



DEPARTMENT OF
ECOLOGY
State of Washington

IAA No. Click or tap here to enter text.

INTERAGENCY AGREEMENT (IAA)

BETWEEN

THE STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

AND

City of Tacoma

THIS INTERAGENCY AGREEMENT (“Agreement” or “IAA”) is made and entered into by and between the state of Washington, Department of Ecology, hereinafter referred to as “**ECOLOGY**,” and the City of Tacoma hereinafter referred to as the “**CITY**” and “**CONTRACTOR**,” pursuant to the authority granted by Chapter [39.34](#) of the Revised Code Washington, Interlocal Cooperation Act.

THE PURPOSE OF THIS AGREEMENT is for monitoring CEC concentrations associated with urban land uses and make this available to Permittees for use in their modeling and pollutant management efforts.

WHEREAS, **ECOLOGY** has legal authority (RCW 90.48 and WAC 173-220) and **CITY OF TACOMA** (other party) has legal authority (RCW 39.34) that allows each party to undertake the actions in this agreement.

THEREFORE, IT IS MUTUALLY AGREED THAT:

1. SCOPE OF WORK

The City shall furnish the necessary personnel, equipment, material and/or service(s) and otherwise do all things necessary for or incidental to the performance of the work set forth in Appendix A, *Statement of Work and Budget*, attached hereto and incorporated herein.

2. PERIOD OF PERFORMANCE

The period of performance of this IAA will commence on **the date of final signature**, and be completed by **December 31, 2025**, unless the Agreement is terminated sooner as provided herein. Amendments extending the period of performance, if any, shall be at the sole discretion of **ECOLOGY**.

State of Washington, Department of Ecology

IAA No. Click or tap here to enter text.

Entity Name: City of Tacoma

3. COMPENSATION

Compensation for the work provided in accordance with this IAA has been established under the terms of RCW 39.34.130 and RCW 39.26.180(3). This is a performance-based agreement, under which payment is based on the successful completion of expected deliverables.

The source of funds for this IAA is **General Fund/Private-Local account for Stormwater Action Monitoring and Model Toxics Control Act**. Both parties agree to comply with all applicable rules and regulations associated with these funds.

The parties have determined that the cost of accomplishing the work identified herein will not exceed dollars (**\$1,224,287**), including any indirect charges. Payment for satisfactory performance of the work shall not exceed this amount unless the parties mutually agree via an amendment to a higher amount. Compensation for services shall be based on the terms and tasks set forth in Appendix A, *Statement of Work and Budget*. ECOLOGY will not make payment until it has reviewed and accepted the work.

ECOLOGY may, at its sole discretion, terminate or suspend this Contract, or withhold payments claimed by the CONTRACTOR for services rendered, if the CONTRACTOR fails to satisfactorily comply with any term or condition of this Agreement.

4. BILLING AND PAYMENT PROCEDURE

Payment requests shall be submitted on state form, Invoice Voucher A19-1A. Invoice voucher shall reference the Agreement (IAA) number and clearly identify those items that relate to performance under this Agreement. Invoices shall describe and document to ECOLOGY's satisfaction a description of the work performed, the progress of the work, and related costs. Attach supporting documentation to the invoice.

Send invoices to:

State of Washington
Department of Ecology
Water Quality Program
Attn: Stormwater Action Monitoring Coordinator
PO Box 47600
Olympia, WA 98504-7600

Payment requests may be submitted on a semi-annual basis, or as needed. Upon expiration of this Agreement, any claim for payment not already made shall be submitted to ECOLOGY within 30 days after the expiration date or the end of the fiscal year, whichever is earlier.

Payment will be made within thirty (30) days of submission of a properly completed invoice (form A19-1A) with supportive documentation. All expenses invoiced shall be supported with copies of invoices paid.

Payment will be issued through Washington State's Office of Financial Management's Statewide Payee Desk. To receive payment, CONTRACTOR must register as a statewide vendor by submitting a statewide vendor registration form and an IRS W-9 form at website, <https://ofm.wa.gov/it-systems/statewide-vendorpayee-services>. For questions about the vendor registration process, contact Statewide Payee Help Desk at (360) 407-8180 or email PayeeRegistration@ofm.wa.gov.

