



DEPARTMENT OF
ECOLOGY
State of Washington

AMENDMENT NO. 1

TO

Contract NO. C2000179

BETWEEN THE

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

AND

CLARK COUNTY

PROJECT TITLE: Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the
Lower Columbia River Region

PURPOSE: To amend the Agreement between the state of Washington, Department of Ecology, hereinafter referred to as "ECOLOGY," and Clark County, hereinafter referred to as "COUNTY" or "Contractor."

WHEREAS, This Agreement is undergoing an increase in scope and extension of the timeline to allow for completion of the work described below and in the attached Appendix A.

IT IS MUTUALLY AGREED the Agreement is amended as follows:

- 1) The Period of Performance is amended to read as follows:

The period of performance is extended from July 31, 2024, to December 31, 2024.

- 2) Compensation is increased for additional tasks added by this amendment. The total amount is changed from \$469,678 to \$582,854, an increase of \$113,176.

- 3) The Agreement Management, section 22, is amended to reflect a new Ecology Representative as follows: New text is underlined (sample) and deleted language is indicated with strikethrough (~~sample~~).

The ECOLOGY Representative is:

Name: ~~Keunyea Song~~ Chelsea Morris

Address: 300 Desmond Dr SE (FedEx)

P.O. Box 47600 (USPS)

Olympia WA 98504

Phone: ~~360-407-6158~~ 564-999-3052

Email: ~~Keunyea.Song@ecy.wa.gov~~ Chelsea.Morris@ecy.wa.gov

- 4) The scope of work, Appendix A, is amended to read as attached. Added tasks and budget revisions. New text is underlined (sample) and deleted language is indicated with strikethrough (~~sample~~).

All other terms and conditions of the original Agreement including any other amendments remain in full force and effect, except as expressly provided by this Amendment.

This Amendment is signed by persons who represent that they have the authority to execute this Amendment and bind their respective organizations to this Amendment.

This Amendment is effective on the Ecology signature date.

IN WITNESS WHEREOF, the parties below, having read this Amendment in its entirety, including any attachments, do agree in each and every particular as indicated by their below signatures.

**State of Washington
Department of Ecology**

Clark County

By:

By:

Signature Date

Signature Date

Heather R. Bartlett

Print Name

Print Name

Deputy Director

Title

Title

APPENDIX A STATEMENT OF WORK AND BUDGET

Project Title: Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region

Background

Ecology has identified a need to understand how stormwater runoff is impacting the quality of receiving waters and to what extent management activities are protecting or improving small streams in urban areas. The Lower Columbia Urban Streams project (LCUS) is a status and trends regional monitoring study implemented to fulfill National Pollutant Discharge Elimination System (NPDES) Phase 1 Municipal Stormwater Permit (Permit) monitoring requirements. The study is anticipated to continue through multiple Permit terms.

The study boundaries are the Permit areas in the Lower Columbia River region, including the urban and urbanizing areas of the jurisdictions of Clark and Cowlitz Counties, and the cities of Camas, Longview, Vancouver, Battle Ground, Kelso, ~~and~~ Washougal and Ridgefield.

The goal of this project is to characterize selected chemical, biological, and physical attributes of urban streams in Clark and Cowlitz Counties in the Lower Columbia River region, and to assess trends over time. The study objectives are described in detail in *Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and addendums*. During the period of this IAA, the general objectives are to answer two questions:

- What are the status and trends of water quality and hydrology in surface waters draining subwatersheds primarily within urban and urbanizing areas under the jurisdiction of municipal stormwater NPDES municipal stormwater permittees?
- What are the status and trends of in-stream biological health, sediment quality and in-stream/riparian habitat conditions that are primarily within urban and urbanizing areas under the jurisdiction of NPDES municipal stormwater permittees?

This work includes site selection, evaluation, deployment and maintenance of continuous monitoring sensors, water and sediment quality sampling, stream habitat and biota assessment, data analysis and annual reporting.

