City of Redmond

Redmond
WASHINGTON

Agenda

Tuesday, November 9, 2021

4:30 PM

City Hall: 15670 NE 85th Street; Remote: Facebook (@CityofRedmond), Redmond.gov/rctvlive, Comcast Ch. 21, Ziply Ch. 34, or 510-335-7371

Committee of the Whole - Planning and Public Works

Committee Members

David Carson, Presiding Officer
Jeralee Anderson
Steve Fields
Jessica Forsythe
Varisha Khan
Vanessa Kritzer
Tanika Kumar Padhye

AGENDA

1. East Link Transit Restructure - Update on Metro/Sound Transit Proposed Network — CM 21-601

Attachment A: Presentation

Department: Planning and Community Development, 10 minutes
Requested Action:Staff Report, November 16th

2. Development Impact Fees - 2022 Annual Indexing — CM 21-596

Attachment A: Proposed 2022 Impact Fee Rates

Attachment B: Presentation

Department: Planning and Community Development, 10 minutes
Requested Action: Consent, December 7th

3. Approval of Redmond Paired Watershed Study Contract Amendments — CM 21-592

Attachment A: Washington State Department of Ecology Interagency Agreement Amendment 5

Attachment B: Herrera Environmental Consulting Supplemental Agreement

Attachment C: King County Agreement

Attachment D: Budget Information

Department: Public Works, 5 minutes
Requested Action: Consent, December 7th

4. Approval of Interlocal Agreement (ILA) with King County Flood Control District for partnering on the Avondale Road Erosion Project Accepting Funding in the Amount of $1,550,000 — CM 21-593

Attachment A: Interlocal Agreement

Attachment B: Charter Avondale Road Erosion Project

Department: Public Works, 5 minutes
Requested Action: Consent, December 7th

5. Acceptance of the Cooperative Watershed Management Grant for the Evans Creek Relocation Project in the Amount of $450,000 — CM 21-594

Attachment A: Grant Agreement

Department: Public Works, 5 minutes
Requested Action: Consent, December 7th

6. Acceptance of the Flood Reduction Grant for Evans Creek Relocation Project in the Amount of $400,000 CM 21-595

Attachment A: Grant Agreement

Department: Public Works, 5 minutes
Requested Action: Consent, December 7th

Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-601
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Planning and Community Development	Carol Helland	425-556-2107

DEPARTMENT STAFF:

Planning and Community Development	Don Cairns, PE	Transportation Planning and Engineering Manager
Planning and Community Development	Tam Kutzmark	Senior Planner

TITLE:
East Link Transit Restructure - Update on Metro/Sound Transit Proposed Network

OVERVIEW STATEMENT:
Staff will brief Council on the Metro/Sound Transit (ST) proposed reorganization of bus transit leading up to the opening of Link Light Rail in 2023. Staff will summarize feedback provided to the agencies, based on staff review of the agencies' proposal. At the November 16 Business meeting, City staff and agency representatives will provide additional details and be available for a question-and-answer period.

The agencies' goal for the restructure is to engage communities in decisions about service improvements, mobility options, and connections to Link light rail. The City's goal is to align with the Transportation Master Plan (TMP) and advance Redmond 2050's vision of supporting future growth with new transit infrastructure.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☒ **Receive Information** ☐ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  Redmond Comprehensive Plan
  Transportation Master Plan (including Transit System Plan)
  Community Strategic Plan
  Environmental Sustainability Action Plan
- **Required:**
  N/A

- **Council Request:**
  N/A
- **Other Key Facts:**
  Sound Transit 2 added regional express bus and commuter rail service including Link light rail service to Overlake Village and the Redmond Technology Station (scheduled to open in 2023).
  Sound Transit 3 further expanded the regional public transit system including Link light rail service to SE Redmond/Marymoor Village and Downtown Redmond (scheduled to open in 2024).

OUTCOMES:

Light rail will be the backbone of Redmond's transit network when it opens in 2023 to Overlake and 2024 to Southeast Redmond and Downtown Redmond. It will provide a frequent and reliable mobility choice that connects Redmond to the region. The success of light rail service fundamentally depends on Metro/ST's restructure of bus service to connect the City's neighborhoods, employment centers, community hubs, transportation facilities, and local destinations to light rail stations.

Metro/ST released the proposed restructure network in September and invited feedback from jurisdictions, riders, and other stakeholders. The City's feedback to the agencies is intended to provide insight on how to improve the proposed restructure as follows:

1. Deploy alternative services to provide critical first/last mile, on-demand connections
2. Boost SE Redmond/Marymoor Village service
3. Close Overlake service gaps in anticipation of the expanded regional growth center
4. Grow more viable transit options and connections in the Willows Corridor
5. Enhance service to Avondale Corridor and Education Hill
6. Clarify the implementation schedule

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  High-level milestones in Metro/ST's co-led process include:
  1. Spring 2021 - Needs assessment
  2. Summer 2021 - Service concepts
  3. Fall 2021 - Proposed restructure
  4. **October-November 2021 - Gather feedback (we are here)**
  5. February-March 2022 - Revised restructure
  6. Spring 2022 - Gather feedback
  7. July 2022 - Transmit to KC Council/ST Board
  8. March 2023 - Open Link stations, implement bus service changes
- **Outreach Methods and Results:**
  Metro/ST methods include:
  - Mobility Board (riders/transit users)
  - Partner Review Board (city staff, community-based organizations)
  - Community surveys
  - Stakeholder interviews

The City will raise community awareness of the process, promote feedback opportunities (surveys, etc.), and help to involve Redmond stakeholders.

- **Feedback Summary:**
  Metro/ST will provide summaries of public input after each phase. The City will share this information via City communications tools.

BUDGET IMPACT:

Total Cost:
N/A

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
000343 - Mobility of People and Goods

Budget Priority:
Vibrant and Connected

Other budget impacts or additional costs: ☐ **Yes** ☐ **No** ☒ **N/A**
If yes, explain:
N/A

Funding source(s):
General

Budget/Funding Constraints:
N/A

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
4/13/2021	Committee of the Whole - Planning and Public Works	Receive Information
4/20/2021	Business Meeting	Receive Information

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
11/16/2021	Business Meeting	Receive Information

Time Constraints:

City will coordinate with Metro/ST schedule and milestones and with the update of the TMP.

ANTICIPATED RESULT IF NOT APPROVED:
An effective reorganization of bus transit service supports both the City's significant investment in Link light rail and the City's ability to achieve its transportation vision.

ATTACHMENTS:
Attachment A - Presentation Slides

East Link Transit Restructure

November 16, 2021

Metro East Link Restructure Team

Tam Kutzmark, Senior Planner

Redmond
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Purpose

- Update Council on process
- Review Metro/Sound Transit’s draft proposal
- Summarize City feedback based on staff review of the draft proposal
- Provide opportunity for Q&A with Metro
- No action required

Project Overview

- Process to improve bus transit connections throughout Eastside prior to light rail opening in 2023
- Co-led and coordinated by Sound Transit and Metro
- Massive scale (service to 12 new stations and 17 cities)
- Reflects Redmond 2050; supports Transportation Master Plan
  - Prepare for and orient around light rail
  - Improve travel choices and mobility

Redmond's goal is to set Link up for success:

- Feed into City's four light rail stations
- Make easy, seamless connections
- Close first/last mile gaps
- Ease the need to drive

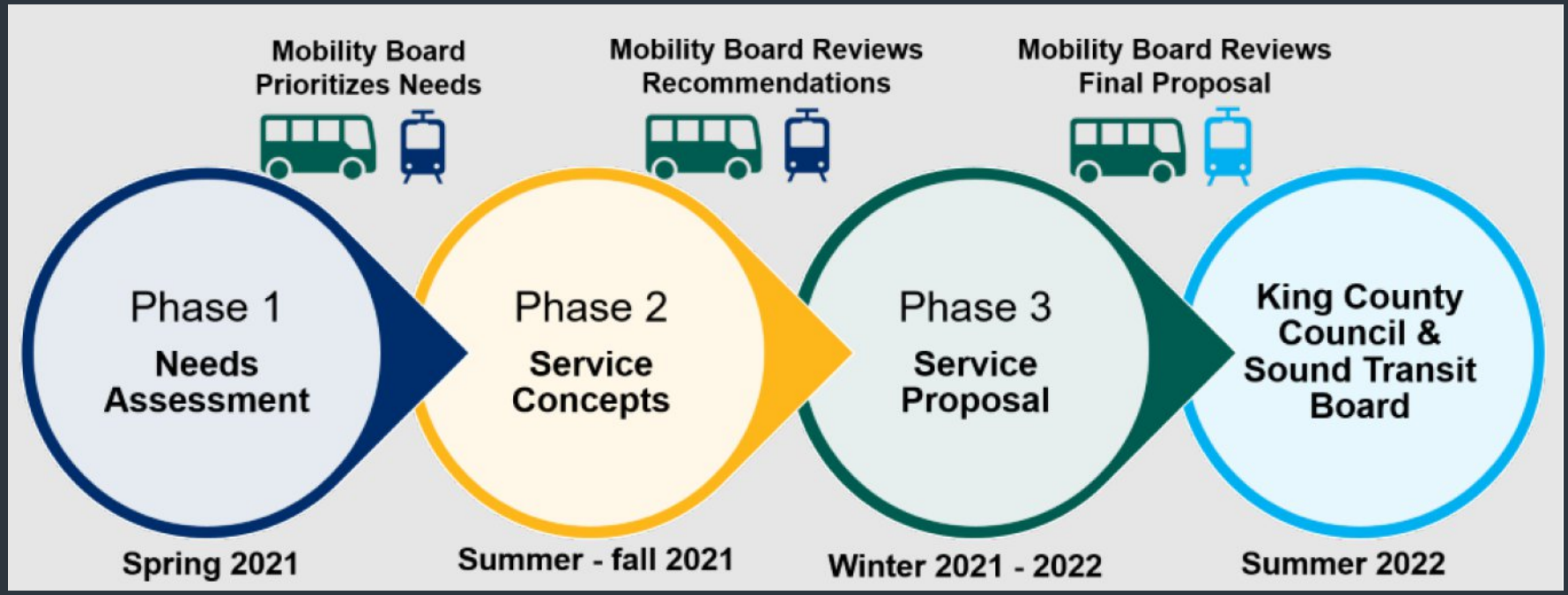
City Staff Feedback to Metro/ST

1. Deploy flexible services
2. Boost SE Redmond/Marymoor Village service
3. Close Overlake service gaps
4. Grow more viable transit in Willows Corridor
5. Enhance service to Avondale Corridor and Education Hill
6. Clarify the implementation schedule

City's Proposed Timeline

- 11/09 – Planning & Public Works Committee of the Whole
- 11/16 – Council Staff Report
  - ➢With Metro staff available for Q&A

Metro/ST Milestones



Thank You

Any Questions?

Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-596
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Planning and Community Development	Carol Helland	425-556-2107

DEPARTMENT STAFF:

Planning and Community Development	Beverly Mesa-Zendt	Deputy Director
Planning and Community Development	Jeff Churchill	Planning Manager
Planning and Community Development	Glenn Coil	Senior Planner

TITLE:
Development Impact Fees - 2022 Annual Indexing

OVERVIEW STATEMENT:
Impact fees are one-time charges collected by the City from new commercial and residential developments to fund fire, park, and transportation facilities needed to accommodate growth. Staff will describe the annual indexing methodology for impact fees, as authorized in RMC 3.10, and seek comments or questions on the 2022 impact fee recommendation before bringing it to Council for action.

The City also collects school impact fees on behalf of the Lake Washington School District (LWSD) by interlocal agreement. School impact fees, calculated by LWSD, reflect a proportionate share of the costs of school-related system improvements that are reasonably related to new development.

- Fire impact fees will increase by 3.34% in 2022,
- Park impact fees will increase by 5.64% in 2022,
- Transportation impact fees will increase by 5.38% in 2022, and
- School impact fees for single-family homes will increase by 21%, and for multifamily, will increase by 23% in 2022.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  Comprehensive Plan policy CF-14
- **Required:**
  Redmond Municipal Code 3.10 Impact Fees
  2006 Interlocal Agreement between the City and LWSD for the Collection, Distribution, and Expenditure of School Impact Fees
- **Council Request:**
  N/A
- **Other Key Facts:**
  RMC 3.10 authorizes the annual indexing of impact fees

OUTCOMES:
Impact fees:

- Contribute toward public infrastructure that is needed to accommodate population and employment growth.
- Can only be used to pay for system improvements. System improvements must be reasonably related to the new development and must benefit the new development.
- Cannot be used to pay for private facilities that solely benefit the development or to correct existing deficiencies in public infrastructure.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  October - November 2021
- **Outreach Methods and Results:**
  Staff informed the development community about the recommended impact fee adjustments. This included direct outreach to OneRedmond, the Master Builders, the Parks and Trails Commission, and posting notices at the Development Services Center and on the City website.
- **Feedback Summary:**
  No feedback received at this time.

BUDGET IMPACT:

Total Cost:
Staff working on Development Impact Fees - 2022 Annual Indexing are funded through the adopted budget.

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
000250

Budget Priority:
Vibrant and Connected

Other budget impacts or additional costs: ☐ **Yes** ☐ **No** ☒ **N/A**
If yes, explain:

N/A

Funding source(s):
N/A

Budget/Funding Constraints:
N/A

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
	Item has not been presented to Council	N/A

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
12/7/2021	Business Meeting	Approve

Time Constraints:
Changes to impact fees are effective January 1, 2022. Timely adoption of the fees provides staff, developers, residents, and other interested parties an opportunity to prepare for fee changes associated with the development review process and ensures that new system improvements can be funded through impact fees.

ANTICIPATED RESULT IF NOT APPROVED:
If the Council chooses not to index impact fees for 2022, the fees will remain at 2021 levels, resulting in underfunding new system improvements needed to address population and employment growth.

ATTACHMENTS:
Attachment A: Proposed 2022 Transportation, Fire, Parks and School Impact Fee Rates
Attachment B: Presentation Slides *(provided as supplemental reading material)*

CITY OF REDMOND

PROPOSED 2022 TRANSPORTATION, FIRE, PARKS AND SCHOOL IMPACT FEE RATES

The City's municipal code authorizes the Council to update the rates annually to keep pace with inflation.

The 2022 City impact fee rates are based on a three-year moving average change from 2018 to 2021 in the indexes specified in RMC 3.10 — from August to August or the closest three consecutive 12-month time periods immediately prior to January 1, 2022.

Fire	Consumer Price Index-Urban (CPI-U)/Seattle	**3.34%**
Parks	CCI and Building Cost Index Average/Seattle	**5.64%**
Transportation	Construction Cost Index (CCI) for Seattle	**5.38%**

FIRE IMPACT FEES		
Land Use	**Units**	**2022 Impact Fee (per unit)**
Single-Family Residences	1 housing unit	**$132.63**
Mobile Homes and Detached Single-Family Manufactured Homes	1 housing unit	**$158.41**
Multi-Family Residences	1 housing unit	**$224.00**
Residential Suites	1 residential suite	**$112.00**
Offices	1,000 sq. ft. of GFA	**$185.46**
Retail Trade	1,000 sq. ft. of GFA	**$213.79**
Manufacturing	1,000 sq. ft. of GFA	**$21.91**

PARKS IMPACT FEES		
Land Use	**Units**	**2022 Impact Fees (per unit)**
Single-Family Residences (inclusive of Mobile Homes and Detached Single-Family Manufactured Homes)	1 housing unit	**$5,413.28**
Multi-Family Residences	1 housing unit	**$3,758.01**
Residential Suite	1 residential suite	**$2,042.52**
Offices	1,000 sq. ft. of GFA	**$1,466.36**
Retail Trade	1,000 sq. ft. of GFA	**$650.54**

Manufacturing	1,000 sq. ft. of GFA	**$659.98**

TRANSPORTATION IMPACT FEES			
Residential Land Uses	**Units**		**2022 Impact Fees (per unit)**
Single Family	Dwelling	Downtown	$6,653.95
		Overlake	$6,883.46
		Rest of City	$8,145.09
Multiple Family	Dwelling	Downtown	$4,673.36
		Overlake	$4,834.56
		Rest of City	$5,720.66
Residential Suites	Residential Suite	Downtown	$2,850.24
		Overlake	$2,948.55
		Rest of City	$3,488.97
Retirement Community	Dwelling	Downtown	$2,135.22
		Overlake	$2,208.86
		Rest of City	$2,613.72
Nursing Home	Bed	Downtown	$1,739.81
		Overlake	$1,799.82
		Rest of City	$2,129.69
Congregate Care/Assisted Living	Dwelling	Downtown	$1,344.40
		Overlake	$1,390.77
		Rest of City	$1,645.67
Hotel/Motel	Room	Downtown	$6,267.05
		Overlake	$6,483.22
		Rest of City	$7,671.48
Institutional Land Uses	**Units**		**2022 (5.38% increase)**
Elementary School	Student	Downtown	$550.93
		Overlake	$569.92
		Rest of City	$674.38
High School	Student	Downtown	$537.15
		Overlake	$555.68

		Rest of City	$657.52
Church/House of Worship	Per sq. ft. of GFA	Downtown	$3.55
		Overlake	$3.68
		Rest of City	$4.35
Hospital	Per sq. ft. of GFA	Downtown	$5.11
		Overlake	$5.29
		Rest of City	$6.26
Retail Shopping Center Land Uses	**Units**		**2022 (5.38% increase)**
Up to 99,999 ft^2	Per sq. ft. of GLA	Downtown	$21.31
		Overlake	$22.04
		Rest of City	$26.08
100,000 ft^2 – 199,999 ft^2	Per sq. ft. of GLA	Downtown	$20.34
		Overlake	$21.04
		Rest of City	$24.90
200,000 ft^2 – 299,999 ft^2	Per sq. ft. of GLA	Downtown	$18.61
		Overlake	$19.25
		Rest of City	$22.78
300,000 ft^2 and Over	Per sq. ft. of GLA	Downtown	$17.94
		Overlake	$18.56
		Rest of City	$21.95
Car Sales – New/Used	Per sq. ft. of GFA	Downtown	$13.55
		Overlake	$14.03
		Rest of City	$16.60
Convenience Market	Per sq. ft. of GFA	Downtown	$152.53
		Overlake	$157.79
		Rest of City	$186.72
Free Standing Discount Store	Per sq. ft. of GFA	Downtown	$15.16
		Overlake	$15.68
		Rest of City	$18.56
Furniture Store	Per sq. ft. of GFA	Downtown	$1.75
		Overlake	$1.80
		Rest of City	$2.14
Miscellaneous Retail	Per sq. ft. of GFA	Downtown	$17.99
		Overlake	$18.61
		Rest of City	$22.03
Supermarket	Per sq. ft. of GFA	Downtown	$45.98
		Overlake	$47.57