5. ALTERATIONS AND AMENDMENTS

This Agreement may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

6. ASSIGNMENT

The work to be provided under this Agreement, and any claim arising thereunder, is not assignable or delegable by either party in whole or in part, without the express prior written consent of the other party, which consent shall not be unreasonably withheld.

7. ASSURANCES

Parties to this Agreement agree that all activity pursuant to this agreement will be in accordance with all the applicable current federal, state, and local laws, rules, and regulations.

8. CONFORMANCE

If any provision of this Agreement violates any statute or rule of law of the state of Washington, it is considered modified to conform to that statute or rule of law.

9. DISPUTES

Parties to this Agreement shall employ every effort to resolve a dispute themselves without resorting to litigation. In the event that a dispute arises under this Agreement that cannot be resolved among the parties, it shall be determined by a Dispute Board in the following manner. Each party to this Agreement shall appoint one member to the Dispute Board. The members so appointed shall jointly appoint an additional member to the Dispute Board. The Dispute Board shall review the facts, agreement terms, and applicable statutes and rules, and then make a determination of the dispute. The determination of the Dispute Board shall be final and binding on the parties hereto, unless restricted by law. The cost of resolution will be borne by each party paying its own cost. As an alternative to this process, if state agencies, either of the parties may request intervention by the Governor, as provided by RCW 43.17.330, in which event the Governor's process will control. The parties may mutually agree to a different dispute resolution process.

10. FUNDING AVAILABILITY

ECOLOGY's ability to make payments is contingent on availability of funding. In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date and prior to completion or expiration date of this Agreement, ECOLOGY, at its sole discretion, may elect to terminate the Agreement, in whole or part, for convenience or to renegotiate the Agreement subject to new funding limitations and conditions. ECOLOGY may also elect to suspend performance of the Agreement until ECOLOGY determines the funding insufficiency is resolved. ECOLOGY may exercise any of these options with no notification restrictions, although ECOLOGY will make a reasonable attempt to provide notice.

In the event of termination or suspension, ECOLOGY will reimburse eligible costs incurred by the CONTRACTOR through the effective date of termination or suspension. Reimbursed costs must be agreed to by ECOLOGY and the CONTRACTOR. In no event shall ECOLOGY's reimbursement exceed ECOLOGY's total responsibility under the agreement and any amendments.

11. GOVERNING LAW AND VENUE

This Agreement is entered into pursuant to and under the authority granted by the laws of the state of Washington and any applicable federal laws. The provisions of this Agreement shall be construed to conform to those laws. This Agreement shall be construed and interpreted in accordance with the laws of the state of Washington, and the venue of any action brought hereunder shall be the Superior Court for Thurston County.

12. INDEPENDENT CAPACITY

The employees or agents of each party who are engaged in the performance of this Agreement shall continue to be employees or agents of that party and shall not be considered for any purpose to be employees or agents of the other party.

13. ORDER OF PRECEDENCE

In the event of an inconsistency in the terms of this Agreement, or between its terms and any applicable statute or rule, the inconsistency shall be resolved by giving precedence in the following order:

- a. Applicable federal and state of Washington statutes, regulations, and rules.
- b. Mutually agreed upon written amendments to this Agreement.
- c. This Agreement, number .
- d. Appendix A, *Statement of Work and Budget*.
- e. Any other provisions or term of this Agreement, including materials incorporated by reference or otherwise incorporated.

14. RECORDS MAINTENANCE

The parties to this Agreement shall each maintain books, records, documents, and other evidence that sufficiently and properly reflect all direct and indirect costs expended by either party in the performance of the service(s) described herein. These materials shall be subject to inspection, review, or audit by personnel of both parties, other personnel duly authorized by either party, the Office of the State Auditor, and federal officials so authorized by law. All books, records, documents, and other materials relevant to this Agreement must be retained for six years after expiration of this Agreement. The Office of the State Auditor, federal auditors, and any persons duly authorized by the parties shall have full access and the right to examine any of these materials during this period. Each party will utilize reasonable security procedures and protections for all materials related to this Agreement. All materials are subject to state public disclosure laws.

