

CITY OF ELLENSBURG
AGENDA
Council Conference
Thursday, April 21, 2022
3:30 PM - Utility Advisory Committee

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

- 3.A Approve minutes - March 17th, 2022 regular meeting minutes
[UAC Minutes 3-17-22.pdf](#)

4. APPROVAL OF CONSENT AGENDA Consent items have been distributed to committee members in advance for study and will be enacted by one motion. If separate discussion is desired on an item, that item may be removed from the Consent Agenda and placed on the Regular Agenda at the request of a committee member or at the request of a member of the public with concurrence of a committee member.

5. CORRESPONDENCE AND CITIZEN COMMENTS ON NON-AGENDA ITEMS Time is set aside each meeting to allow citizens to address the Utility Advisory Committee on city utility issues that are not on the agenda. Please limit remarks to three minutes. The Committee will not take action when the issue is first raised, but may place the issue on a future agenda. Citizen comment on items on the agenda is also welcome. Please let the chair know you wish to speak and then wait to be recognized.

6. TELECOMMUNICATIONS UTILITY DISCUSSION ITEMS

- 6.A Telecommunications Issues and Updates
[UAC April 2022 - Telecom Issues & Updates updated.docx](#)

7. ELECTRIC, NATURAL GAS, WATER, WASTEWATER, STORMWATER UTILITY DISCUSSION ITEMS

- 7.A [2021-2022 Stormwater Management Plan Update 2021-2022.docx](#)

8. INFORMATIONAL ITEMS

- 8.A [2021-2023 Capacity Grant Agreement with the Department of Ecology 2021-2023 Stormwater Capacity Grant Agreement.pdf](#)
- 8.B [Reecer Creek Floodplain Mapping and Levee Certification Support Services Agreement with Aspect Consulting Aspect-Signed_Levee_Cert_Support_Contract_Package_22_0328.pdf](#)
- 8.C [2021 monthly pumping report and 2022 aquifer level report.](#)

8.D Past Due Utility Accounts - Verbal Report

8.E [Public Works & Utilities Issues and Updates](#)
[UAC April 2022 Public Works & Utilities Issues Update.docx](#)

9. NEXT MEETING

9.A May 19th, 2022 at 3:30 pm

10. ADJOURNMENT



CITY OF ELLENSBURG

Utility Advisory Committee

Date of Meeting

March 17, 2022

Time of Meeting

3:30 PM

Place of Meeting

Council Conference & remotely via Zoom

Nancy Goodloe, Chairperson, term expires May 31, 2024

Ed Barry, Vice Chairperson, term expires May 31, 2023

Nancy Lillquist, City Council, term expires May 31, 2022

Shane Scott, CWU, term expires May 31, 2025

Bryan Clark, KITTCOM, term expires May 31, 2023

Jim Goeben, Telecommunications Utility customer, term expires May 31, 2023

Nate Sitton, City Utility Customer, term expires May 31, 2023

1. CALL TO ORDER

Chairperson Goodloe called the meeting to order at 3:30 pm.

2. ROLL CALL

Members present: Nancy Goodloe, Chair; Ed Barry, Vice Chair; Nancy Lillquist, City Council; Nate Sitton, City Utility Customer; Shane Scott, CWU; Jim Goeben, Telecom; Bryan Clark, KITTCOM.

Also present: Ryan Lyyski, Public Works & Utilities Director; Darren Larsen, Assistant Utilities Director; Derek Mayo, Engineering Services Manager; Mike Helgeson, Assistant Public Works Director; Kim Bowie, Operations Analyst; Darin Yusi, Gas Engineer; Buddy Stanavich, Power & Gas Manager; Heidi Behrends Cerniwey, City Manager; Paul Meyer, Electrical Engineer; Jon Morrow, Stormwater Manager; Ben Faubion, IT; Nicole Klauss, Public Information Officer; Brad Case, Parks & Rec.

Others present remotely via Zoom and approximately two members of the public.

3. APPROVAL OF MINUTES

3.A. Approve minutes - February 17th, 2022 regular meeting minutes

Committee member Barry moved to approve the minutes. **Motion approved. 5-0**

4. APPROVAL OF CONSENT AGENDA

4.A. 2021-2023 Biennial Stormwater Capacity Grant

4.B. Bid Award - Cured-In-Place Sewer Line Rehabilitation Bid Call #2022-05

4.C. Bid Call 2021-14 Dolarway Substation Power Transformer

Committee member Barry moved to approve the consent agenda. **Motion approved. 5-0**

5. CORRESPONDENCE AND CITIZEN COMMENTS ON NON-AGENDA ITEMS

No Correspondence.

6. TELECOMMUNICATIONS UTILITY DISCUSSION ITEMS

6.A. Telecommunications Issues and Updates

Ben Faubion gave an update on telecommunications.

Committee member Lillquist requested a future agenda item to discuss requiring developers put fiber conduit in new developments.

Telecommunication members are allowed to vote on telecommunication items only per ECC 1.50.040.

7. ELECTRIC, NATURAL GAS, WATER, WASTEWATER, STORMWATER UTILITY DISCUSSION ITEMS

7.A. Public Forum to Establish Water Use Efficiency Goals

Committee member Lillquist moved the committee recommend the adoption of the new water use efficiency goals to be included in the update of the water system plan. **Motion approved. 5-0**

8. INFORMATIONAL ITEMS

8.A. Carbon Monoxide Detectors

Staff informed the committee carbon monoxide detectors do not qualify for energy conservation rebates.

8.B. Late Payments - Verbal Report

Staff shared current past due account data as of February 28, 2022.

8.C. Sustainable Energy Scope Planning Discussion

City Manager, Heidi Behrends Cerniwey, presented three scope options for future sustainable energy planning.

Meghan Anderson commented that the sustainable energy planning should retire the natural gas utility.

Judy Hendricks commented about potential funding included with the Climate Commitment Act to help mitigate impacts on low-income customers.

Committee member Lillquist moved the committee make a favorable recommendation that the City proceed with an RFP for a consultant to provide a sustainability plan with a focus on meeting state energy requirements. **Motion approved. 5-0**

8.D. Public Works & Utilities Issues and Updates

Staff shared key points on departmental issues and updates.

9. NEXT MEETING

9.A. April 21st, 2022 at 3:30 pm

10. ADJOURNMENT

With no further discussion, the meeting adjourned at 5:06 pm.

Kim Bowie
Recording Secretary
Drafted: 3/21/2022
Approved:

Ellensburg Utility Advisory Committee
Telecommunication Issues and Updates
April 21st, 2022

- The City Attorney is researching “Smart City” initiatives and language pertaining to potential conduit recommendations.



AGENDA REPORT

Meeting Date:	April 21, 2022
Agenda Subject:	2021-2022 Stormwater Management Plan Update
Submitted by:	Jon Morrow Public Works & Utilities
Recommended Action or Motion:	It's informational only, but the permit requires it be submitted before an elected or appointed body and have it approved. Staff requests the UAC approve the plan.
Background/Summary:	Annually the Utility is required to update the plan for Ecology and be submitted with the Annual Report by March 31, 2022. This action already took place. Your unofficial approval will change it from draft status to final and then I will put it on the stormwater web page.
Previous Council Action:	Council used to approve the plan, but it's just as efficient to have the UAC do this as we've done in the past.
Analysis:	Approve the plan unofficially through discussion as informational only.
Financial Impact:	None
Attachments:	
	2021-2022.docx

City of Ellensburg



Stormwater Management Plan Update 2021/2022

Written by

Jon Morrow Stormwater Utility Manager

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- C. Illicit Discharge Detection and Elimination (IDDE)
- D. Construction Site Stormwater Runoff Control
- E. Public Involvement and Participation
- F. Operation and Maintenance
- G. S8 Monitoring and Assessment (Outreach and Effectiveness Study)
- H. Achievements and planned activities
 - 1. Gateway I Stormwater Retro-fit Project Update
 - 2. Gateway II Stormwater Retro-fit Project Update
 - 3. Reecer/Currier Flood Project
 - 4. Brook Lane Wilson Creek Re-Alignment
- I. S7 Compliance with (TMDL)
- J. Operation and Maintenance Plan Update

Appendices: Stormwater Utility Budget

Introduction:

On January 17, 2007 the City of Ellensburg was issued an Eastern Washington Phase II Municipal Stormwater permit. In compliance with the provisions of the State of Washington Water Pollution Control Law, Chapter, 90.48 Revised Code of Washington and The Federal Water Pollution Control Act (The Clean Water Act), the City formed the Stormwater Utility in 2009.

The City of Ellensburg adopted ordinances, created a fee for equivalent residential units and hired the necessary staff to develop and implement programs aimed at complying with the permit. Those programs and projects are captured each year in the annual report to Ecology and Stormwater Management Plan (SWMP).

In addition to the NPDES Permit requirements, the City wrote its own Stormwater Operation and Maintenance (O&M) Plan in 2010 and updated it in 2017. The plan is scheduled to be updated in 2022. The City trained all field staff from all departments on Best Management Practices and pollution prevention from 2010 to current. A copy of the O&M 2017 Plan is provided in the O&M section of this update.

The City of Ellensburg maintains approximately 2,367 catch basins and manholes in the public right of way. The public storm system is comprised of 50.26 miles of underground pipe. The system discharges to approximately 80 outfalls in local streams. In addition, most of the newer parts of town infiltrate stormwater in bio-retention facilities (swales). The City's public storm system also receives runoff from private property, but not in all locations.

The SWMP outlines specific programs and projects aimed at improving water quality throughout the City. Public outreach/education, illicit discharge elimination, construction/post construction runoff controls, public participation, operation maintenance and LID stormwater retro-fit projects are covered in detail with this plan.

COVID 19 UPDATE:

Education programs are picking back up for 2021 into 2022. A tree planting event along Mercer Creek with CWU volunteers happened in October of 2021. Drain Rangers happened virtually in the schools in 2021, KEEN will be held January 2022 (canceled), Dial 811 contractor's seminars will happen again February 2022, CWU and the City will conduct two Earth Day litter pick up events in April 2022 and the City is in the middle of conducting an outreach education/effectiveness study in 2021/2022, which is covered in this plan.

A. Public Education and Outreach

Partnership with Central Washington University Center for Leadership:

The City of Ellensburg teams up with The CWU Center for Leadership annually and semiannually to provide outreach education activities in the community. Leadership volunteers have stenciled all storm drains in Ellensburg, performed multiple litter pick parties and planted several hundred trees along the banks of local streams. All these events are organized by the Utility with CWU annually. **Litter pickups and storm drain stenciling events are scheduled for 2022 Earth Month with CWU.**



Two years ago, the City Council approved a grant program whereby stormwater utility funds are used to improve the health of local streams and the environment. Applicants who can demonstrate water quality health improvements within the city limits are encouraged to apply annually. Grant applications are scored and ranked by the Environmental Commission and those applicants that meet the funding guidelines are awarded. The utility awards up to \$10,000 annually out of the stormwater budget.

In 2020/2021 the Mid-Columbia Fisheries Enhancement Group (MCFEG) was awarded grant funding from the City's stormwater utility to continue operation of the adopt a stream program, backyard stream protection program and a water in the classroom education program. Volunteer groups from the community planted trees and removed trash from local streams. The Ellensburg Stormwater Utility is happy to help fund this necessary program.



Mid Columbia's year-end report utilizing Ellensburg's grant funds is a link on page 6.

https://g3coe-my.sharepoint.com/:b:/g/personal/morrowj_ci_ellensburg_wa_us/EVB6NyNi1_5Ej0IWcqCVJ7IBqeKxVFW5mpwWCiLV0vtTuA?e=1jlbct

Media, workshops, seminars, fairs, schools, stream walks and activities:

The Eastern Washington Stormwater Permit requires an outreach education program that targets restaurants, industrial businesses, mobile businesses, fueling, automotive and the general public. In 2021 the utility sent out fliers (pictured below) to all businesses and residents except for the fat's oils and grease poster. This poster was part of the outreach and effectiveness study for fast food restaurants that is discussed later on in this plan update.



KEEN Winter Fair

Annually the Kittitas environment and education network (KEEN) holds an annual fair. The 2020 fair was held in 2020 pre the COVID outbreak but canceled in 2021. The stormwater utility always sponsors an educational booth along with 35 other exhibitors. The fair is a great outreach mechanism for the City's utility, and it reaches out to several different levels of interest. KEEN E3 fair is scheduled for January 22, 2022. (Canceled 2022)



KEEN's Fair was held January 25th 2020 at Hal Holmes Event Center.

Copied is the link to the City's stormwater web page.

[Stormwater Utility | Ellensburg, WA](#)

Dial 811 Contractors Safety Training Seminar

Annually the City's stormwater Utility is a guest speaker at the Dial 811 Contractors Training Safety Seminar. The event reaches out to all contractors, irrigators, county and city work crews. The stormwater utility finds that it is a great opportunity to reach out to all local contractors and discuss erosion control, permit compliance issues and help with development related questions. The stormwater utility has been a guest speaker since 2010. The Utility was a guest speaker at the February 20, 2020 workshop. The seminar was canceled in 2021 but will be re-scheduled for February 2022. (Tentatively on schedule at time of writing this plan)



CONTRACTORS SAFETY TRAINING SEMINAR

Brought to you by Kittitas County Utility Coordinating Council

Please join the Kittitas County Utility Coordinating Council for a complimentary lunch and conversations.