		Rest of City	$56.29
Services Land Uses	**Units**		**2022 (5.38% increase)**
Bank/Savings and Loans	Per sq. ft. of GFA	Downtown	$78.58
		Overlake	$81.28
		Rest of City	$96.19
Carwash	Stall	Downtown	$23,289.07
		Overlake	$24,092.38
		Rest of City	$28,508.12
Daycare	Per sq. ft. of GFA	Downtown	$59.85
		Overlake	$61.92
		Rest of City	$73.27
Health Club/Racquet Club	Per sq. ft. of GFA	Downtown	$23.02
		Overlake	$23.81
		Rest of City	$28.18
Library	Per sq. ft. of GFA	Downtown	$35.41
		Overlake	$36.63
		Rest of City	$43.34
Movie Theater	Seat	Downtown	$384.81
		Overlake	$398.09
		Rest of City	$471.05
Post Office	Per sq. ft. of GFA	Downtown	$54.43
		Overlake	$56.30
		Rest of City	$66.62
Service Station	Fuel position	Downtown	$35,881.08
		Overlake	$37,118.71
		Rest of City	$43,921.98
Service Station/Minimart	Fuel position	Downtown	$26,212.33
		Overlake	$27,116.46
		Rest of City	$32,086.47
Restaurant	**Units**		**2022 (5.38% increase)**
Fast Food Restaurant	Per sq. ft. of GFA	Downtown	$105.58
		Overlake	$109.22
		Rest of City	$129.25
Restaurant	Per sq. ft. of GFA	Downtown	$38.75
		Overlake	$40.09

		Rest of City	$47.44
Administrative Office Land Uses	**Units**		**2022 (5.38% increase)**
Up to 99,999 ft^2	Per sq. ft. of GFA	Downtown Overlake Rest of City	$22.13 $22.90 $27.09
100,000 ft^2 – 199,999 ft^2	Per sq. ft. of GFA	Downtown Overlake Rest of City	$19.02 $19.67 $23.28
200,000 ft^2 – 299,999 ft^2	Per sq. ft. of GFA	Downtown Overlake Rest of City	$16.60 $17.17 $20.32
300,000 ft^2 and Over	Per sq. ft. of GFA	Downtown Overlake Rest of City	$15.56 $16.10 $19.04
Medical Office/Clinic	Per sq. ft. of GFA	Downtown Overlake Rest of City	$22.73 $23.52 $27.82
Industrial Land Uses	**Units**		**2022 (5.38% increase)**
Light Industrial/Manufacturing	Per sq. ft. of GFA	Downtown Overlake Rest of City	$10.38 $10.75 $12.72
Industrial Park	Per sq. ft. of GFA	Downtown Overlake Rest of City	$9.10 $9.42 $11.14
Warehousing/Storage	Per sq. ft. of GFA	Downtown Overlake Rest of City	$3.43 $3.54 $4.20
Mini Warehouse	Per sq. ft. of GFA	Downtown Overlake Rest of City	$2.04 $2.10 $2.49

Alternate Impact Fee Assessment*	Units		2022 (5.38% increase)
Cost per Person Mile of Travel (PMT)	Mile of travel per person		$3,361.61

School Impact Fees: The City of Redmond also collects development impact fees on behalf of Lake Washington School District (LWSD). The District's requested school impact fees are $18,997 per single-family unit and $3,510 for each multi-family unit. The single-family fee is an increase of $3,927 and the multi-family fee is an increase of $809 from 2021 fees. These increases are largely due to school site acquisition costs as fully described in the appendices of the LWSD's *2021-26 Six-Year Capital Facilities Plan*.

SCHOOL IMPACT FEES	
Land Use	2022 Rate
Single-family dwelling unit	$18,997.00
Multi-family dwelling unit	$3,510.00

Impact Fees: 2022 Annual Indexing

Planning and Public Works Committee of the Whole

November 9, 2021

Redmond
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Purpose

- Provide information on the 2022 annual indexing of development impact fees.

- PLEASE NOTE:
  - This process only includes the annual indexing of impact fees and update of Impact Fee Schedule.

  - This process *DOES NOT* include any discussion or review of city policies related to impact fees, including fee calculation or rate studies.

Project Background

RMC 3.10

3-year moving average of the following indexes:

- Fire Impact Fee: CPI-U (Consumer Price Index – Urban/Seattle)
- Parks Impact Fee: CCI + BCI Average (Building Cost Index)
- Transportation Impact Fee: CCI (Construction Cost Index - Seattle)

LWSD School Impact Fees

City of Redmond collects development impact fees **on behalf of Lake Washington School District** which are calculated based on:

- A 5-year average of student enrollment numbers generated from new single-family and multi-family development.

City of Redmond Impact Fee Rates

3-year moving average of indexes

- Consumer Price Index
- Building Construction Index
- Construction Cost Index

	2022 Proposed Rate Increase
Fire (CPI)	3.34%
Parks (BCI+CCI)	5.64%
Transportation (CCI)	5.38%

School District Fees

5-year average of student enrollment numbers for new developments

	2021	2022
Single Family	$15,070	**$18,997**
Multifamily (per unit)	$2,701	**$3,510**

Residential Impact Fees

Single family impact fees increased by 16.5% over 2021

Multi-family up by 11% over 2021 rates

Single-family dwelling unit		
	Redmond 2021 Rate	**Proposed 2022 Rate**
Fire	$ 128.33	**$ 132.62**
Parks	$ 5,124.14	**$ 5,412.09**
Transportation*	$ 7,729.29	**$ 8,145.26**
Schools	$ 15,070.00	**$ 18,997.00**
Single-family dwelling unit	$ 28,051.76	**$ 32,686.97**

Multi-family residences (per unit)		
	Redmond 2021 Rate	**Proposed 2022 Rate**
Fire	$ 216.75	**$ 224.00**
Parks	$ 3,557.37	**$ 3,757.88**
Transportation*	$ 5,428.62	**$ 5,720.78**
Schools	$ 2,701.00	**$ 3,510.00**
Multi-family residences (per unit)	**$** 11,903.74	**$ 13,212.66**

**Transportation impact fees reduced in the Downtown and Overlake Urban Centers*

Office, Retail and Manufacturing Impact Fees

Average 5.35% growth over 2021 rates.

	Redmond 2021 Rate	Proposed Redmond 2022 Rate
Fire	$ 179.46	**$ 185.46**
Parks	$ 1,388.08	**$ 1,466.32**
Transportation*	$ 22,090.00	**$ 23,280.00**
Total Office (per 1,000 sq. ft. of GLA)	**$ 23,657.54**	**$ 24,931.78**
Fire	$ 206.87	**$ 213.78**
Parks	$ 615.81	**$ 650.52**
Transportation*	$ 20,900.00	**$ 22,020.00**
Retail Trade (per 1,000 sq. ft. of GLA)	**$ 21,722.68**	**$ 22,884.30**
Fire	$ 21.20	**$ 21.90**
Parks	$ 624.75	**$ 659.96**
Transportation*	$ 12,070.00	**$ 12,720.00**
Manufacturing (per 1,000 sq. ft of GLA)	**$ 12,715.95**	**$ 13,401.86**

** Transportation impact fees reduced in the Downtown and Overlake Urban Centers*

Outreach to Stakeholders

October 28:	One Redmond Government Affairs
November 2:	Microsoft
November 4:	Parks and Trails Commission
Notification:	Master Builders, City website

Council Timeline

November 9:	2PW Briefing
December 7:	**Council Adoption**
January 1, 2022:	Fees take effect

Thank You

Any Questions?

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Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-592
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Public Works	Dave Juarez	425-556-2733

DEPARTMENT STAFF:

Public Works	Jessica Atlakson	Environmental Geologist
Public Works	Amanda Balzer	Science and Data Analytics Supervisor

TITLE:
Approval of Redmond Paired Watershed Study Contract Amendments

OVERVIEW STATEMENT:
Execute the following contract amendments to continue the Redmond Paired Watershed Study (RPWS):

- Amendment No. 5 to the Interagency Agreement with the Washington State Department of Ecology in the amount of $936,444.48 to fund the contracts with King County and Herrera.
- Phase V Agreement with King County in the amount of $194,734.48.
- Supplemental Agreement No. 3 with Herrera Environmental Consulting in the amount of $741,710.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  Comprehensive Plan, Environmental Sustainability Action Plan, Redmond Watershed Management Plan
- **Required:**
  NPDES Permit WAR04-5538, Section S8.
  The current contracts for the monitoring component of the RPWS expire on December 31, 2021.
- **Council Request:**
  NA
- **Other Key Facts:**

Background

The Redmond Paired Watershed Study (RPWS) and partnership between King County, Herrera Environmental Consulting (Herrera), and Redmond started in 2014 to measure the health of streams in Redmond and unincorporated King County. The goal of the RPWS is to measure the effectiveness of actions taken by Redmond's Stormwater Utility and King County to restore urban streams on a watershed scale. The City is focusing restoration efforts in priority watersheds identified in the 2013 Watershed Management Plan.

Many studies have occurred nationally that measure the declining health of streams after urbanization of a watershed. This Study does the opposite by measuring the health of streams in already urbanized watersheds and the impact local governments can have in trying to restore the urban streams to good health.

The effectiveness monitoring to date has established baseline conditions in seven streams. The Study is 'paired' because it measures the health of streams that either:

1. Redmond and King County are working to improve (application watersheds),
2. Are not targeted for improvement (control watersheds), or
3. Are relatively pristine and located in Redmond's Watershed Preserve Park (reference watersheds).

By 'pairing' watersheds, it will be easier to identify if actions taken by Redmond and King County specifically made an improvement in stream health.

Program Modifications

The application watershed of Evans Creek Tributary 108 has been removed from this scope of work. Evans Creek Tributary 108 is in unincorporated King County. King County has no further plans for stormwater retrofits within this watershed during the timeline of this project. The trend analysis report for water years 2016 through 2019, which was presented to Council at the June 1, 2021 Staff Report, did not identify any improvement within the watershed based on the two vaults installed by King County in water year 2017. Based on this finding and no further retrofits planned during the project timeline, the watershed is being removed to reduce project costs.

Sustainability

The RPWS supports Strategies N1 and N3 in the Environmental Sustainability Action Plan. The information collected by this Study is used to calculate City of Redmond dashboard measures and budget performance measures. The benthic index of biotic integrity (BIBI) data collected for the RPWS is a target indicator for the Natural Systems focus area within the Environmental Sustainability Action Plan.

OUTCOMES:

These agreements will allow the RPWS to continue as planned as a long term (10 year) study to determine the effectiveness of actions taken to restore urban streams on a watershed scale. The study will help guide regional actions to refine stormwater management programs.

Description of Agreements

Interagency Agreement with the Washington State Department of Ecology

This study is 100 percent funded by the Stormwater Action Monitoring (SAM) program, except for staff time to manage the project. The SAM program is administered through the Washington Department of Ecology.

Agreement with King County

King County's agreement includes collecting continuous rain, stream gauge, and temperature data for six streams from

January 1, 2022 through September 30, 2024, as well as an annual quality control review.

Supplemental Agreement with Herrera
Herrera's contract amendment would authorize them to continue to collect water quality data, BIBI data, sediment quality data, and physical habitat data in six streams from January 1, 2022 through September 30, 2024. Herrera's contract also includes data quality control review, annual reporting, and a data analysis report that will demonstrate trends in the entire dataset collected to date. Data quality review and reporting will be completed by September 2025.

The supplemental agreement also includes monitoring to evaluate the effectiveness of upgrades to two existing stormwater detention ponds in the Monticello Watershed. The detention ponds were retrofitted with a continuous monitoring and adaptive control system to improve their performance for managing peak flows during storm events.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  N/A
- **Outreach Methods and Results:**
  N/A
- **Feedback Summary:**
  N/A

BUDGET IMPACT:

Total Cost:
Total project cost since 2014: $3,583,294.33

Project cost included in this current amendment: $936,444.48

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
000214

Budget Priority:
Healthy and Sustainable

Other budget impacts or additional costs: ☐ **Yes** ☒ **No** ☐ **N/A**
If yes, explain:
N/A

Funding source(s):
100% grant funded through the Stormwater Action Monitoring (SAM) Program

The RPWS is planned to continue through 2025 with 100% funding from the SAM program, which is a collaborative stormwater monitoring program in Western Washington funded by Phase I and II municipal stormwater permittees and administered by the Washington Department of Ecology. Redmond pays into the SAM program as part of the fee requirements for the City's stormwater permit.

Budget/Funding Constraints:
N/A

☒ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
5/11/2021	Committee of the Whole - Planning and Public Works	Provide Direction
6/1/2021	Business Meeting	Receive Information

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
12/7/2021	Business Meeting	Approve

Time Constraints:
The current contract has monitoring scheduled through December 31, 2021. Having amendments in place by December will avoid a lapse in the data collection for the study.

ANTICIPATED RESULT IF NOT APPROVED:
This would end the Study before the effectiveness of actions taken by the City to restore urban streams has been measured. The project would have spent $2,646,849.85 of pooled resources from Phase I and II municipal stormwater permittees without completing the goals of the Study.

ATTACHMENTS:
Attachment A: Washington State Department of Ecology Interagency Agreement
Amendment 5
Attachment B: Herrera Environmental Consulting Supplemental Agreement
Attachment C: King County Agreement
Attachment D: RPWS Budget information

DEPARTMENT OF
ECOLOGY
State of Washington

AMENDMENT NO. 5

TO

IAA NO. **C1500059**

BETWEEN THE

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

AND

CITY OF REDMOND

PURPOSE: To amend the Agreement between the state of Washington, Department of Ecology, hereinafter referred to as "ECOLOGY," and the City of Redmond, hereinafter referred to as "CITY" or "CONTRACTOR."

WHEREAS, This amendment adds tasks, modifying tasks, and adds time to accomplish the new work.

IT IS MUTUALLY AGREED the Agreement is amended as follows:

1) The project end date is changed from December 31, 2022 to September 30, 2025.

2) Task D5.0 from Amendment No. 4 of IAA No. C1500059 is removed and $54,280 will be removed from the budget.

3) Additional tasks are added by this amendment as Appendix E, a new appendix. Compensation is increased by $990,724.48 for the additional tasks. Appendix E – has three tasks (E1.0, E2.0, and E3.0) to continue monitoring at the study sites for January 1, 2022 to September 30, 2024; and two tasks (E4.0 and E5.0) for a trend analysis report for Water Years 2016 – 2023 and a pond retrofit effectiveness evaluation.

4) The total of the agreement is changed:

   - Previous total $2,646,849.85 - $54,280 (amendment 5 decrease) = $2,592,569.85
   - $2,592,569.85 + $990,724.48 (amendment 5 increase) = to a new contract total of $3,583,294.33, a total increase of $936,444.48.

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

By:

_____
Signature Date

_____
Print Name

_____
Title

City of Redmond

By:

_____
Signature Date

_____
Print Name

_____
Title

APPENDIX E

STATEMENT OF WORK FOR JANUARY 1, 2022 THROUGH SEPTEMBER 30, 2025

Background

The City of Redmond (REDMOND) has a Citywide Watershed Management Plan (WMP) to implement structural and nonstructural stormwater controls pursuant to the Phase II municipal stormwater permit. This Redmond Paired Watershed Study (RPWS) will study and quantify improvements in receiving water conditions based on implementing the WMP controls. This RPWS will measure various hydrologic, chemical, physical, and biological indicators of stream health. The RPWS was initiated in the fall of 2015 and will be implemented over an anticipated ten-year timeframe. Funding comes from the Stormwater Action Monitoring (SAM) program, a coordinated monitoring program founded by Phase I and II municipal stormwater permittees and administered by Ecology.

This scope of work in Appendix E continues field measurement collection, data management and quality assurance of review, data analysis, and reporting for this study over the last three quarters of water year 2022 (a water year is defined as the 12-month period that extends from October 1 in any given year through September 30 of the following year) and all of water year 2023 and 2024. Two additional tasks in Appendix E includes a trend analysis report for water years 2016 – 2023 and effectiveness monitoring for two stormwater pond retrofits. Additional monitoring and trend analysis for the study in subsequent years would occur under a new contract or addendum to this contract. The monitoring will follow the already approved quality assurance project plan (QAPP) for this Paired Watershed study.

This scope of work includes several deviations from the QAPP:

- The application watershed of Evans Creek Tributary 108 has been removed from this scope of work. Evans Creek Tributary 108 is in unincorporated King County. King County has no further plans for stormwater retrofits within this watershed during the timeline of this project. The trend analysis report for water years 2016 through 2019 (Herrera, 2021) did not identify any improvement within the watershed based on the two vaults installed by King County in water year 2017. Based on this finding and no further retrofits planned during the project timeline, the watershed is being removed to reduce project costs.
- The QAPP indicates trend analyses reports should also be prepared following 4, 6, 8, and 10 years of study implementation. These reports summarize the results of statistical analyses that are described in the QAPP to identify relationships between rehabilitation efforts and improving receiving water conditions. This scope of work includes a task for preparing the trend analysis report following 8 years of study implementation. The trend analyses report following 4 years of study implementation was prepared under Task D4.0 from Amendment No. 4 of IAA No. C1500059. Amendment No. 5 of IAA No. C1500059 removes work and budget ($54,280) identified under Task D5.0 from Amendment No. 4 of IAA No. C1500059 to prepare the trend analysis report following 6 years of study implementation. This change was made with Ecology's concurrence to reduce the overall budget for the study while allowing for a longer period of data collection before conducting analyses to identify relationships between rehabilitation efforts and improving receiving water conditions.
- The QAPP indicates that sediment quality monitoring and physical habitat monitoring will occur at each watershed annually. Results from each of these monitoring efforts show very little change over

time. Monitoring for sediment quality and physical habitat will occur every other year. For this Scope of Work, monitoring will occur in WY2023.

- The QAPP indicates that continuous conductivity will be collected in all watersheds. Results from the conductivity monitoring are very noisy, and no trend was detected during the trend analysis report for water years 2016 through 2019 (Herrera, 2021). Continuous conductivity monitoring will not be included in this Scope of Work.

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

- Task E1.0 – Last three quarters of Water Year 2022 Study Implementation
- Task E2.0 – Water Year 2023 Study Implementation
- Task E3.0 – Water Year 2024 Study Implementation
- Task E4.0 – Trend Analysis Report: Water Years 2016 - 2023
- Task E5.0 – Pond Retrofit Effectiveness Monitoring

Work on these tasks will be performed by REDMOND with assistance from Herrera Environmental Consultants (Herrera), and King County. REDMOND, Herrera, and King County are collectively referred to as the "Project Team" in this scope of work. Where applicable, specific roles for each member of the Project Team are called out under individual tasks. The cost by deliverable, and schedule are included in the table at the end of this Scope of Work.

Task E1.0 – Last three quarters of Water Year 2022 Study Implementation

Under this task, the Project Team will implement required monitoring activities identified in the QAPP for the RPWS over the final three quarters water year 2022 (January 1, 2022 through September 30, 2022). This would include field measurement collection, data management and quality assurance review, and reporting. These activities are described in more detail under the following subtasks:

Subtask E1.1 - Hydrologic Monitoring

REDMOND has subcontracted with King County to continue the hydrologic monitoring component of the RPWS through the first quarter of Water Year 2024. This involves continuous flow monitoring at 12 stations in six watersheds. Data from the continuous flow monitoring will be processed to calculate a suite of indicators for evaluating hydrologic impacts from urban development. King County will continue hydrologic monitoring which involves maintenance of the continuous flow monitoring equipment and replacement as needed, telemetry where cell phone coverage is available, maintenance of the automatic processing, and posting of data on King County's Hydrological Information Center (HIC) database on their public website. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use by January each calendar year for the prior water year's data. Herrera will generate summary statistics (e.g., antecedent dry period, flow at time of sample collection) from the flow record for storm and base flow events that were sampled for water quality under Subtask E1.2. These statistics will be stored in the data management system developed for this project and presented in the data report described under Subtask E1.6. These statistics will be used in analyses to detect trends in water quality that will be performed in Task

E4.0. REDMOND will coordinate the project team members (Herrera and King County) to summarize the continuous flow monitoring data for each station for presentation in the data report described in Subtask E1.6.

