



**IAA No. C2500163**

**INTERAGENCY AGREEMENT (IAA)**

**BETWEEN**

**THE STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY**

**AND**

**THE 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 the Contractor to review infiltration methods across the US and identify one’s that are relevant and with required technical information and narrative language for incorporation into the state stormwater manuals.

**WHEREAS**, ECOLOGY has legal authority (RCW 90.48 and WAC 173.200) and the City (other party) has legal authority (RCW 39.34) 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 **06/30/2026**, 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.

### 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**. 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 One Hundred Ninety Five Thousand and Four Hundred Eight One dollars (\$195,481), 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 Quarterly basis **or** at the completion of the work. 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, the City 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](mailto: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 C2500163.
- 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 Office of Minority and Women's Business Enterprises (OMWBE), WA Dept of Veterans Affairs (WDVA), 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.

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.

## **21. 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. C2500163  
Entity Name: City of Tacoma

## **22. 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: Raghu Namburi  
Address: P.O. Box 47600  
Olympia, WA 98504-7600  
Phone: (360) 628-4989  
Email: [raghu.namburi@ecy.wa.gov](mailto:raghu.namburi@ecy.wa.gov)

### **The CITY OF TACOMA Representative is:**

Name: Kyle Amoroso  
Address: Center for Urban Waters  
326 East D St, Tacoma, WA 98421  
Phone: (253) 325-1159  
Email: [KAmaroso@cityoftacoma.org](mailto:KAmaroso@cityoftacoma.org)

State of Washington, Department of Ecology  
IAA No. C2500163  
Entity Name: City of Tacoma

### **23. 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**  
**Department of Ecology**

By:

---

Signature

---

Date

---

Print Name

---

Title

State of Washington, Department of Ecology  
IAA No. C2500163  
Entity Name: City of Tacoma

## City of Tacoma Signatures

Washington State Department of Ecology  
Interagency Agreement with City of Tacoma  
**Updated Infiltration Methods in the Stormwater Manuals**  
IAA No. 2500163

---

Kristin Lamson, Deputy City Attorney

---

Date

---

John Burk, P.E. Division Manager, ES Sci & Eng

---

Date

---

Geoffrey M. Smyth, P.E., Assistant Director ES

---

Date

---

Ramiro A. Chavez, P.E. PgMP, ES Director/City Engineer

---

Date

---

Andrew Cherullo, Director of Finance

---

Date

---

Nicole Emery, City Clerk

---

Date



**APPENDIX A**  
**STATEMENT OF WORK AND BUDGET**  
**Updated Infiltration Methods in the Stormwater Manuals**  
**City of Tacoma**

**BACKGROUND**

This project is funded through the Stormwater Action Monitoring (SAM) program as a stormwater effectiveness study project. This project will specifically address a technical aspect related to the requirement in the Washington State Department of Ecology's (Ecology) National Pollutant Discharge Elimination System (NPDES) Western Washington Phase I and Phase II Municipal Stormwater Permits that states low impact development (LID) shall be the preferred and commonly used approach to manage stormwater at the site scale since the 2013 permits.

Often stormwater LID best management practices (BMP) use infiltration (e.g., infiltration ponds, bioretention facilities, pervious pavement, and drywells) in their designs as shown in Ecology's Stormwater Management Manual for Western Washington (SWMMWW) and the Stormwater Management Manual for Eastern Washington (SWMMEW) (stormwater manuals). Sizing these BMPs per Ecology's stormwater manuals requires estimating the infiltration capacity of the BMP and the native soils, which is impacted by numerous variables. Through a facilitated technical review, this project will provide procedural recommendations and guidelines to update stormwater manuals based on recently developed advances in infiltration testing methodology.

This project aims to evaluate updates to infiltration testing methods for the stormwater manuals. A literature review of stormwater infiltration practices around the US will be conducted to identify relevant advances. We anticipate that this review will include approximately 10 field infiltration test methods and an additional 5 to 10 grainsize analysis methods. The literature review is expected to cover a range of topics including a more accurate analysis of pilot infiltration testing (PIT) data, new borehole methods that are easier to perform in denser urban environments, technically based correction factors, and better-defined mounding analysis methods.

