p>Total: \$5,000</p> <p>To be billed according to the attached Schedule of Charges</p>

This change amends Contract Order No. 1 between Aspect Consulting, LLC and Client dated January 24, 2024. Except as amended above, all terms and conditions of contract apply to this contract change.

ASPECT CONSULTING	By: 
	Printed Name: Tyson D. Carlson, LHG Sr. Principal Hydrogeologist
CLIENT	By:
	Printed Name/Date:

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