Assumptions

- Telemetry and database all continue to work without problems.
- Equipment will be replaced as it reaches maximum manufacturer's life expectancy.

Deliverables

- Posting of telemetered data on HIC (continual).
- Posting of non-telemetered data on HIC will occur every 5 weeks.
- Table with flow summary statistics for sampled storm and base flow events from 12 stations.

Subtask E1.2 – Water Quality Monitoring

REDMOND subcontracted with Herrera for the water quality monitoring component of the RPWS. This involves the collection of up to twelve grab samples over the water year during storm events (three each quarter) at 12 stations. In addition, up to four grab samples will be collected over the water year during base flow (one each quarter) at these stations. Each sample will be analyzed for the following indicators for evaluating water quality impacts from urban development:

- Total suspended solids
- Turbidity
- Conductivity
- Hardness
- Dissolved organic carbon
- Fecal coliform bacteria
- Total phosphorus
- Total nitrogen
- Copper, total and dissolved
- Zinc, total and dissolved

In addition, probes will be used for continuous in-situ monitoring of temperature at all 12 stations.

Collection of grab samples during both storm and base flow events will include the following activities performed in accordance with the QAPP for the study:

- Weather tracking and go/no go decision coordination
- Mobilization of field crews for sampling during the event
- Delivery of samples to the laboratory after the event

- Auditing of laboratory analytical results within seven days of their receipt
- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of graphical and tabular summaries for the data report described in Subtask E1.4

REDMOND will ensure coordination between the project team members. King County will oversee the continuous in-situ monitoring at each station using the probes. Herrera will coordinate with King County to provide review of continuous data and summarize them for presentation in the data report described in Subtask E1.4.

Assumptions

- Storm event sampling will be performed by two teams of two Herrera staff. Sampling for each event will be performed over an 8- hour period including travel but not including storm tracking and go/no go decision coordination. A 15 percent contingency is included to account for sampling event false starts and allow for make-up sampling.
- Nominally, all 12 stations will be sampled during each storm event. If specific stations are not sampled because a sampling event was terminated, they will be prioritized for sampling in subsequent events to ensure the annual sampling goals established for the study are met for every station.
- Base flow event sampling will be performed by one team of two Herrera staff. Sampling for each event will be performed over a 10- hour period including travel.
- King County will provide continuous water quality monitoring data in an electronic format for review by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.
- Obtaining storm event samples may not be possible during particularly dry quarters. If this should occur, efforts will be made to conduct makeup sampling in subsequent quarters to obtain twelve grab samples from each station over the water year.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from water quality sampling at 12 stations during 3 storm events and 1 base flow event per quarter will be uploaded to the Environmental Information Management (EIM) database.
- Data validation memorandum.

Subtask E1.3 – Biological Monitoring

Under this subtask, REDMOND will ensure Herrera conducts biological monitoring for the RPWS once during the water year at 17 stations. Pursuant to the QAPP for the study, this entails the collection of a composite sample of benthic macro invertebrates from specific locations along the cross-sections for physical habitat monitoring that are described in Subtask E1.4. These samples will be submitted to an analytical laboratory where they will be processed to compute the following indicators for use in evaluating stream health:

- Benthic Index of Biotic Integrity
- Taxa Richness
- Ephemeroptera Richness
- Plecoptera Richness
- Trichoptera Richness Clinger Percent
- Long-Lived Richness
- Intolerant Richness
- Percent Dominant
- Predator Percent
- Tolerant Percent

Assumptions

- Benthic macro invertebrate samples and the sediment samples described in Subtask E1.3 will be collected during the same field visit to each station. This sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.
- A delay of approximately 6 months can be expected for obtaining biological metrics from the contract lab.

Deliverables

- Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database or EIM.

Subtask E1.4 - Water Year Data Summary Report

A data summary report will contain tabular and/or graphical summaries of all data that were collected over the water year in connection with the following monitoring components of the RPWS: hydrologic, water quality, and biological. This report will provide a detailed description of any quality assurance issues associated with these data based on results from audits and data validation memoranda. Any corrective actions that were undertaken to address quality assurance issues will also be described. Finally, this report will document all rehabilitation efforts that have occurred in the Application watersheds over the previous year. Included will be detailed information on the design and operational status of structural stormwater controls and the frequency and geographic extent of nonstructural stormwater control implementation.

REDMOND will collaborate with Herrera and King County to prepare a preliminary draft of the data summary report. The draft will be sent to Ecology (SAM Coordinator) and the technical advisory committee that has been established for the study (see Subtask E1.5). Herrera will then finalize the water year report based on comments received. REDMOND will review and send to Ecology.

Deliverables

- Draft data summary report.
- Final Water Year 2022 data summary report.

Subtask E1.5 – Technical Advisory Committee Coordination

The technical advisory committee for this study includes representation from the following agencies: Ecology, King County, and the U.S. Geological Survey (USGS). This task is to coordinate and for the project team to participate in up to two meetings to obtain input from the committee on technical issues related to the study over water year 2022. It is anticipated that one of these meetings will occur after the release of the data report from Subtask E1.4 to review and discuss the monitoring results from the water year. Contingency budget is also provided for a second, optional meeting to address unforeseen issues that may arise during implementation of the RPWS over the water year.

Assumptions

- Technical advisory committee meetings will last 2-hours and be attended by up to 3 Herrera staff.
- King County presentation on hydrologic data and attended by up to 4 staff.

Deliverables

- King County presentation on hydrologic data.
- Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.

Subtask E1.6 – Project Management

REDMOND, Herrera, and King County will share responsibilities for ongoing contract administration of this project, including preparing invoices and progress reports, as well as coordination of all work efforts with Ecology (SAM Coordinator) and the Project Team.

Deliverables

- Monthly invoices and progress reports from Herrera.
- Semi-annual invoices and annual progress report from King County.

Task E2.0 – Water Year 2023 Study Implementation

Under this task, REDMOND will ensure Herrera and King County implement required monitoring and reporting activities identified in the QAPP for the RPWS over water year 2023 (October 1, 2022 through September 30, 2023). The activities, assumptions, and deliverables for Task E2.0 are identical to those for Task E1.0 with the addition of the following tasks:

Subtask E2.7 – Sediment Quality Monitoring

The sediment quality monitoring component of the RPWS involves the collection of sediment samples once during the water year at 17 monitoring stations. Each sample is analyzed for the following indicators for evaluating sediment quality impacts from urban development:

- Total organic carbon

- Copper
- Zinc
- Polycyclic aromatic hydrocarbons
- Phthalates

This task is to collect stream sediment samples. This includes the following activities that will be performed in accordance with the QAPP for the study:

- Mobilization of field crews for sampling
- Delivery of samples to the laboratory after the event
- Auditing of laboratory analytical results within seven days of their receipt
- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of tabular summaries for the data report described in Subtask E1.4

Assumptions

- Sediment samples and the benthic macro invertebrate samples described in Subtask E1.3 will be collected during the same field visit to each station. This sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from sediment sampling at 17 stations.
- Data validation memorandum.

Subtask E2.8 - Physical Habitat Monitoring

Under this subtask, REDMOND will ensure Herrera is trained and conducts physical habitat monitoring for the RPWS once during the water year at 17 monitoring stations. Herrera will coordinate directly with Ecology's Environmental Assessment Program (EAP) for training, data management, and quality control of habitat data. At each station, the characteristic bed-form type will be recorded as a whole, and physical habitat quality indicators will be measured at 11 cross sections and one longitudinal (thalweg) profile. Pursuant to the QAPP for the study, the following indicators will be measured at each cross-section:

- Bank-full width, wetted width, and cumulative bar width
- Bank-full depth, wetted depth, substrate class and embeddedness
- Fish cover

- Riparian shading
- Riparian vegetation structure

The following indicators will be measured along the thalweg profile:

- Thalweg depth and the presence of bars and/or edge pools
- Main channel slope and bearing
- Large woody debris tally, including notation of diameter, length, category, zone, and key-pieces

Upon completion of field work, physical habitat monitoring data will be uploaded to the EIM. Based on post processing of these data within this system, Ecology will provide a suite of indicators for assessing physical habitat quality that are consistent with those being used for the broader SAM program. A summary of these indicators will be presented in the data report described in Subtask E1.6.

Assumptions

- One Herrera staff will participate in an Ecology sponsored 2-day training session on the physical habitat monitoring protocols developed for the SAM program. These staff will coordinate an additional 1-day training session for three additional Herrera staff that will be involved in the monitoring.
- Physical habitat monitoring will be performed by two teams having two Herrera staff. Physical habitat monitoring at each station will require approximately 8-hours of field time including travel.
- Ecology's EAP will perform quality assurance review of the compiled physical habitat monitoring data and calculate metrics for assessing physical habitat conditions using scripts that have been developed to work with the Watershed Health database in the EIM. Costs for EAP's support for these activities are not included in the cost proposal for this scope of work.
- A delay of approximately 6 months can be expected for obtaining processed metrics for assessing physical habitat conditions from EAP via the Watershed Health database in the EIM system.

Deliverables

- Results from physical habitat monitoring at 17 stations that are uploaded to Watershed Health database in the EIM.

Task E3.0 –Water Year 2024 Study Implementation

Under this task, REDMOND will ensure Herrera and King County implement required monitoring activities identified in the QAPP for the RPWS for water year 2024 (October 1, 2023 through September 20, 2024). The activities, assumptions, and deliverables for Task E3.0 are identical to those for Task E1.0.

Task E4.0 –Trend Analysis Report: Water Years 2016 - 2023

Following completion of required monitoring for water year 2023 and preparation of the associated data summary report, REMOND will ensure Herrera prepares a trend analysis report covering data collected over the first 8 years of study implementation (water years 2016 – 2023). This report will summarize results from statistical analyses performed to detect improving or degrading trends in receiving water conditions in the six watersheds that are the focus of monitoring efforts for the RPWS. A detailed discussion of these trends will be

provided with a specific emphasis on relationships between trends and rehabilitation efforts in the Application watersheds relative to trends in the Reference and Control watersheds. A summary of major conclusions from these analyses will also be provided.

Statistical analyses will follow procedures that are described in the QAPP and documented in minutes from the technical advisory committee meeting that occurred on July 29, 2019. The following specific procedures will be performed in connection with these analyses:

- Correlation analyses to detect trends over time in water and sediment pollutant concentration data and computed indicators from hydrologic and biological monitoring.
- Computation of annual mass load estimates from data for a subset of parameters from water quality monitoring; correlation analyses would then be performed on these estimates to detect trends over time.
- Comparison of data from physical habitat monitoring to reference conditions from Puget Sound lowland ecoregion streams.

REDMOND will collaborate with Herrera and King County to prepare a draft of the trend analysis report. The draft will be sent to Ecology (SAM Coordinator) and the technical advisory committee that has been established for the study (see Subtask E1.7). Herrera will then finalize the trend analysis report based on comments received. REDMOND will review and send to Ecology.

REDMOND will collaborate with Herrera to communicate the trend findings report by creating and conducting two (2) presentations of the design results, and interim-study conclusions to permittees and stakeholders. One of these presentations will be made to the Stormwater Work Group. The other will be made at a conference with a stormwater and regional focus (e.g. MuniCon), upon agreement with the Ecology (SAM Coordinator). REDMOND will collaborate with Herrera to create a SAM fact sheet for distribution on the SAM website.

Assumptions

- Comments on the draft and revised draft trend analysis reports will be provided using a standardized template to be provided by Herrera.

Deliverables

- Draft trend analysis report.
- Final trend analysis report.
- Two presentations on study design and findings to date.
- SAM factsheet on project findings to date.

Task E5.0 – Pond Retrofit Effectiveness Monitoring

REDMOND will collaborate with Herrera to implement monitoring to evaluate the effectiveness two existing stormwater detention ponds in the Monticello Watershed that were retrofitted with a continuous monitoring and adaptive control (CMAC) system to improve their performance for managing peak flows during storm events. As described in the RPWS Pond Retrofit Effectiveness Monitoring Proposal dated February 1, 2021, this monitoring will involve the following steps:

1. Develop relationships for predicting the available storage in each pond as a function of stage.
2. Develop spreadsheet models to predict inlet discharge to the ponds in 15-minute intervals based on the relationship from Step 1 and using measured data from the CMAC system for outlet discharge and stage.
3. Estimate the inlet discharge for each pond over an entire water year using the models from Step 2 and the continuous measurements (15-minute logging interval) of outlet discharge and stage from the CMAC system over the same period.
4. Use the continuous estimates of inlet discharge from Step 3 as input for a Western Washington Hydrology Model (WWHM) that will be developed for each pond to predict outlet discharge in their current configuration.
5. Conduct statistical analyses to detect a significant decrease in peak outlet discharge from the ponds relative to the expected peak outlet discharge of the ponds in their current configuration.

In addition to the comparison in Step 5, data from the hydrologic monitoring described in Task E1.1 will be analyzed to detect improving trends in receiving water conditions that may stem from the pond retrofits. Similarly, data from the physical habitat monitoring stations described in Task E2.8 will be analyzed for the same purpose.

The effectiveness monitoring will initiate once the CMAC system becomes operational in each pond (April 2021) and extend over a period capturing water years 2022 and 2023. This will produce a continuous time series of outlet discharge data that will be collected over a sufficient duration to detect pond performance improvements across a range of storm sizes.

Results from the analyses described above will be summarized in a stand-alone effectiveness monitoring report that will be produced following the conclusion of monitoring at the end of water year 2023.

REDMOND will collaborate with Herrera and King County to prepare a draft of the trend analysis report. The draft will be sent to Ecology (SAM Coordinator) and the technical advisory committee that has been established for the study (see Subtask E1.5). Herrera will then finalize the trend analysis report based on comments received. REDMOND will review and send to Ecology.

Deliverables

- Draft effectiveness monitoring report.
- Final effectiveness monitoring report.
- Fact sheet.

Task/Deliverable	Quantity	Total by Deliverable	Target Dates
Task E1.0 – Last three quarters of Water Year 2022 Study Implementation			
Subtask E1.1 Hydrologic Monitoring			
Posting of telemetered data on HIC (continual). Posting of non-telemetered data on HIC will occur every 5 weeks.	1	$56,300.76	
Equipment maintenance	1	$7,584.16	
Table with flow summary statistics for sampled storm and base flow events from 12 stations.	1	$7,850	
Subtask Total		$71,734.92	3/31/2023
Subtask E1.2 Water Quality Monitoring			
Laboratory analytical results and documentation of Herrera audits for 12 stations X 12 sampling events	12	$93,240	
Data validation memorandum	1	$13,800	
Subtask Total		$107,040	3/31/2023
Subtask E1.3 Biological Monitoring			
Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database or EIM	1	$14,810	
Subtask Total		$14,810	3/31/2023
Subtask E1.4 Water Year Data Summary Report			
Draft data summary report	1	$21,500	6/30/2023
Final data summary report	1	$5,390	9/30/2023
Subtask Total		$26,890	
Subtask E1.7 Technical Advisory Committee Coordination			
King County presentation on hydrologic data and report review	1	$3,492.56	
Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.	2	$3,700	
Subtask Total		$7,192.56	6/30/2023
Subtask E1.8 Project Management			
Monthly progress reports from Herrera	9	$16,740	

Annual progress report from King County	1	$649.92	
Subtask Total		$17,389.92	12/31/2022
E1 Task Total		$245,057.40	

Task E2.0 – Water Year 2023 Study Implementation

Subtask E2.1 Hydrologic Monitoring

Posting of telemetered data on HIC (continual). Posting of non-telemetered data on HIC will occur every 5 weeks.	1	$56,865.95	
Equipment maintenance	1	$7,584.17	
Table with flow summary statistics for sampled storm and base flow events from 12 stations.	1	$8,080	
Subtask Total		$72,530.12	3/31/2024

Subtask E2.2 Water Quality Monitoring

Laboratory analytical results and documentation of Herrera audits for 12 stations X 16 sampling events	16	$126,560	
Data validation memorandum	1	$14,100	
Subtask Total		$140,660	3/31/2024

Subtask E2.3 Sediment Quality Monitoring

Laboratory analytical results and documentation of Herrera audits for 17 stations	1	$17,500	
Data validation memorandum	1	$4,380	
Subtask Total		$21,880	3/31/2024

Subtask E2.4 Physical Habitat Monitoring

Results from physical habitat monitoring at 17 stations that are uploaded to Ecology's data management system	1	$65,750	
Subtask Total		$65,750	3/31/2024

Subtask E2.5 Biological Monitoring

Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database or EIM	1	$15,050	
Subtask Total		$15,050	3/31/2024

Subtask E2.6 Water Year Data Summary Report

Draft data summary report	1	$22,200	6/30/2024

Final data summary report	1	$5,540	9/30/2024
Subtask Total		$27,740	
Subtask E2.7 Technical Advisory Committee Coordination			
King County presentation on hydrologic data and report review	1	$3,597.34	
Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.	2	$3,800	
Subtask Total		$7,397.34	6/30/2024
Subtask E2.8 Project Management			
Monthly progress reports from Herrera	12	$23,040	
Annual progress reports from King County	1	$669.42	
Subtask Total		$23,709.42	12/31/2023
E2 Task Total		$374,716.88	
Task E3.0 – Water Year 2024 Study Implementation			
Subtask E3.1 Hydrologic Monitoring			
Posting of telemetered data on HIC (continual). Posting of non-telemetered data on HIC will occur every 5 weeks.	1	$45,838.90	
Equipment maintenance	1	$7,584.16	
Table with flow summary statistics for sampled storm and base flow events from 12 stations.	1	$8,310	
Subtask Total		$61,733.06	3/31/2025
Subtask E3.2 Water Quality Monitoring			
Laboratory analytical results and documentation of Herrera audits for 12 stations X 16 sampling events	16	$128,800	12/31/2024
Data validation memorandum	1	$14,300	3/31/2025
Subtask Total		$143,100	
Subtask E3.3 Biological Monitoring			
Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database or EIM	1	$15,050	
Subtask Total		$15,050	3/31/2025
Subtask E3.4 Water Year Data Summary Report			

Draft data summary report	1	$22,800	6/30/2025
Final data summary report	1	$5,700	9/30/2025
Subtask Total		$28,500	
Subtask E3.5 Technical Advisory Committee Coordination			
King County presentation on hydrologic data and report review	1	$3,705.26	
Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.	2	$3,800	
Subtask Total		$7,505.26	6/30/2025
Subtask E3.6 Project Management			
Monthly progress reports from Herrera	12	$23,640	
Annual progress reports from King County	1	$861.88	
Subtask Total		$24,501.88	9/31/2024
E3 Task Total		$280,390.21	
Task E4.0 – Trend Analysis Report: Water Years 2016 – 2023			
Draft data analysis report	1	$35,000	12/31/2024
Final data analysis report	1	$7,000	3/31/2024
Stormwater Work Group and Conference Presentations	2	$3,400	3/31/2024
Fact Sheet	1	$1,160	3/31/2024
E4 Task Total		$46,560	
Task E5.0 – Pond Retrofit Effectiveness Monitoring			
Spreadsheet Models and WWHM models to predict pond outlet discharge	1	$8,000.00	6/30/2022
Inlet discharge estimates for ponds through the end of WY2022	1	$8,500.00	12/31/2022
Inlet discharge estimates for ponds through the end of WY2023	1	$8,500.00	12/31/2023
Draft effectiveness monitoring report	1	$13,840	1/31/2024
Final effectiveness monitoring report	1	$4,000	2/28/2024
Fact Sheet	1	$1,160	3/30/2024
E5 Task Total		$44,000.00	
Project Total		$990,724.48	

REDMOND PAIRED WATERSHED STUDY IMPLEMENTATION: WATER YEARS 2022 (Q2-Q4) TO 2024 (Q1–Q4)

In February 2014, the Washington State Department of Ecology (Ecology) approved a Citywide Watershed Management Plan (WMP) for the City of Redmond (City) that allows use of a watershed approach for implementing required stormwater best management practices (BMPs) pursuant to the Phase II municipal stormwater permit. Through the implementation of this WMP, the City will focus stormwater BMPs in a subset of priority watersheds that are moderately impacted by urbanization and therefore expected to respond more quickly to rehabilitation efforts. This provides a unique opportunity to study the effectiveness of stormwater BMPs for improving receiving water conditions on an accelerated timeframe. Recognizing this opportunity, the City is implementing the Redmond Paired Watershed Study (RPWS) to quantify improvements in receiving water conditions based on routine and continuous measurements of various hydrologic, chemical, physical, and biological indicators of stream health. This study will be implemented over an anticipated ten-year timeframe with funding from Ecology's Stormwater Action Monitoring (SAM) program.