Task 1: Project management – (~~\$32,328~~) See budget table

Includes 10% contingency: \$2,939

Clark County will manage the project and budget, and coordinate field, laboratory, and reporting tasks. Semi-annual project progress reports will be submitted to ECOLOGY to communicate project status and document work performed. Semi-annual progress reports will also include any decisions or modifications related to the tasks made during team meetings, communications with other permittees, and communications with Ecology as appropriate. Preliminary results or findings to date can also be included. Progress reports and billing packages will typically be delivered in the month following period end (i.e., January and July).

Deliverables and target dates:

- D1.1: Semi-annual progress report; target October 31, 2020
- D1.2: Semi-annual progress report; target January 31, 2021
- D1.3: Semi-annual progress report; target July 31, 2021
- D1.4: Semi-annual progress report; target January 31, 2022
- D1.5: Semi-annual progress report; target July 31, 2022
- D1.6: Semi-annual progress report; target January 31, 2023
- D1.7: Semi-annual progress report; target July 31, 2023
- D1.8: Semi-annual progress report; target January 31, 2024
- D1.9: Semi-annual progress report; target July 31, 2024

Task 2: Station Set Up – (~~\$109,096~~) See budget table

Includes 10% contingency: \$9,918

Clark County will acquire and install equipment to continuously monitor stream stage and ~~conductivity~~ temperature at five (5) long-term trend stations and ~~thirteen~~ twelve (12) rotating panel status stations during the period of the IAA. Trend stations will also include telemetry equipment. The equipment purchased for this project will be owned, stored, and maintained by Clark County; however, it is understood unused equipment can be borrowed to support future SAM-sponsored studies.

Initial setup to be completed by September 2020 will include the five long-term stations and the initial set of three rotating panel stations. Additional rotating panel stations will be installed prior to October of each year; three each in 2021, and 2022, 2023 and four in ~~2023~~ 2024.

Long-term trend stations will measure conductivity and temperature with a Campbell Scientific CS547A sensor, and stream stage with a CS450 series pressure transducer. The submersible sensor will be interfaced with a CR800 Campbell Scientific data logger that will be connected to a Sierra Wireless RV50 cellular modem to provide access to near real time-data and daily data transmittal.

Rotating panel status stations will measure temperature with a Hobo U24 submersible logger, and stage with a vented ONSET level logger HOB0 MX2001. Both loggers will be strategically placed in the stream and data downloaded manually during site visits.

Clark County will attach photographs and site description in the email documenting completed setup of each monitoring station as proof of deliverable.

Deliverables and target dates:

- D2.1: Copy of receipt for purchase of two conductivity probes; target August 31, 2020
- D2.2: Confirmation email for equipment installation at five trend monitoring stations; target September 30, 2020
- D2.3: Confirmation email for equipment installation at three status monitoring stations; target September 30, 2020
- D2.4: Confirmation email for equipment installation at three status monitoring stations; target September 30, 2021

D2.5: Confirmation email for equipment installation at three status monitoring stations; target September 30, 2022

D2.6: Confirmation email for equipment installation at ~~four~~ three status monitoring stations; target September 30, 2023

D2.7 Draft QAPP amendment with new status sites, target September 30, 2024

D2.8: Confirmation email for equipment installation at four status monitoring stations; target September 30, 2024

Task 3: Continuous Datalogger Operation and Field Data Collection (~~\$191,402~~) See budget table
Includes 10% contingency: \$17,400

Clark County will operate and maintain continuous monitoring equipment and perform field data collection per the Ecology-approved Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and approved addendums.

General activities under this task include continuous data logger operation and data retrieval related work, and summer watershed health monitoring related work.

Continuous data loggers will record temperature, ~~conductivity~~, and stage at 15-minute intervals throughout the project at the trend stations, and for one water year at each status station. Continuous water level data will then be used to calculate several flow metrics that are known to correlate with urbanization and biological condition in streams. All sites will initially be visited monthly for continuous data retrieval and any necessary equipment maintenance. Site visit frequency may be adjusted as needed.