Come learn about upcoming Dig Law changes and how they could effect your operation of excavation.

Key Speakers:

Dangers involving Natural Gas and Pipeline Equipment — Williams Pipeline

Onsite Hydro-Excavating Demonstration with Vactor and Vac-Con



Thursday February 20th, 2020
8:30AM to 1:00PM
Kittitas Valley Event Center ~
Heritage Room
901 E.7th Ave. Ellensburg, WA

Please RSVP by 2/17/20
Heather Forgey 509-925-8603
forgeyh@ci.ellensburg.wa.us





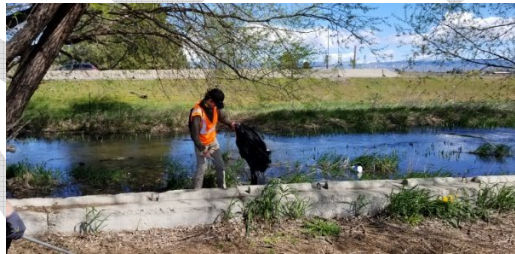
Earth Day Activities: 2019/2020/2021/2022

The City of Ellensburg and CWU's Center for Leadership along with Mid-Columbia Fisheries Enhancement Group, Bureau of Land Management and Fish and Wildlife all take part in the Yakima River Cleanup annually. The Yakima River Cleanup has been an ongoing event for over 41 years.

The event in 2019 focused on litter pick up and streamside tree planting. The City partnered with CWU volunteers and planted trees along Mercer Creek and picked up litter at Reecer Creek.

Earth Day 2019

CWU volunteers picked up 1000 pounds of trash out of and along Wilson Creek at the Flying J Truck Stop. Earth Day 2020 was canceled because of COVID.

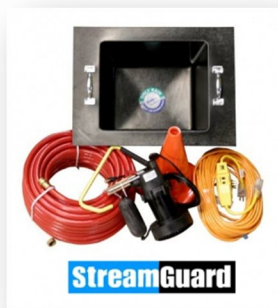


Earth Day 2022 is scheduled for April 23rd. Litter pickup and storm drain stenciling events are in planning with CWU volunteers at the time of writing this plan.

Car Wash Kits: (Ongoing Program) **ON HOLD BECAUSE OF COVID 2022**

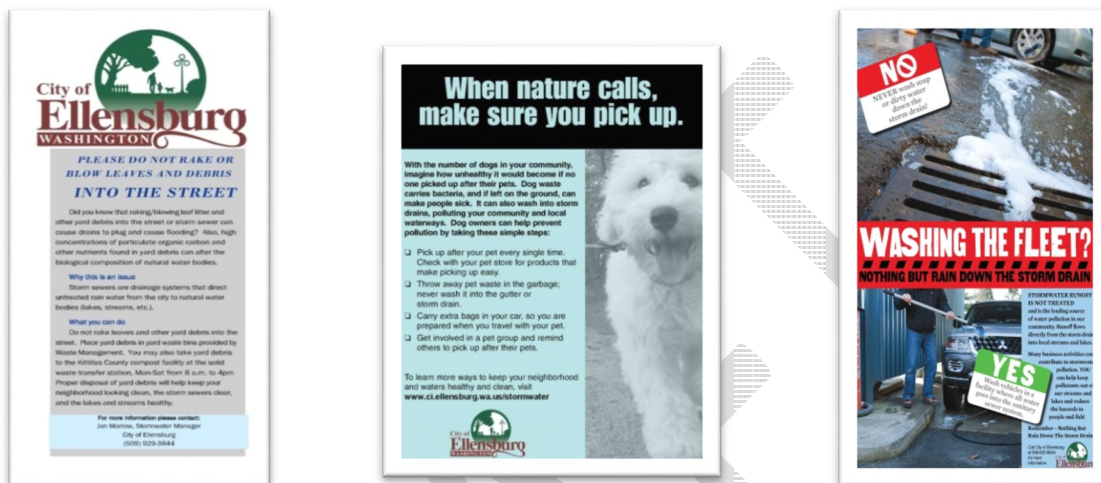
In 2011 the City of Ellensburg purchased two car wash kits. Car wash kits trap the soapy water from entering the storm drainage system and pump it to the nearest sanitary sewer connection.

The car wash kits are an ongoing annual program. The kits are permanently loaned out to local businesses that sponsor car wash fundraising activities. The program is free to the public. Use the QR code below to watch a video on how to set up a car wash kit and learn about your watershed.



Media Releases, Utility Inserts and Multi Media Public Education:

To date several articles featuring the stormwater utility with regards to pollution prevention, pet waste runoff, pesticide use, flooding, hazardous materials handling, and car washing have been sent in utility billing inserts, on the radio and in the newspaper.



Before COVID last year in February the Utility was a guest speaker on Town Talk the local radio station. The topics were maintenance of private stormwater detention ponds and blowing leaves out into the street. There have been several newspaper articles in the Ellensburg Daily record to date regarding the same topics. In 2021 the utility worked with fast food restaurants regarding the handling of fats, oils and grease (FOG), dumpster maintenance and mop water. See S8 Monitoring.

The Utility will be sending out pet waste fliers in 2022 along with spill response posters in the billing inserts as in the past.

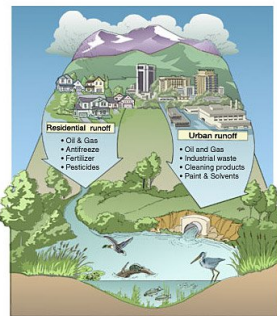
Interlocal Agreement Franklin County Conservation District (Drain Rangers) Ongoing

In 2021 the City and Franklin County Conservation District provided outreach education in local grade schools through Zoom learning. Franklin Conservation District has a program called Water on Wheels Week and has incorporated stormwater education into the curriculum. In 2017 Water on Wheels week became Drain Rangers. Events held at all the elementary schools provided students an opportunity to learn about stormwater.

Drain Rangers will be happening again 2022 and it is unclear if it will classroom or virtual.

Below is a link to the work completed by the drain rangers' program 2021. **Because of COVID, the schools are not allowing in person visits with the vector truck and sweeper as we did in the past. This may change in 2022 with COVID restrictions being lifted?**

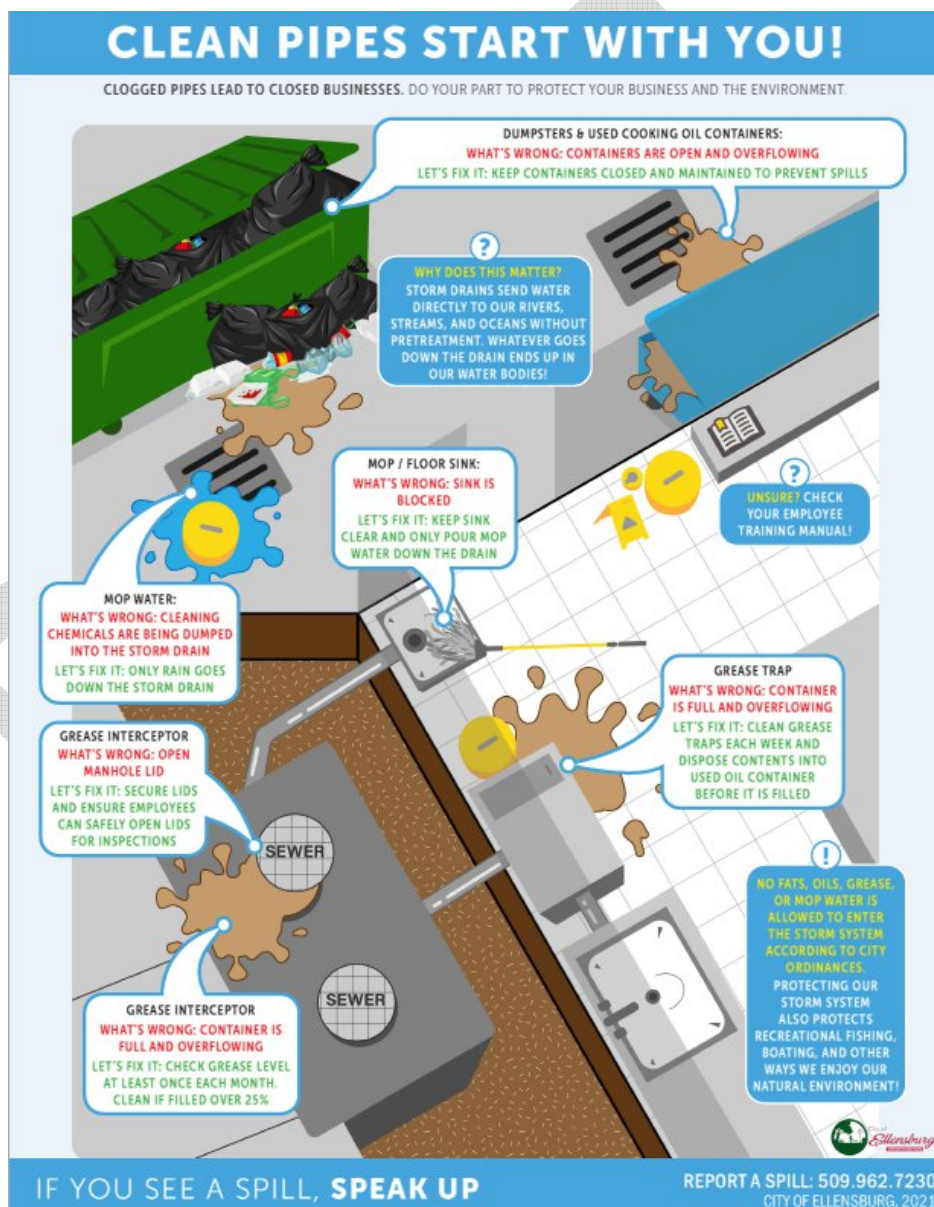
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2021-2022 outreach and effectiveness study S8 Monitoring

Starting in 2021 the City hired Osborn Consulting to put together an outreach and effectiveness study aimed at educating fast food restaurants about dumpster maintenance, mop water and fats/oils and grease. Below is a link to the study that's been completed to date and submitted to Ecology on December 26, 2021.

https://g3coe-my.sharepoint.com/:w:/g/personal/morrowj_ci_ellensburg_wa_us/EZR6e2RXMqhEgN41KjbvR3QBp4u-C3x39JLJSR7wRcTTmq?e=wBC1Gk



B. Post Construction Stormwater Management for New Development and Redevelopment

Permanent stormwater control facilities shall be maintained and operated in compliance with Chapter 9.100 'Storm Drainage and Surface Water Management Utility' of the Ellensburg Municipal Code and the current Stormwater Management Manual for Eastern Washington. Stormwater control facilities include manmade stormwater control facilities that combined constitute the city's stormwater control facility.

Cited above is an excerpt from the City of Ellensburg Storm Drainage Standards. It references the code Chapter 9.100. The ordinance requires that owners (private or public) of stormwater facilities that were constructed after the effective date of this permit be required to maintain their facilities in accordance with the standards and details to which they were constructed.

<https://ci.ellensburg.wa.us/803/Engineering-Division>

The link above references the Stormwater Design standards and details for the City of Ellensburg. All projects (public and private) that disturb one acre or more, and from projects of less than one acre that are part of a larger common plan of development or sale, adhere to the Stormwater Management Manual of Eastern Washington. Ellensburg Stormwater Standards require at a minimum all applicants use the Stormwater Management Manual for Eastern Washington when designing treatment and flow control facilities. The design storm shall treat the first ½ inch of rainfall in 24 hours (6 month 24 hour storm event) for all pollution generating impervious surfaces.

Flow control shall be designed based on the 10 year 24-hour storm event and if detention is proposed, it shall be based on the first 1.6 inches of rain in 24 hours (25 yr. storm event).

The standards have a section devoted to enforcement/penalties and a brand new section devoted to Low Impact Development (LID).

Staff reviews all projects that disturb one acre or greater and records comments on a spreadsheet. (See review comments spreadsheet excerpt) In addition staff reviews all stormwater pollution prevention plans (SWPPP's) and temporary sediment erosion control plans (TESC) for completeness.