15. RESPONSIBILITIES OF THE PARTIES

Each party of this Agreement hereby assumes responsibility for claims and/or damages to persons and/or property resulting from any act or omissions on the part of itself, its employees, its officers, and its agents. Neither party will be considered the agent of the other party to this Agreement.

16. RIGHTS IN DATA

Unless otherwise provided, data which originates from this Agreement shall be "work made for hire" as defined by the United States Copyright Act, Title 17 U.S.C. section 101 and shall be owned by state of Washington, ECOLOGY. Data shall include, but not be limited to, reports, documents, pamphlets,

advertisements, books magazines, surveys, studies, computer programs, films, tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, and register these items, and the ability to transfer these rights.

17. SEVERABILITY

If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of this Agreement, and to this end the provisions of this Agreement are declared to be severable.

18. SUBCONTRACTORS

CONTRACTOR agrees to take complete responsibility for all actions of any Subcontractor used under this Agreement for the performance. When federal funding is involved there will be additional CONTRACTOR and subcontractor requirements and reporting.

Prior to performance, all subcontractors who will be performing services under this Agreement must be identified, including their name, the nature of services to be performed, address, telephone, WA State Department of Revenue Registration Tax number (UBI), federal tax identification number (TIN), and anticipated dollar value of each subcontract. Identify whether subcontractor is certified with OMWBE, WA Veterans, or is a WA small business. Provide such information to ECOLOGY's Agreement manager.

19. SUSPENSION FOR CONVENIENCE

ECOLOGY may suspend this Agreement or any portion thereof for a temporary period by providing written notice to the CONTRACTOR a minimum of seven (7) calendar days before the suspension date. CONTRACTOR shall resume performance on the first business day following the suspension period unless another day is specified in writing by ECOLOGY prior to the expiration of the suspension period.

20. TERMINATION FOR CAUSE

If for any cause, either party does not fulfill in a timely and proper manner its obligations under this Agreement, or if either party violates any of these terms and conditions, the aggrieved party will give the other party written notice of such failure or violation. The responsible party will be given the opportunity to correct the violation or failure within fifteen (15) business days. If failure or violation is not corrected, this Agreement may be terminated immediately by written notice of the aggrieved party to the other.

21. TERMINATION FOR CONVENIENCE

Either party may terminate this Agreement without cause upon thirty (30) calendar day prior written notification to the other party. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

22. WAIVER

A failure by either party to exercise its rights under this Agreement shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this Agreement unless stated to be such in a written amendment to this Agreement signed by an authorized representative of the parties.

State of Washington, Department of Ecology

IAA No. Click or tap here to enter text.

Entity Name: City of Tacoma

23. AGREEMENT MANAGEMENT

The representative for each of the parties shall be responsible for and shall be the contact person for all communications, notifications, and billings questions regarding the performance of this Agreement. The parties agree that if there is a change in representatives, they will promptly notify the other party in writing of such change, such changes do not need an amendment.

The ECOLOGY Representative is:

Name: Chelsea Morris

Address: P.O Box 47600

Olympia, WA 98504-7600

Phone: 564-999-3052

Email: chelsea.morris@ecy.wa.gov

The City of Tacoma Representative is:

Name: Brandi Lubliner

Address: 326 East D Street

Tacoma, WA 98421

Phone: 253-686-6506

Email: BLubliner@cityoftacoma.org

DRAFT

State of Washington, Department of Ecology

IAA No. Click or tap here to enter text.

Entity Name: City of Tacoma

24. ALL WRITINGS CONTAINED HEREIN

This Agreement contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind any of the parties hereto.

The signatories to this Agreement represent that they have the authority to bind their respective organizations to this Agreement.