Summer watershed health monitoring will be conducted between July 1 and September 30 at status and trend stations. Sediment, water quality, macroinvertebrate, and habitat data will be collected each year at the trend stations and once at each status station. Sediment, water quality, macroinvertebrate will be collected each year at each trend stations. Habitat data will be collected once every five years at trend stations.

Summer watershed health monitoring will be conducted between July 1 and September 30 at the Jones Creek reference station. Clark County operates and maintains continuous monitoring equipment and performs field data collection at this location per the Quality Assurance Project Plan for the Long-term Index Site Project in Clark County. Sediment samples will be collected and analyzed per the Ecology-approved Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and approved addendums. Water quality samples will be analyzed for additional parameters per the Ecology-approved Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and approved addendums. Habitat data will be collected once every five years at the Jones Creek reference station.

Continuous data retrieval, any issues related to the data, and maintenance status will be reported in semi-annual progress reports (Task 1 and D.1).

Deliverables and target dates:

D3.1: Email for monitoring completeness WY2021, confirming submission of the data collection event (DCE) file for each site compiled by the WHM e-forms and all required data and sample collection; target October 15, 2021

D3.2: Email for monitoring completeness WY2022, confirming submission of the data collection event (DCE) file for each site compiled by the WHM e-forms and all required data and sample collection; target October 15, 2022

D3.3: Email for monitoring completeness WY2023, confirming submission of the data collection event (DCE) file for each site compiled by the WHM e-forms and all required data and sample collection; target October 15, 2023

D3.4: Email for monitoring completeness WY2024, confirming submission of the data collection event (DCE) file for each site compiled by the WHM e-forms and all required data and sample collection; target October 15, 2024

Task 4.0: Data Management (~~\$63,721~~) See budget table

Includes 10% contingency: \$5,793

Clark County will perform data management and submittal per the Ecology-approved Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and addendums.

Clark County will complete QA/QC verification and upload continuous data sets to Aquarius software monthly or bi-monthly. Clark County will upload QC'd continuous datasets to EIM, along with laboratory results for sediment chemistry and macroinvertebrates annually.

Deliverables and target dates:

D4.1: Upload continuous data to Aquarius, and send an excel file with graphs to the project manager; target bi-monthly December 1, 2020 – July 31, 2024.

D4.2: Upload continuous data, sediment chemistry and macroinvertebrate data from sampling water year 2021 to EIM and send the email confirmation to the project manager; target March 31, 2022.

D4.3: Upload continuous data, sediment chemistry and macroinvertebrate data from sampling water year 2022 to EIM and send the email confirmation to the project manager; target March 31, 2023.

D4.4: Upload continuous data, sediment chemistry and macroinvertebrate data from sampling water year 2023 to EIM and send the email confirmation to the project manager; target March 31, 2024.

D4.5: Upload continuous data from partial water year 2024 (thru June 30, 2024) to EIM and send the email confirmation to the project manager. Email the project manager a copy of the continuous data, and water and sediment chemistry from sampling water year 2024; target July 31, 2024 December 31, 2024.

Task 5.0 Data Analysis and Annual Reporting (~~\$73,131~~) See budget table

Includes 10% contingency: ~~\$5,793~~

Clark County will perform data analysis and annual reporting per the Ecology-approved Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (2020) and approved addendums.

Data finalization and analysis will take place during Q4 each year beginning in 2021 (following the completion of each sampled water year). Annual reports will be submitted to Ecology during Q1 or Q2 each year beginning in 2022 (WY2021 report).

Clark County will present results from water years 2021 through 2023 to Stormwater Work Group.

Deliverables and target dates:

D5.1: Flow metrics calculation from continuous data for each site up to date; target December 31, 2021

D5.2: Annual report (WY2021) draft; target March 31, 2022

D5.3: Annual report (WY2021) final; target May 31, 2022

D5.4: Annual report (WY2022) draft; target March 31, 2023

D5.5: Annual report (WY2022) final; target May 31, 2023

D5.6: Annual report (WY2023) draft; target March 31, 2024

D5.7 Annual report (WY2023) final; target May 31, 2024

D5.8: Present to Stormwater Workgroup; target date December 31, 2024.