With each rain event that exceeds the 10 year 24 hour storm (approximately 1.2-1.4 inches, depending on the location in Ellensburg), staff inspects all treatment and flow control facilities owned and operated by the City. No recorded storm events exceeded 1.3 inches/24 hr in 2021. Facilities are inspected for damage and if found to have problems, they're put on a

capital facilities list. In 2020 staff inspected all city owned BMP's to determine if they need maintenance. S5.6.i.ii.a of the permit requires inspections every two years or as needed for 95% of treatment and control facilities. Below is a snip of the database that tracks the inspections and recommendations.

annual City maintained Swale inspection						
Swale ID	Maintainance notes	Project #	Plat / Dev. Name	Street	X Street	Inspected 2020
205	still works, but excess vegetation	2003-055	Water St Impr project	Manitoba	Water	10/1/20
490	no issues	2014-063	at Morgan Jr. high	Sampson St	Capitol Ave	10/1/20
477	no issues - grass maintained by city contract	2013-083	3rd Ave extension to Pfenning	3rd Ave	Pfenning Rd	10/1/20
538	no issues - new construction	2018-084	Willow St Impr.	Willow St	Mtn View to Cap	10/15/20
36	cleaned inlet pipe; new homeowner is maintaining the swale	2002-075	Kayla/Mylissa short plats	Ridgeview Ln		11/10/20
63	still works, but excess vegetation	2002-080	Helena Ave Impr.	Helena Ave.	Chestnut St.	10/15/20
64	still works, but excess vegetation	2002-080	Helena Ave Impr.	Helena Ave.	Chestnut St.	10/15/20
99	still works, but excess vegetation	2002-080	Helena Ave Impr.	Helena Ave.	Alder st.	10/15/20
334	no issues	1997-029	Water St Impr project	John Wayne Tr	15th Ave	1/6/20
219	constant groundwater drainage, leads to excess vegetation at inlet	1997-029	Water St Impr project	Water St.	11th Ave	9/2/20
417	free of standing water this year; felt dry	2010-083	John Wayne Trail extension	Sanders Rd	Alder St	11/10/20
65	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Willow St.	9/2/20
212	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Ruby St.	9/2/20
213	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Ruby St.	9/2/20
214	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Ruby St.	9/2/20
215	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Ruby St.	9/2/20
216	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Ruby St.	9/2/20
217	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Whitman St.	9/2/20
220	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
221	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
222	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
223	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
224	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
225	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
226	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
227	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
228	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
229	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
230	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Willow St.	9/2/20
231	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Willow St.	9/2/20
232	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Willow St.	9/2/20
233	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Willow St.	9/2/20
287	no issues - grass maintained by city contract	2005-127	Mtn View Improvements	Mountain View	Chestnut St.	9/2/20
307	standing water in swale bottom, from groundwater flow into upstream	1997-066	Aspen Grove MHP	Umptanum Rd	Chestnut St.	9/2/20
139	no issues - grass maintained by city contract	2006-080	Dolarway Rd. Impr project	Dolarway Rd.	Prospect St	9/2/20

Some public stormwater swales are maintained by local contract with private companies and catch basin cleaning is performed by City staff. The city inventoried all post construction BMP's private and public. There are 475 systems citywide of which most are private. Most were all built before 2007. The same annual inspection did not occur in 2021 because of COVID.

Annual inspections are scheduled for spring/summer 2022.

(2021 post construction BMP inspection database)

Road & parking lot Swales, retention/detention ponds, pervious concrete, etc							Swale issue or problem in pink						
ID #	Project #	Plat / Dev. Project	owner / Dev. name	Owner	ownership notes	Street	Notes	year built	In city pond swale qty	eventual discharge to creek?	25 yr storm discharges to water body	after 2007 acreage if >1 Ac pre dev	
531	2019-076	SR 97 Truck Wash expansion	Dhiman Corp	Private	apts/comm prop	SR 97	1 Interior Retention, for bldg & asphalt addition	2020	1	No	no outfall	NA	
532	2017-096	Rainier St. extension	Spurling Ct. Associates LLP	Private	apts/comm prop	Rainier St.	2 Interior Retention	2020	two	No	no outfall	yes	
533	2019-086	ESD new Elem school	ESD	Private	ESD	Cora St	2 Interior Retention swales	2020	three	No	no outfall	yes	
534	2019-086	ESD new Elem school	ESD	Private	ESD	Cora St	1 Interior Retention pond	2020	one	yes	to irrigation	yes	
535	2019-086	Cora St ext for new school	ESD	Private	ESD	Cora St	1 Interior Retention pond	2020	one	yes	to irrigation	yes	
536	2019-086	Cora St widening & extension	ESD	In R/W	ESD	Cora St	7 roadside swales in R/W: 6 at Mt Stuart & 1 at new school	2020	x7	No	no outfall	x	
537	2019-087	ESD - Mt Stuart Elem replacement	ESD	Private	ESD	Cora St	1 Interior Retention pond	2020	one	yes	to irrigation	yes	
538	2018-084	Willow St Impr, Mtn View to Capitol	City R/W	City		Willow St	19 roadway water Retention swales	2020	25	No	no outfall	x	
539	blgd permit	403 S Water St	was church, now IUOE Union hall	Private	apts/comm prop	Water St	1 Interior Retention	1999	1	No	no outfall	x	
540	2017-079	713 E 7th Ave	Pederson	Private		7th Ave	2 roadway Retention - owner added curb w/ raingarden in front of house	2019	2	yes	East br Wilson	x	
455 locations								in City swale qty		599			
zxc	16-067	PUD	PUD	Private			3 Interior Retention	2020	three	No	no outfall	yes	
zxc	16-122	parking lot addition	Bid Mechanical	Private	Bid Mechanical	RR Ave	2 Interior Retention; 20,495 sf ISA	zxc	two	No	no outfall	no	
non swale storm detention retention - perv conc etc													
Pervious surface: concrete, pave drain brick, etc													
PS 01	2009-087	planned parenthood		Private	apts/comm prop	Pine St.		2009	1			less than	
PS 02	2011-048	Carls Jr		Private	apts/comm prop	Opportunity St		2011	1			less than	
PS 03	2016-101	Community Health bldg expansion		Private	apts/comm prop	Mountain View Ave		2019	3			less than	
PS 04	2018-121	Libenow duplexes - Helena Ave		Private	apts/comm prop	Helena Ave		2019	2			less than	
								7					
Wet Ponds													
WP 01	2007-049	Alliance SP No 1	City property	City	City purchased in 2017	Enterprise Way	proposed detention pond deepened to create wet pond during const.	2007	1	yes	Whiskey Cr	yes	
WP 02	2003-077	Sander's Mill	Sander's Mill	Private		Olive Lane	pre-existing agricultural pond; pond size reduced during construction	NA	1	yes	Mercer Cr	NA	
WP 03	1997-029	Water St Impr project, phase 2	City property	City		Water St.	high groundwater pond, not water quality cell	2002	1	No	Mercer Cr		
WP 04	blgd permit	2202 Canyon Rd - Buzz Inn		Private		Canyon Rd	high groundwater pond, not water quality cell	NA	1		no outfall	NA	
WP 05	2001-044	CWU Music Building		CWU		Alder St.	high groundwater pond, not water quality cell	2001	1		no outfall		

The City inspects private post construction BMP's every two to four years for BMP's built after 2007. Above is a snip of the master database of 475 facilities and inspection notes. New requirements for after August 2019 may require some sort of inventorying and inspection for BMP's that discharge to groundwater. That will be captured in the 2021-2022 SWMP.

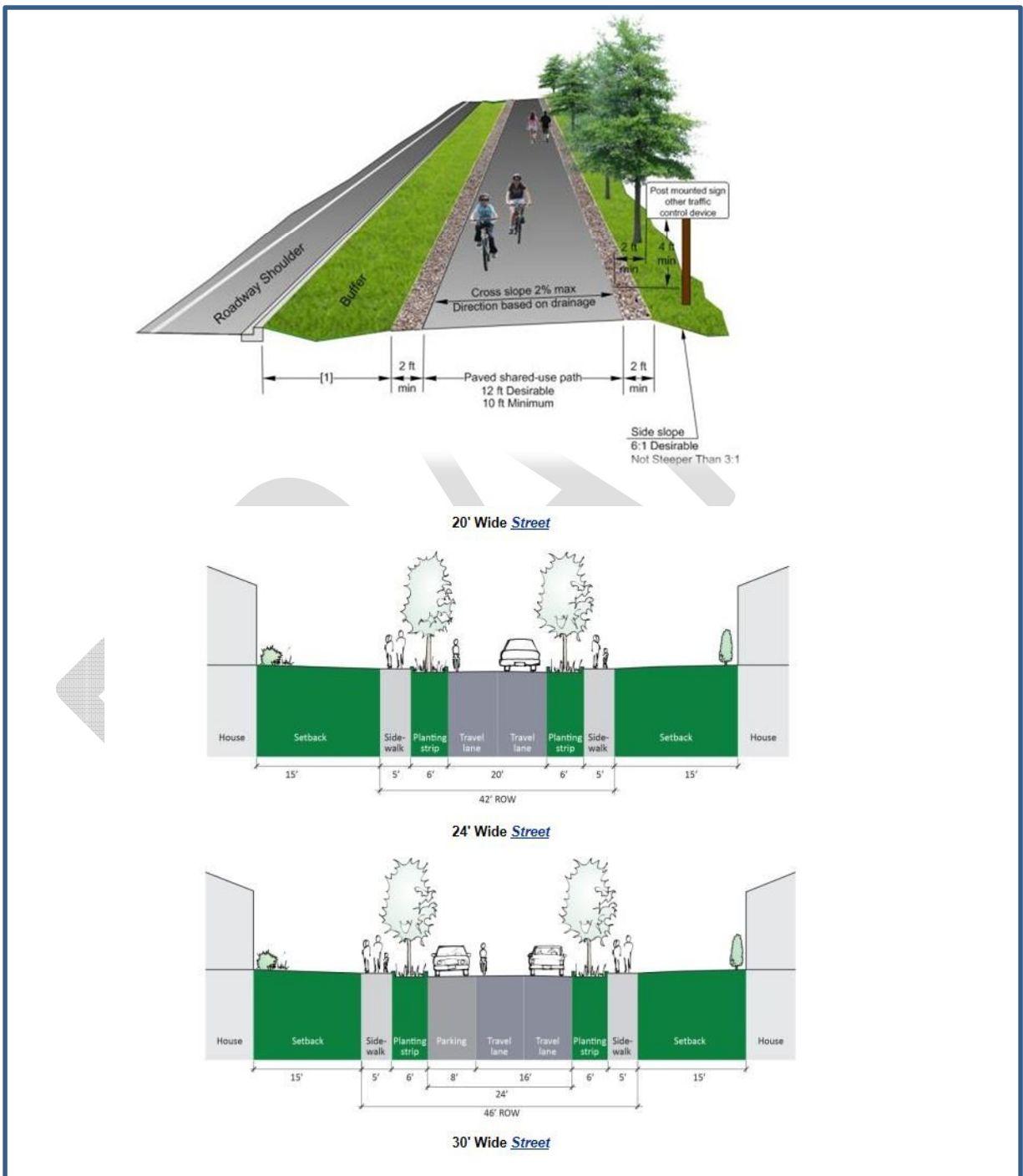
The private BMP's that discharge to ground or surface waters are already mapped and inventoryed and the system is updated annually.

Pictured on the opposite page 16 are a few public and private examples of post construction flow control and treatment BMP's within the City of Ellensburg.





All frontage improvements are now required to provide infiltration for street water instead of connecting to the existing storm system. Recently the City adopted new street standards. The new standards narrowed the streets and now require vegetated or rock lined planter strips to accommodate runoff. Pictured below are examples out of the City Code that depicts the new street standards.



The City receives approximately 8.89 inches of precipitation annually. Most often, that falls in the form of snow. The region is classified as high desert/shrub steppe. Maintenance of post construction facilities are an issue statewide. More often than not, the facilities fall in the hands of homeowner's associations that fail to form and or developers that refuse to take care of the systems. Most are in private ownership and were built prior to permit in 2007. Most have fallen victim to the lack of maintenance over the years and are in decay, a condition of out of sight and out of mind. Most become overgrown with vegetation, quit working and plug, and become dumping grounds for trash.



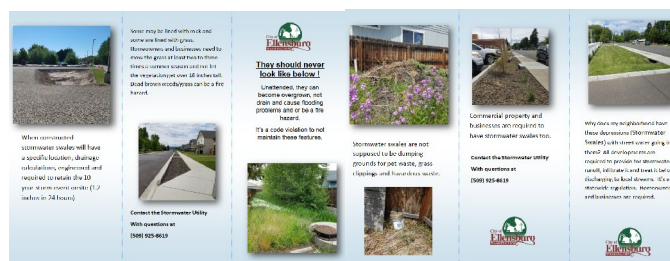
Success story for 2020. The stormwater detention pond pictured at the left just underwent a complete transformation and was reconstructed early spring of 2020. The pond is no longer a dumping ground for trash and is doing what it was designed to do. Capturing our post construction inspection program, inspection gains compliance most of the time.

Rock lined swales (Xeriscaping) are becoming very popular in Ellensburg. They're relatively inexpensive to construct and very little maintenance is required. They're aesthetically pleasing to the eye and blend in with the native landscape. They're usually visible to the public and that eliminates the out of sight, out of mind issues. Watering is not required on xeriscaping facilities and is one of the benefits to conservation. Pre-treatment is required to treat the first half inch of rainfall. 60/40 Bio-soil retention media mulch, grassy strips, downturn elbows and other BMP's are offered in the Eastern Washington Manual and it is up to the design engineer to choose, which one best fits the design.