This project will include facilitating a robust technical review workshop series that will include a professional facilitator, likely users of the methods (geotechnical engineers and hydrogeologists), Ecology staff, and any municipal stormwater professionals that wish to participate in the review process. The Review Team will provide a contribution towards multiple tasks during this technical review. Initially, they will assist with the Task 2.0 Literature Review by recommending relevant resources. Additionally, they will attend the three workshops (and if needed a fourth) within Task 4.0 to evaluate the new infiltration language testing methods and suggest changes and refinements.

An Ecology representative will be part of the Review Team and will attend the three workshops (and if needed a fourth) (2 hours each), the two Ecology Meetings (Tasks 3 and 5, 2 hours each), and review the deliverables. It is anticipated that other Ecology staff will attend the two Ecology meetings and participation in the Workshops would be encouraged.

Municipal staff will be encouraged to participate in the review process and will be invited to join the Review Team either directly (because they previously expressed interest in the project), through the SAM mailing list or other municipal stormwater mailing lists, and announcements at stormwater meetings.

The goal of this technical review is to provide specific infiltration methods and language that Ecology can consider for their evaluation and incorporation into the SWMMWW and SWMMEW. This project does not include any environmental sample data collection or sample analysis.

## **TASK 1.0: PROJECT ADMINISTRATION AND MANAGEMENT**

The City of Tacoma (City) will manage the project and budget, as well as coordinate with Ecology, and their subcontractor for coordination of the review team and setup of the meetings and workshops. The City will review and approve subcontract language developed by the review team. The City will hold routine progress meetings with the Subcontract Lead and prepare invoices including a description of work completed in the reporting period.

### Task 1.0 Deliverables:

- 1.1 Quarterly invoicing with progress summary including Project Administration and Management
- 1.2 Notes from Initial Ecology Meeting

## **TASK 2.0: LITERATURE REVIEW OF EXISTING INFILTRATION METHODS**

This task will include a review of infiltration methods across the United States to determine if there are practices that offer advantages over the current stormwater infiltration practices in Washington State. This review will be led by the subcontractor with input provided by the City and Ecology throughout the entire process from Task 2-5. This review will include regulatory guidance/requirements in stormwater manuals adopted by states and municipalities and a review of the technical literature to see if there are recent advances that have not been incorporated into stormwater manuals. This task will rely on reviews conducted by others and well-accepted methods that are published in technical journals. Based on previous work, we anticipate that this review will include approximately 10 field infiltration test methods and an additional 5 to 10 grainsize analysis methods that could be suitable for screening-level infiltration assessments. The infiltration review will also include available literature documenting infiltration testing of full-scale infiltration facilities.

### Task 2.0 Deliverables:

- 2.1 Summary of resources used for literature review
- 2.2 Draft literature review with executive summary

### **TASK 3.0: INITIAL GUIDANCE FROM ECOLOGY**

The City will coordinate with the subcontractor in preparing for and leading a meeting with Ecology once the deliverables from Task 2.0 are completed. This meeting will be facilitated by the subcontractor and will include the City and the Review Team. The purpose of this meeting will be for Ecology to provide clarity on how the stormwater manuals work and to define which portions of the stormwater manuals may be modified based on the results of the literature review. Ecology will provide input on whether the methods identified and proposed for inclusion by the review team in Task 2, are worth continuing to pursue. Additionally, this meeting will identify the level of technical detail and complexity that would fit into the stormwater manuals and would be considered appropriate for these modifications. Ecology will also provide guidance on the format and style of the draft infiltration language.

Following this meeting, the City and their subcontractor will draft a list of infiltration testing methods under consideration and initial infiltration language that incorporates the guidance from Ecology Staff.

#### Task 3.0 Deliverables:

##### 3.1 Draft Agenda

##### 3.2 List of Infiltration Testing Methods Under Consideration and Initial Infiltration Language v1

### **TASK 4.0: WORKSHOPS AND REVISIONS**

This task includes creating, communicating, and implementing three or four (if needed) technical language revision workshops. These workshops will be in a hybrid environment, with attendees able to join either in person or online. The workshops will be led by the professional facilitator and technical input will be solicited from the Review Team as well as other participants which are intended to include geotechnical engineers, hydrogeologists, Ecology staff, and municipal stormwater professionals. The focus of these workshops will be to revise the latest draft infiltration language and suggest additions for future workshops. The subcontractor or the subconsultant will prepare the communications plan for the workshops which will include using the SAM email list at Ecology. Two weeks in advance of the workshop the agendas, meeting materials, and meeting information will be posted to the SAM website.