To guide its implementation, Herrera Environmental Consultants (Herrera) developed a quality assurance project plan (QAPP) for the RPWS through a previous contract with the City. This QAPP provides detailed descriptions of the procedures that will be used for the following components of the study's experimental design:

- Hydrologic monitoring
- Water quality monitoring
- Sediment quality monitoring
- Physical habitat monitoring
- Biological monitoring

To date, the City has authorized Herrera to implement the monitoring identified in the QAPP over a period that extends from water year 2016 through the first quarter of water year 2022 (a water year is defined as the 12-month period that extends from October 1 in any given year through September 30 of the following year). This scope of work amends this previous contract to extend the monitoring implementation through the following periods:

- Last three quarters of water year 2022 (January 1, 2022 through September 30, 2022)

- All of water year 2023 (October 1, 2022 through September 30, 2023)
- All of water year 2024 (October 1, 2023 through December 31, 2024)

Pursuant to this scope of work, Herrera will take the lead role for implementing all the components of the study's experimental design identified above except hydrologic monitoring; King County will lead this component of the study under a separate contract with the City.

The QAPP for the RPWS indicates trend analyses reports should also be prepared following 4, 6, 8, and 10 years of study implementation. These reports summarize the results of statistical analyses that are described in the QAPP to identify relationships between rehabilitation efforts and improving receiving water conditions. This scope of work includes a task for preparing the trend analysis report following 8 years of study implementation. The trend analyses report following 4 years of study implementation was prepared under Task 10.0 from Supplemental Agreement #2 to the contract for the RPWS. This amendment removes work and budget ($54,280) identified under Task 11.0 from Supplemental Agreement #2 to prepare the trend analysis report following 6 years of study implementation. This change was made with Ecology's concurrence to reduce the overall budget for the study while allowing for a longer period of data collection before conducting analyses to identify relationships between rehabilitation efforts and improving receiving water conditions.

The QAPP also established an Effectiveness Monitoring component for the RPWS to verify specific structural stormwater controls are constructed properly and performing as designed. The City has retrofitted two existing stormwater detention ponds in the Monticello Watershed with a continuous monitoring and adaptive control (CMAC) system to improve their performance for managing peak flows during storm events. This scope of work also amends the previous contract to include a task for monitoring the effectiveness of the pond retrofits pursuant to procedures that are identified in the RPWS Pond Retrofit Effectiveness Monitoring Proposal dated February 1, 2021.

Finally, the Evans Creek watershed is identified as an Application Watershed in the QAPP for the RPWS because it was prioritized by King County (County) for rehabilitation efforts at the onset of the study; specifically, the County constructed two stormwater detention ponds within the watershed in water year 2017. Monitoring has subsequently occurred at individual stations within this watershed over the period extending from water year 2016 through water year 2021. The performance of these ponds for improving receiving water conditions was analyzed in the trend analysis report that was prepared after 4 years of study implementation. Results from this analysis indicated the ponds are generally providing no measurable benefit to the creek. Because the County is not planning to implement any additional rehabilitation efforts within the Evans Creek watershed in the short-term, monitoring at all stations within this watershed is being suspended through this amendment. This change was made with Ecology's concurrence to reduce the overall budget for the study.

This scope of work includes a discussion of the activities, assumptions, deliverables associated with the following tasks:

- Task 12.0 - Water Year 2022 (Q2-Q4) Study Implementation
- Task 13.0 - Water Year 2023 (Q1-Q4) Study Implementation
- Task 14.0 – Water Year 2024 (Q1-Q4) Study Implementation
- Task 15.0 - Trend Analysis Report: Water Years 2016 - 2023
- Task 16.0 - Pond Retrofit Effectiveness Monitoring

The cost by deliverable, and schedule by deliverable for work to be performed by Herrera are included in a separate payment schedule (Exhibit B).

TASK 12.0 – WATER YEAR 2022 (Q2-Q4) STUDY IMPLEMENTATION

Under this task, Herrera will implement required monitoring activities identified in the QAPP for the RPWS over the final three quarters of water year 2022 (January 1, 2022 through September 30, 2022). This would include field measurement collection, data management and quality assurance review, and reporting. These activities are described in more detail under the following subtasks:

Subtask 12.1 - Hydrologic Monitoring

The hydrologic monitoring component of the RPWS involves continuous flow monitoring at 12 stations. Data from the continuous flow monitoring is processed to calculate a suite of indicators for evaluating hydrologic impacts from urban development. King County is leading the implementation of the hydrologic monitoring component of the study under a separate contract with the City. Herrera's involvement will entail the post processing of data compiled by King County to generate summary statistics (e.g., antecedent dry period, flow at time of sample collection) from the flow record for storm and base flow events that were sampled for water quality under Subtask 12.2. Herrera will also coordinate with King County to summarize the continuous flow monitoring data for each station for presentation in the data report described in Subtask 12.4.

Assumptions

- King County will make available continuous flow monitoring data in an electronic format for post processing by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.

Deliverables

- Table with flow summary statistics for sampled storm and base flow events from 12 stations.

Subtask 12.2- Water Quality Monitoring

The water quality monitoring component of the RPWS involves the collection of up to twelve grab samples over the water year during storm events (three each quarter) at 12 stations. In addition, up to four grab samples will be collected over the water year during base flow (one each quarter) at these stations. Each sample will be analyzed for the following indicators for evaluating water quality impacts from urban development:

- Total suspended solids
- Turbidity
- Hardness
- Dissolved organic carbon
- Fecal coliform bacteria
- Total phosphorus
- Total nitrogen
- Copper, total and dissolved
- Zinc, total and dissolved

In addition, probes will be used for continuous in-situ monitoring of temperature at all 12 stations.

Under this subtask, Herrera will oversee the collection of grab samples during both storm and base flow events. This will include the following activities that will be performed in accordance with the QAPP for the study:

- Weather tracking and go/no go decision coordination
- Mobilization of field crews for sampling during the event
- Delivery of samples to the laboratory after the event
- Auditing of laboratory analytical results within seven days of their receipt

- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of graphical and tabular summaries for the data report described in Subtask 12.4

King County will oversee the continuous in-situ monitoring at each station under a separate contract with the City. Herrera will coordinate with King County to summarize these data in the data report described in Subtask 12.4.

Assumptions

- Storm event sampling will be performed by two teams of two Herrera staff. Sampling for each event will be performed over an 8- hour period including travel but not including storm tracking and go/no go decision coordination. A 15 percent contingency is included to account for sampling event false starts and to allow for make-up sampling.
- Nominally, all 12 stations will be sampled during each storm event. If specific stations are not sampled because a sampling event was terminated, they will be prioritized for sampling in subsequent events to ensure the annual sampling goals established for the study are met for every station.
- Base flow event sampling will be performed by one team of two Herrera staff. Sampling for each event will be performed over a 10- hour period including travel.
- King County will provide continuous water quality monitoring data in an electronic format for review by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.
- Obtaining storm event samples may not be possible during particularly dry quarters. If this should occur, efforts will be made to conduct makeup sampling in subsequent quarters to obtain twelve grab samples from each station over the water year.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from water quality sampling at 12 stations during 3 storm events and 1 base flow event per quarter; these data will be uploaded to the Environmental Information Management (EIM) database.
- Data validation memorandum.

Subtask 12.3 - Biological Monitoring

Under this subtask, Herrera will conduct biological monitoring for the RPWS once during the water year at 17 stations. Pursuant to the QAPP for the study, this entails the collection of a composite sample of benthic macro invertebrates from specific locations along the cross-sections for physical habitat monitoring. These samples will be submitted to an analytical laboratory where they will be processed to compute the following indicators for use in evaluating stream health:

- Benthic Index of Biotic Integrity
- Taxa Richness
- Ephemeroptera Richness
- Plecoptera Richness
- Trichoptera Richness Clinger Percent
- Long-Lived Richness
- Intolerant Richness
- Percent Dominant
- Predator Percent
- Tolerant Percent

Assumptions

- Benthic macro invertebrate sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.
- A delay of approximately 6 months can be expected for obtaining processed indicators for evaluating stream health from the analytical laboratory.

Deliverables

- Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database.

Subtask 12.4- Water Year Data Summary Report

Herrera will prepare a data summary report with tabular and/or graphical summaries of all data that were collected over the water year in connection with the following monitoring components of the RPWS: hydrologic, water quality, sediment quality, physical habitat, and biological. This report will provide a detailed description of any quality assurance issues associated with these data based on results from audits and data validation memoranda. Any corrective actions that were undertaken to address quality assurance issues will also be described. Finally, this report will document all rehabilitation efforts that have occurred in the Application watersheds over the previous year. Included will be detailed information on the design and operational status of structural stormwater controls and the frequency and geographic extent of nonstructural stormwater control implementation.

Herrera will collaborate with King County to prepare a preliminary draft of the data summary report for review by the City. Based on comments received from the City, Herrera will then prepare a revised draft for review by Ecology and the technical advisory committee (TAC) that has been established for the study (see Subtask 12.5). Herrera will then prepare a finalized version of the report based on comments received.

Deliverables

- Preliminary draft data summary report.
- Draft data summary report.
- Final data summary report.

Subtask 12.5 -Technical Advisory Committee Coordination

The TAC for this study includes representation from the following agencies: Ecology, King County, City of Seattle, and the U.S. Geological Survey (USGS). Under this subtask, Herrera will coordinate and participate in up to two meetings to obtain input from the committee on technical issues related to the study over water year 2022. It is anticipated that one of these meetings may occur after the release of the data report from Subtask 12.4 to review and discuss the monitoring results from the water year. Contingency budget is also provided for a second, optional meeting to address unforeseen issues that may arise during implementation of the RPWS over the water year.

Assumptions

- Technical advisory committee meetings will last 2-hours and be attended by up to 3 Herrera staff.

Deliverables

- Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.

Subtask 12.6 - Project Management

Herrera will be responsible for ongoing contract administration of this project, including preparing invoices and progress reports, as well as coordination of all work efforts with the designated City point of contact and the Project Team. The Herrera project manager (John Lenth) will have phone and e-mail contact with the City on an as-needed basis.

Deliverables

- Monthly invoices and progress reports.

TASK 13.0 – WATER YEAR 2023 (Q1 – Q4) STUDY IMPLEMENTATION

Under this task, Herrera will implement required monitoring activities identified in the QAPP for the RPWS over water year 2023 (October 1, 2022 through September 30, 2023). This would include field measurement collection, data management and quality assurance review, and reporting. These activities are described in more detail under the following subtasks:

Subtask 13.1 - Hydrologic Monitoring

The hydrologic monitoring component of the RPWS involves continuous flow monitoring at 12 stations. Data from the continuous flow monitoring is processed to calculate a suite of indicators for evaluating hydrologic impacts from urban development. King County is leading the implementation of the hydrologic monitoring component of the study under a separate contract with the City. Herrera's involvement will entail the post processing of data compiled by King County to generate summary statistics (e.g., antecedent dry period, flow at time of sample collection) from the flow record for storm and base flow events that were sampled for water quality under Subtask 13.2. Herrera will also coordinate with King County to summarize the continuous flow monitoring data for each station for presentation in the data report described in Subtask 13.6.

Assumptions

- King County will make available continuous flow monitoring data in an electronic format for post processing by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.

Deliverables

- Table with flow summary statistics for sampled storm and base flow events from 12 stations.

Subtask 13.2- Water Quality Monitoring

The water quality monitoring component of the RPWS involves the collection of up to twelve grab samples over the water year during storm events (three each quarter) at 12 stations. In addition, up to four grab samples will be collected over the water year during base flow (one each quarter) at these stations. Each sample will be analyzed for the following indicators for evaluating water quality impacts from urban development:

- Total suspended solids
- Turbidity
- Hardness
- Dissolved organic carbon
- Fecal coliform bacteria
- Total phosphorus
- Total nitrogen
- Copper, total and dissolved
- Zinc, total and dissolved

In addition, probes will be used for continuous in-situ monitoring of temperature at all 12 stations.

Under this subtask, Herrera will oversee the collection of grab samples during both storm and base flow events. This will include the following activities that will be performed in accordance with the QAPP for the study:

- Weather tracking and go/no go decision coordination
- Mobilization of field crews for sampling during the event
- Delivery of samples to the laboratory after the event
- Auditing of laboratory analytical results within seven days of their receipt

- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of graphical and tabular summaries for the data report described in Subtask 13.6.

King County will oversee the continuous in-situ monitoring at each station under a separate contract with the City. Herrera will coordinate with King County to summarize these data in the data report described in Subtask 13.6.

Assumptions

- Storm event sampling will be performed by two teams of two Herrera staff. Sampling for each event will be performed over an 8- hour period including travel but not including storm tracking and go/no go decision coordination. A 15 percent contingency is included to account for sampling event false starts and to allow for make-up sampling.
- Nominally, all 12 stations will be sampled during each storm event. If specific stations are not sampled because a sampling event was terminated, they will be prioritized for sampling in subsequent events to ensure the annual sampling goals established for the study are met for every station.
- Base flow event sampling will be performed by one team of two Herrera staff. Sampling for each event will be performed over a 10- hour period including travel.
- King County will provide continuous water quality monitoring data in an electronic format for review by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.
- Obtaining storm event samples may not be possible during particularly dry quarters. If this should occur, efforts will be made to conduct makeup sampling in subsequent quarters to obtain twelve grab samples from each station over the water year.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from water quality sampling at 12 stations during 3 storm events and 1 base flow event per quarter; these data will be uploaded to the Environmental Information Management (EIM) database.
- Data validation memorandum.

Subtask 13.3 - Sediment Quality Monitoring

The sediment quality monitoring component of the RPWS involves the collection of sediment samples once during the water year at 17 monitoring stations. Each sample will be analyzed for the following indicators for evaluating sediment quality impacts from urban development:

- Total organic carbon
- Copper
- Zinc
- Polycyclic aromatic hydrocarbons
- Phthalates

Under this subtask, Herrera will oversee the collection of these sediment samples. This includes the following activities that will be performed in accordance with the QAPP for the study:

- Mobilization of field crews for sampling
- Delivery of samples to the laboratory after the event
- Auditing of laboratory analytical results within seven days of their receipt
- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of tabular summaries for the data report described in Subtask 13.6

Assumptions

- Sediment samples and the benthic macro invertebrate samples described in Subtask 13.5 will be collected during the same field visit to each station. This sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from sediment sampling at 17 stations.
- Data validation memorandum.

Subtask 13.4 - Physical Habitat Monitoring

Under this subtask, Herrera will conduct physical habitat monitoring for the RPWS once during the water year at 17 monitoring stations. Herrera will coordinate with Ecology's Environmental Assessment Program (EAP) for training, data management, and quality control of habitat data. At each station, the characteristic bed-form type will be recorded as a whole, and physical habitat quality indicators will be measured at 11 cross sections and one longitudinal (thalweg) profile. Pursuant to the QAPP for the study, the following indicators will be measured at each cross-section:

- Bank-full width, wetted width, and cumulative bar width
- Bank-full depth, wetted depth, substrate class and embeddedness
- Fish cover
- Riparian shading
- Riparian vegetation structure

The following indicators will be measured along the thalweg profile:

- Thalweg depth and the presence of bars and/or edge pools
- Main channel slope and bearing
- Large woody debris tally, including notation of diameter, length, category, zone, and key-pieces

Upon completion of field work, physical habitat monitoring data will be uploaded to the EIM. Based on post processing of these data within this system, Ecology will provide a suite of indicators for assessing physical habitat quality that are consistent with those being used for the broader SAM program. Herrera will summarize these indicators for presentation in the data report described in Subtask 13.6.

Assumptions

- One Herrera staff will participate in an Ecology sponsored 2-day training session on the physical habitat monitoring protocols developed for the SAM program. This staff will coordinate an additional 1-day training session for three additional Herrera staff that will be involved in the monitoring.
- Physical habitat monitoring will be performed by two teams having two Herrera staff. Physical habitat monitoring at each station will require approximately 8-hours of field time including travel.

- Data from the physical habitat monitoring will be recorded on custom forms while in the field. The custom forms will be reviewed in the field upon completion of the monitoring at each station to ensure all required data have been collected. In an office setting, data from the custom forms will then be transferred to the electronic field data collection software that has been developed by Ecology to ensure completeness in field data collection and facilitate upload of these data to Ecology's Watershed Health database in the EIM. Ecology's Environmental Assessment Program (EAP) will perform quality assurance review of the compiled physical habitat monitoring data and calculate metrics for assessing physical habitat conditions using scripts that have been developed to work with the Watershed Health database in the EIM. Costs for EAP's support for these activities are not included in the cost proposal for this scope of work.

- A delay of approximately 6 months can be expected for obtaining processed indicators for assessing physical habitat conditions from EAP via the Watershed Health database in the EIM system.

Deliverables

- Results from physical habitat monitoring at 17 stations that are uploaded to Watershed Health database in the EIM.

Subtask 13.5 - Biological Monitoring

Under this subtask, Herrera will conduct biological monitoring for the RPWS once during the water year at 17 stations. Pursuant to the QAPP for the study, this entails the collection of a composite sample of benthic macro invertebrates from specific locations along the cross-sections for physical habitat monitoring. These samples will be submitted to an analytical laboratory where they will be processed to compute the following indicators for use in evaluating stream health:

- Benthic Index of Biotic Integrity
- Taxa Richness
- Ephemeroptera Richness
- Plecoptera Richness
- Trichoptera Richness Clinger Percent
- Long-Lived Richness
- Intolerant Richness

- Percent Dominant
- Predator Percent
- Tolerant Percent

Assumptions

- Benthic macro invertebrate samples and the sediment samples described in Subtask 13.3 will be collected during the same field visit to each station. This sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.
- A delay of approximately 6 months can be expected for obtaining processed indicators for evaluating stream health from the analytical laboratory.