Department of Ecology now requires on all sites greater than one acre of disturbance or part of a common plan or sale, the builder provide the local jurisdiction with an O&M plan. The plan outlines how maintenance will be conducted, the financial element to make that happen and who is responsible for maintenance.

A flier was created in 2020 that is handed out at pre-construction meetings on how to maintain private stormwater facilities.



C. Illicit Discharge Detection and Elimination (IDDE)

Provided is a link to the City's prohibited discharges Municipal Code Section 9.25.320, allowable discharges 9.25.322, conditional discharges 9.25.324 and the prohibited illicit connections to the storm drainage system 9.25.326

<http://www.codepublishing.com/WA/Ellensburg/#!/Ellensburg09/Ellensburg0925.html#9.25.320>

The City has an escalating enforcement procedure under ordinance 4717, Chapter 1.80 of the Civil Violations and penalties section of the City Code. The ordinance allows the City to escalate enforcement for water quality and other stormwater violations beyond the educational correction notice. This code can apply to IDDE, Post Construction and Construction.

The utility enforces the storm drainage code on a complaint basis. Complaints from the public are kept anonymous but are a matter of public record. All complaints are followed through until compliance has been achieved or the problem rectified. All complaints that violate state water quality standards are reported to the Washington State Department of Ecology's Environmental Tracking System (ERTS) and Portal.



Outfall Inspection Program 2021-2022



Annually the City conducts outfall screening in the dry season and after rain events that exceed the 10 year 24 hour storm. In 2021 no recorded storm events exceeded the 10 year 24 hour storm. No spot checks were required. The City mapped all of the outfalls to local streams in 2010 and again in 2013. Approximately 80 discharge points (outfalls) exist within the 50.26 mile underground system. Below is a breakdown of the underground pipe/outfall size in inches (diameter) and the number of (how many) of each pipe type exists within the system.

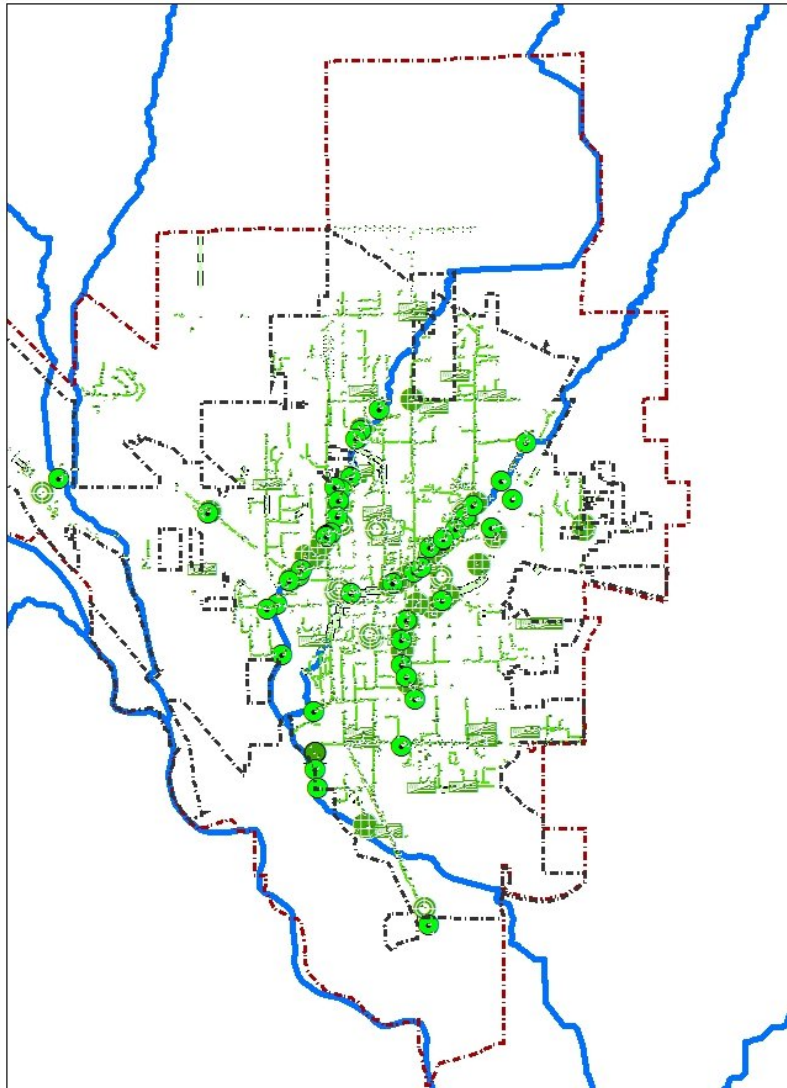
Pipe/culvert size diameter on top row and number of pipes/culverts that match that size on the bottom row

48"	42"	36"	30"	24"	18"	16"	12"	10"	8"	6"	4"
15	6	3	4	82	129	137	1013	136	947	354	30

[illegible]

23

Ellensburg Outfall Discharge Points



Each outfall is identified by an ID number correlating with the City's GIS maps. Each outfall was screened for flow, odor, color and any visible signs of pollution. Pictures were taken of every outfall. Each outfall inventoried has an NPDES dry weather field screening data form. See page 25 for outfall inspection database.

(2020 outfall inspection database)

South to north	Upstream Facility ID #	Location	Outfall location / comments	Stream/Outfall	Pipe Size	Pipe Type	2020 Inspection date	2020 Dry screening	2020 Comments
Mercer Cr.									
Mercer 1	55-2030	1st Ave dead end at terminus with creek	usually visible from RR Ave	Mercer Creek	12	HDPE	10/14/2020	No Flow	high & dry; found upstream CB
Mercer 2	55-1017	5th Ave, west of Wenas	outfall buried under rip rap boulders; drains 5th Ave west of Kittitas St.	Mercer Creek	12	Concrete	10/14/2020	No Flow upstream MH	standing water, no movement
Mercer 3	55-2053	6th Ave, west of Wenas	1st upstream CB buried under fallen tree branches & leaf litter	Mercer Creek	8	AC	10/14/2020	No Flow upstream CB	
Mercer 4	55-2057	Wenas St, south of 7th Ave	3 CB at 7th & Wenas; outfall at culvert & not visible	Mercer Creek	6	Concrete	10/14/2020	No Flow upstream CB	
Mercer 5	55-2059	7th Ave, east of Wenas	Point of connection inside culvert - not visible	Mercer Creek	8	PVC	10/14/2020	No Flow upstream CB	
Mercer 6	65-2057	east of Cle Elum St, south of University Way @ Hampton Court Apartments	Point of connection inside culvert - not visible; 18" line is inside the walls of the abandoned Reed Mill ditch at the University Way crossing	Mercer Creek	18	Concrete	10/14/2020	No Flow upstream CB	
Mercer 7	65-1037	University Way, east of Okanogan	Point of connection inside culvert - not visible	Mercer Creek	12	Concrete	x	needs traffic control to inspect MH in arterial street	dry upstream CB
Mercer 8	65-7000	11th & Water St.	Pipe drains 11th Ave & Columbia St. and discharges direct to the creek, parallel to swale.	Mercer Creek	12	HDPE	10/14/2020	minimal trickle of water	
Mercer 9	65-1041 Splitter MH	11th & Water St.	12" low flow from Water St goes into swale #219, which overflows into creek	Mercer Creek	swale #219 overflows into creek	PVC	10/14/2020	standing water & saturated soil from groundwater at outfall pipe into swale.	swale vegetation now on City landscape maintenance contract
Mercer 10	65-1041 Splitter MH	11th & Water St.	18" high flow pipe IE is .2 ft higher than 12" low flow pipe	Mercer Creek	18	HDPE	10/14/2020	groundwater trickle	groundwater trickle increased, due to constant groundwater flow from Main St ext. improvements
Mercer 11	66-1009	at back of 1101 N. Main St.	outfall is on private property; is buried under willow tree stump	Mercer Creek	8	Concrete	10/15/2020	upstream MH totally dry	Willow tree over outfall was removed October 2018
Mercer 12	66-2073	Main St. at Kiwanis Park, by well house.	year round groundwater; drain comes from area north of 17th Ave through Englehorn pond; MH cover in grass east of walk	Mercer Creek	10	PVC	10/15/2020	constant year round groundwater	

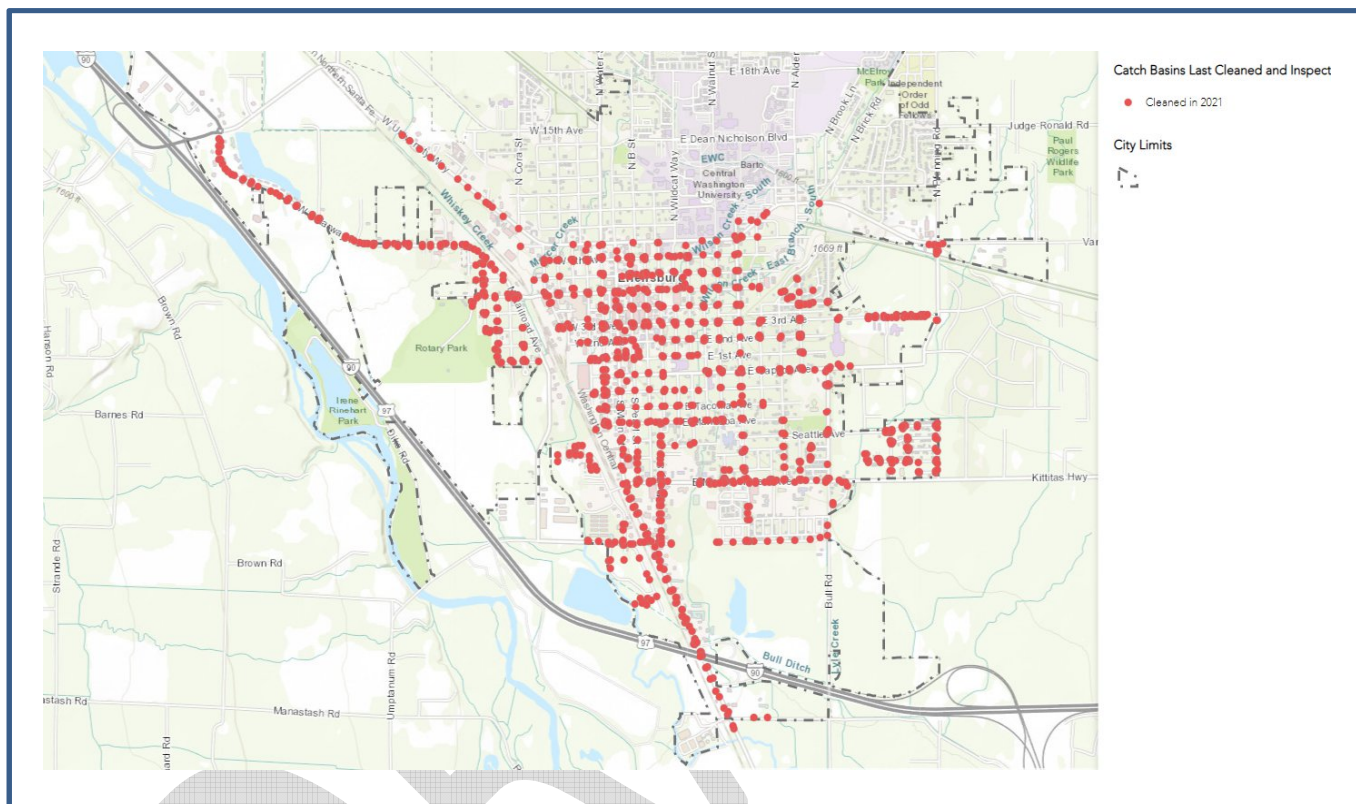
The City operates a 24 hour hotline for spills on its stormwater web page (509) 962-7230 after hours (509) 925-8534. See link <https://ci.ellensburg.wa.us/738/Stormwater-Division>

The Utility has a software program powered by ESRI GIS to assist with IDDE inspections. The vector truck crew is outfitted with a tablet that tracks each cleaning and collects data on IDDE inspections. Each catch basin, manhole and pipe is inspected before cleaning. The crews inspect each inlet and outlet for flow, odor, color, sheen, staining and floatables. They also note if side laterals have obvious discharge from private sources. Once inspected, they clean the lines, and that too is tracked in the software program. If any structural damage is noted, then that information is put on a capital facilities plan. If pollution problems are noted, the Utility technician is notified and source traces the problem for elimination.

The City is on target for meeting its permit obligation to inspect and clean the entire system by December 31st 2018 (at time of writing this report, the system has been entirely inspected and cleaned as of September 2017). In 2014 (728) catch basins were cleaned, 2015, (637) cleaned, 2016, (410) and (602) in 2017 and (361) in 2018. The utility met the new requirements for 2019 and cleaned one half of the town during the spring-summer-fall season. Same will be done for the remainder of the new permit until 2023.