ACCESSIBILITY REQUIREMENTS FOR COVERED TECHNOLOGY

CONTRACTOR must comply with the Washington State Office of the Chief Information Officer, OCIO Policy no. 188, Accessibility (<https://ocio.wa.gov/policy/accessibility>) as it relates to “covered technology.” This requirement applies to all products supplied under this Contract, providing equal access to information technology by individuals with disabilities, including and not limited to web sites/pages, web-based applications, software systems, video and audio content, and electronic documents intended for publishing on ECOLOGY’s public web site.

Budget and Schedule:

Table 1. Project Budget and Deliverables Summary (July 2020 – ~~July 2024~~ December 2024).

Deliverable by Task	Target Deliverable Date	Deliverable Cost	Overhead/ Indirect Charges	Total Deliverable Cost
Task 1.0 Project Management				
D1.0: Semi-annual progress report	Oct-20	\$2,550	\$850	\$3,400
D1.2: Semi-annual progress report	Jan-21	\$2,606	\$869	\$3,475
D1.3: Semi-annual progress report	Jul-21	\$2,663	\$888	\$3,551
D1.4: Semi-annual progress report	Jan-22	\$2,722	\$907	\$3,629
D1.5: Semi-annual progress report	Jul-22	\$2,782	\$927	\$3,709
D1.6: Semi-annual progress report	Jan-23	\$2,843	\$948	\$3,791
D1.7: Semi-annual progress report	Jul-23	\$2,905	\$969	\$3,874
D1.8: Semi-annual progress report	Jan-24	\$2,970	\$990	\$3,959
D1.9: Semi-annual progress report	Jul-24	\$9,166	\$4,334	\$13,500
Additional Funds to cover Task 1.0	-	\$16,070	\$0	\$16,070
		Deliverable Subtotal	\$22,042	\$47,277
		Overhead/Indirect Charges	\$7,347	\$11,681
		Subtotal with Overhead/Indirect Charges		\$29,399
		Contingency		\$2,939
		Total		\$4,289
				\$32,328
				\$63,247
Task 2.0 Station Set Up				
D 2.1: Purchase of conductivity probe (2)	Aug-20	\$1,416	\$84	\$1,500
D 2.2: Set up of five "Trend" stream monitoring sites	Sep-20	\$49,092	\$4,186	\$53,278
D 2.3: Set up of three "Status" stream monitoring sites	Sep-20	\$11,147	\$1,885	\$13,032
D 2.4: Set up of three "Status" stream monitoring sites	Sep-21	\$10,296	\$1,925	\$12,221
D 2.5: Set up of three "Status" stream monitoring sites	Sep-22	\$5,570	\$1,968	\$7,538
D 2.6: Set up of four "Status" stream monitoring sites	Sep-23	\$8,929	\$2,682	\$11,611
D 2.7: Draft QAPP amendment with new status sites	Sep-24	\$3,395	\$1,605	\$5,000
D 2.8: Confirmation email for equipment installations for status sites	Sep-24	\$6,790	\$3,210	\$10,000
		Deliverable Subtotal	\$86,448	\$96,635
		Overhead/Indirect Charges	\$12,730	\$17,545
		Subtotal with Overhead/Indirect Charges		\$99,178
		Contingency		\$9,918
		Total		\$11,418
				\$109,096
				\$125,598