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

State of Washington

City of Tacoma

Department of Ecology

By:

By:

Signature

Date

Signature

Date

Heather R. Barlett

Elizabeth Pauli

Print Name

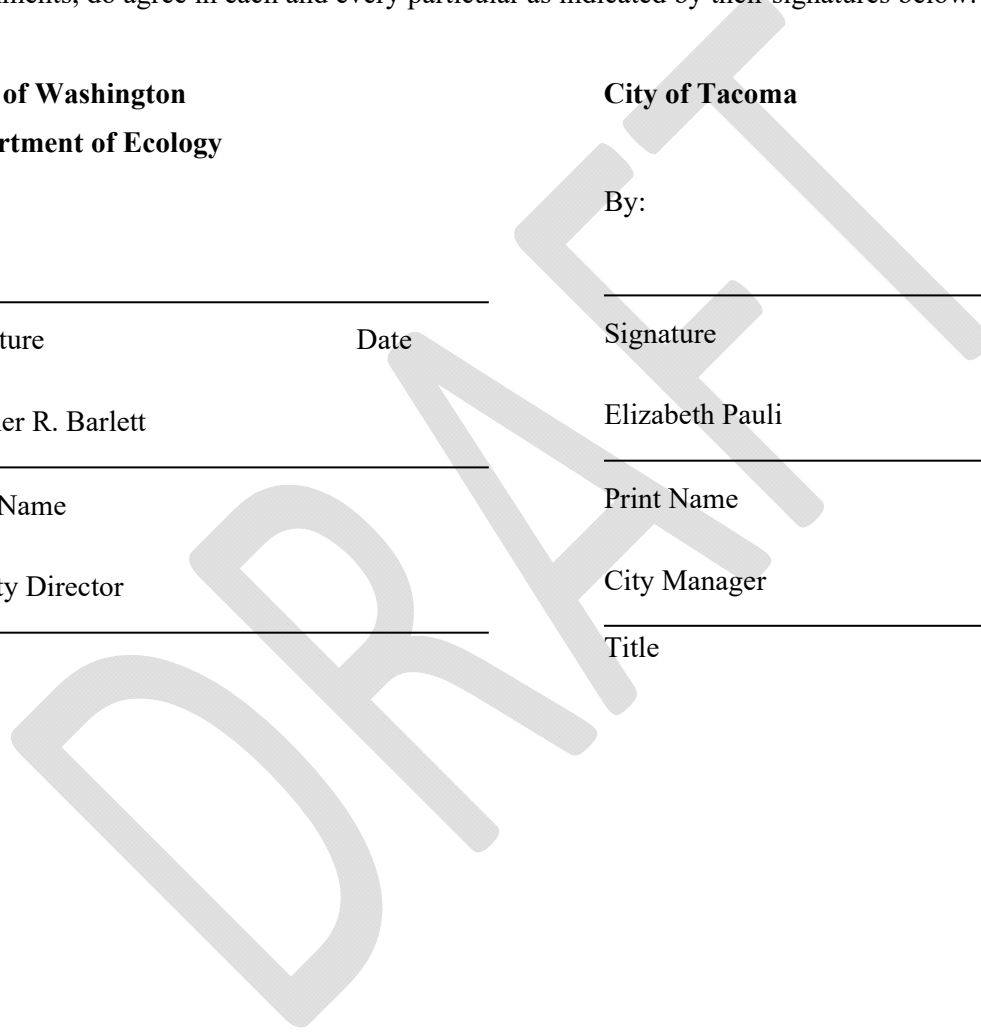
Print Name

Deputy Director

City Manager

Title

Title



APPENDIX A STATEMENT OF WORK AND BUDGET

Characterization of Stormwater Transport of Contaminants of Emerging Concern in Western Washington

BACKGROUND

Through stormwater and stormwater suspended particulate matter (SSPM) sample collection across western Washington, this Project will build a dataset of average Contaminant of Emerging Concern (CEC) concentrations associated with the following land uses: Industrial, Commercial, High Density Residential, and Low Density Residential. Stormwater from these four land uses was monitored over a decade ago, from 2007-2013, by local governments as required by the western Washington under the Phase I Stormwater Municipal Permit (Phase I permit) Section S8.D. Both old and new target parameters will be sampled in this project. The new parameters, CECs, will be refined in the QAPP (Task 2) but are intended to include: 6PPD-q, vehicle-derived constituents, PFAS, tire and road wear particles (TRWP), and microplastics. The intended outcomes are to:

1. Develop a dataset correlating CECs with land use/land cover.
2. Compare sediment chemistry with sediment samples collected from some of the same locations sampled under the Phase I Permit.
3. Compare a limited set of water quality parameters with water samples collected from some of the same locations sampled under the Phase I Permit.
4. Provide data which can be easily accessed via web-based dashboards and used for future planning and modeling efforts.
5. Produce and archive the non-targeted liquid chromatography–mass spectrometry (LC/MS) spectra for future CEC analysis of the stormwater collected in this study.