2021 IDDE Inspection and Cleaning map

The IDDE program also conducts weekly bacteria monitoring on local streams to detect for illicit connections in addition to the O&M inspection program. See page 28.

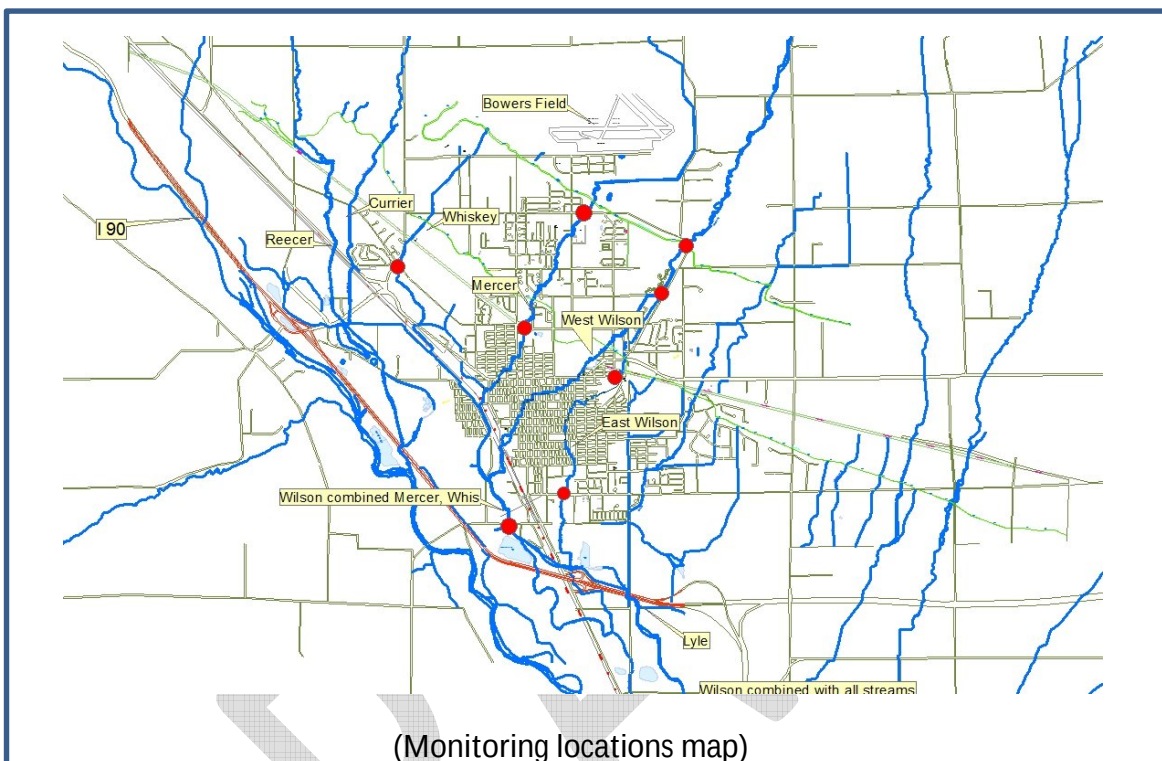


The link below is the City's cleaning and inspection map

<https://gis.cityofellensburg.org/gallery/#viewer=0548d3889c9844f6a502b370e44a2b51>

The north half of the town will be cleaned and inspected in spring/summer/fall of 2022

The utility now conducts bacteria monitoring at several locations on Wilson Creek twice a week. The monitoring is a part of the IDDE program, and the data is being shared with Ecology for their TMDL program. The bacteria monitoring is a source tracing program and utilizes Coli-scan Easy Gel. A one milliliter sample is plated and incubated for 24 hours at the Wastewater Treatment Plant for results in CFU/milliliter.



The utility has detected and eliminated a few illicit discharges since the program was implemented in 2010.

The data collection spreadsheet shows the date and time the bacteria sample was collected, and the level recorded in coliform units per 100 milliliters. (Disclaimer) Data collected does not use EPA certified Standard Methods. The method of collection and analysis is certified for finding out the presence of coliform units per 100 milliliters. Membrane filtration is the certified standard method. The collection augments the City's IDDE program and if sources are detected, they are traced and eliminated.

Recent data collection below, not yet entered in the spreadsheet.

A new bacteria source tracing program is set to kick off spring of 2022 with potential changes to the locations. It will still be done twice a week as before. The IDDE program is being planned at the time of writing this plan.

	Date sample taken	Wilson @ Sanders cfu/mL	Wilson above Fairgrounds @ 8th & Alder cfu/mL	Wilson @ 5th w of Poplar cfu/mL	Wilson @ Mtn. View south side cfu/mL	Wilson @ Senic Burger cfu/mL	Precip past 24 hrs	comments
	10/27/2020	Ø	100	Ø	Ø	Ø	None	
M	11-2-20	Ø				Ø	None	
W	11-4	Ø				Ø	None	
M	11-9	Ø	Ø	Ø	300	100	None	
T	11-17	Ø	Ø	Ø	300	200	None	
Th	11-19	Ø	Ø	Ø	600	100	Trace	
M	11-23	Ø	Ø	Ø	Ø	Ø	None	
W	11-30	Ø	Ø	Ø	Ø	200	None	
W	12-2	Ø	Ø	Ø	Ø	Ø	None	
W	12-9	Ø	Ø	Ø	Ø	Ø	None	
M	12-14	Ø	Ø	100	Ø	Ø	Trace	
W	12-16	Ø	Ø	Ø	Ø	Ø	None	
W	12-23	Ø	Ø	Ø	Ø	Ø	None	
W	1-6-21	Ø	Ø	Ø	Ø	Ø	Trace	2021

Ellensburg began collecting data to see how much bacteria loading occurred as Wilson entered the City limits and what the concentration was when it left town. Early results indicated a large dilution factor as it progressed through town. The data collected by Ecology indicated that most of the loading was coming from outside the City limits. As Wilson passed through town, it diluted significantly by the time it reached Berry Road and Umptanum. The City worked with the County Fairgrounds to eliminate all storm drains from entering Wilson Creek in the year 2012.

In addition to outfall screening and O&M inspections, the utility also fields complaints from citizens and staff. The complaints range from spills to drainage problems, water quality violations, swales, construction/erosion control and flooding. If it's a water quality violation, spill or discharge under S4F of the permit, the problem is reported to the Department of Ecology's ERTS tracking system and Portal. The City also receives ERTS from Ecology and they are tracked and followed up on. We're now required to report water quality violations on a statewide electronic database, Portal. We discontinued keeping the spreadsheet in 2021

Below is an example of the spreadsheet that no longer exists. To date in 2022 there have been a few reportable incidents to Portal.

(Example of complaint database)

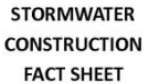
of Stormwater Issues/Complaints for City of Ellensburg													
Date	Site Address	Name associated with Site	Notes	Water Quality Issue	Erosion Control	Utility Concern	Drainage Concern	Swale Issue	Flooding Concern	Stormwater Billing concern	Outreach Education Visit	Case Closed	WQ report filed
3/10/20	111 King Place	na	caller reported oil spill. Investigation revealed a lion issue. About a 6' long dribble on the driveway, already covered in kitty litter by resident. Did not even reach the curb line. No harcopy file.	1								x	x
7/6/20	Cora St. at new Mt. Stuart replacement school site	Advantage Dirt	About 1:00 on Monday July 6 the ESD contractor Advantage Dirt hit & broke a water main on the west side Cora. Most of the silty water flowed into the brand new sewer main they are constructing, and some silty water headed south & west, into the mix of irrigation lines & storm lines. They also diverted water west out onto the lawn area of the school grounds. By the time I heard about the break & got there around 2:45, they had the main shut off & the water had ceased flowing, with not much to see at the surface. The only CB that - eventually drains to Mercer Creek, (#75-2005, red arrow) is the 1st CB west of Cora. The next City CB to the west on 15th Ave. ties into the irrigation drainage of Mt Stuart School. The CBs/storm on the east side of Cora drain to the Stonebridge swale. The contractor has been instructed to clean the silt at the curb line & to clean and/or replace the CB socks. The City crew will assess & clean the catch basins as required, and also sweep the street.	1	1							x	x
7/13/20	new Mt. Stuart replacement school site	Advantage Dirt/Garco Const.	ERTS incident #699328 - Dust complaint from a resident living nearby the construction zone. PW field inspector sent emails to contractor regarding need to control dust. Case is ongoing, and likely will continue until the project is done. Contractor has increased use of water truck for dust suppression, and will use PAM, too. Inquiry about swale located in front of her residence. The swale was installed as part of the neighboring short plat improvements. The resident may request to modify the swale to reduce the catfall & weed maintenance. No harcopy file.		1							ongoing	x
7/23/20	404 W Ridgeview	FIROH, KYLE & SARAH	Field crew report of fence building activity in a swale located on this property. Gordon met with Michelle & Steven, discussed their plans work & proposed fence. They are to uncover pipe entry to swale & keep outfall CB open. 2nd discussion at site regarding fence OK at top of swale, but not on property line at bottom of swale. No harcopy file.					1				x	x
9/28/20	112 W Courtney Ct	Michelle O'Brien & Steven	When Bryan was out inspecting catch basins, he found one with a small amount of oil inside. A thin skim in CB 78-2010, some additional skim on the crown of the outlet run but nothing at all in the downstream CB 78-2004. Bryan put an absorbent tube in the CB & returned with the vac truck. Looks like intentional dumping into the CB. Report filed on DOE WQ website.					1				x	no
9/29/20	Helena Ave, E of Alder St.	unknown perpetrator	ERTS incident #700844 Report that resident at 208 E Kirsten Ave has open containers of oil next to the retention cell adjacent to 208. also reported that the resident at 208 E Kirsten was sumping household trash in the retention swale. Jon looked at it, found no signs of dumping. Some trash nearby but not in swale. Swale is owned by homeowner's association.	1								x	yes
10/1/20	206 E Kirsten Ave	resident at 208 E Kirsten Ave	A water main on 2nd Ave east of Water St. broke in the early AM on 10/12/20. The Water Dept. responded & shut off the main, the Street Dept. responded to clean up silt & rocks that was washed over the roadway from the leak. Most of the water went in to the Water St. storm drain system which out falls to a storm water detention pond. Some portion of the water traveled west on 1st Ave to 2 catch basins that drain in to the Fred Meyer private-storm water system, which also drains to a storm water detention pond. The Sewer Department will assess how much silt went into the catch basins & clean the catch basins as necessary. The water crew checked for chlorine at the outfall, and found no detectable chlorine.					1				x	yes
10/12/20	Water St & 2nd Ave	City of Ellensburg		1								x	yes

D. Construction Site Stormwater Runoff Control

The link below is the City of Ellensburg's Stormwater Development Standards. Site operators, civil engineers, city staff and private developers must adhere to these standards when designing and constructing projects. Sites one acre or greater are required to complete a Stormwater Pollution Prevention Plan (SWPPP). SWPPP's along with the O&M plan and sediment control plans are reviewed by the Stormwater Manager for completeness. Engineering plans are reviewed by both the stormwater manager and the plans examiner to meet the requirements of the 2019 EWA Manual.

<https://ci.ellensburg.wa.us/339/Development-Standards>

Ellensburg Standards has a whole section devoted to LID and site design (copy link above). Also new is the section on treatment and volume-based design. The Eastern Washington Stormwater Manual was updated in 2019 and the City adopted that manual into their standards making it city code.



- If your site is one acre or greater of disturbance or part of a common plan, or sale, you need to comply with the Department of Ecology regulations and apply for a Stormwater General Construction Permit well in advance of any site work taking place (see link below)
<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>
- A stormwater pollution prevention plan (SWPPP) is required (see template link above on DOE website) and will be reviewed by City staff for completeness before work takes place.
- Temporary Erosion Sediment Control (TESC) is required on all plans submitted if disturbance is one acre or greater. Plans must be reviewed by City staff and approved before work takes place.
- New rules apply for construction de-watering, dust control and several other construction related elements (see link above)
- Commercial and residential stormwater flow control/treatment facilities (swales/detention ponds, bio-filtration) on sites one acre or greater must be designed to meet Core Element 2,5 and 6 out of the Eastern Washington Stormwater Management Manual along with the City of Ellensburg Development Standards. <http://www.ci.ellensburg.wa.us/index.aspx?nid=339>
- **New:** An Operation and Maintenance plan for the perpetual maintenance of the facilities is now required. <http://www.ci.ellensburg.wa.us/index.aspx?nid=252>

The stormwater construction fact sheet (page 30) and O&M template are handed out at every pre-application meeting informing the developer that sites an acre or greater require a SWPPP, TESC, Construction General Permit from Ecology and a O&M plan. Both the O&M template and the fact sheet can also be found on the City's Stormwater webpage at,

<https://ci.ellensburg.wa.us/738/Stormwater-Division>

All sites > 1 acre are required to use the Eastern Washington Stormwater Design Manual. Private projects and projects proposed by the permittee's own departments adhere to the same standards and details as set forth in the 2019 Eastern Washington Stormwater Design Manual.