#### ***TASK 4.1 – WORKSHOP #1***

In advance of Workshop #1, the subcontractor will provide the Review Team with the draft Infiltration Language v1 prepared in Task 3. The subcontractor will also provide the Task 2 deliverable, which will include background information regarding the potential methods under consideration by Ecology. The focus of Workshop 1 will be to discuss the merits of the infiltration methods uncovered in Task 2 and determine which infiltration methods are suitable for incorporation into the stormwater manuals. Input received during the workshop will inform revision of the Infiltration Language. Where conflicts between comments exist, the subcontractor will offer a professional resolution and seek input from the City and the Review Team to inform the next iteration. The subcontractor will prepare v2 of the Infiltration Language in preparation for Workshop #2.

Task 4.1 Deliverables:

- 4.1.A Summary of Workshop #1 Feedback on Infiltration Language 1
- 4.1.B Draft Infiltration Language v2 and List of Infiltration Testing Methods Under Consideration
- 4.1.C Provide Infiltration Language v2 to Review Team

***TASK 4.2 – WORKSHOP #2***

As was done before, the City and the Review Team will review the draft Infiltration Language v2, prepared in Task 4.1, before the workshop. If necessary, this Workshop will finalize the decisions regarding which infiltration methods will be considered for inclusion in the manual. However, the primary focus will be on modifications and or edits to the infiltration language based on input by members of the Review Team and attendees. The input gathered in Workshop 2 will be used to develop a revised draft, v3 of the Infiltration Language, which will be provided to the review team prior to Task 4.3 - Workshop 3.

Task 4.2 Deliverables:

- 4.2.A Summary of Workshop #2 Feedback on Infiltration Language v2
- 4.2.B Draft Infiltration Language v3
- 4.2.C Provide Infiltration Language v3 to Review Team

***TASK 4.3 – WORKSHOP #3***

As before in Task 4.2, the City and the Review Team will review the draft Infiltration Language v3, prepared in Task 4.2, before the workshop. Similar to Workshop #2, this workshop will focus on any modifications and or edits recommended by members of the Review Team. Workshop 3 will gather input from attendees and a revised draft, v4 of the Infiltration Language will be prepared following the workshop. The latest version of the Infiltration Language will be used to in Task 5.

Task 4.3 Deliverables:

- 4.3.A Summary of Feedback on Infiltration Language v3
- 4.3.B Draft Infiltration Language v4
- 4.3.C Provide Infiltration Language v4

***TASK 4.4 – WORKSHOP #4 (IF NEEDED)***

While not anticipated, should Ecology request an additional workshop to refine infiltration language Workshop #4 will be held. As before in Task 4.3, the City and the Review Team will review the draft Infiltration Language v4, prepared in Task 4.3, before the workshop. Similar to Workshop #3, this workshop will focus on any modifications and or edits recommended by members of the Review Team. Workshop #4 will gather input from attendees and a revised draft, v5 of the Infiltration Language will be prepared following the workshop. The latest version of the Infiltration Language will be used to in Task 5.

Task 4.4 Deliverables (IF NEEDED):

- 4.4.A Summary of Feedback on Infiltration Language v4 (IF NEEDED)
- 4.4.B Draft Infiltration Language v5 (IF NEEDED)
- 4.4.C Provide Infiltration Language v5 (IF NEEDED)

**TASK 5.0: FINAL GUIDANCE FROM ECOLOGY**

This task includes a final meeting with Ecology staff to review the latest version of Infiltration Language for final revisions and comments, prior to consideration for use by Ecology in the stormwater manuals. This task will also provide a final opportunity for Ecology Staff to suggest edits and modifications. This meeting will be led by the professional facilitator. Following this meeting, the Infiltration Language will be edited to address guidance from Ecology Staff and the final draft will be submitted. Ecology will then begin the process of considering the inclusion of infiltration language into the state stormwater manuals. During this process Ecology may reach out to the City with corrections or clarifications regarding the infiltration language.