This project is anticipated to begin in early 2024 and be completed in December 2027 (with sampling ending in April 2027). This scope focuses on the work to be performed through the end of 2025 (Phase 1) and the second half of the project (Phase 2) will be amended at that time.

TASK 1.0: PROJECT MANAGEMENT

The City of Tacoma (City) will manage the project and budget, as well as coordinate with the project Consultant Team and the contract laboratory. The technical advisory committee (TAC) will convene to discuss progress of the project and key draft deliverables, including the draft QAPP and draft report.

Semi-annual project reports submitted to Ecology will communicate project status data summary tables, photos, and other relevant information as needed to provide documentation of work performed.

Task 1 Deliverables:

- D 1.1: Notes from TAC Meeting #1(\$3,750) – Target Date: July 2024
- D1.2: Notes from TAC Meeting #2 (\$3,750) – Target Date: January 2025
- D1.3: Notes from TAC Meeting #3 (\$3,750) – Target Date: July 2025
- D1.4: Notes from TAC Meeting #4 (\$3,750) – Target Date: January 2026
- D 1.5: 1st Semi-annual Project Report (\$9,000) – Target Date: July 2024
- D 1.6: 2nd Semi-annual Project Report (\$10,600) – Target Date: January 2025
- D 1.7: 3rd Semi-annual Project Report (\$11,500) – Target Date: July 2025
- D 1.8: 4th Semi-annual Project Report (\$13,000) – Target Date: December 2025

TASK 2.0: PLANNING FOR MONITORING

The purpose of this task is to establish the monitoring site locations, acquire and analyze all required GIS data for each study basin, acquire sampling equipment, develop a health and safety plan, and develop the project Quality Assurance Project Plan (QAPP). The majority of the monitoring locations will be identical with those established under the Phase I permit. Two to four additional locations will also be established to assure a good representation of land use types. Drainage areas will be re-established and land uses characterized for each of the proposed monitoring locations using GIS analysis and coordination with local governments for confirmation. In addition, estimates of average annual daily traffic (AADT) will be developed for each basin. These data will be used in the Data Management, Analysis, and Reporting tasks (Tasks 5 and 6) to generate correlations with stormwater quality results.

Because there is only one industrial basin of the 15 potential sites from the original S8.D monitoring locations (five jurisdiction with available sites, and 3 sites per jurisdiction), the City and their Consultant Team will work with the TAC to locate three additional industrial basins to increase the rigor of the experimental design and in turn eliminate two high-density residential basins, as they are over-represented in the dataset. This will result in a total of 16 monitoring locations. Pending site investigations, other historical sites may be abandoned, and similar locations will be sought if needed beyond the three additional industrial sites.

The QAPP will use information from the literature review (Task 3.0) to describe field sampling techniques for each CEC, and the quality control approach. The draft QAPP will follow Ecology's Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies,

July 2004 (Ecology Publication No. 04-03-030) and be reviewed by the City, Consultant Team, laboratory personnel, TAC, and any project partners prior to Ecology review. Once Ecology comments are addressed, the final QAPP will be submitted to Ecology for review and approval before the start of the work in Task 4.0: Sample Collection and Monitoring. Standard operating procedures (SOPs) will be developed for the collection of all samples and shared with the sampling teams. These SOPs will be included in an appendix to the project QAPP.

Under this task, the City will also purchase, inventory, and QA any required monitoring equipment. The equipment purchased for this project will be owned, stored, and maintained by City of Tacoma; however, it is understood unused equipment can be borrowed to support future SAM-sponsored studies. The following monitoring equipment will be purchased for this project:

- 16 Hamlin or Norton in-line stormwater suspended particulate matter (SSPM) traps
- 5 Isco automated samplers with jumbo base
- 5 Campbell CR300 datalogger with integrated cellular modem
- 5 area velocity flow meters or flume transducer combinations (depending upon site hydraulics)
- 5 solar panel, charge controller, and power supply configurations
- 5 rain gauges
- 5 equipment enclosures
- Associated wiring, conduit, and hardware

A SSPM trap will be installed at each location. Realtime rain data will be used by sampling teams to target specific portions of the hydrograph for water quality grab sampling. If there is no nearby reliable rain gauge, a rain gauge with telemetry will be installed within 200 yards for the sampling location.