All employees involved in field activities, (Operation and Maintenance, Plan Review, and Construction Inspection) undergo stormwater pollution prevention training and have CESCL certification.

The City adopted ordinances to prohibit silt, sediment, concrete slurry and all construction related products from entering the public storm system. See City code sections 9.25.320, 322, 324 and 326 from the link provided.

<http://www.codepublishing.com/WA/Ellensburg/#!/Ellensburg09/Ellensburg0925.html#9.25.320>

City ordinances, the adoption of the Eastern Washington Stormwater Manual, the design/development standards, the required SWPPP, TESC, O&M Plan, site review and field inspection combined, ensure compliance with the regulatory framework of the permit.

City staff who manage capital projects, oversee Operation and Maintenance, review site plans, inspect in the field and manage stormwater are all Certified Erosion Sediment Control Leads (CESCL). Every three years city staff renew their CESCL accreditation.

All projects disturbing one acre or greater since the issuance of the Phase II permit are on file with the City of Ellensburg. The permit requires construction records be kept for a period of up to five years after completion. All records at the City of Ellensburg pertaining to public projects or private development are kept indefinitely thru archiving and project files.

Stormwater Development Standards require staff review all site plans for treatment and flow control, inspect all stormwater BMP's and erosion control even if the threshold is under one acre or greater.

NPDES Stormwater Construction Review								
PW Project #	Project Title	Applicant	Reviewer	prelim storm review	comments	Checked BMP selection and Calcs (added 3-17-18)		
in PW review								
21-103	609 North Water Multi family	Stalder	JM		Less than one acre and is installing a UIC	Approved		
21-085	Trent Blackmore	TB	JM		Meets the criteria out of the SWMMEW for flow control and treatment. TESC, SWPPP, O/M approved	Approved		
18-021	L. Betteow Driv	Lansow	JM		Letter fit the existing detention pond. PISA re-calculated the pond with rock. Approved meets the design criteria out of the manual	Approved		
21-096	Patricia Place	TG	JM		Approved for construction UIC and no connection to the MS4. Consistent with the SWMMEW	Approved		
2021-061	Dry Creek Rd - Foster Subdivision							
2019-070	Bender Rd to Greenfield Ave - Ridgeview Plat Phase 3	Drexler	GC & JM		This phase drains to roadway swales	Approved for construction by PW 9-18-21		
2021-070	Habitat for Humanity North Water Street	Stuart Meadows	JM		Project meets all the core elements of the NPDES permit and SWMMEW	Approved for construction		
2020-095	Greear Phase 3 1500 W Dolarway	Greear	JM		Site is greater than one acre, does not drain to our MS4. They provided TESC, O&M, SWPPP, calcs match infiltration and runoff rates, sizing. They are required by DOE to get a construction general permit.	Approved for construction by PW 9-10-21		
2018-085	101 N Pine Street Holdings - 19 unit Apartment	Stalder	JM		Site is under one acre, does not drain to our MS4 and is exempt the guidelines for development from ECV. Parking lot drains to UIC.	Approved for construction by PW		
					TESC plan approved, O&M approved, sizing and calculations approved, BMP selection approved, Geo tech report provides plenty of separation to groundwater and the infill rates are 10 times the amount to retain the 10 year storm. They will need to apply for a general construction permit with Ecology prior to construction. Approved for construction.			
2018-132	Ellington St Ext - Ellensburg Flats Plat	Falcon Ridge Invest	JM		stormwater plan in SmartScan 6-15-21. Existing parking lot and building drainage drains without treatment through CWU storm drains to W Br. Wilson Cr. Renovation of drainage will include on site treatment and retention in UIC.	Approved for construction by PW		
2020-122	CWU Nicholson Pavilion - Renovation & Addition	CWU	GC & JM					
2017-091	Penning & Radio Rd ext - Lyle Creek Plat	Stalder	JM		New owner re-submitted in Dec 2019 for 100+ lot long plat, in 4 phases	on hold by developer		
Projects underway								
2020-102	Opportunity St - Lakeshore Equine Hospital	KLB Construction	GC & JM		Does not discharge to City MS4. 6.63 acre site, drains to interior swale.	Approved for construction by PW 6/21/2021		
2021-088	duplex project - 603 E 5th	Blanchard	GC & JM		Site is under one acre, does not drain to our MS4, drains to interior swale.	Approved for construction by PW		
2021-075	Walnut and Helena townhomes	Johnston	JM		Site is under one acre, does not drain to our MS4 and is exempt the guidelines for development from ECV	Approved for construction by PW 6/21/2021		
2021-024	Rever Mini Storage Phase 2	Blanchard	JM		Phase 2 is under one acre and does not trigger Ecology guidelines; does not drain to our MS4	Approved for construction by PW		
2019-048	Transfer Station - Access Rd improvements	KCSW	JM		95% calculations and modeling are good to go. Waiting on TESC, O&M, SWPPP	Approved for construction by PW		
					Does not discharge to City MS4. Geo tech report gives them 4-5 feet of separation to GH20. They're amending their soil with 1.5 feet of compost for treatment; flow control is good for detention and retention and everything is treated and contained onsite. SWPPP good, TESC good and O&M good, approved for construction.	Approved for construction by PW		
2020-085	505 S Railroad Ave - Storage Facility	Greear	JM		Does not discharge to City MS4. Their infiltration gallery and sand filters are bona fide UIC's and they will need to register those with the Department of Ecology. The city's stormwater permit with Ecology does not authorize us to approve UIC's. Ecology requires a State Waste Discharge Permit before construction can be approved. We'll need to make sure they get approval from the state prior to construction. Please let the engineer of record know this and I can be the point of contact.			
					They do not discharge or overflow to the City's system and are not regulated by Ellensburg. They do however have to comply with our standards for erosion control and O&M, of which this is covered in the report and plans. All catch basins and underground pipes draining to the facilities will have to meet city standards. They do not need a SWPPP, because they do not drain to our system. That said, they will have to apply for a Department of Ecology General Construction Permit and that may require a SWPPP from ECV.	Approved for construction by PW		
2020-099	Walnut & Sampson - Lincoln Elem school remodel	ESD	JM		Sizing calculations are good to go along with TESC, SWPPP, O&M	Approved for construction by PW		
2019-108	Sanders Rd - 1200 Block - French Plat	Willard	JM		Does not discharge to City MS4. Proposed detention pond drains an existing irrigation tailwater ditch.	Approved for construction by PW		
2019-087	Mt. Stuart replacement Elem school	ESD	GC & JM		Does not discharge to City MS4. Two on-site detention ponds will each have an outlet to an existing grassy area that drains an existing irrigation tailwater ditch.	Approved for construction by PW		
2019-086	Cora St. Extension & new Elem school	ESD	GC & JM			Cora St. ext. Approved for construction by PW 4/29/20		
2018-123	Opportunity St - Marriott Hotel	Hoeback	GC & JM		2 interior Retention swales. 2.69 Acre site, but does not drain to MS4.	Approved for construction by PW		

(2021-2022 Plan Review Spreadsheet example)

The project number, title, applicant, reviewer, comments, plan approval and status are the fields that get reviewed. Under comments, the status of the TESC and SWPPP are reviewed for completeness. Every project, public or private goes through the same internal process. With Ecology's assistance, a spreadsheet was made to run and simulate storm calculations to check up on sizing requirements. See column on review spreadsheet. After the permit is issued and groundbreaking commences, staff inspects the BMP's to ensure they match the plan requirements throughout the project. Staff keeps a daily log called the "Inspectors Daily Report" (IDR). See page 33.

(Example IDR)

 CITY OF ELLENSBURG Public Works Department Inspector's Daily Report						
Project:	rt School replacement/ North Cora S	Date:	3/17/2021			
Weather AM:		Weather PM:	Clear 45 degrees			
Location:	15th and Cora Street					
Contractor:	Garco/Advantage Dirt	representative:	Jake W /Jaramy H			
Contractors:	Advantage Dirt					
Equipment:	Backhoe, Cat, Etc.					
Labor:						
Item Of Work	n-Progress	Complete	Erosion Control Required	Installed	Approved	
Saw Cutting			EC Plan			
Clearing/Grubbing			SWPP			
Excavation & Haul			Tire Wash			
Storm Sewer			Silt Fence			
Utilities			Wattles			
Water			Wattles			
Sidewalks			Check Dams			
HMA Patch			Drain Filter			
Signage			Seeding/Sod			
Punch List			Sed. Ponds			
Sewer						
Paving						
Traffic Control Needed	Yes	No	ffic Control Acceptab	Yes	No	N/A
Cora Street looked pretty good. It looks like they replaced the socks in the catch basins. I did not see any water Trucks or watering on site?						
It			Inspector's On Site Hours			
No	Dustin Auckland		1 hours			

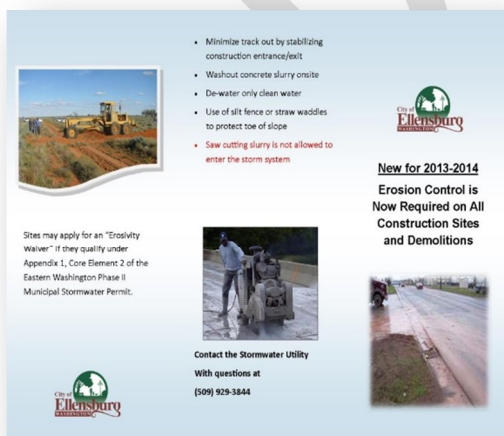
The City's construction inspector keeps a daily inspection record of all erosion and sediment control issues onsite and the corrective measures taken to seek compliance . (See example above)

All construction site operators, developers, and engineers are provided information on erosion control training available, how to install effective Best Management Practices (BMP's) and how to comply with requirements in Appendix 1 of the Phase II Eastern Washington Municipal Permit. Information is provided on how to apply and install the BMP's as prescribed in Chapter 7 of the Stormwater Management Manual for Eastern Washington.

Private contractors have access to statewide CESCL training, the fliers and pamphlets on the city's website and are given these materials during pre-construction meetings. Annually the call before you dig seminar, hosted by the City's gas department is a large draw for local contractors. Information is usually given out or there is a presentation by the stormwater utility. Most if not all large projects in Ellensburg are now bid by companies outside Kittitas County. Most if not all come with CESCL leads. All plans that are submitted to the City are now designed from a licensed engineer to the new 2019 manual.

Internally Capital Improvement projects undergo the same scrutiny with regards to permitting, erosion control, plan review, field inspections and guideline compliance as the private sector.

The Utility created a flyer several years ago aimed at educating contractors to implement erosion control on all sites even if the threshold is less than one acre. The flier is handed out to all developers and contractors at predevelopment meetings and is available online and the Building Department at City Hall.





E. Public Involvement and Participation

On the third Wednesday of each month, the City of Ellensburg's Environmental Commission holds its public meeting at 5:15 pm, at 501 North Anderson Street (City Hall). The meeting is open to the public. From time to time, the agenda will have stormwater items requiring SEPA that is reviewed by the committee.

The City of Ellensburg Utility Advisory Committee (UAC) meets on the 3rd Thursday of the month from 3:30-5pm at City Hall and these meetings are open to the public. All committee meetings have stormwater agenda items and will remain to do so in the future. This plan goes before the UAC for public approval and is recommended by the UAC for City Council approval. Most items like SWMP, O&M, grants/projects and ordinances always are presented at the UAC first, then to City Council for authorization and public comment.

The public is always welcome to comment on the utility's program development, the City's NPDES permit, how to volunteer or general questions regarding the utility. The City's stormwater webpage offers citizens a chance to voice concerns, report problems and be informed of upcoming events. The public can contact the Stormwater Utility Manager at 509-925-8619 with questions, concerns or comments.