Deliverables

- Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database.

Subtask 13.6- Water Year Data Summary Report

Herrera will prepare a data summary report with tabular and/or graphical summaries of all data that were collected over the water year in connection with the following monitoring components of the RPWS: hydrologic, water quality, sediment quality, physical habitat, and biological. This report will provide a detailed description of any quality assurance issues associated with these data based on results from audits and data validation memoranda. Any corrective actions that were undertaken to address quality assurance issues will also be described. Finally, this report will document all rehabilitation efforts that have occurred in the Application watersheds over the previous year. Included will be detailed information on the design and operational status of structural stormwater controls and the frequency and geographic extent of nonstructural stormwater control implementation.

Herrera will collaborate with King County to prepare a preliminary draft of the data summary report for review by the City. Based on comments received from the City, Herrera will then prepare a revised draft for review by Ecology and the TAC that has been established for the study (see Subtask 13.7). Herrera will then prepare a finalized version of the report based on comments received.

Deliverables

- Preliminary draft data summary report.

- Draft data summary report.
- Final data summary report.

Subtask 13.7 -Technical Advisory Committee Coordination

The TAC for this study includes representation from the following agencies: Ecology, King County, City of Seattle, and the USGS. Under this subtask, Herrera will coordinate and participate in up to two meetings to obtain input from the committee on technical issues related to the study over water year 2023. It is anticipated that one of these meetings may occur after the release of the data report from Subtask 13.6 to review and discuss the monitoring results from the water year. Contingency budget is also provided for a second, optional meeting to address unforeseen issues that may arise during implementation of the RPWS over the water year.

Assumptions

- Technical advisory committee meetings will last 2-hours and be attended by up to 3 Herrera staff.

Deliverables

- Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.

Subtask 13.8 - Project Management

Herrera will be responsible for ongoing contract administration of this project, including preparing invoices and progress reports, as well as coordination of all work efforts with the designated City point of contact and the Project Team. The Herrera project manager (John Lenth) will have phone and e-mail contact with the City on an as-needed basis.

Deliverables

- Monthly invoices and progress reports.

TASK 14.0 – WATER YEAR 2024 (Q1-Q4) STUDY IMPLEMENTATION

Under this task, Herrera will implement required monitoring activities identified in the QAPP for the RPWS over the first quarter of water year 2024 (October 1, 2023 through September 30, 2024). This would include field measurement collection, data management and quality assurance review, and reporting. These activities are described in more detail under the following subtasks:

Subtask 14.1 - Hydrologic Monitoring

The hydrologic monitoring component of the RPWS involves continuous flow monitoring at 12 stations. Data from the continuous flow monitoring is processed to calculate a suite of indicators for evaluating hydrologic impacts from urban development. King County is leading the implementation of the hydrologic monitoring component of the study under a separate contract with the City. Herrera's involvement will entail the post processing of data compiled by King County to generate summary statistics (e.g., antecedent dry period, flow at time of sample collection) from the flow record for storm and base flow events that were sampled for water quality under Subtask 14.2. Herrera will also coordinate with King County to summarize the continuous flow monitoring data for each station for presentation in the data report described in Subtask 14.4.

Assumptions

- King County will make available continuous flow monitoring data in an electronic format for post processing by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.

Deliverables

- Table with flow summary statistics for sampled storm and base flow events from 12 stations.

Subtask 14.2- Water Quality Monitoring

The water quality monitoring component of the RPWS involves the collection of up to twelve grab samples over the water year during storm events (three each quarter) at 12 stations. In addition, up to four grab samples will be collected over the water year during base flow (one each quarter) at these stations. Each sample will be analyzed for the following indicators for evaluating water quality impacts from urban development:

- Total suspended solids
- Turbidity
- Hardness
- Dissolved organic carbon
- Fecal coliform bacteria
- Total phosphorus
- Total nitrogen

- Copper, total and dissolved
- Zinc, total and dissolved

In addition, probes will be used for continuous in-situ monitoring of temperature at all 12 stations.

Under this subtask, Herrera will oversee the collection of grab samples during both storm and base flow events. This will include the following activities that will be performed in accordance with the QAPP for the study:

- Weather tracking and go/no go decision coordination
- Mobilization of field crews for sampling during the event
- Delivery of samples to the laboratory after the event
- Auditing of laboratory analytical results within seven days of their receipt
- Entry of the analytical results into the study's data management system
- Preparation of a data validation memorandum that will establish the usability of all the data
- Preparation of graphical and tabular summaries for the data report described in Subtask 14.4

King County will oversee the continuous in-situ monitoring at each station under a separate contract with the City. Herrera will coordinate with King County to summarize these data in the data report described in Subtask 14.4.

Assumptions

- Storm event sampling will be performed by two teams of two Herrera staff. Sampling for each event will be performed over an 8- hour period including travel but not including storm tracking and go/no go decision coordination. A 15 percent contingency is included to account for sampling event false starts and to allow for make-up sampling.
- Nominally, all 12 stations will be sampled during each storm event. If specific stations are not sampled because a sampling event was terminated, they will be prioritized for sampling in subsequent events to ensure the annual sampling goals established for the study are met for every station.
- Base flow event sampling will be performed by one team of two Herrera staff. Sampling for each event will be performed over a 10- hour period including travel.

- King County will provide continuous water quality monitoring data in an electronic format for review by Herrera. King County will perform a quality assurance review on these data that will clearly identify any limitations to their use and interpretation.

- Obtaining storm event samples may not be possible during particularly dry quarters. If this should occur, efforts will be made to conduct makeup sampling in subsequent quarters to obtain twelve grab samples from each station over the water year.

Deliverables

- Laboratory analytical results and documentation of Herrera audits from water quality sampling at 12 stations during 3 storm events and 1 base flow event per quarter; these data will be uploaded to the Environmental Information Management (EIM) database.

- Data validation memorandum.

Subtask 14.3 - Biological Monitoring

Under this subtask, Herrera will conduct biological monitoring for the RPWS once during the water year at 17 stations. Pursuant to the QAPP for the study, this entails the collection of a composite sample of benthic macro invertebrates from specific locations along the cross-sections for physical habitat monitoring. These samples will be submitted to an analytical laboratory where they will be processed to compute the following indicators for use in evaluating stream health:

- Benthic Index of Biotic Integrity
- Taxa Richness
- Ephemeroptera Richness
- Plecoptera Richness
- Trichoptera Richness Clinger Percent
- Long-Lived Richness
- Intolerant Richness
- Percent Dominant
- Predator Percent
- Tolerant Percent

Assumptions

- Benthic macro invertebrate sample collection will be performed by one team having two Herrera staff. Collection of these samples from 3 stations will require approximately 8-hours of field time including travel.
- A delay of approximately 6 months can be expected for obtaining processed indicators for evaluating stream health from the analytical laboratory.

Deliverables

- Laboratory results from macroinvertebrate sample analysis for 17 stations entered into the Puget Sound Stream Benthos database.

Subtask 14.4- Water Year Data Summary Report

Herrera will prepare a data summary report with tabular and/or graphical summaries of all data that were collected over the water year in connection with the following monitoring components of the RPWS: hydrologic, water quality, sediment quality, physical habitat, and biological. This report will provide a detailed description of any quality assurance issues associated with these data based on results from audits and data validation memoranda. Any corrective actions that were undertaken to address quality assurance issues will also be described. Finally, this report will document all rehabilitation efforts that have occurred in the Application watersheds over the previous year. Included will be detailed information on the design and operational status of structural stormwater controls and the frequency and geographic extent of nonstructural stormwater control implementation.

Herrera will collaborate with King County to prepare a preliminary draft of the data summary report for review by the City. Based on comments received from the City, Herrera will then prepare a revised draft for review by Ecology and the TAC that has been established for the study (see Subtask 14.5). Herrera will then prepare a finalized version of the report based on comments received.

Deliverables

- Preliminary draft data summary report.
- Draft data summary report.
- Final data summary report.

Subtask 14.5 -Technical Advisory Committee Coordination

The TAC for this study includes representation from the following agencies: Ecology, King County, City of Seattle, and the USGS. Under this subtask, Herrera will coordinate and participate in up to two meetings to obtain input from the committee on technical issues related to the study over water year 2022. It is anticipated that one of these meetings may occur after the release of the data report from Subtask 14.4 to review and discuss the monitoring results from the water year. Contingency budget is also provided for a second, optional meeting to address unforeseen issues that may arise during implementation of the RPWS over the water year.

Assumptions

- Technical advisory committee meetings will last 2-hours and be attended by up to 3 Herrera staff.

Deliverables

- Meeting notes documenting discussion items and consensus decisions from the technical advisory committee.

Subtask 14.6 - Project Management

Herrera will be responsible for ongoing contract administration of this project, including preparing invoices and progress reports, as well as coordination of all work efforts with the designated City point of contact and the Project Team. The Herrera project manager (John Lenth) will have phone and e-mail contact with the City on an as-needed basis.

Deliverables

- Monthly invoices and progress reports.

TASK 15.0 –TREND ANALYSIS REPORT: WATER YEARS 2016 - 2023

Following completion of required monitoring for water year 2023 and preparation of the associated data summary report, Herrera will prepare a trend analysis report covering data collected over the first 8 years of study implementation (water years 2016 – 2023). This report will summarize results from statistical analyses performed to detect improving or degrading trends in receiving water conditions in the seven watersheds that are the focus of monitoring efforts for the RPWS. A detailed discussion of these trends will be provided with a specific emphasis on relationships between trends and rehabilitation efforts in the Application watersheds relative to trends in the Reference and Control watersheds. A summary of major conclusions from these analyses will also be provided.

Statistical analyses will follow procedures that are described in the QAPP and documented in minutes from the technical advisory committee meeting that occurred on July 29, 2019. The following specific procedures will be performed in connection with these analyses:

- Correlation analyses to detect trends over time in water and sediment pollutant concentration data and computed indicators from hydrologic and biological monitoring.
- Computation of annual mass load estimates from data for a subset of parameters from water quality monitoring; correlation analyses would then be performed on these estimates to detect trends over time.
- Comparison of data from physical habitat monitoring to reference conditions from Puget Sound lowland ecoregion streams.

Herrera will collaborate with King County to prepare a preliminary draft of the trend analysis report for review by the City. Based on comments received from the City, Herrera will then prepare a revised draft for review by Ecology and the TAC that has been established for the study. Herrera will then prepare a finalized version of the report based on comments received.

Herrera will communicate the trend findings report by creating and conducting two (2) presentations of the design results, and interim-study conclusions to permittees and stakeholders. One of these presentations will be made to the Stormwater Work Group. The other can be made at a conference with a stormwater and regional focus (e.g. MuniCon), upon agreement with the City and Ecology (SAM Coordinator). Herrera will also create a SAM factsheet for distribution on the SAM website.

Assumptions

- Comments on the draft and revised draft trend analysis reports will be provided using a standardized template to be provided by Herrera.

Deliverables

- Preliminary draft trend analysis report.
- Draft trend analysis report.
- Final trend analysis report.
- Two presentations on study design and findings to date.
- SAM factsheet on project findings to date.

TASK 16.0 – POND RETROFIT EFFECTIVENESS MONITORING

Herrera will implement monitoring to evaluate the effectiveness two existing stormwater detention ponds in the Monticello Watershed that were retrofitted with a CMAC system to improve their performance for managing peak flows during storm events. As described in the RPWS Pond Retrofit Effectiveness Monitoring Proposal dated February 1, 2021, this monitoring will involve the following steps:

1. Develop relationships for predicting the available storage in each pond as a function of stage.
2. Develop spreadsheet models to predict inlet discharge to the ponds in 15-minute intervals based on the relationship from Step 1 and using measured data from the CMAC system for outlet discharge and stage.
3. Estimate the inlet discharge for each pond over an entire water year using the models from Step 2 and the continuous measurements (15-minute logging interval) of outlet discharge and stage from the CMAC system over the same period.
4. Use the continuous estimates of inlet discharge from Step 3 as input for a Western Washington Hydrology Model (WWHM) that will be developed for each pond to predict outlet discharge in their current configuration.
5. Conduct statistical analyses to detect a significant decrease in peak outlet discharge from the ponds relative to the expected peak outlet discharge of the ponds in their current configuration.

In addition to the comparison in Step 5, data from the hydrologic monitoring described above will be analyzed to detect improving trends in receiving water conditions that may stem from the pond retrofits. Similarly, data from the physical habitat monitoring stations described above will be analyzed for the same purpose.

The effectiveness monitoring will initiate once the CMAC system becomes operational in each pond (spring of 2021) and extend over a period capturing water years 2022 and 2023. This will produce a continuous time series of outlet discharge data that will be collected over a sufficient duration to detect pond performance improvements across a range of storm sizes.

Results from the analyses described above will be summarized in a stand-alone effectiveness monitoring report that will be produced following the conclusion of monitoring at the end of water year 2023. A preliminary draft version of this report will be produced for review by the City. Based on comments received from the City, Herrera will then prepare a revised draft for review by Ecology and the TAC that has been established for the study. Herrera will then prepare

a finalized version of the report based on comments received. Herrera will also create a SAM factsheet for distribution on the SAM website.

Deliverables

- Spreadsheet and WWHM models to predict pond outlet discharge.
- Inlet discharge estimates for ponds through the end of WY2022.
- Inlet discharge estimates for ponds through the end of WY2023.
- Preliminary draft effectiveness monitoring report.
- Draft effectiveness monitoring report.
- Final effectiveness monitoring report.
- SAM Factsheet.

EXHIBIT B: PAYMENT SCHEDULE

Redmond Paired Basin Retrofit Effectiveness monitoring Implementation - Water Years 2022 (Q2-Q4) - 2024 (Q1-Q4)

Task/Deliverable	Target Completion Date	Quantity	Unit Cost	Total by Deliverable
Task 11.0 – Trend Analysis Report: Water Years 2016 - 2021				
Draft data analyis report	Jun 2022	0	$ 39,900	$ (39,900)
Final data analysis report	Aug 2022	0	$ 9,980	$ (9,980)
Stormwater Work Group and Conference Presentations	Sep - Dec 2022	0	$ 1,650	$ (3,300)
Fact Sheet	Sep 2022	0	$ 1,100	$ (1,100)
Task Total				$ (54,280)
Task 12.0 – Water Year 2022 (Q2 - Q4) Study Implementation				
Subtask 12.1 – Hydrologic Monitoring				
Table with flow summary statistics for sampled storm and base flow events from 12 stations	Mar 2023	1	$ 7,850	$ 7,850
Subtask Total				$ 7,850
Subtask 12.2 – Water Quality Monitoring				
Laboratory analytical results and documentation of Herrera audits for 12 stations x 12 sampling events	Dec 2022	12	$ 7,770	$ 93,240
Data validation memorandum	Mar 2023	1	$ 13,800	$ 13,800
Subtask Total				$ 107,040
Subtask 12.3 – Biological Monitoring				
Laboratory results from macroinvertebrate sample analysis for 17 stations	Mar 2023	1	$ 14,810	$ 14,810
				$ 14,810
Subtask 12.4 – Water Year Data Summary Report				
Draft data summary report	Jun 2023	1	$ 21,500	$ 21,500
Final data summary report	Sep 2023	1	$ 5,390	$ 5,390
Subtask Total				$ 26,890
Subtask 12.5 – Technical Advisory Committee Coordination				
Meeting notes documenting discussion items and consensus decisions	Jun 2023	2	$ 1,850	$ 3,700
Subtask Total				$ 3,700
Subtask 12.6 – Project Management				
Monthly invoices and progress reports	Sep 2022	9	$ 1,860	$ 16,740
Subtask Total				$ 16,740
Task Total				$ 177,030

EXHIBIT B: PAYMENT SCHEDULE

Redmond Paired Basin Retrofit Effectiveness monitoring Implementation - Water Years 2022 (Q2-Q4) - 2024 (Q1-Q4)

Task/Deliverable	Target Completion Date	Quantity	Unit Cost	Total by Deliverable
Task 13.0 – Water Year 2023 (Q1 - Q4) Study Implementation				
Subtask 13.1 – Hydrologic Monitoring				
Table with flow summary statistics for sampled storm and base flow events from 12 stations	Mar 2024	1	$ 8,080	$ 8,080
Subtask Total				$ 8,080
Subtask 13.2 – Water Quality Monitoring				
Laboratory analytical results and documentation of Herrera audits for 12 stations x 16 sampling events	Dec 2023	16	$ 7,910	$ 126,560
Data validation memorandum	Mar 2024	1	$ 14,100	$ 14,100
Subtask Total				$ 140,660
Subtask 13.3 – Sediment Quality Monitoring				
Laboratory analytical results and documentation of Herrera audits for 17 stations	Dec 2023	1	$ 17,500	$ 17,500
Data validation memorandum	Mar 2024	1	$ 4,380	$ 4,380
Subtask Total				$ 21,880
Subtask 13.4 – Physical Habitat Monitoring				
Results from physical habitat monitoring at 17 stations	Mar 2024	1	$ 65,750	$ 65,750
Subtask 13.5 – Biological Monitoring				
Laboratory results from macroinvertebrate sample analysis for 17 stations	Mar 2024	1	$ 15,050	$ 15,050
				$ 15,050
Subtask 13.6 – Water Year Data Summary Report				
Draft data summary report	Jun 2024	1	$ 22,200	$ 22,200
Final data summary report	Sep 2024	1	$ 5,540	$ 5,540
Subtask Total				$ 27,740
Subtask 13.7 – Technical Advisory Committee Coordination				
Meeting notes documenting discussion items and consensus decisions	Jun 2024	2	$ 1,900	$ 3,800
Subtask Total				$ 3,800
Subtask 13.8 – Project Management				
Monthly invoices and progress reports	Sep 2023	12	$ 1,920	$ 23,040
Subtask Total				$ 23,040
Task Total				$ 306,000

EXHIBIT B: PAYMENT SCHEDULE

Redmond Paired Basin Retrofit Effectiveness monitoring Implementation - Water Years 2022 (Q2-Q4) - 2024 (Q1-Q4)

Task/Deliverable	Target Completion Date	Quantity	Unit Cost	Total by Deliverable
Task 14.0 – Water Year 2024 (Q1 - Q4) Study Implementation				
Subtask 14.1 – Hydrologic Monitoring				
Table with flow summary statistics for sampled storm and base flow events from 12 stations	Mar 2025	1	$ 8,310	$ 8,310
Subtask Total				$ 8,310
Subtask 14.2 – Water Quality Monitoring				
Laboratory analytical results and documentation of Herrera audits for 12 stations x 16 sampling events	Dec 2024	16	$ 8,050	$ 128,800
Data validation memorandum	Mar 2025	1	$ 14,300	$ 14,300
Subtask Total				$ 143,100
Subtask 13.5 – Biological Monitoring				
Laboratory results from macroinvertebrate sample analysis for 17 stations	Mar 2025	1	$ 15,050	$ 15,050
				$ 15,050
Subtask 13.6 – Water Year Data Summary Report				
Draft data summary report	Jun 2025	1	$ 22,800	$ 22,800
Final data summary report	Sep 2025	1	$ 5,700	$ 5,700
Subtask Total				$ 28,500
Subtask 13.7 – Technical Advisory Committee Coordination				
Meeting notes documenting discussion items and consensus decisions	Jun 2025	2	$ 1,900	$ 3,800
Subtask Total				$ 3,800
Subtask 14.2 – Project Management				
Monthly invoices and progress reports	Sep 2024	12	$ 1,970	$ 23,640
Subtask Total				$ 23,640
Task Total				$ 222,400