Task 5 Deliverables:

- 5.1 Draft agenda and PowerPoint covering a brief synopsis of workshops and evolution of the Infiltration Language (Tasks 1 to 5)
- 5.2 Infiltration Language v5 (or v6 if Workshop #4 is needed)

**TASK 6.0: OUTREACH**

Task 6 includes the communications plan for ensuring a baseline advertising of the workshops and use of the SAM email list. Outreach and communications also include presentation at a local conference and to the Stormwater Work Group. This task also includes preparing a draft SAM Fact Sheet that provides a two-page project summary following the SAM-provided template.

Task 6 Deliverables:

- 6.1 Prepare a draft SAM Fact Sheet
- 6.2. Presentation to Stormwater Work Group
- 6.3. Presentation at a local conference (e.g. PNCWA, NEBC, etc.)

## PROJECT TEAM AND PROJECT MANAGEMENT

**Team Structure:** Table 2 lists all the team members and their roles. Key team members include:

- **Kyle Amoroso with City of Tacoma** will manage the contract with Ecology and the subcontractor (Kindred Hydro, Inc). The City will also provide a permittee's perspective on the Infiltration Language.
- **Scott Kindred with Kindred Hydro, Inc.** was the original author of the Infiltration Guide for the NEP grant and will be the primary author for the deliverables under this project including the Infiltration Language. In addition, he will manage the subconsultant team.
- **Gretchen Muller with Cascadia Consulting Group** will lead in the coordination and facilitation of the workshops and evaluate the Infiltration Language to ensure that it addresses Ecology's requirements and the general consensus feedback from the technical review team.
- **The Review Team includes eight consulting firms** with one to two representatives from each firm, as shown in Table 2. Both hydrogeologists and geotechnical engineers are included on the team. In addition, Tony Allen with the Washington State Department of Transportation will be included on the team. The members of the team may be replaced with qualified reviewers if necessary.

**Engagement of Permittees:** Permittees are welcome to join the Review Team but will not receive compensation. As discussed in Task 5 above, interested permittees will be provided drafts of the Infiltration Language during the technical review process. Permittees that have expressed interest in the past include the following cities: Everett, Kirkland, Mukilteo, Port Angeles, Sammamish, and Seattle; and the following counties: Clallam, King, Kitsap, and Pierce. Permittees can attend one or all the technical workshops.

## DOCUMENT ACCESSIBILITY REQUIREMENTS

Ecology has identified those documents intended to be published, posted, or hosted on Ecology's public web site, namely, **the final Infiltration Language v5 (or v6 if Workshop #4 is needed) and SAM Fact Sheet**. 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 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

**Budget:** The project budget and deliverables for each task are provided in Table 1. There are six main tasks and a number of sub-tasks. Deliverables, goals, and budget are provided for each sub-task. 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. Table 1 below shows the costs and target dates of the deliverables at the task level.

**Schedule:** The project schedule is provided in Table 1. This schedule assumes a start date of July 29, 2025, and Ecology's feedback on the infiltration language in Tasks 3 and 5 will be provided within five weeks. Dates are listed as targets.