The three City of Tacoma locations (commercial, industrial, and high-density residential) have automated samplers and flow sensors already in place. In addition to these stations, additional automated samplers and flow sensors will be installed at 5 more locations and tested as soon as equipment is procured. The result will be automated sampling at two locations for each of the four land use types. To the extent feasible, automated sampling will be conducted at historical monitoring locations so that comparisons in water quality over time can be based on the same sample collection methods as were used in the original S8.D effort. More details on the sampling approach are provided in Task 4.0.

Task 2 Deliverables:

- D 2.1: GIS analysis results for each basin (\$65,000) – Target Due Date: December 2024
- D 2.2: Equipment Purchases and Inventory (\$160,412) – Target Due Date: December 2024
- D 2.3: Draft QAPP (\$66,500) – Target Due Date: October 2024
- D 2.4: Final QAPP (\$30,000) – Target Due Date: December 2024

TASK 3.0: REVIEW OF CEC LITERATURE AND AVAILABLE DATA

This task will produce a literature review to document the state of the science for the project CECs. The first part of the review will be the creation of a references database (such as EndNote or Zotero) of existing information on CEC loads and concentrations for storms events from land use types served by the municipal separate storm sewer systems (MS4s). Multiple entities in the region have been collecting these data over the past 3 years, but the results have not been synthesized in one place. The City and their Consultant Team will work with the TAC, the Stormwater Work Group (SWG), and Ecology to help gather these data for the literature review.

The second component of the literature review will be to document other emerging vehicle-derived contaminants in stormwater and if relevant, recommend their inclusion in the study.

Finally, the literature review will document best practices for sample collection, handling, and preservation. The literature review will synthesize results from other sampling method studies to develop sampling standard operating procedures (SOPs) to be included as an appendix to the project QAPP and shared with sampling teams to assure consistency across the project. SOPs developed by the City, TAC members, or Ecology will be sourced if already in existence and updated or developed for the following procedures:

1. In-line SSPM trap deployment, collection, and sample handling
2. Grab sampling methodology for 6PPD-q and other vehicle-derived constituents, PFAS, TRWP, and microplastics
3. Storm tracking, targeting, and sampling guidance

Task 3 Deliverables:

D 3.1: Database of existing CEC data and associated land use (\$60,000) – Target Due Date: July 2024

D 3.2: Draft Literature Review (\$32,800) – Target Due Date: August 2024

D 3.3: Final Literature Review (\$41,000) – Target Due Date: September 2024

TASK 4.0: SAMPLE COLLECTION AND MONITORING

To meet the project objective of developing relationships between land use and CEC export, the 16 monitoring locations will be targeted 18 times for stormwater grab sampling for the following parameters: 6PPD-q, emerging vehicle-derived chemicals, and PFAS. For four of the 18 storm events, water samples will also be analyzed for microplastics and TRWP. The analyses costs for microplastics and TRWP are estimated to be \$2,200 per sample, thus only a limited number of storm events will be targeted. Grab sampling is proposed because of restrictions on using automated samplers for 6PPD-q, PFAS, and microplastics.

To meet the project objective of assessing stormwater quality changes since the original S8.D monitoring, half of the 16 monitoring locations will be sampled using a combination of manual grab sampling and automated sampling. This approach will not be conducted at all 16 of the monitoring locations due to budget constraints. Table 1 presents the intended sampling level of effort by land use and sampling method. Task 2 products will finalize these tables in the sampling plan.