EXHIBIT B: PAYMENT SCHEDULE

Redmond Paired Basin Retrofit Effectiveness monitoring Implementation - Water Years 2022 (Q2-Q4) - 2024 (Q1-Q4)

Task/Deliverable	Target Completion Date	Quantity	Unit Cost	Total by Deliverable
Task 15.0 – Trend Analysis Report: Water Years 2016 - 2023				
Draft trend analyis report	Dec 2024	1	$ 35,000	$ 35,000
Final trend analysis report	Mar 2024	1	$ 7,000	$ 7,000
Stormwater Work Group and Conference Presentations	Mar 2024	2	$ 1,700	$ 3,400
Fact Sheet	Mar 2024	1	$ 1,160	$ 1,160
Task Total				$ 46,560
Task 16.0 – Pond Retrofit Effectiveness Monitoring				
Spreadsheet Models and WWHM models to predict pond outlet discharge	Jun 2022	1	$ 8,000	$ 8,000
Inlet discharge estimates for ponds through the end of WY2022	Dec 2022	1	$ 8,500	$ 8,500
Inlet discharge estimates for ponds through the end of WY2023	Dec 2023	1	$ 8,500	$ 8,500
Draft Effectiveness Monitoring Report	Jan 2024	1	$ 13,840	$ 13,840
Final Effective Monitoring Report	Feb 2024	1	$ 4,000	$ 4,000
Fact sheet	Mar 2024	1	$ 1,160	$ 1,160
Task Total				$ 44,000
Project Total				741,710

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
2022 Subtotal			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
2023 Subtotal			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
2024 Subtotal			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**

Redmond Paired Watershed Total Budget and Grant Funding

Previous Budget Expenses

Council Approval Date	Amount
11/18/2014	$ 96,760.00
9/15/2015	$ 265,680.00
3/1/2016	$ 935,560.00
11/20/2018	$ 477,755.00
11/19/2019	$ 871,094.85
Proposed Budget Expenses	
12/7/2021	$936,444.48

Total: $ 3,583,294.33

Previous Grant Funding

Council Approval Date	Amount
11/18/2014	$ 96,760.00
9/15/2015	$ 265,680.00
3/1/2016	$ 935,560.00
11/20/2018	$ 477,755.00
11/19/2019	$ 871,094.85
Proposed Grant Funding	
12/7/2021	$936,444.48

Total: $ 3,583,294.33

Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-593
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Public Works	Dave Juarez	425-556-2733

DEPARTMENT STAFF:

Public Works	Emily Flanagan	Senior Surface Water Engineer
Public Works	Steve Hitch	Engineering Supervisor
Public Works	Andy Rheaume	Interim Engineering Manager

TITLE:
Approval of Interlocal Agreement (ILA) with King County Flood Control District for partnering on the Avondale Road Erosion Project Accepting Funding in the Amount of $1,550,000

OVERVIEW STATEMENT:
The King County Flood Control District (KCFCD) has added $1,550,000 for the Avondale Road Erosion Project to their CIP budget. This project is a partnership between the City and the KCFCD. Approval of the ILA agrees to the terms of this partnership.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  N/A
- **Required:**
  N/A
- **Council Request:**
  N/A
- **Other Key Facts:**
  We are requesting this item go forward on Consent Agenda for approval at the Council meeting on December 7, 2021.

OUTCOMES:
Approval of this ILA will add $1,550,000 revenue to the Stormwater CIP budget. The agreement allows KCFCD to provide input on the 90% Design.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  N/A
- **Outreach Methods and Results:**
  Once awarded, the City will post partnership information to project website.
- **Feedback Summary:**
  N/A

BUDGET IMPACT:

Total Cost:
$0

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
CIP

Budget Priority:
N/A

Other budget impacts or additional costs: ☒ **Yes** ☐ **No** ☐ **N/A**
If yes, explain:
The 2021-2026 Budget assumed $1,100,000 in revenue from the King County Flood Control District to the Stormwater CIP. This ILA agreement increases the KCFCD contribution by $450,000 to $1,550,000.

Funding source(s):

King County Flood Control District	$1,550,000
Stormwater CIP	$ 733,458
Transportation CIP	$ 436,000
	$2,719,458

Budget/Funding Constraints:
When this project and its costs were initially developed, KCFCD's agreed upon contribution was to be $1,100,000. In anticipation that project costs may rise through design and construction the KCFCD contribution was increased. If the City contribution needs to be increased that request will be brought to the City Council for approval within the budget process.

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
12/1/2020	Business Meeting	Approve
11/10/2020	Committee of the Whole - Planning and Public Works	Approve

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
12/7/2021	Business Meeting	Approve

Time Constraints:
N/A

ANTICIPATED RESULT IF NOT APPROVED:
No additional revenue added to the Stormwater CIP.

ATTACHMENTS:
Attachment A - Draft _ILA_KCFCD
Appendix B - Charter Avondale Road Erosion Project edits 20211015

AGREEMENT FOR

FLOOD RISK REDUCTION IMPROVEMENT PROJECT

BETWEEN THE KING COUNTY FLOOD CONTROL ZONE DISTRICT AND THE CITY OF REDMOND

This Agreement is made between the King County Flood Control Zone District, a quasi-municipal corporation of the State of Washington ("District") and the City of Redmond, a Washington municipal corporation ("City"), (collectively, the "Parties"), for the purpose set forth herein.

RECITALS

A. WHEREAS, the King County Flood Control Zone District is a quasi-municipal corporation of the State of Washington, authorized to provide funding and support for flood risk reduction projects within King County.

B. WHEREAS, the District has identified the Avondale Road/Bear Creek Flood Erosion Project ("Project") as a flood risk reduction project necessary to increase the level of flood protection for King County's residents and has included it for funding for 2020, 2021, and 2022.

C. WHEREAS, utilizing the District's funding, the City desires to implement the Project, including the restoration and strengthening of the Avondale roadway embankment, and the employment of stream restoration techniques and natural stream processes to redirect flow away from the threatened roadway, alleviating future risk.

D. WHEREAS, the Parties agree that time is of the essence in the implementation of this Agreement in order to alleviate flood risk which impacts the safety of King County's residents.

E. WHEREAS, the King County Water and Land Resources Division ("WLRD") is a service provider to the District under the terms of an Interlocal Agreement between the District and King County, and pursuant to that Agreement, WLRD provides contract management and technical expertise for the District for District-funded projects, and may assist the City as requested and as authorized by the District in this capacity for the Project.

AGREEMENT

Based upon the foregoing, the Parties agree as follows:

1. Incorporation of Recitals. All recitals above are hereby incorporated and ratified as part of this Agreement.

2. Scope of Agreement. The District agrees to provide funding for the Project not to exceed the total amount of One Million, One Hundred Thousand Dollars and No Cents

($1,100,000.00) ("Funds"), subject to the terms of this Agreement. The Funds shall be used by the City solely for the performance of the Project, and specifically those tasks identified in the Project's Charter attached hereto as Exhibit A and incorporated herein by this reference. Modifications to and deviations from the Charter by the City shall require advance written approval from the District. The Funds shall not be used for any tasks performed prior to January 1, 2020, even if those tasks appear on the Charter.

3. Term. This Agreement shall be effective upon mutual execution of this Agreement ("Effective Date"). The Agreement shall terminate upon completion of the tasks identified in the Project's Charter, unless earlier terminated in accordance with the terms of this Agreement.

3.1. The District may terminate this Agreement at any time prior to the City entering into a construction contract for the Project by providing the City 90 days' advance written notice,, provided that, unless termination is for cause, the City may continue to submit reasonable requests for reimbursement up to the amount of funds appropriated in an approved District budget for work that was performed prior to the date of termination. After the City has entered into a contract for construction of the Project, the District may not terminate this Agreement except for a material breach by the City. If the District alleges that a material breach has occurred, the District shall provide thirty (30) days' advance written notice of termination to the City and an opportunity to cure. If the City cures the alleged breach within the thirty (30) days or, if the breach cannot be cured within thirty (30) days, the City commences cure within thirty (30) days and provides the District with a date by which the breach will be expeditiously cured in full, then this Agreement shall not terminate. If the City does not cure the breach as provided in this Section, then this Agreement shall terminate at the end of the thirty (30) day period without further action by the District

3.2. The City may terminate this Agreement with 90 days advance written notice to the District, provided that the District shall have no obligation to provide Funds for work occurring after the effective date of termination.

3.3. The Funds were appropriated in the District's 2020 Budget ($550,000), and the District's 2021 Budget ($550,000), with the 2020 budgeted amount carried forward to 2021, for a total allocation of $1,100,000 by the District in 2021. To the extent that the Project requires future appropriations or carryover to a future budget year by the District, the District's obligations are contingent upon the appropriation of sufficient funds, provided, that once the City enters into a contract for construction of the Project, the District's obligations shall be fixed and no longer contingent. If no such appropriation is made and the City has not yet entered into a contract for construction of the Project, this Agreement will terminate at the close of the appropriation year for which the last appropriation that allocated Funds under this Agreement was made.

4. Permitting and Compliance. At all times relevant to the City's performance under the terms of the Agreement, the City shall comply with all applicable federal, state and local laws

and regulations. The City shall obtain and be responsible for all necessary local, state, and federal permits and approvals for the Project, and shall fully comply with all applicable requirements and conditions thereof.

4.1. The City shall obtain and be responsible for all necessary property rights, special use permits, easements, or property acquisitions. Access to private properties for the Project are the sole responsibility of the City, and the District shall notify the City when District access is necessary to effectuate the District's performance under this Agreement.

4.2. Inspections. The District, including its service provider WLRD, may provide technical assistance to the City and coordinate with the City as required on work needed within King County jurisdiction. The District, including its service provider WLRD, shall have the right to inspect the City's Project at the District's request.

4.3. Discriminatory Practices Prohibited. Throughout the term of this Agreement, the City shall fully comply with all equal employment and nondiscrimination provisions of applicable local, state and federal laws.

5. District Review. The City shall review and adhere to the requirements set out in District Resolution FCD 2016-22 in acquiring property or property rights, if any, required for the Project., The City shall also adhere to the terms of the City's Project Management Manual or similar City-adopted policy documents. The City shall maintain and update the Project Charter (Exhibit A hereto) and all modifications thereto shall be submitted to the District for prior written approval. The City shall provide to the District and maintain a project schedule showing all significant events and actions for completion of the Project, including but not be limited to, completion of right-of-way acquisition (if any), permitting approval, completion of contract documents, and completion of construction.

The 30% design for the Avondale Road/Bear Creek Flood Erosion Project was completed by the City in advance of this Agreement. The first milestone for the Project as funded by the District pursuant to this Agreement is the 60% design submittal, and the remaining milestones are described below. Consistent with Exhibit A hereto, the City shall not proceed to the next milestone until the District has reviewed and approved of interim products associated with the preceding milestone consistent with the District's Capital Project Review Protocols:

- 60% Design submittal
- 90% Design submittal
- Final Design submittal
- Construction

The District agrees to review and act upon design submittals in a timely manner and to approve, disapprove, or return submittals for correction within forty-five (45) calendar days from receipt. If the District fails to take action on a design submittal within forty-five (45) calendar days, the design submittal shall be deemed approved, and the City may proceed to the next milestone.

6. Retention and Review of Documents. The City agrees to maintain documentation of all planning, modeling, analysis, and design of the Project sufficient to meet District and state audit standards for a capital project, recognizing that the costs of the Project are paid for in whole or in part by the City and the District. The Parties shall retain all records in accordance with the Washington State Retention Schedules and shall comply with the Washington State Public Records Act, Ch 42.56.RCW. The City shall submit to the District the final report of this Project, in a form and with detail required by the District as provided in Attachment A.

7. Payment of Funds. The City may submit for reimbursement of its actual and reasonable costs and expenses for the Project incurred after January 1, 2020 from the Funds described in Section 2. Requests for reimbursement shall be submitted and reviewed consistent with the procedures, requirements and restrictions set out in this Agreement.

7.1. No more than once a quarter, the City may submit requests for reimbursement of City actual and reasonable costs and expenses incurred on or after January 1, 2020 for the Project. The requests shall be in the form attached (Attachment B) . In connection with submittal of requests for reimbursement, the District may require the City to provide a status or progress report concerning submittal, preparation or completion of any document or work required by this Agreement.

7.2. The District shall review the requests to confirm that they are reimbursable and payable under this Agreement. The District shall endeavor to complete such review within thirty (30) days of receipt of a request in order to determine whether they are reimbursable and payable under this Agreement. The District shall forward a response to the requested reimbursement to the City within forty-five (45) days of the City's request.

7.3. The District may postpone review of a City request for reimbursement where all or any part of the request is unreasonable, inaccurate or incomplete. The District shall notify the City of any inaccuracies or incompleteness within thirty (30) days of receipt of the request. The City shall provide all additional information or data that may be reasonably required to confirm that the expenses are reimbursable and payable under this Agreement within thirty (30) days of the District's request for such additional information or data. If the request is still unreasonable, inaccurate or incomplete in the opinion of the District, the dispute shall be resolved in accordance with paragraph 9.5 below. If the dispute is resolved in the City's favor, the District shall provide reimbursement within thirty (30) days of said resolution.

7.4.

8. Impact on Other Reaches or Segments. The District and the City agree that the Project under this agreement shall not have a detrimental effect on other reaches of Bear Creek. The improvements to Avondale Road shall be deemed not to have such a detrimental effect where the improvements fully protect the conveyance capacity of Bear Creek and provide reasonable flood protection for adjacent properties during the 100-year flood.

9. General Provisions.

9.1. Third Parties. This Agreement and any activities authorized hereunder shall not be construed as granting any rights or privileges to any third person or entity, or as a guarantee or warranty of protection from flooding or flood damage to any person, entity or property, and nothing contained herein shall be construed as waiving any immunity to liability to the City, the District or King County, granted under state statute, including Chapters 86.12 and 86.15 RCW, or as otherwise granted or provided for by law.

9.2. Liens and Encumbrances. The City acknowledges and agrees that it will not cause or allow any lien or encumbrance arising from or related to the Projectauthorized by this Agreement to be placed upon the real property interests of King County and the District. If such lien or encumbrance is so placed, King County and the District shall have the right to remove such lien and charge back the costs of such removal to the City.

9.3. Indemnification. The City shall defend, indemnify and hold harmless the District and King County, and all of their officials, employees, principals, agents and insurers, from any and all claims, demands, suits, actions, losses, costs, attorney fees and expenses, fines, penalties and liability of any kind, including but not limited to injuries to persons or damages to property, relating to, in connection with, or arising out of, whether directly or indirectly, or as a consequence of, the Project, this Agreement, the City's use of the Funds, or the City's exercise of its obligations, rights or privileges under this Agreement.

The foregoing indemnity is specifically and expressly intended to constitute a waiver of the City's immunity under industrial insurance, Title 51 RCW, as respects the District and the County only, and only to the extent necessary to provide the District and the County with a full and complete indemnity of claims made by the indemnitor's employees against the District and the County as the result of the City's actions. This waiver has been mutually negotiated.

The City's obligations under this Section shall survive any termination of this Agreement for claims arising out of the City's actions undertaken pursuant to this Agreement.

9.4. Insurance. The City shall maintain, and shall require its contractors, subcontractors and agents to carry comparable insurance as set forth below, a policy of liability insurance with limits of not less than One Million Dollars ($1,000,000) per occurrence, with a reinsurance liability policy of not less than Ten Million Dollars ($10,000,000), naming the District as an additional insured thereon and will provide the District with a Evidence of Coverage (EOC)

pursuant to Chapter 48.62 RCW; provided, that the District shall accept a certificate from a certified risk pool certifying that the City is a member in good standing and has contractual indemnity coverage applicable to the requirements of this paragraph in fulfillment of insurance requirements. The City's obligations under this Section shall survive any termination of this Agreement.

9.4.1. The City's insurance coverage shall be primary insurance with respect to the District. Any insurance, self-insurance, or insurance pool coverage maintained by the District shall be in excess of the District's insurance and shall not contribute to it.

9.4.2. The City shall waive its rights of subrogation against the District for all claims and suits.

9.4.3. The coverage shall apply separately to each insurance against whom a claim is made or a suit is brought, except with respect to the limits of the insurer's liability.

9.4.4. Upon receipt of notice from its insurer(s), the City shall provide the District with notice of cancellation within three (3) days. It is hereby understood and agreed that the policy may not be canceled nor the intention not to renew be stated until thirty (30) days after receipt by the District, by registered mail, of a written notice addressed to the Chair of such intent to cancel or not to renew. If the insurance is canceled or reduced in coverage, the City shall provide a replacement policy or this Agreement is immediately terminated.

9.4.5. The City's maintenance of insurance policies required by this Agreement shall not be construed to limit the liability of the City to the coverage provided in the insurance policies, or otherwise limit the District's recourse to any other remedy available at law or in equity.

9.5. Dispute Resolution. The Parties will work collaboratively to resolve disagreements arising from the matters provided for in this Agreement. Disagreements will be resolved promptly and at the lowest organizational level. The following is a guide intended to resolve the maximum number of issues at the lowest level of hierarchy:

9.5.1. Each party shall designate a representative (the "Designated Representative") responsible for communications between the parties and as a central point of contact for the resolution of disputes under this Agreement. The initial Designated Representatives are:

CITY OF REDMOND DISTRICT

9.5.2. If the foregoing does not result in resolution and for all other disputes, the Parties may mutually select any informal means of resolution and resort will otherwise be had to the Superior Court for King County, Washington. Each Party will be responsible for its own costs and attorney's fees in connection with the dispute resolution provisions of this paragraph. The Designated Representatives shall use their best efforts to resolve disputes and issues arising out of or related to the matters covered by this Agreement. The Designated Representatives shall communicate regularly to discuss the status of the Project and the resolution of any issues or disputes arising during the term of this Agreement.

9.5.3. Each Designated Representative shall notify the other in writing of any problem or dispute that the Designated Representative believes needs formal resolution. The Designated Representatives shall meet within three (3) business days of receiving the written notice in an attempt to resolve the dispute. The parties may, but shall not be required to, utilize the services of a mediator to assist with problem identification and resolution.

9.5.4. If the Designated Representatives cannot resolve the dispute, the Director of WLRD and the Director of the City's Public Works Department shall meet within ten (10) business days of being notified by the Designated Representatives and shall engage in good faith negotiations to resolve the dispute.

9.5.5. If the Director of WLRD and the Director of the City's Public Works Department cannot resolve the dispute, the Executive Director of the District and the City's Chief Operating Officer shall meet within ten (10) business days after being notified by the Manager and Director and shall engage in good faith negotiations to resolve the dispute.

9.5.6. The parties agree that they will not seek relief under this Agreement in a court of law unless and until each of these dispute resolution steps is exhausted. The preceding sentence shall not apply to the extent any applicable statute of limitations will or may run during the time that may be required to exhaust the dispute resolution steps set forth above, provided, however, that the parties agree that any legal proceeding brought during such period may be stayed, if consistent with applicable law and if the rights of the parties will not be prejudiced thereby, while the dispute resolution steps set forth above are satisfied.