One annexation occurred in 2021. Ordinance NO. 4877

ORDINANCE NO. 4877 AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ELLENSBURG, WASHINGTON ANNEXING PARCELS 916833, 698633, 708633 & 528633 TO THE CITY OF ELLENSBURG, WASHINGTON, ASSIGNING LIGHT INDUSTRIAL ZONING CLASSIFICATION, PROVIDING FOR THE ASSUMPTION OF EXISTING CITY INDEBTEDNESS AND FIXING A TIME WHEN THE SAME SHALL BE EFFECTIVE. WHEREAS, on May 17, 2021, the City of Ellensburg, Washington received a notice of intention to commence annexation proceedings pursuant to the "direct petition" method of RCW 35A.14.120 for parcels 916833, 698633, 708633 & 528633, as more fully described in Section 1 of this Ordinance and depicted in Exhibit A, attached hereto; and WHEREAS, on June 7, 2021, the City Council of the City of Ellensburg, Washington held a public meeting with the annexation initiators pursuant to

RCW 35A.14.120 and determined that the initiators could proceed to acquire a 60% petition for annexation pursuant to RCW 35A.14.120; and WHEREAS, at its June 7, 2021 public meeting the City Council set the annexation area and further determined that the property subject to annexation would be zoned Light Industrial, and assume the annexation area's share of City indebtedness; and WHEREAS, the owners of not less than 60% in value, according to the assessed valuation for general taxation of the property hereinafter described, signed the petition pursuant to RCW 35A.14.120 for the annexation of said area to the City of Ellensburg, Washington; and WHEREAS, the petition for annexation was certified as sufficient by the Kittitas County Assessor, on June 22, 2021, having determined that the petition signatures have a combined total assessed value for general taxation of not less than 60% of the total assessed value for general taxation of all property in the proposed annexation area, in compliance with RCW 35A.01.040; and WHEREAS, the City provided public notice of the petition for annexation and has provided an opportunity for comment thereon by all interested citizens at a duly called and noticed public hearing; and WHEREAS, on July 15, 2021, pursuant to proper notice given in accordance with RCW 35A.14.130, the Planning Commission conducted a public hearing on the proposed annexation, and following such hearing recommended City Council approve the annexation request; and Ordinance 4877 -Annexation of Parcels 916833, 698633, 708633 & 528633 Page 1of4 WHEREAS, on September 7, 2021 and November 1, 2021, pursuant to proper notice given in accordance with RCW 35A.14.130, the City Council received and reviewed all of the documentation associated with this annexation proposal, conducted public hearings on the proposed annexation in accordance with RCW 35A. 14.140 and RCW 35A.14.330-.340, and following such hearings determined to effect the annexation of the territory described in Section 1 of this ordinance, finding that the petition for annexation met the applicable requirements, and that the best interests of the City of Ellensburg, Washington, will be served by the annexation and that it is appropriate to good government of the City of Ellensburg, Washington, and therefore accepted the petition for annexation pursuant to RCW 35A.14.120 and Chapter 15.360 of the Ellensburg City Code; and WHEREAS, the territory described in Section 1 of this ordinance is contiguous to the City of Ellensburg, Washington and entirely within the City of Ellensburg Urban Growth Area established pursuant to RCW 36.70A.110, NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF ELLENSBURG, WASHINGTON, DO ORDAIN AS FOLLOWS: Section 1. Annexation. The following described parcel and rights-of-ways are hereby annexed to and made a part of the City of Ellensburg, Washington, to wit: The South 460 feet of the south Yi of the SW 1/4 of the SW 1/,\ Section 2 Township 17 Range 18 lying west of the easterly right-of-way for Anderson Road. Together with the North 347 feet of the N Yi, NW 1/,\, NW 1/,\ lying west of the easterly right-of-way for Anderson Road; together with adjacent right of way for Anderson Road extending northerly approximately 500 feet to existing city limits Records of Kittitas County, State of Washington being a portion of Section 11, Township 17 North, Range 18 East, W.M., in the County of Kittitas, state of Washington. Section 2. Assessment and Taxation. All property within the territory so annexed shall be assessed and taxed at the same rate and on the same basis as other property of the City of Ellensburg, Washington is assessed and taxed to pay for any outstanding indebtedness of the City of Ellensburg, Washington as presently adopted or as is hereafter amended. Section 3. Comprehensive Plan Designation. All property within the territory so annexed shall be subject to and a part of the Comprehensive Plan of the City of Ellensburg, Washington as presently adopted or as is hereinafter amended. Ordinance 4877 -Annexation of Parcels 916833, 698633, 708633 & 528633 Page 2of4 Section 4. Land Use Designation and Zoning. All property within the territory so annexed shall

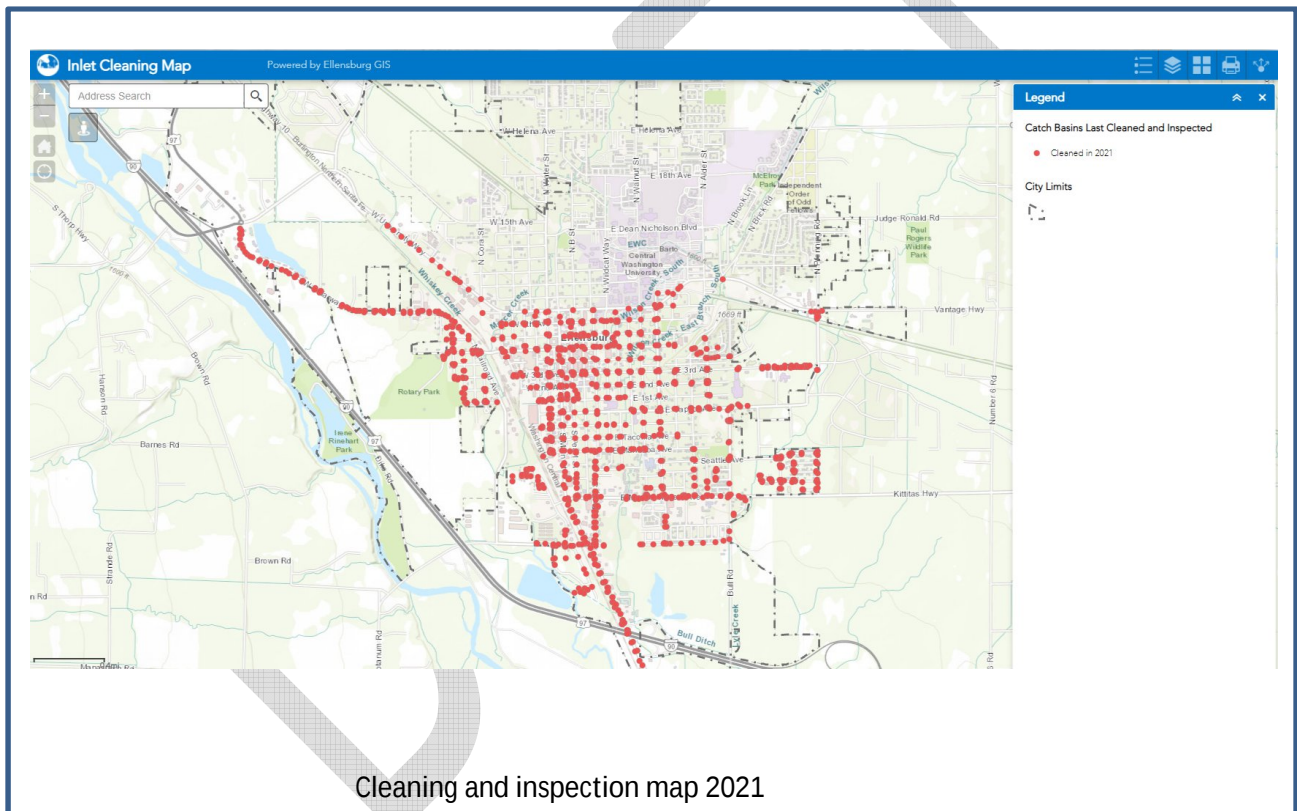
be hereby zoned as follows: Kittitas County Assessor Parcel Numbers 916833, 698633, 708633 & 528633 shall be zoned Light Industrial (L-I). Section 5. Transmittal and Filing. The Ellensburg City Clerk is directed to file a certified copy of this ordinance with the Kittitas County Board of County Commissioners. Section 6. Severability. If any portion of this ordinance is declared invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect the validity of the remaining portion(s) of this ordinance. Section 7. Corrections. Upon the approval of the City Attorney, the City Clerk and the codifiers of this ordinance are authorized to make necessary corrections to this ordinance, including but not limited to, the correction of scrivener's clerical errors, references, ordinance numbering, sections/subsections numbers and any references thereto. Section 8. Effective Date. This ordinance shall take effect and be in full force five (5) days after its passage, approval and publication. The foregoing ordinance was passed and adopted at a regular meeting of the City Council on the 1st day of November, 2021. .. / ATTEST: CITY CLERK Approved as to form: CITY ATTORNEY Publish: { I-+-w2{ I, Beth Leader, City Clerk of said City, do hereby certify that Ordinance No. 4877 is a true and correct copy of said Ordinance of like number as the same was passed by that Ordinance No. 4877 was published as required by law.



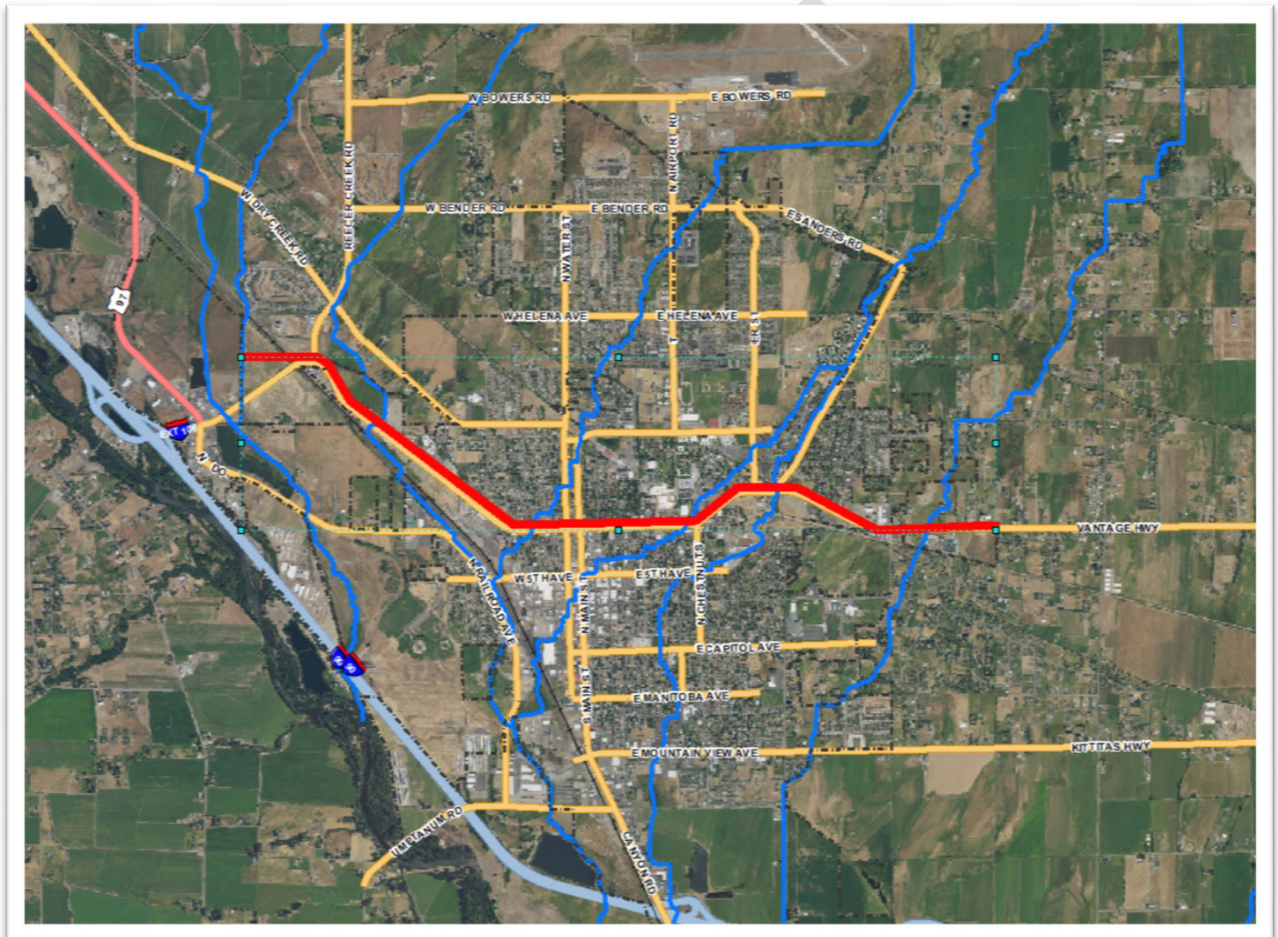
F. Municipal Operations and Maintenance

The City of Ellensburg wrote its own Operation and Maintenance (O&M) Plan in 2010. The Utility updated that plan in 2017 to meet the permit requirement S5 6a. All City staff is trained on Best Management Practices (BMP's) and pollution prevention. A copy of the updated O&M plan is available upon request.

As previously mentioned in the IDDE section, the vector truck is outfitted with a software tool that tracks inspection, cleaning and jetting. City crews were successful cleaning all of Ellensburg's storm system in the years 2014-2017. The 2021 map below shows the south half of the town was cleaned and inspected for IDDE and O&M.



The city has inspected and cleaned the entire system three times since 2017 . The new permit is requiring the town be inspected and cleaned every two years instead of four. The city met these obligations in 2019, 2020 and 2021. The city recently budgeted for a full time employee to spend 6 months on the storm vector truck with Bryan and the other 6 months (off season) with sewer. This assures the system has 6 months (April-September) of inspection and cleaning. The town is divided into two sections, each receiving 6 months of attention (see map below).



G.

