

SERVICE AGREEMENT #C-100130

AMENDMENT No. 1

BURNT BRIDGE CREEK AMBIENT STREAM MONITORING

This Agreement amends the Professional Services Agreement number C-100130 by and between the City of Vancouver, hereinafter referred to as "City", and Herrera Environmental Consultants hereinafter referred to as "Contractor", whose address is 1001 SE Water Ave, Portland OR 97214 for services offered.

This amendment amends the original agreement as follows:

1. Increase the authorized amount of the Agreement by \$277,624.00 to a revised authorized amount of \$533,158.00.
2. **Amend** the language contained in Section 1, Statement of Work with language in herein attached and by reference made part of the Contract, Attachment A – Burnt Bridge Creek 2021-2023 Water Quality Monitoring.
3. **Amend** language contained in Section 5, Time of Performance as follows: Extend the completed by date from January 15, 2022 to February 15, 2024.
4. Ratification: Acts taken pursuant to this Amendment but prior to its effective date are hereby ratified and confirmed.

This amendment in no way alters any other provisions of the original agreement.

CITY OF VANCOUVER

A municipal corporation

CONTRACTOR:

Herrera Environmental Consultants

Eric Holmes, City Manager

Signature

Date

Printed Name /Title

Attest:

Date

Natasha Ramras, City Clerk

Approved as to form:

Jonathan Young, City Attorney

SCOPE OF WORK

BURNT BRIDGE CREEK 2021–2023 WATER QUALITY MONITORING

On August 19, 2021, the City of Vancouver (City) authorized Herrera Environmental Consultants (Herrera) to prepare a contract amendment with a scope of work and cost estimate to conduct ambient water quality monitoring of Burnt Bridge Creek in 2021–2023 and prepare a Summary Report for the City. Herrera will conduct the monitoring using the same procedures established for the 2019–2021 Burnt Bridge Creek Ambient Stream Monitoring Project. Herrera will evaluate water quality data collected in previous monitoring efforts to evaluate temporal and spatial patterns.

This scope of work includes a discussion of the activities, assumptions, deliverables, and a schedule associated with this project:

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TASK 1.0 – PROJECT MANAGEMENT

Herrera’s project manager (Jess Brown) will be responsible for ongoing contract administration of the project, including preparing invoices and progress reports, as well as coordination of work efforts with the designated client point of contact (Dorie Sutton) and analytical laboratories. Herrera’s project manager will have phone and e-mail contact with the City on an as-needed basis.

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Deliverables and Schedule

- Monthly invoices and progress reports.

TASK 2.0 – QAPP ADDENDUM

A quality assurance project plan (QAPP) was developed in 2019 by Herrera for ambient water quality monitoring in Burnt Bridge Creek from November 2019 through October 2021. Herrera will prepare an addendum consisting of a technical memorandum to document and define any modifications for the 2021–2023 ambient monitoring effort with respect to the procedures described in the 2019 QAPP. These modifications will include a proposed schedule for 2021–2022. The QAPP addendum will be submitted to the City for review, comment, and approval prior to commencing monitoring activities.

Assumptions

- City will provide one set of comments on the draft final QAPP addendum within 1 week of its submittal.

Deliverables

- Draft final QAPP addendum (Word or PDF file of technical memorandum)
- Final QAPP addendum (PDF file)

TASK 3.0 – WATER QUALITY MONITORING

Herrera will implement the monitoring program over a 2-year period from October 2021 through October 2023 covering water years 2022 and 2023. This monitoring will be performed in accordance with field measurement, sampling, and quality control procedures identified in the 2019 QAPP and QAPP addendum. It is anticipated that samples will be analyzed for the same parameters as 2019–2021 including optical brighteners as a parameter for septic system source tracking. Any modifications to parameters will be documented in the QAPP addendum under Task 2.0.