9.6. Entire Agreement; Amendment. This Agreement, together with Exhibit A, represents a full recitation of the rights and responsibilities of the Parties and may be modified only in writing and upon the consent of both Parties. Should any conflict exist between the terms of this Agreement and the terms of the Exhibits, this Agreement shall control.

9.7. Notices, Communications and Documents. Unless applicable law requires a different method of giving notice, any and all notices, demands or other communications required or desired to be given hereunder by either Party (collectively, "notices") shall be in writing and shall be validly given or made to the other Party if delivered either personally or by Federal Express or other overnight delivery service of recognized standing, or if deposited in the United States

Mail, certified, registered, or express mail with postage prepaid, or if sent by electronic mail. If such notice is personally delivered, it shall be conclusively deemed given at the time of such delivery. If such notice is delivered by Federal Express or other overnight delivery service of recognized standing, it shall be deemed given one business day after the deposit thereof with such delivery service. If such notice is mailed as provided herein, such shall be deemed given three business days after the deposit thereof in the United States Mail. If such notice is sent by electronic mail, it shall be deemed given at the time of the sender's transmission of the electronic mail communication, unless the sender receives a response that the electronic mail message was undeliverable. Each such notice shall be deemed given only if properly addressed to the Party to whom such notice is to be given as follows:

To City: Emily Flanagan
Senior Surface Water Engineer
City of Redmond
15670 NE 85th Street
P.O. Box 97010
Mail Stop 2NPW
Redmond, WA 98073-9710
Phone: (425) 556-2707
Email: eflanagan@redmond.gov

To District: Michelle Clark, Executive Director
516 Third Avenue, Room 1200, W-1201
Seattle, WA 98104
Phone: (206) 477-2985
Email: Michelle.Clark@kingcounty.gov

9.8 Authority. The undersigned warrant that they have the authority duly granted by their respective legislative bodies to make and execute this Agreement. This Agreement will be approved and filed in accordance with Chapter 39.34 RCW.

9.9 Severability. If any word, article, section, subsection, paragraph, provision, condition, clause, sentence, or its application to any person or circumstance (collectively referred to as "Term"), shall be held to be illegal, invalid, or unconstitutional for any reason by any court or agency of competent jurisdiction, such Term declared illegal, invalid or unconstitutional shall be severable and the remaining Terms of the Agreement shall remain in full force and effect unless to do so would be inequitable or would result in a material change in the rights and obligations of the Parties hereunder.

9.10 No Joint Venture. It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture, or principal-agent relationship or other arrangement between the City and the District. Neither Party is authorized to, nor shall either Party act toward third Persons or the public in any manner which would indicate any such relationship with the other.

9.11 Force Majeure. In the event either party is prevented or delayed in the performance of any of its obligations herein due to circumstances beyond its control or by reason of a force majeure occurrence, such as, but not limited to, acts of God, acts of terrorism, war, riots, civil disturbances, natural disasters, floods, tornadoes, earthquakes, unusually severe weather conditions, employee strikes and unforeseen labor or availability of materials conditions not attributable to the City's employees or agents, neither party shall be deemed in breach of provisions of this Agreement.

9.12 Venue/Choice of Law. This Agreement shall be governed and construed in accordance with the laws of the State of Washington. Any action brought relative to enforcement of this Agreement, or seeking a declaration of rights, duties or obligations herein, shall be initiated in King County Superior Court.

IN WITNESS WHEREOF, the parties have executed this Agreement, which shall become effective on the last date signed below.

CITY OF REDMOND	**KING COUNTY FLOOD CONTROL ZONE DISTRICT**
By:_____	By:_____
Angela Birney	Dave Upthegrove
Its: Mayor	Its: Board Chair
DATE:_____	DATE:_____
APPROVED AS TO FORM:	APPROVED AS TO FORM:
By:_____	By:_____
James E. Haney	Charlotte A. Archer
City Attorney	District Legal Counsel

Project Charter			Version 01
Project Name	10000 Block Avondale Road Erosion		
Sponsor/Client	City of Redmond		
Project Number	20021807	**Date**	10/15/2021
Project Manager	Emily Flanagan	**Email**	eflanagan@redmond.gov

Charter Objective: The objective of the charter is to document the information as it is known at the beginning of the project – not to get into the planning itself. A good charter creates a summary of the project. It's a very succinct way of sharing good, concrete information about the project with individuals who have questions about the project later. The project charter is a short, 3-4 page document that allows us to have that initial discussion, before launching into detailed planning. It is also a tool to make sure we've brought everyone together and have them on the same page regarding what the project needs to be. It's a very important step to deal with stakeholder expectations.

INSTRUCTIONS: Be sure to display hidden blue instruction text under File tab/Options/Display/Hidden text. Delete this (unhidden) instruction text when form is complete.

Project Statement	What is the project? Provide a brief sentence or two about what the project is.
	The primary purpose of this project is to repair the 90 feet of roadway embankment near the 10000 block of Avondale Road and to provide an environmental lift of Bear Creek within the project limits.
Need/ Justification	Why is it important to achieve the project scope, to be doing this project now? What is expected to be achieved by executing the project? This is a high level business justification.
	Bear Creek has migrated to the west edge of the floodplain near 10000 Avondale Road, about 950 ft north of the Novelty Hill Road intersection. The roadway embankment is experiencing severe scour at the toe, which is resulting in the embankment settling, sidewalk slumping, and damage to existing stormwater outfalls. The City of Redmond (Redmond) has been monitoring the embankment since summer 2018 and a long-term solution for bank stabilization is needed. If left unchecked this flood damage would cause the sidewalk, bike lane and parts of the roadway to collapse. Bear Creek is an important stream in the Cedar-Sammamish watershed for its productive salmonid habitat. Enhancement of Bear Creek is in the *Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan (10-year Update)* (WRIA 8 Salmon Recovery Council, 2017). Work done to protect the embankment will trigger the requirements to improve and enhance Bear Creek along the project reach. Redmond's vision for the project is to support Avondale Road with a new retaining wall to minimize the impact on the floodplain, and employ stream restoration techniques and natural stream processes to redirect flow away from the threatened roadway, minimizing future risk.
Objectives/ Deliverables	What will be the outcome of the project? What does the world look like when the project is done (what does DONE look like)? State the objectives to be SMART (**S**pecific [clear & explicit], **M**easurable, **A**ttainable, **R**elevant [what is the benefit gained] and **T**ime-bound [completion date]).

	Objectives 1. Provide long-term stabilization of the roadway and alleviate settlement risk. 2. Restore more diverse stream habitat through placement of large woody debris and grading of side channels. 3. Repair the stormwater outfalls. Deliverables 1. 90% design package 2. As-Built Drawings
Stakeholders	A stakeholder is anyone who is involved, impacted, or perceives themselves as being impacted by a project. Who is the project sponsor? What other stakeholders have already been identified? We can do a more detailed stakeholder analysis later but this lets people begin to raise awareness of stakeholders.
	Sponsor 1. King County Flood Control District 2. City of Redmond – Design and Construction Tribes 1. Muckleshoot Indian Tribe 2. Snoqualmie Tribe 3. Tulalip Tribes 4. Stillaguamish Tribe of Indians Stakeholders 1. Adjacent Property Owners a. King County Parks b. Fairwinds Retirement Community 2. Puget Sound Energy 3. Permitting Agencies: a. Army Corp of Engineers b. Washington State Department of Fish and Wildlife
Project Team Role and Responsibilities	Who will be on the team? Are there some roles/responsibilities that need to be clarified now before the detailed planning begins? Are you clear on your responsibilities as the project manager?
	1. Steven Hitch – Engineering Manager (Interim) 2. Emily Flanagan – Technical Design Lead 3. Aaron Noble – Construction Project Manager 4. Alicia Pettibone – RH2 Engineering – Design Consultant 5. Ernest Fix – Maintenance
High-Level Schedule	List month & year for start and end of overall project and each phase of the project. May include key milestone dates if known.
	1. Pre-Design and Permit Submittals: July 2019 – December 2021 2. 30% Design: April 2020 – February 2021 3. Final Design and Permit Approvals: January 2020 – December 2022 4. Construction: June 2023 – October 2023 5. Closeout: December 2023 – April 2024
Initial Assumptions	What high-level assumptions have already been made about the project?
	1. $1.55 Million Funding from the King County Flood Control District. Additional $1,169,458 from City of Redmond CIP. 2. All permitting agencies will issue the necessary permits by December 2022 3. The current Avondale Road alignment and sidewalk configuration will remain in place for the near term (25 years). 4. Habitat enhancements and environmental lift will be permit requirements. 5. The project must cause zero-rise to 100-yr flood flow water surface elevations. 6. The project will be constructing a retaining wall to replace the failing embankment.

	7. Project will only include roadway improvements along Avondale Road, if impacted by project construction or required by permitting agencies. 8. Existing drainage structures can be replaced where impacted by new retaining wall.
Risks	What are main high-level risks that have already been identified? This is all about uncertainty. What do you, or other people, think could go wrong on the project?
	1. Permit requirements for habitat restoration may affect the cost/feasibility of the repair. 2. Failure of the embankment along Avondale Road prior to construction. 3. Access to the project site may be difficult due to the steep slopes from the arterial down to the floodplain and could limit design options. 4. The COVID-19 pandemic could affect the project schedule and costs.
Constraints/ Boundaries	Are there specific items that are NOT within the scope of the project? There's an infinite number of things not in the project, but remember, this document is about clarifying stakeholder expectations.
	1. Sidewalk and Roadway improvements will occur if required by permitting of project. 2. Utility and Stormwater improvements will be limited to improvements directly related to the embankment repair. 3. Stream Improvements outside of the Project area are not intended
Planning Level Cost Range	What is the expected project cost through the life of the project? Include contingencies and allied costs (design, permitting, staff labor) and where appropriate, estimated cash flow for the project. Present the project cost range to correspond with the initial schedule assumptions adjusted as appropriate to recognize the very preliminary nature of this cost estimate.
	Total Project Cost; $3,173,298 (includes 20% contingency). $1.55 M from King County Flood Control District and $1,623,298 from City of Redmond. 1. Preliminary Design - $345,000 2. Final Design and Permitting - $529,178 3. ROW and Easements - $42,712 4. Construction – $2,269,458 *Construction estimate based on 60% Design.
Sustainability Development Programs	Discuss how this project will address the County directives related to environmental sustainability, such as: climate change; green building and sustainable development practices for capital projects (e.g., LEED Certification, or cost-effective sustainable practices); energy efficiency; conservation and cost savings; and any other related County directives in this area.
	This project will be considering long term geomorphic processes of Bear Creek, when designing roadway embankment protection. This will result in a project with a longer lifespan, and delay the need to return to the site in the future. The project is also considering construction methods with the lightest touch to the sensitive riparian area around Bear Creek. Habitat enhancements included in project design include removal of invasive plant species, planting of shade trees, and installation of large woody debris. Any trees felled for construction will be repurposed as habitat features on site.
Equity and Social Justice (ESJ) Program	Discuss how this project will address the County directives related to Equity and Social Justice (ESJ) Ordinance 16948. The ordinance calls for a focus on both equity in the development and decision processes (process equity) and equity in the distribution of project benefits and burdens (distributional equity). http://www.kingcounty.gov/exec/equity/vision.aspx
	Roadway, utility, bike lane and sidewalk elements serve the entire community, including transit users, cyclists and pedestrians on this heavily-used principal arterial (daily average traffic count is 32,402 vehicles/day). The project vicinity is served by two Metro Transit routes (232 and 248) with the closest stop approximately 800 feet from the project site. The sidewalk in the project vicinity, while not heavily used, serves an Aegis Living retirement community (immediately adjacent) and Friendly Village (a mobile home court for seniors owned by King County Housing), underscoring the need for functional sidewalks. If the project were not completed, the erosion caused by high flows against the roadway embankment would cause failures of the stormwater outfalls, sidewalk and eventually the bike lane and road. The City does not have any Limited English Proficiency (LEP) populations that account for more than 5% of our overall area. Both the Chinese and Spanish languages represent 2.7% and 2.6% of the City's population, respectively. The City will translate project information items as the need is identified.

Project Approval Process	Identify who evaluates and decides on project continuance at intermediate review milestones, as well as project success, and gives ultimate sign-off of project completion. Agencies may refer to other standard processes of project acceptance if used within that agency.
	1. Project Charter – Approved by City of Redmond design team (Engineering Manager, Technical Design Lead, and Construction Project Manager) and the King County Flood Control District KCFCD). 2. Project Initiation and Initial Funding– Approval by City of Redmond City Council and Mayor 3. Preferred Alternative Selection – Approval by the City of Redmond design team with input from stakeholders. 4. 30% design and baselining – Approved by City of Redmond design team. 5. Review of 60% design - Approved by City of Redmond design team. 6. Review of 90% design – KCFCD approval required as a funding partner. 7. Final Design – Approval by the City of Redmond design team. 8. Ad and Award for Construction – Approval by the City of Redmond City Council and Mayor 9. Project Acceptance - Approval by the City of Redmond City Council and Mayor

Decision Making Process	What will be the decision making process(es) for the project?
	The Technical Design Lead will be responsible for the day to day decision making until 30% design is achieved. Major milestones, such as alternative selection and authorization to change project phases will be approved by consensus of the City design team (Engineering Manager, Technical Design Lead, and Construction Project Manager). After 30%, day to day decision make will be made by the Construction Project Manager, in consultation with the Functional Area Lead, and Engineering Manager.

Success Criteria	What will be the criteria for judging the project successful?
	1. A retaining wall will be constructed that will protect Avondale, while minimizing impact on floodplain. 2. Repair is completed by the target date of October 2023 3. Total project costs do not exceed the 60% design estimate. 4. Stream channel and habitat improvements allow for long term sustainable salmonid habitat.

Signatures	**Optional** - List signatories and obtain their signatures memorializing they have read and agree with the Charter. Typically the core project team members sign . The client/sponsor by signing the Gate 1 authorization form, with the charter as an attachment, agrees to the charter.		
	Person x	Person y	
	Person z		

Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-594
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Public Works	Dave Juarez	425-556-2733

DEPARTMENT STAFF:

Public Works	Emily Flanagan	Senior Surface Water Engineer
Public Works	Steve Hitch	Engineering Supervisor
Public Works	Andy Rheaume	Interim Engineering Manager

TITLE:
Acceptance of the Cooperative Watershed Management Grant for the Evans Creek Relocation Project in the Amount of $450,000

OVERVIEW STATEMENT:
The Cooperative Watershed Management Grant is funded by the King County Flood Control District. The awarded $450,000 is for design of the Evans Creek Relocation Project.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  N/A
- **Required:**
  N/A
- **Council Request:**
  N/A
- **Other Key Facts:**
  We are requesting this item go forward on the Consent Agenda for the December 7, 2021 Council Meeting.

OUTCOMES:
Acceptance of this grant will add $450,000 revenue to the Stormwater CIP budget.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  N/A
- **Outreach Methods and Results:**
  Once awarded, the City will post grant information to project website.
- **Feedback Summary:**
  N/A

BUDGET IMPACT:

Total Cost:
$0

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
CIP

Budget Priority:
N/A

Other budget impacts or additional costs: ☒ **Yes** ☐ **No** ☐ **N/A**
If yes, explain:
$450,000 grant money will be added revenue to the Stormwater CIP.

Funding source(s):
King County Flood Control District

Budget/Funding Constraints:
Funds must be spent by December 31, 2023.

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
N/A	Item has not been presented to Council	N/A

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
12/7/2021	Business Meeting	Approve

Time Constraints:
N/A

ANTICIPATED RESULT IF NOT APPROVED:
No additional revenue added to the Stormwater CIP.

ATTACHMENTS:
Attachment A - Redmond CWM2021 GrantAgreement Draft

AGREEMENT FOR AWARD OF COOPERATIVE WATERSHED MANAGEMENT GRANT FUNDS BETWEEN THE CITY OF REDMOND AND KING COUNTY

This Agreement is made between King County, a municipal corporation, and the City of Redmond ("Recipient"), for the purposes set forth herein. This Agreement shall be in effect from the date of execution to **December 31, 2023**.

Primary Contact for King County: Kim Harper, Grant Administrator, 206-477-6079, Kim.harper@kingcounty.gov.

Primary Contact for Recipient: Emily Flanagan, 425-556-2707, Eflanagan@redmond.gov.

SECTION 1. RECITALS

1.1 Whereas, the King County Flood Control District ("District") is a quasi-municipal corporation of the State of Washington, authorized to provide funding for cooperative watershed management arrangements and actions for purposes of water quality, water resource, and habitat protection and management;

1.2 Whereas King County is the service provider to the District under the terms of an interlocal agreement ("ILA") by and between King County and the District, dated February 17, 2009, as amended, and as service provider implements the District's annual work program and budget;

1.3 Whereas, the Board of Supervisors of the District (the "Board"), the District's governing body, passed Resolution FCD 2020-22 on November 4, 2020, authorizing the King County executive or his designee to develop and administer a grant award program of up to $9,762,382 in 2021 for water quality, water resources and habitat restoration and management projects and activities in King County, provided that the project list is approved by the Board;

1.4 Whereas, in accordance with Resolution FCD2012-07.2 and in its capacity as service provider to the District, King County has established a grant award program, called the Cooperative Watershed Management Award Program, to fund water quality, water resources and habitat restoration and management projects and activities;

1.5 Whereas, the Recipient submitted an application to its respective WRIA forum or committee for the Project, as described in Exhibit A attached hereto and incorporated herein by this reference, and that body has recommended the Project for funding under the Cooperative Watershed Management Grant Program in accordance with King County's Cooperative Watershed Management Grant Program Policies and Procedures, a copy of which has been furnished by King County to the Recipient and which are incorporated herein by this reference ("Grant Policies and Procedures");

1.6 Whereas the District's Board of Supervisors has received a list of proposed projects that

includes the Project, and the Board of Supervisors, in Resolution FCD2021-07, has approved the Project for funding up to the amount of **$450,000**;

1.7 Whereas King County has received a Scope of Work and a Budget for the Project from the Recipient and has determined that the Scope of Work, attached hereto and incorporated herein as Exhibit B ("Scope of Work"), and the Budget, attached hereto and incorporated herein as Exhibit C ("Budget Summary"), are consistent with the Grant Policies and Procedures;

1.8 Whereas, King County and the Recipient desire to enter into this Agreement for the purpose of establishing the terms and conditions under which King County will provide funding from the District in accordance with the Policies and Procedures, and the Recipient will implement the Project.

SECTION 2. AGREEMENT

2.1. The Recitals are an integral part of this Agreement and are incorporated herein by this reference.

2.2. King County agrees to award the Recipient an award in the total amount of **$450,000** from District funds (the Award). The Award shall be used by the Recipient solely for the performance of the Project. King County shall pay the Recipient in accordance with the Grant Policies and Procedures.

2.3. The Recipient represents and warrants that it will only use the Award for the Scope of Work of this Agreement and in accordance with the Project Budget. The Recipient shall be required to refund to King County that portion of the Award which is used for work or tasks not included in the Scope of Work. Further, the Recipient agrees that King County may retain any portion of the Award that is not expended or remains after completion of the Scope of Work and issuance of the Final Report, as further described below.

