

Scope of Work

Paired Basin Retrofit Effectiveness Monitoring Study – Phase V

Background/Description

In 2015, the Washington Department of Ecology awarded to City of Redmond a Regional Stormwater Monitoring Program (RSMP) stormwater effectiveness grant for Phase I of the Redmond Paired Basin Study (“Project”). This study is designed to monitor changes in receiving waters before and after construction of stormwater retrofit projects, stream restoration projects, and targeted stormwater program application within watersheds in Redmond and King County (including Evans Creek 108). Phases II, III and IV have been completed to continue monitoring through to January, 2022. King County conducts flow and limited water quality monitoring for this project and expert support for data analysis. Phase V will include these services through December 31, 2023. Evans Creek 108 will be removed from Phase V due to results of the 2016 – 2019 Trend Analysis Report and no further planned stormwater retrofits are planned for this watershed. Continuously monitored conductivity data will also no longer be collected in this phase of work.

Under the attached interagency agreement (IAA) and this scope of work, King County Water and Land Resources Division (“WLRD”) will provide to Redmond services to support completion of the Project, per the tasks as outlined below. The completion target date for the Project and tasks to be performed by WLRD is **September 30, 2024**.

Overview of Tasks

WLRD will provide continuous gaging services for flow and water quality in six watersheds for the duration of the Project. WLRD will participate in meetings as needed for troubleshooting and Project Team coordination and administer the Project in accordance with this Scope of Work.

Task 1: Monitoring and Maintenance

WLRD gaging specialists (Funke, Grant, or Smith) will maintain and replace flow and water quality monitoring equipment and maintain equipment to ensure proper operation. Equipment required for maintenance and replacement includes but is not limited to batteries, solar panels, data logger hardware, temperature probes and data transfer services. Monitoring data will be telemetered where cell phone coverage is available and the installation feasible. Telemetered data will be automatically processed and available for download on King County’s Hydrological Information Center (HIC) website, a public website. Non-telemetered data will be processed within seven days after download, and then will be available for download on the HIC website. WLRD will prepare an electronic data file annually of all project data for the City of Redmond upon request.

Deliverables:

1. Posting of telemetered data on HIC (continual)
2. Posting of non-telemetered data on HIC will occur every 5 weeks
3. Electronic data file of monitoring data provided annually by January 31st for the prior calendar year.

Timeline

From January 1, 2022 through September 30, 2024

Task 2: Data Quality Assurance

WLRD gaging specialist will regularly review flow and water quality monitoring data for quality assurance (QA) purposes and conduct an annual QA review of monitoring data. Regular review of telemetered data will include a daily (work week) check that the station is transmitting reasonable data. After each site visit, the result of the discharge measurement will be plotted and the rating curve verified. Observations of water level and water quality will be compared to the recorded values. Annual QA review includes: an examination of the continuous record for completeness; charting average, maximum and minimum daily values; comparison with a nearby station; review of discharge measurements, review of rating curve and data workup.

Deliverables:

1. Annual QA reports will be provided as follows:
 - Water year 2022 (10/1/2021 – 9/30/2022) by 1/31/2023
 - Water year 2023 (10/1/2022 – 9/30/2023) by 1/31/2024
 - Water year 2024 (10/1/2023 – 9/30/2024) by 1/31/2025

Timeline

From January 1, 2022 through September 30, 2024

Task 3: TAC input

The WLRD gaging specialist (Funke, Grant, or Smith) and Agreement Administrator (Sosik) will attend up to three meetings a year for troubleshooting and/or project status reports. Jeff Burkey and Kate Macneale will attend two meetings per year on analytical strategy in 2022, 2023 and 2024. Meetings will be up to two hours in length. All four staff will also review the annual (2022, 2023, and 2024) project data reports, and the 2016-2021 Trend Analysis Report by Herrera.

Deliverables:

1. Meeting participation
2. Review comments

Timeline: Duration of services

Task 4: Project Management

The Agreement Administrator (Sosik) will act as Project Manager for services to be provided pursuant to this Scope of Work. Task 4 includes coordination of WLRD and other King County staff, budget management, progress reports (annual end-of-year 2022, 2023, and 2024) and participation in Project Team meetings for troubleshooting and status check purposes.

Deliverables:

1. Annual progress reports for prior calendar year will be provided by January 31st (end-of-year 2022, end-of-year 2023 and end-of-year 2024)

Timeline: Duration of Project

King County Budget by Task

Task 1 - Monitoring and Maintenance	\$159,499.74
Task 2 - Data QA	\$22,258.37
Task 3 - TAC input	\$10,795.15
Task 4 - Project Administration	\$2,181.21
TOTAL	\$ 194,734.48

King County Budget by Hours

Year		Task	Miller	Sosik	Macneale	Burkey	Subtotal
			109.11	81.24	118.73	127.49	
2022	Task 1	Monitoring and Maintenance	450.0	0	0	0	\$49,099.50
2022	Task 2	Data QAQC	66.0	0	0	0	\$7,201.26
2022	Task 3	Meeting	8	8	8	8	\$3,492.56
2022	Task 4	Project Admin	0	8	0	0	\$649.92
<i>2022 Subtotal</i>			524.0	16	8	8	\$60,443.24
Year		Task	112.38	83.68	122.29	131.31	
2023	Task 1	Monitoring and Maintenance	440.0	0	0	0	\$49,448.65
2023	Task 2	Data QAQC	66.0	0	0	0	\$7,417.30
2023	Task 3	Meeting	8	8	8	8	\$3,597.34
2023	Task 4	Project Admin	0	8	0	0	\$669.42
<i>2023 Subtotal</i>			514.0	16	8	8	\$61,132.70
Year		Task	115.75	86.19	125.96	135.25	
2024	Task 1	Monitoring and Maintenance	330.0	0	0	0	\$38,199.08
2024	Task 2	Data QAQC	66.0	0	0	0	\$7,639.82
2024	Task 3	Meeting	8	8	8	8	\$3,705.26
2024	Task 4	Project Admin	0	10	0	0	\$861.88
<i>2024 Subtotal</i>			514.0	18	8	8	\$50,406.03
Labor Subtotal			1038.0	32	16	16	\$171,981.98
Equipment							\$22,752.50
Total						Total	\$194,734.48