Sampling and field measurements will be collected at 11 sites in 1 day during 12 sampling events in each year of monitoring. Continuous temperature monitoring will be conducted May through October at 8 of the 11 sites, and temperature data will be downloaded from each site during each baseflow sampling event to minimize risk of lost data. Temperature probe calibration will be checked prior to and after both deployment periods. The sampling schedule presented below in the Project Schedule subsection assumes that sampling will be conducted

SCOPE OF WORK

for each water year during 5 storm events, 3 base flow events in the wet season from October through May, and 4 monthly baseflow events in the dry season from June through September for a total of 24 events. The actual sampling dates will depend on rainfall conditions and may be modified in the QAPP addendum prepared in Task 2.

It is anticipated that sampling will begin at 8:00 am and conclude by 4:00 pm. Monitoring procedures at each site will generally consist of 1) calibration and equilibration of water quality meters, 2) collection of grab samples by directly filling each pre-labeled sampling bottle from the center of the stream, 3) storage of sampling bottles in a cooler with ice, 4) recording of water quality meter measurements, and 5) downloading of temperature probe data. All field data will be recorded on a sampling form to ensure all data are collected and for ease of data entry. One field duplicate sample will be collected during each sampling event for a total of 12 samples per event and 288 samples for all 24 events (12 events in each year of monitoring). One field duplicate water quality meter measurement will be recorded for each sampling event.

The sample cooler containing fecal bacteria samples (fecal coliform and *E. coli*) will be shipped via Federal Express to LabCor, Inc. (Seattle, WA) by 5:00 pm for delivery by 8:30 am on the following day. The optical brightener samples will be analyzed by Herrera staff in the evening the day of sampling. The remaining samples will be picked up by the ALS Environmental (Kelso, WA) courier by 7:00 am the following morning. The sample coolers will be carefully packed with ice to maintain a temperature of 4°C and bubble wrap to prevent breakage of any glass containers. Samples will be immediately processed by each laboratory in accordance with required sample holding times and storage conditions for each of the analyses. All field and laboratory data will be reviewed by the quality assurance officer within one week of receipt to ensure that all data meet the objectives for completion, precision, and accuracy. Any corrective actions will be taken as necessary. Data review and validation of results will be presented in interim update memoranda for Task 4. Validated project data will be entered into a database for the project summary report (Task 5).

Assumptions

- Each sampling event will require up to 17 staff hours to complete, including travel, optical brightener analysis, shipping, mobilization, and demobilization time.
- Temperature probe installation and removal will be performed by two Herrera staff.
- All sampling events will be performed by two Herrera staff or one Herrera staff and one City staff. City staff may provide field support depending on availability and City health and safety policy.
- Sampling locations will be consistent with the 2019–2021 ambient monitoring sampling locations.

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- Sampling will be conducted on a Tuesday, with alternate sampling days occurring on a Monday or Wednesday if necessary.

Deliverables

- Field forms, continuous temperature data, and laboratory reports will be submitted to the City for each sampling event in interim reports for Task 4.

TASK 4.0 – INTERIM REPORTING

Herrera will prepare an interim update memorandum for each sampling event within 6 weeks of the sampling event. Each report will summarize sampling activities and present the field forms, continuous temperature data, laboratory data reports, and chain of custody documentation. All field and laboratory data will be reviewed by the quality assurance officer in accordance with the QAPP addendum. Each interim update memorandum will include a data quality and usability assessment that identifies any changes or deviations from the QAPP for each of the following quality control elements:

- Completeness
- Methodology
- Holding Times
- Method Blanks
- Laboratory Duplicates
- Field Duplicates
- Laboratory Control Samples
- Matrix Spikes
- Significant quality assurance problems and corrective actions
- Measurement quality objectives that were not met and the resulting impact on decision making
- Limitations on the use or interpretation of the measurement data
- Recommended changes to monitoring procedures

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Deliverables

- Interim update (PDF file) will be submitted to the City for each of 24 sampling events within 6 weeks of each sampling date.