2.4. Activities carried out for this Project and expenses incurred by the Recipient may predate the execution date of this Agreement provided that 1) they have been identified by Recipient as being within the scopes of numbers 2) and 3) below, and have been approved by King County as being within such scopes; 2) The activities are specified in the Scope of Work of this Agreement; 3) the expenses are incurred in carrying out the Scope of Work and are authorized by the Award as identified in the Budget of this Agreement; 4) such activities and expenses otherwise comply with all other terms of this Agreement; and 5) such activities and expenses do not occur prior to the date the grants were approved by the District and reimbursements shall be paid to the Recipient only after this Agreement has been fully executed.

2.5. The Recipient shall invoice King County for incurred expenses using the Request for Payment form and Progress Report form for those documented and allowable expenses identified in the Budgets and according to the rules set forth in the Grant Policies and Procedures. Blank forms shall be provided to the Recipient by King County upon execution of this Agreement. Progress reports for each project (with or without requests

for payment) shall be made no less frequently than every six months after the effective date of this Agreement nor more frequently than every three months after the aforementioned date. A Progress Report form shall be submitted with all payment requests. A one-time advance may be allowed, in the discretion of King County, for expenses anticipated to be incurred in the three months following the date of submission of the advance Request for Payment only for work that is included in the Scope of Work of this Agreement, and identified as such in the Request for Payment. The amount of the advance may not exceed 25% of the total award amount. Documentation of payments made from advances shall be submitted to King County prior to any further requests for payment.

2.6. The Recipient shall be required to submit to King County a final report which documents the Recipient's completion of the work in conformance with the terms of this Agreement within thirty (30) days after the completion of the work. The final report may be submitted on the Close-out Report form unless a more detailed final report is specified in the scope of work. A blank Close-out Report form shall be provided to the Recipient by King County upon execution of this Agreement. The final report shall include a summary of the Project's successes and shall address the watershed benefits accomplished by the work.

2.7. The Recipient's expenditures of Award funds shall be separately identified in the Recipient's accounting records. If requested, the Recipient shall comply with other reasonable requests made by King County with respect to the manner in which Project expenditures are tracked and accounted for in the Recipient's accounting books and records. The Recipient shall maintain such records of expenditures as may be necessary to conform to generally accepted accounting principles as further described in Section 2.8 below, and to meet the requirements of all applicable state and federal laws.

2.8. The Recipient shall be required to track project expenses using the Budget Accounting and Reporting System for the State of Washington ("BARS") or Generally Accepted Accounting Principles set forth by the Financial Accounting Standards Board or by the Governmental Accounting Standards Board.

2.9. King County or its representative, and the District or its representative shall have the right from time to time, at reasonable intervals, to audit the Recipient's books and records in order to verify compliance with the terms of this Agreement. The Recipient shall cooperate with King County and the District in any such audit.

2.10. The Recipient shall retain all accounting records and project files relating to this Agreement in accordance with criteria established by the Washington State Archivist Local Government Common Records Retention Schedule (CORE) as revised.

2.11. The Recipient shall ensure that all work performed by its employees, agents, contractors or subcontractors is performed in a manner which protects and safeguards the environment and natural resources, and which is in compliance with local, state and federal laws and regulations. The Recipient shall implement an appropriate monitoring system or program to ensure compliance with this provision.

2.12. The Recipient agrees to indemnify, defend and hold harmless King County, and the District, their elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property arising out of any acts or omissions of the Recipient, its employees, agents, contractors or subcontractors in performing its obligations under the terms of this Agreement.

2.13. The Recipient agrees to acknowledge the District as a source of funding, and the WRIA as a funding partner, for the Project on all printed, online, and electronic documents; signage or press releases; audio-visual materials; or any other materials produced in association with the Project. Grant recipients shall submit documentation of acknowledgement activities with their final reporting documents.

SECTION 3. GENERAL PROVISIONS

3.1. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns.

3.2. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No prior or contemporaneous representation, inducement, promise or agreement between or among the parties which relate to the subject matter hereof which are not embodied in this Agreement shall be of any force or effect.

3.3. No amendment to this Agreement shall be binding on any of the parties unless such amendment is in writing and is executed by the parties. The parties contemplate that this Agreement may from time to time be modified by written amendment which shall be executed by duly authorized representatives of the parties and attached to this Agreement.

3.4. Each party warrants and represents that such party has full and complete authority to enter into this Agreement and each person executing this Agreement on behalf of a party warrants and represents that he/she has been fully authorized to execute this Agreement on behalf of such party and that such party is bound by the signature of such representative.

3.5. The Project shall be completed by no later than **December 31, 2023**. In the event that the Project is not completed by this date, King County has the discretion, but not the obligation to terminate this Agreement and retain any unexpended Award funds.

3.6. This Agreement may be signed in multiple counterparts.

3.7. If any provision of this Agreement shall be wholly or partially invalid or unenforceable under applicable law, such provision will be ineffective to that extent only, without in any way affecting the remaining parts or provision of this Agreement, and the remaining provisions of this Agreement shall continue to be in effect.

3.8. The amount of the Award has been fully funded by the District. To the extent that funding of the Award requires future appropriations by the King County Council, King County's obligations are contingent upon the appropriation of sufficient funds by the King County Council to complete the Scope of Work. If no such appropriation is made, this Agreement will terminate at the close of the appropriation year for which the last appropriation that provides funds under this Agreement was made.

KING COUNTY:	**RECIPIENT:**
By_____	**By**_____
Name_____	**Name**_____
Title_____	**Title**_____
Date_____	**Date**_____

EXHIBIT A: PROJECT DESCRIPTION

Project	Recipient	Description	Leverage	Award
Evans Creek Relocation	City of Redmond	Prepare Bid Ready Plans, Specifications and Estimate for this project to relocate reach 2 of Evans Creek out of an industrial area and into adjacent floodplain wetland, enhancing in-stream and riparian habitat.	$620,000	$450,000

Project Location: Evans Creek Reach 2 – North Lake Washington Tributaries.

EXHIBIT B: SCOPE OF WORK

Task Title	Task Description (Include Activities and Deliverables)	Estimated Percent of Total Budget	Month/Year Task will be Completed
Task 1: Project Administration (Required)	Submit reimbursement request forms, backup documentation for billing, and progress reports at least every 6 months. Submit a Fiscal Closeout form and a Closeout Report form with the final reimbursement request.	0%	December, 2023
Task 2:	Produce 60% complete Plans, Specification and Estimate	0%	September, 2021
Task 3:	Secure Project Permits	30%	December, 2022
Task 4:	Produce 90% complete Plans, Specifications and Estimate, and design documents.	30%	June, 2022
Task 5:	Produce a bid-ready construction package	30%	February, 2023
Task 6:	Construction	10%	December, 2024

EXHIBIT C: BUDGET SUMMARY

Budget Item	Grant Request
Commercial Services & Crew Time	$450,000
TOTAL	**$450,000**

Memorandum

Date: 11/9/2021
Meeting of: Committee of the Whole - Planning and Public Works

File No. CM 21-595
Type: Committee Memo

TO: Committee of the Whole - Planning and Public Works
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Public Works	Dave Juarez	425-556-2733

DEPARTMENT STAFF:

Public Works	Emily Flanagan	Senior Surface Water Engineer
Public Works	Steve Hitch	Engineering Supervisor
Public Works	Andy Rheaume	Interim Engineering Supervisor

TITLE:
Acceptance of the Flood Reduction Grant for Evans Creek Relocation Project in the Amount of $400,000

OVERVIEW STATEMENT:
The Flood Reduction Grant is funded by the King County Flood Control District. The awarded $400,000 is for design of the Evans Creek Relocation Project.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  N/A
- **Required:**
  N/A
- **Council Request:**
  N/A
- **Other Key Facts:**
  We are requesting this item go forward on the Consent Agenda for the December 7, 2021 Council Meeting.

OUTCOMES:
Acceptance of this grant will add $400,000 revenue to the Stormwater CIP budget.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  N/A
- **Outreach Methods and Results:**
  Once awarded, the City will post grant information to project website.
- **Feedback Summary:**
  N/A

BUDGET IMPACT:

Total Cost:
$0

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
CIP

Budget Priority:
N/A

Other budget impacts or additional costs: ☒ **Yes** ☐ **No** ☐ **N/A**
If yes, explain:
$400,000 grant money will be added revenue to the Stormwater CIP.

Funding source(s):
King County Flood Control District

Budget/Funding Constraints:
Funds must be spent by December 31, 2023.

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
N/A	Item has not been presented to Council	N/A

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
12/7/2021	Business Meeting	Approve

Time Constraints:
N/A

ANTICIPATED RESULT IF NOT APPROVED:
No additional revenue added to the Stormwater CIP.

ATTACHMENTS:
Attachment A - Redmond 2021FloodReductionGrantAgreement Draft

AGREEMENT FOR AWARD OF FLOOD REDUCTION GRANT FUNDS BETWEEN THE CITY OF REDMOND AND KING COUNTY

This Agreement is made between King County, a municipal corporation, and the **City of Redmond** ("Recipient") (collectively referred to as the "parties" and in the singular "party"), for the purposes set forth herein. This Agreement shall be in effect from the date of execution to **December 31, 2023**.

Project Contacts:

Contact for King County – Kim Harper, Grant Administrator, 206-477-6079, Kim.harper@kingcounty.gov.

Contact for Recipient – Emily Flanagan, Senior Surface Water Engineer, 425-556-2707, Eflanagan@redmond.gov.

SECTION 1. RECITALS

1.1 Whereas, the King County Flood Control District ("District") is a quasi-municipal corporation of the State of Washington, authorized to provide funding for flood control and stormwater protection projects and activities; and

1.2 Whereas King County is the service provider to the District under the terms of an interlocal agreement ("ILA") by and between King County and the District, dated February 17, 2009, as amended, and as service provider implements the District's annual work program and budget; and

1.3 Whereas, on November 12, 2013, the District's Board of Supervisors passed Resolution FCD2013-14 which established a Flood Reduction Grant Program and criteria for awarding grant funding for projects, and on November 4, 2020, the Board passed Resolution FCD2020-22, which authorized an allocation of $12,000,000 from the District's 2021 budget to fund flood reduction projects; and

1.4 Whereas, on September 14, 2021 the District's Board of Supervisors passed Resolution FCD2021-10, which approved the flood reduction projects described in Attachment A to that Resolution; and

1.5 Whereas, in accordance with the terms of these Resolutions, and in its capacity as service provider to the District, King County has established policies and procedures for administering the flood reduction grant program, a copy of which has been furnished to Recipient and which is incorporated herein by this reference (hereinafter "Grant Policies and Procedures"); and

1.6 Whereas, the Recipient submitted an application to receive funds for a project to be

funded by the Flood Reduction Grant Program; and

1.7 Whereas the District's Board of Supervisors approved funding of Recipient's application for the project ("Project"), as described in Attachment A to Resolution FCD2021-10 in the amount of **$400,000** ("Award"); and

1.8 Whereas King County has received a Scope of Work and a Budget for the Project from the Recipient and has determined that the Scope of Work, attached hereto and incorporated herein as Exhibit B ("Scope of Work"), and the Budget, attached hereto and incorporated herein as Exhibit C ("Budget"), are consistent with the Grant Policies and Procedures, the Recipient's application for the Project, and the Resolution approving funding for the Project; and

1.9 Whereas, King County and the Recipient desire to enter into this Agreement for the purpose of establishing the terms and conditions under which King County will provide funding from the District in accordance with Resolution FCD2021-10, and the Grant Policies and Procedures, and under which the Recipient will implement the Project.

SECTION 2. AGREEMENT

2.1. The Recitals are an integral part of this Agreement and are incorporated herein by this reference.

2.2. King County agrees to pay the Award amount to Recipient in the total amount of **$400,000** from District funds. The Award shall be used by the Recipient solely for the performance of the Project, as described in Exhibit A to this Agreement. Exhibit A, attached hereto and incorporated herein by this reference, contains a description of the Project as described in Attachment A to Resolution FCD2021-10. King County shall pay the Recipient in accordance with the terms of the Grant Policies and Procedures.

2.3. The Recipient represents and warrants that it will only use the Award for the Scope of Work of this Agreement and in accordance with the Project Budget. The Recipient shall be required to refund to King County that portion of the Award which is used for work or tasks not included in the Scope of Work. Further, the Recipient agrees that King County may retain any portion of the Award that is not expended or remains after completion of the Scope of Work and issuance of the Final Report, as further described below.

2.4. Activities carried out for this Project and expenses incurred by the Recipient may predate the execution date of this Agreement provided that 1) they have been identified by Recipient as being within the scopes of numbers 2) and 3) below, and have been approved by King County as being within such scopes; 2) the activities are specified in the Scope of Work of this Agreement; 3) the expenses are incurred in carrying out the Scope of Work and are authorized by the Award as identified in the Budget of this Agreement; 4) the activities occur after the District passes a resolution approving an award for the Project; 5) such activities and expenses otherwise comply with all

other terms of this Agreement; and 6) reimbursements shall be paid to the Recipient only after this Agreement has been fully executed.

2.5. The Recipient shall invoice King County for incurred expenses using the Request for Payment form and Progress Report form for those documented and allowable expenses identified in the Budget and according to the rules set forth in the Grant Policies and Procedures. Blank forms shall be provided to the Recipient by King County upon execution of this Agreement. A progress report (with or without a request for payment) shall be made no less frequently than every six months after the effective date of this Agreement nor more frequently than every three months after the aforementioned date. A Progress Report form shall be submitted with all payment requests. A one- time advance of no more than 25% of the Award amount may be allowed, in the discretion of King County, for expenses anticipated to be incurred in the three months following the date of submission of the advance Request for Payment only for work that is included in the Scope of Work of this Agreement, and identified as such in the Request for Payment. Documentation of payments made from the advance payment shall be submitted to King County prior to any further requests for payment.

2.6. The Recipient shall be required to submit to King County a final report which documents the Recipient's completion of the work in conformance with the terms of this Agreement within thirty (30) days after the completion of the work. The final report may be submitted on the Closeout Report form unless a more detailed final report is specified in the scope of work. A blank form shall be provided to the Recipient by King County upon execution of this Agreement. The final report shall include a summary of the Project's successes and shall address the flood reduction benefits accomplished by the work.

2.7. The Recipient's expenditures of Award funds shall be separately identified in the Recipient's accounting records. If requested, the Recipient shall comply with other reasonable requests made by King County with respect to the manner in which Project expenditures are tracked and accounted for in the Recipient's accounting books and records. The Recipient shall maintain such records of expenditures as may be necessary to conform to generally accepted accounting principles as further described in Section 2.8 below, and to meet the requirements of all applicable state and federal laws.

2.8. The Recipient shall be required to track project expenses using the Budget Accounting and Reporting System for the State of Washington ("BARS") or Generally Accepted Accounting Principles set forth by the Financial Accounting Standards Board or by the Governmental Accounting Standards Board.

2.9. King County or its representative, and the District or its representative, shall have the right from time to time, at reasonable intervals, to audit the Recipient's books and records in order to verify compliance with the terms of this Agreement. The Recipient shall cooperate with King County and the District in any such audit.

2.10. The Recipient shall retain all accounting records and project files relating to this Agreement in accordance with criteria established by the Washington State Archivist Local Government Common Records Retention Schedule (CORE) as revised.

2.11. The Recipient shall ensure that all work performed by its employees, agents, contractors or subcontractors is performed in a manner which protects and safeguards the environment and natural resources and which is in compliance with local, state and federal laws and regulations. The Recipient shall implement an appropriate monitoring system or program to ensure compliance with this provision.

2.12. The Recipient agrees to indemnify, defend and hold harmless King County, and the District, their elected or appointed officials, employees and agents, from all claims, alleged liability, damages, losses to or death of person or damage to property arising out of any acts or omissions of the Recipient, its employees, agents, contractors or subcontractors in performing its obligations under the terms of this Agreement.

2.13. The Recipient agrees to acknowledge the District as a source of funding for the Project on all literature, signage or press releases related to the Project. The Recipient may obtain from King County a District logo that may be used in the acknowledgement.

SECTION 3. GENERAL PROVISIONS

3.1. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns.

3.2. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No prior or contemporaneous representation, inducement, promise or agreement between or among the parties which relate to the subject matter hereof which are not embodied in this Agreement shall be of any force or effect.

3.3. No amendment to this Agreement shall be binding on any of the parties unless such amendment is in writing and is executed by the parties. The parties contemplate that this Agreement may from time to time be modified by written amendment which shall be executed by duly authorized representatives of the parties and attached to this Agreement.

3.4. Each party warrants and represents that such party has full and complete authority to enter into this Agreement and each person executing this Agreement on behalf of a party warrants and represents that he/she has been fully authorized to execute this Agreement on behalf of such party and that such party is bound by the signature of such representative.

3.5. The Project shall be completed by no later than **December 31, 2023**. In the event that the Project is not completed by this date, King County has the discretion, but not the obligation, to terminate this Agreement and retain any unexpended Award funds.

3.6. This Agreement may be signed in multiple counterparts.

3.7. If any provision of this Agreement shall be wholly or partially invalid or unenforceable under applicable law, such provision will be ineffective to that extent only, without in any way affecting the remaining parts or provision of this Agreement, and the remaining provisions of this Agreement shall continue to be in effect.

3.8. The amount of the Award has been fully funded by the District. To the extent that funding of the Award requires future appropriations by the District, King County's obligations are contingent upon the appropriation of sufficient funds by the Board of Supervisors of the District to complete the Scope of Work. If no such appropriation is made, this Agreement will terminate at the close of the appropriation year for which the last appropriation that provides funds under this Agreement was made.

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KING COUNTY:	**RECIPIENT:**
By_____	**By**_____
Name_____	**Name**_____
Title_____	**Title**_____
Date_____	**Date**_____

EXHIBIT A: PROJECT DESCRIPTION

PROJECT NAME	RECIPIENT	DESCRIPTION	LEVERAGE	AWARD
Evans Creek Relocation	City of Redmond	Relocate Reach 2 of Evans Creek out of an industrial area and into adjacent floodplain wetlands. The project will reduce flooding, engage the channel with floodplain wetlands, increase flood storage, restore in-stream habitat and improve an existing multi-use pedestrian trail. KCFCD funding will be used towards preparing final design documents and securing permits.	$670,000	$400,000

EXHIBIT B: SCOPE OF WORK

TASKS	ACTIVITIES AND DELIVERABLES	APPROX. PERCENT OF AWARD	MONTH/YEAR TASK WILL BE COMPLETED
Task 1: Project Administration (Required task)	Submit reimbursement request forms, backup documentation for billing, and progress reports at least every 6 months. Submit a Fiscal Closeout form and a Closeout Report form with the final reimbursement request.	5%	December, 2023
Task 2:	Final design and permitting – produce bid-ready documents (Plans, Specifications and Estimate) and provide support sufficient to secure permits necessary for construction.	95%	June, 2023

EXHIBIT C: BUDGET

BUDGET ITEM	GRANT AWARD REQUEST	FINANCIAL LEVERAGE (not required)			LEVERAGE TOTAL	TOTAL (Grant + Leverage)
		SOURCE NAME				
		CWM (pending)	Redmond Stormwater CIP			
		AMOUNT				
STAFFING	$20,000					$20,000
COMMERCIAL SERVICES AND CREW TIME	$380,000	$450,000	$220,000		$670,000	$1,050,000
TOTAL	$400,000	$450,000	$220,000		$670,000	$1,070,000