<b>Table 1: PROJECT TASK</b>	<b>COST</b>	<b>TARGET DATE</b>
<b>TASK 1.0: PROJECT ADMINISTRATION AND MANAGEMENT</b>		
1.1 Quarterly invoicing with progress summary including Project Administration and Management	\$21,100	Last business day of each quarter
1.2 Notes from Initial Ecology Meeting	\$3,900	10/20/2025
<b>TASK 2.0: LITERATURE REVIEW OF EXISTING INFILTRATION METHODS</b>		
2.1 Summary of resources used for literature review	\$5,000	9/24/2025
2.2 Literature review with executive summary	\$20,460	10/08/2025
<b>TASK 3.0: INITIAL GUIDANCE FROM ECOLOGY</b>		
3.1 Draft Agenda	\$2,000	11/05/2025
3.2 List of Infiltration Testing Methods Under Consideration and Initial Infiltration Language v1	\$18,390	12/19/2025
<b>TASK 4.0: WORKSHOPS AND REVISIONS</b>		
Task 4.1 - Workshop #1		
4.1.A Summary of Workshop #1 Feedback on Infiltration Language v1	\$12,000	01/07/2026
4.1.B Draft Infiltration Language v2 and List of Infiltration Testing Methods Under Consideration	\$12,150	01/21/2026
4.1.C Provide Infiltration Language v2 to Review Team	\$1,000	01/21/2026
Task 4.2 - Workshop #2		
4.2.A Summary of Workshop #2 Feedback on Infiltration Language v2	\$10,000	02/12/2026
4.2.B Draft Infiltration Language v3	\$10,790	02/26/2026
4.2.C Provide Infiltration Language v3 to Review Team	\$1,000	02/26/2026
Task 4.3 - Workshop #3		
4.3.A Summary of Feedback on Infiltration Language v3	\$10,000	03/18/2026
4.3.B Draft Infiltration Language v4	\$10,790	04/01/2026
4.3.C Provide Infiltration Language v4	\$1,000	04/01/2026
Task 4.4-Workshop #4 (IF NEEDED)		
4.4.A Summary of Feedback on Infiltration Language v4 (IF NEEDED)	\$10,000	04/22/2026
4.4.B Draft Infiltration Language v5 (IF NEEDED)	\$6,771	05/06/2026
4.4.C Provide Infiltration Language v5 (IF NEEDED)	\$1,000	05/06/2026
<b>TASK 5.0: FINAL GUIDANCE FROM ECOLOGY</b>		
5.1 Draft agenda and PowerPoint covering a brief synopsis of workshops and evolution of the Infiltration Language (Tasks 1 to 5)	\$20,000	05/14/2026
5.2 Infiltration Language v5 (or v6 if Workshop #4 is needed)	\$10,440	06/22/2026
<b>TASK 6.0: OUTREACH</b>		
6.1 Prepare a draft SAM Fact Sheet	\$3,690	06/22/2026
6.2 Presentation to Stormwater Work Group	\$2,000	07/24/2026
6.3 Presentation at a local conference (e.g. PNCWA, NEBC, etc.)	\$2,000	08/21/2026
<b>PROJECT TOTAL</b>	<b>\$195,481</b>	

**Budget:** Total Cost is divided among the six tasks. Estimated dollar amounts assigned to the tasks may vary without need to amend the contract as long as the Total Cost is not exceeded, subject to ECOLOGY's agreement.



<b>Table 2: SAM Effectiveness Study Leads and Review Team</b>			
<b>Organization</b>	<b>Team Member</b>	<b>Expertise</b>	<b>Role</b>
City of Tacoma	Kyle Amoroso	Geotechnical Engineer, PE	City Project Manager/Review Team
Ecology	Douglas Howie	Stormwater Engineer, PE	Ecology Representative/Review Team
Kindred Hydro, Inc.	Scott Kindred	Hydrogeologist, PE, LHG	Subcontractor, Review Team
Cascadia Consulting Group	Gretchen Muller	Facilitation	Facilitator
Richard Martin Groundwater	Richard Martin	Hydrogeologist, LHG	Review Team
Aspect Consulting	Henry Haselton	Geotechnical Engineer, PE	Review Team
	Andrew Austreng	Hydrogeologist, LHG	Review Team
Shannon & Wilson	Brian Peck	Hydrogeologist, PG, LHG	Review Team
	Paul Van Horne	Hydrogeologist, LHG	Review Team
Earth Solutions NW, LLC	Henry Wright	Geotechnical Engineer, PE	Review Team
	Keven Hoffmann	Hydrogeologist, LHG	Review Team
Terra Associates, Inc.	Ted Schepper	Geotechnical Engineer, PE	Review Team
	TBD	Hydrogeologist, LHG	Review Team
Landau Inc.	Eric Weber	Hydrogeologist, LHG	Review Team
	TBD	Geotechnical Engineer, PE	Review Team
GeoEngineers, Inc.	Bridget August	Hydrogeologist, LG, LHG	Review Team
Associated Earth Sciences, Inc.	Jennifer Saltenstall	Hydrogeologist, LG, LHG	Review Team
WSDOT	Tony Allen	Geotechnical Engineer, PE	Review Team

Note: The members of the team may be replaced with qualified reviewers if necessary.