TASK 5.0 – SUMMARY REPORT

Herrera will provide one summary monitoring report upon completion of the 2-year monitoring period. This report will identify the specific goals of the monitoring program and then describe the monitoring procedures that were implemented to achieve those goals. Monitoring quality assurance objectives and review findings will be summarized. Results of the monitoring program will then be presented and evaluated using supporting graphical and/or tabular representations of the data as necessary. Results from statistical analyses that are performed on the data will be presented and discussed in detail. Finally, major conclusions from the monitoring program will be presented at the end of the report.

Herrera's quality assurance officer will perform an independent review of all data entry to ensure individual sample values and data flags were entered without error. All interim reports will be included as appendices. All validated project data will be entered into a spreadsheet database (Excel) that will be suitable for data analysis and preparation of the EIM data submittal to Ecology (Tasks 6 and 7).

The summary report will be submitted to the City for review and comment. Herrera will address all comments and submit a final draft report for approval by the City. Once the final annual monitoring report has been approved by the City, Herrera will make all the project data available to the City in an electronic format that is compatible with the City's GIS. Herrera will also forward all project data to the City in an electronic format that conforms to the submittal requirements for Ecology's EIM system (Tasks 6 and 7).

Assumptions

- City will provide consolidated written comments on the draft project report within 3 weeks of receiving the report.

Deliverables

- Draft summary report (PDF and MS Word)
- Draft Final summary report (PDF file)
- Final summary report (PDF file)

SCOPE OF WORK

TASK 6.0 – EIM SUBMITTAL

Validated field and laboratory data in the project database will be put in an electronic format that conforms to the submittal requirements for Ecology’s EIM system. Herrera will submit the 2021-2022 monitoring year EIM data to Ecology and the City within 10 business days of completing the final Year 1 Interim Report. Herrera will submit the 2022-2023 monitoring year EIM data to Ecology and the City within 10 business days of completing the project summary report. Herrera’s quality assurance officer will perform an independent review of all data entry to ensure individual sample values were entered without error. Herrera will coordinate with Ecology during the submittal process.

Assumptions

- Schedule includes 3 weeks after the Year 2 EIM submittal for any revisions requested by Ecology.

Deliverables

- Year 1 (2021–2022) EIM data submittal (Microsoft Excel) to Ecology and City
- Year 2 (2022–2023) EIM data submittal (Microsoft Excel) to Ecology and City

PROJECT SCHEDULE

The proposed project schedule is summarized in the following table. This schedule assumes that the contract is complete and notice to proceed is obtained on October 1, 2021. The schedule may be revised in the QAPP addendum (Task 2) or over the course of the project as needed and approved by the City.

SCOPE OF WORK

Table 1. Project Schedule.	
Activity	Scheduled Date/Duration
Task 1. Project Management	
Project Management	10/1/21 – 2/15/24
Kick-off Meeting	10/1/21
Task 2. QAPP Addendum	
Draft Final QAPP Addendum	10/8/21
Final QAPP Addendum	10/20/21
Task 3. Water Quality Monitoring	
Year 1 Sampling	
Storm Sampling (5 Events)	10/20/21 – 5/31/22
Wet Season Baseflow Sampling (3 Events)	11/1/21 – 4/30/22
Dry Season Baseflow Sampling (4 Events)	6/1/22 – 9/30/22
Temperature Probe Deployment	5/2/22 – 10/31/22
Laboratory Reports	15 business days after sampling
Year 2 Sampling	
Storm Sampling (5 Events)	10/1/22 – 5/31/23
Wet Season Baseflow Sampling (3 Events)	11/1/22 – 4/30/23
Dry Season Baseflow Sampling (4 Events)	6/1/23 – 9/30/23
Temperature Probe Deployment	5/1/23 – 10/31/23
Laboratory Reports	15 business days after sampling
Task 4. Interim Updates and Data Review	
Interim Updates 1 through 24	6 weeks after sampling
Task 5. Summary Report	
Draft Summary Report	12/15/23
Draft Final Summary Report	1/8/24
Final Summary Report	1/15/24
Task 6. EIM Data Submittal	
2021 – 2022 EIM Data Submittal	10 days after submitting Interim Update 12
2022 – 2023 EIM Data Submittal	1/29/24-2/15/24

Herrera Environmental Consultants

8/30/2021



Cost Estimate for
Herrera Project No.