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Deliverable by Task	Target Deliverable Date	Deliverable Cost	Overhead/ Indirect Charges	Total Deliverable Cost
Task 3.0: Continuous Datalogger Maintenance and Downloads and Field Annual Base Parameters				
D 3.1: Submission of the data collection events (DCE) file for each site	Oct-21	\$49,183	\$16,394	\$65,577
D 3.2: Submission of the data collection events (DCE) file for each site	Oct-22	\$36,631	\$12,211	\$48,842
D 3.3: Submission of the data collection events (DCE) file for each site	Oct-23	\$44,686	\$14,896	\$59,582
D 3.4: Submission of the data collection events (DCE and EIM) file for each site	Oct-24	\$21,672	\$9,828	\$31,500
Additional Funds to cover Task 3.0	-	\$17,660	\$0	\$17,660
		Deliverable Subtotal	\$130,501	
			\$169,832	
		Overhead/Indirect Charges		\$43,500
				\$53,329
		Subtotal with Overhead/Indirect Charges		\$172,002
				\$223,161
		Contingency		\$17,400
				\$20,550
		Total		\$191,402
				\$243,711
Task 4.0 Data Management				
D 4.1: Upload continuous data to Aquarius	Dec-20	\$23,677	\$7,892	\$31,569
D 4.2: Upload data from sampling WY2021 to EIM	Apr-22	\$5,771	\$1,924	\$7,694
D 4.3: Upload data from sampling WY2022 to EIM	Apr-23	\$6,044	\$2,015	\$8,059
D 4.4: Upload data from sampling WY2023 to EIM	Apr-24	\$6,376	\$2,126	\$8,502
D 4.5: Upload data from sampling WY2024 to EIM-Email the project manager a copy of the continuous data, and water and sediment chemistry from sampling water year 2024	Jul-24 Dec-24	\$1578	\$526	\$2104
			\$4,815	\$15,000
		Deliverable Subtotal	\$43,466	
			\$52,053	
		Overhead/Indirect Charges		\$14,482
				\$18,771
		Subtotal with Overhead/Indirect Charges		\$57,928
				\$70,824
		Contingency		\$5,793
		Total		\$63,721
				\$76,617
Task 5.0 Data Analysis and Annual Reporting				
D5.1 Flow metrics calculation from continuous data for each site	Dec-21	\$3,015	\$1,005	\$4,020
D5.2 Annual Report (WY2021) draft	Mar-22	\$11,506	\$3,835	\$15,341
D5.3 Annual report final (WY2021)	May-22	\$3,750	\$1,250	\$5,000
D5.4 Annual report (WY2022) draft	Mar-23	\$11,781	\$3,927	\$15,708
D5.5 Annual report final (WY2022)	May-23	\$3,832	\$1,277	\$5,109
D5.6 Annual report (WY2023) draft	Mar-24	\$11,877	\$3,959	\$15,836
D5.7 Annual report final (WY2023)	May-24	\$4,102	\$1,367	\$5,469
D5.8 SWG Presentation	Dec-24	\$339	\$161	\$500
		Deliverable Subtotal	\$49,8623	
			\$50,202	
		Overhead/Indirect Charges		\$16,621
				\$16,781
		Subtotal with Overhead/Indirect Charges		\$66,483
				\$66,983
		Contingency		\$6,648
				\$6,698
		Total		\$73,132
				\$73,681
Project Estimated Costs			\$469,678	\$582,854
Total Estimated Costs			\$469,678	\$582,854

Table 2: July 2020 – ~~July 2024~~ December 2024 budget summary by task

Object	Task 1	Task 2	Task 3	Task 4	Task 5	Total by Object
Deliverables	\$22,042	\$86,448	\$130,501	\$43,446	\$49,862	\$332,300
	<u>\$47,277</u>	<u>\$96,635</u>	<u>\$169,832</u>	<u>\$52,053</u>	<u>\$50,202</u>	<u>\$415,999</u>
Overhead/ Indirect Charges	\$7,347	\$12,730	\$43,500	\$14,482	\$16,621	\$94,680
	<u>\$11,681</u>	<u>\$17,545</u>	<u>\$53,329</u>	<u>\$18,771</u>	<u>\$16,781</u>	<u>\$118,107</u>
Contingency	\$2,939	\$9,918	\$17,400		\$6,648	\$42,698
	<u>\$4,289</u>	<u>\$11,418</u>	<u>\$20,550</u>	<u>\$5,793</u>	<u>\$6,698</u>	<u>\$48,748</u>
Total Task	\$32,328	\$109,096	\$191,402	\$63,721	\$73,131	\$469,678
	<u>\$63,247</u>	<u>\$125,598</u>	<u>\$243,711</u>	<u>\$76,617</u>	<u>\$73,681</u>	<u>\$582,854</u>