Table 1. Water quality sample count by method, land use, and parameter

Parameter	Land use								Total Locations		Number of storm events targeted
	Commercial		Industrial		High-Density Residential		Low-Density Residential				
	G ¹	S ¹	G	S	G	S	G	S	G	S	
Objective: Historical Comparison											
TSS	0	2	0	2	0	2	0	2	0	8	18
Zinc	0	2	0	2	0	2	0	2	0	8	18
Copper	0	2	0	2	0	2	0	2	0	8	18
TP	0	2	0	2	0	2	0	2	0	8	18
Ortho-P	0	2	0	2	0	2	0	2	0	8	18
TKN	0	2	0	2	0	2	0	2	0	8	18
Nitrate + Nitrite	0	2	0	2	0	2	0	2	0	8	18
NWTPH-Dx	2	0	2	0	2	0	2	0	8	0	18
Objective: Survey of CECs											
6PPD-q	4	0	4	0	4	0	4	0	16	0	18
Microplastics and TRWP	4	0	4	0	4	0	4	0	16	0	4
PFAS	4	0	4	0	4	0	4	0	16	0	18

¹G= grab, S= autosampler

Storm criteria, telemetry, rain gauge use, and other guidance from 2007 -2013 monitoring are intended to be emulated and any changes will be noted in the QAPP.

SSPM samples will be collected annually from sediment traps that will be installed where feasible at each monitoring location, which may be in-pipe or end-of-pipe at an outfall. Table 2 presents the intended sampling level of effort by their associated land use. Task 2 products will finalize these tables in the sampling plan. Laboratories to analyze the stormwater and SSPM samples will be finalized in the QAPP. Separate water and SSPM samples will be collected and delivered to Ed Kolodziej’s lab at UW-Tacoma where they will be analyzed for a wide array of vehicle-derived pollutants.

Table 2 Stormwater suspended particulate matter sample count by land use and parameter

Parameter	Land use				Total Locations	Sediment trap collection frequency
	Commercial	Industrial	High-Density Residential	Low-Density Residential		
Objective: Historical Comparison						
TS	4	4	4	4	16	2
TOC	4	4	4	4	16	2
Grain Size	4	4	4	4	16	2
Total Metals	4	4	4	4	16	2
PAHs	4	4	4	4	16	2
Phthalates (as SVOCs)	4	4	4	4	16	2
Phenolics	4	4	4	4	16	2
PCBs	4	4	4	4	16	2
Herbicides & Pesticides	4	4	4	4	16	2
Objective: Survey of CECs						
6PPD-q	4	4	4	4	16	2
Microplastics and TRWP	4	4	4	4	16	2
PFAS	4	4	4	4	16	2

A 5% contingency is added on this sampling task to allow for extra costs associated with installation and retrieval of equipment for the City or their contractors, storm not meeting criteria, possible damage and replacement of equipment or extra efforts that may need to be made to collect samples during wet weather events.

Task 4 Deliverables:

- D 4.1: Site Installation Documentation- Phase 1 (\$63,000) – Target Due Date: March 2025
- D 4.2: Field notes (with photo documentation) and associated Chain of Custody for each targeted event and location - Phase 1 (\$363,715) – Target Due Date: December 2025
- D 4.3: Field notes (with photo documentation) for each sediment sampling deployment and collection event with COCs - Phase 1 (\$117,190) – Target Due Date: December 2025

D 4.4: Compiled and dated laboratory reports available on Project SharePoint site - Phase 1 (\$77,500) – Target Due Date: December 2025

TASK 5.0: DATA MANAGEMENT AND ANALYSIS

Project chemistry data will be stored in a cloud database, ESdat, and hydrologic data will be stored in Aquarius. The field and lab data collected will be reviewed for quality assurance as stated in the QAPP. Data from Aquarius and ESdat will be compiled in an Azure database, which will be used to support the creation of an interactive web application with data visualization for the project team’s use. The application will be developed in R Shiny and include intuitive high-level summaries of results by parameter, sampling location, and sampling event.

The data dashboard will be used for internal information sharing during the project. In Phase 2 of the project, a “Communications Dashboard” will provide the data in a more accessible format for the public. Both dashboards will have map interfaces which display land use/land cover for each basin along with the associated chemistry.