Burnt Bridge Creek Water Quality Monitoring
19-07183-001

Herrera Labor based on: Burdened Labor Rates			Task No.	1	2	3	4	5	6	Total
			Project Management	QAPP Addendum	Water Quality Monitoring	Interim Reporting	Summary Report	EIM Submittal		
			Schedule	Task Start Date	10/1/2021	10/1/2021	10/20/2021	11/1/2021	10/15/2023	
			Task End Date	2/15/2024	10/20/2021	10/31/2023	10/15/2023	1/15/2024	2/15/2024	
Staff	Title	2021 Burdened Labor Rates								
Brown, Jess	Engineer III	\$140.51	52	4	24	104	64	16	264	
Zisette, Rob	Scientist VI	\$260.62	4	3	8	24	28	0	67	
Lee, Adam	Engineer III	\$164.80	0	0	18	0	0	0	18	
West, Carson	Engineer II	\$134.51	0	0	136	0	8	0	144	
Mullen, Meghan	Engineer II	\$133.65	0	0	0	8	12	8	28	
Gleason, Rayna	Landscape Designer II	\$110.01	0	0	120	0	0	0	120	
Nilsson, Samuel	Scientist II	\$101.34	0	8	168	96	40	16	328	
Stewart, Rick	Project Accountant III	\$109.25	18	0	0	0	0	0	18	
Jackowich, Pam	Administrative Coordinator IV	\$123.03	0	3	0	18	20	0	41	
Total Hours per Task			74	18	474	250	172	40	1028	
Subtotal Labor			\$10,315	\$2,524	\$56,942	\$33,880	\$25,484	\$4,939	\$134,084	
Subtotal Herrera Labor			\$10,315	\$2,524	\$56,942	\$33,880	\$25,484	\$4,939	\$134,084	
3%	Escalation on Herrera Labor in 2022		\$143	\$0	\$788	\$469	\$0	\$68	\$1,469	
6%	Escalation on Herrera Labor in 2023		\$286	\$0	\$1,577	\$938	\$706	\$137	\$3,643	
9%	Escalation on Herrera Labor in 2024		\$71	\$0	\$394	\$0	\$176	\$34	\$676	
Escalated Subtotal Herrera Labor			\$10,815	\$2,524	\$59,702	\$35,287	\$26,366	\$5,178	\$139,872	
Travel and Per Diem (PD)										
Item	Unit	Cost								
Auto Use	Mile	\$0.56	0	0	2340	0	0	0	2340	
Subtotal Per Diem			\$0	\$0	\$1,310	\$0	\$0	\$0	\$1,310	
Laboratory Costs										
Item	Unit	Cost								
ALS Kelso	Unit	\$392.00	0	0	288	0	0	0	288	
Lab/Cor	Unit	\$49.50	0	0	288	0	0	0	288	
Subtotal Lab Costs			\$0	\$0	\$127,152	\$0	\$0	\$0	\$127,152	
Other Direct Costs (ODCs)										
Item	Unit	Cost								
Water quality multimeter (YSI)	Day	\$100.00	0	0	24	0	0	0	24	
Gloves, disposable (box)	Box	\$25.00	0	0	4	0	0	0	4	
Computer, laptop	Day	\$50.00	0	0	12	0	0	0	12	
Hobo temperature probes	Each	\$135.00	0	0	10	0	0	0	10	
Miscellaneous (lump sum)	Each	\$1,000.00	0	0	1	0	0	0	1	
Shipping	Each	\$160.00	0	0	24	0	0	0	24	
Subtotal ODCs			\$0	\$0	\$9,290	\$0	\$0	\$0	\$9,290	
Subtotal Per Diem, Lab Costs, and ODCs			\$0	\$0	\$137,752	\$0	\$0	\$0	\$137,752	
Grand Subtotal			\$10,815	\$2,524	\$197,454	\$35,287	\$26,366	\$5,178	\$277,624	
Grand Total									\$277,624	