Task 5 Deliverables:

D 5.1 QA worksheets for each sampled event (\$17,500) – Target Due Date: March 2025 – December 2025

D 5.2 Internal technical dashboard (\$32,500) – Target Due Date: March 2025

TASK 6.0: COMMUNICATION AND REPORTING

Most of this task will occur during the next phase of the project (after 2025). The Communication Plan will define how and when project information will be shared in formats such as: flyers, videos, Story Maps, fact sheets, presentations, and reports. The Communication Plan will also include a Project Schedule which makes clear when project information will be ready for sharing and in what format. In Phase 2, this task will include the final report, submission of data to the EIM database, and three presentations.

Task 6 Deliverables:

D 6.1: Communication Plan and Project Schedule (\$7,000) – Target Due Date: August 2024

DOCUMENT ACCESSIBILITY REQUIREMENTS

Ecology has identified those documents intended to be published, posted, or hosted on Ecology’s public web site, namely, **the final QAPP and final literature review**. The City shall provide these documents in both their “native format” (such as Word, Excel, or PowerPoint) and in PDF format (latest version of Adobe Acrobat Pro or compatible). The City shall run the PDF Accessibility Checker’s report and provide the report with the delivered documents. The PDF

State of Washington, Department of Ecology

IAA No. Click or tap here to enter text.

Entity Name: City of Tacoma

documents must satisfactorily pass the Adobe Acrobat Pro Accessibility Checker (Full Check). Ecology will review the PDF Accessibility results and may request the City remedy any known issues. Ecology reserves the right to perform independent testing to validate accessibility and may require the City remedy any identified issues before acceptance of the documents. For assistance concerning accessibility, visit Washington State Office of the Chief Information Officer, OCIO Policy no. 188, Accessibility (<https://ocio.wa.gov/policy/accessibility>).

PROJECT BUDGET AND SCHEDULE

The budget may be shifted between tasks, with pre-approval from Ecology, but the total budget may not be exceeded without an approved amendment from Ecology. All deliverables need Ecology approval for payment. Table 3 below shows the costs and target dates of the deliverables at the task level.

DRAFT

Table 3: Deliverable, dates, and costs.

Task	Cost	Dates
Task 1 -Project Management		
D1.1 - Notes from TAC Meeting #1	\$3,750	July 2024
D1.2 - Notes from TAC Meeting #2	\$3,750	January 2025
D1.3 - Notes from TAC Meeting #3	\$3,750	July 2025
D1.4 - Notes from TAC Meeting #4	\$3,750	January 2026
D1.5: 1st Semi-annual Project Report	\$9,000	July 2024
D1.6: 2nd Semi-annual Project Report	\$10,600	January 2025
D1.7: 3rd Semi-annual Project Report	\$11,500	July 2025
D1.8: 4th Semi-annual Project Report	\$13,000	December 2025
Task 2 -Planning for Monitoring		
D2.1: GIS analysis results for each basin	\$65,000	December 2024
D2.2: Equipment Purchases and Inventory	\$160,412	December 2024
D2.3: Draft QAPP	\$66,500	October 2024
D2.4: Final QAPP	\$30,000	December 2024
Task 3 -Review of CEC Literature and Available Data		
D3.1: Database of existing CEC data and associated land use	\$60,000	July 2024
D3.2: Draft Literature Review	\$32,800	August 2024
D3.3: Final Literature Review	\$41,000	September 2024
Task 4 -Sample Collection and Monitoring		
D4.1: Site Installation Documentation- Phase 1	\$63,000	March 2025
D4.2: Field notes (with photo documentation) and associated Chain of Custody for each targeted event and location - Phase 1	\$363,715	December 2025
D4.3: Field notes (with photo documentation) for each sediment sampling deployment and collection event with COCs - Phase 1	\$117,190	December 2025
D4.4: Compiled and dated laboratory reports available on Project SharePoint site - Phase 1	\$77,500	December 2025
Task 5 -Data Management and Analysis		
D5.1 QA worksheets for each sampled event	\$17,500	December 2025
D5.2 Internal technical dashboard	\$32,500	March 2025
Task 6 – Communication Plan and Reporting		
D6.1: Communication Plan and Project Schedule	\$7,000	August 2024
Contingency		
Task 4 – 5% contingency	\$31,070	
Totals		
Total Cost – Phase 1	\$ 1,224,287	