S8 Monitoring and Assessment

The City is required every permit cycle to complete a monitoring and assessment study via a regional group, sub group or be a lead entity on a study that's for your own jurisdiction. You might remember that Ellensburg conducted its own study in the last permit that compared street sweeping to catch basin cleaning. That study was completed in 2019 and can be found at the link provided below.

https://g3coe-my.sharepoint.com/:b:/g/personal/morrowj_ci_ellensburg_wa_us/EZ0HCptv2Q9Nn-8gnasFHfEBaZ958Q1sB0vQUIcEQLBSZw?e=QBQG8M

In the current permit, the City compiled two studies into one to save time and money. The current permit requires an outreach education study aimed at a target audience to track behavior changes regarding pollution prevention. Along with the perpetual effectiveness study that is required, we combined the two to track the effectiveness of the outreach study into one study. Both studies looked at fast food restaurants and the handling of fats, oils and grease (FOG).

Staff hired Osborn consulting to help create the two studies as one and performed all necessary site visits and fieldwork. In 2021 Osborn visited all the fast food restaurants in Ellensburg and produced a program management recommendations and implementation plan. Copied below is the plan which was delivered to Ecology December 2021 as a permit requirement.

https://g3coe-my.sharepoint.com/:w:/g/personal/morrowj_ci_ellensburg_wa_us/EZR6e2RXMqhEgN41KjbvR3QBp4u-C3x39JLJSR7wRcTTmg?e=MVyBhS

The outreach portion, which included multiple site visits and in person training on the handling of FOG was followed up with how effective that part of the program was received. It is assumed at the time of writing this plan that staff will be faced with a new program in the upcoming permit that deals with source control business inspections. The City is in negotiations with Ecology to ascertain what the new permit requirement might look like and what the new program would cost. In the current permit we are required to write new ordinances by 2023 that would allow staff to inspect private property. This would pave the way for the new business inspection program. If this program is added to the new permit, then the fast food restaurants would be re-visited to see how effective the outreach and effectiveness study in this current permit cycle was received.

Copied below is the print version of the latest FOG recommendations from the outreach and effectiveness study.

CITY OF ELLENSBURG BUSINESS EDUCATION & OUTREACH STUDY

Document Intent

This document includes an overview of the study, a measurement of the understanding and adoption of the targeted behaviors for the study, the education and outreach (E&O) program recommendations to more effectively direct ongoing E&O resources, and a plan to implement the recommendations as required for the December 31, 2021 deadline specified by S5.B.1.b of the Permit. The results, E&O recommendations, and Appendix C (revised E&O flier) are direct excerpts from the study Technical Evaluation Report (TER) that is being developed to meet S8 Monitoring and Assessment Requirements. The remaining sections of the TER will be completed in early 2022.

Study Overview

Under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4s) Phase II Permit (Permit), jurisdictions such as the City of Ellensburg, Washington, are required by Washington State Department of Ecology (Ecology) in Eastern Washington (EWA) to evaluate the effectiveness of a Permit-required stormwater management program (S8 Monitoring and Assessment) and conduct studies on education and outreach programs (S5.B.1.b). The City of Ellensburg (lead entity) chose to meet both permit requirements by conducting a study on a revived E&O program that targets fast-food restaurants which are sources of F.O.G. and wash water (target audience). The targeted behavior which the E&O program planned to address was proper maintenance and disposal of F.O.G and wash water. The goal of the study is to evaluate the effectiveness of the City's E&O program specifically measure the target audience's adoption and understanding of targeted behaviors.

An E&O program addressing F.O.G. and wash water was implemented in 2013 and not revisited until this study occurred. The E&O program involved delivering a flier to local fast-food restaurants to inform restaurant personnel about the negative effects that improper F.O.G. and wash water disposal has on stormwater. Due to high turn-around rates of employment in fast-food restaurants and the growth of the number of operating businesses within the City, an updated version of this program was implemented in 2021 and evaluated for this study. The 2021 E&O program was deployed in summer 2021 and completed in fall 2021. The E&O messages were deployed by visiting each participating fast-food restaurant in person and discussing the contents of a revised flier during the visit. To determine the performance of the E&O program, baseline (before the E&O program was implemented) and follow-up (after the E&O program was implemented) data from in-person surveys of the fast-food restaurant staff were compared as well as observational data collected during the survey and during a separate visit. The data collected was analyzed to determine the effectiveness of the program. Results and discussion of the 2021 study are included in Section 6.

Based on the results of the study, recommendations were developed and are summarized in Section 8 that will assist the City of Ellensburg with improving their E&O program and directing their E&O resources more effectively. Copies of the revised flier for the E&O program based on the study recommendations is included in Appendix C. The implementation plan in Section 5.4 describes the staffing and funding needed to implement the E&O program recommendations.

6.0 RESULTS AND DISCUSSION

This section presents the results of the study and is organized by study objective as described in Section 4.2 of the study QAPP. For each objective a succinct response regarding the results is first provided followed by details regarding how the research team reached those conclusions. The results presented in this section consist primarily of coded survey responses (a copy of the survey will be included in Appendix D of the TER), though observational responses were coded separately and analyzed to check for bias on the survey responses. Both survey and observational data were converted into quantitative data using a Likert scale, as described in Section 13 of the study QAPP. As such, data is represented by the Likert scale values defined in Table 6.1.

TABLE 6.1 LIKERT SCALE DEFINITIONS

Likert Scale Value	Definition for Survey Question about Awareness	Definition for Survey Question about Adoption
+1	Full Awareness of Issue/Behavior (Aware)	Full Adoption of Behavior (Adoption)
0	Partial Awareness of Issue/Behavior (Partially Aware)	Partial Adoption of Behavior (Partial Adoption)
-1	No Awareness of Issue/Behavior (Not Aware)	No Adoption of Behavior (No Adoption)
No value	Not Applicable (N/A)	Question did not apply to the restaurant (Not Applicable)
No value	Unsure	Staff responded that they were unsure of answer to the question (Unsure)

Note: “N/A” or “Unsure” responses were not included in the analysis.

Based on the Likert scale, each survey response or observational data collected was assigned a value, except for “N/A” or “Unsure”. Values presented for each BMP which are closer to 1 indicate that on average, fast-food restaurants are fully aware or are fully adopting the desired behavior (use of BMPs for F.O.G. and wash water) promoted by the E&O program. Values approaching -1 indicate no awareness or no adoption of the desired behavior, and values close to 0 indicate partial awareness or partial adoption. The definition of “aware/adoption”, “partial awareness/partial adoption” and “no awareness/no adoption” specific to each BMP are defined in Tables 6.2-6.7 for baseline data and Appendix D of the TER for follow-up data. The values for each BMP were compared for survey responses and the observational data was used to verify whether bias was present in the survey responses. Observational data was used to verify survey data as the use of surveys are susceptible to reporting social desirability biases, especially when respondents believe there is a “right” or socially appropriate answer and they may be ashamed of answering otherwise. Any survey responses which did not match the observational data were omitted from the analysis, resulting in the filtered survey response data in Figure 6.1. The filtered data set also excluded flags which included inconsistent responses from fast-food restaurant staff between baseline and follow-up visits (i.e. staff reported having a grease trap during the baseline site visit and reported they *did not* have a grease trap during the follow-up sit visit) and confusion by the fast-food restaurant staff that resulted in a misinterpreted question reflected by the response (i.e. manager misunderstood what a grease interceptor was, and provided answers specific to their used cooking oil container instead). Figure 6.1 compares the filtered survey response data to the original survey responses.

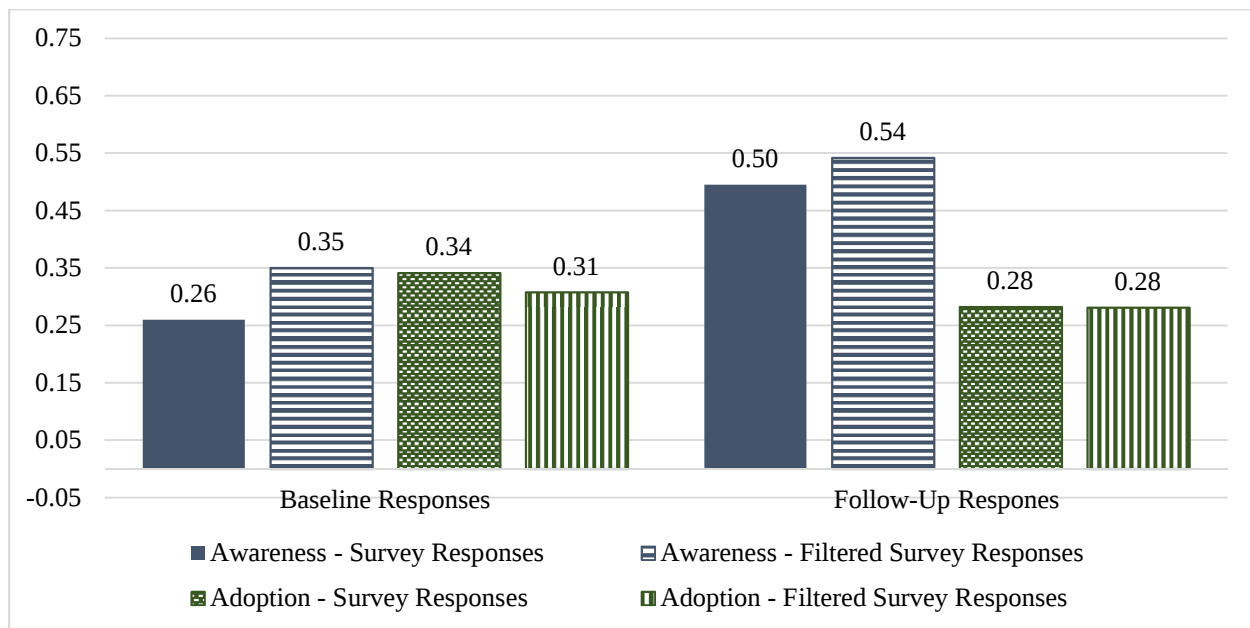


FIGURE 6.1 SUMMARY OF FILTERED SURVEY RESPONSES

The results in this section represent fast-food restaurants in Ellensburg, Washington (excluding restaurants located on the Central Washington University campus). The desired sample size defined in the study QAPP was to obtain survey responses from all 20 of the fast-food restaurants identified for the study. However, three restaurants indicated they were not interested in participating in the study (will be included in Appendix A of the TER) and attempts to schedule baseline survey site visits were not successful with seven of the fast-food restaurants. A higher number of follow-up survey site visits were achieved because data collection staff were able to walk in to four of the seven restaurants and collect data without scheduling the visit ahead of time. Data collection staff did not attempt this during the baseline site visits as it was assumed that scheduling visits would increase participation and limit complaints by the restaurant staff. The sample size collected from the baseline survey site visit consisted of 10 fast-food restaurants (n=10) out of the total target population of 20 fast-food restaurants (n=20) in Ellensburg; the sample collected from the follow-up survey site visit consisted of 14 fast-food restaurants (n=14).

6.1 Objective #1: Understand whether fast-food restaurants currently implement BMPs for F.O.G. and wash water

Succinct Objective Response: Prior to implementing the E&O program, survey questions were used to understand to what extent fast-food restaurant staff were aware of the impacts of F.O.G. and wash water and whether they implemented BMPs for F.O.G. and wash water management. Participant responses indicated that:

- **Employee training** – most employees are generally trained in F.O.G. and wash water management once upon hiring.
- **Grease traps** were not installed at any of the restaurants.
- **Grease interceptors** were occasionally installed; most restaurants did not have one or used another technology (i.e. grease piped directly to cooking oil container).

- **Cooking oil** is typically disposed of properly (in a used cooking oil container or equivalent), though lids are commonly left open, and staff were uncertain of protocols when container defects were observed.
- **Dumpster** lids were typically kept closed when not actively disposing of trash, and staff knew what to do when the dumpster was full. Fewer staff knew what to do when a dumpster leaked. Most staff indicated they did not wash out the dumpsters in the parking lot.
- **Mop water** is typically disposed of properly, though a clear path to the utility drain or sink to dispose of mop water was not always available.

The baseline survey was used to understand to what extent fast-food restaurant staff were aware of the impacts of F.O.G. and wash water and whether they implemented BMPs for F.O.G. and wash water. Awareness is important to adoption because the target audience needs to be aware of the proper behavior (BMPs for F.O.G. and wash water) to implement that behavior (McKenzie-Mohr, 2013). Figure 6.2 indicates the level of awareness of the fast-food restaurant staff about the impacts of F.O.G. and wash water prior to the implementation of the E&O program. Staff were specifically asked about the impacts of F.O.G. and wash water, where the used oil container and dumpster were located in relation to the nearest storm drain, and where wash water would flow if dumpsters were washed in the parking lot. Responses provided by the restaurant staff indicated they were aware of the cooking oil containers in relation to the nearest storm drain. However, there was room for improvement related to fast-food staff's awareness of the impacts of F.O.G., spill identification, and dumpster location in relation to the nearest storm drain (where water would flow while cleaning the dumpster). Staff appeared to be only partially aware of the impacts of F.O.G. and wash water and partially aware of the location of the dumpster in relation to the storm drain and where water would flow if the dumpster were washed out.

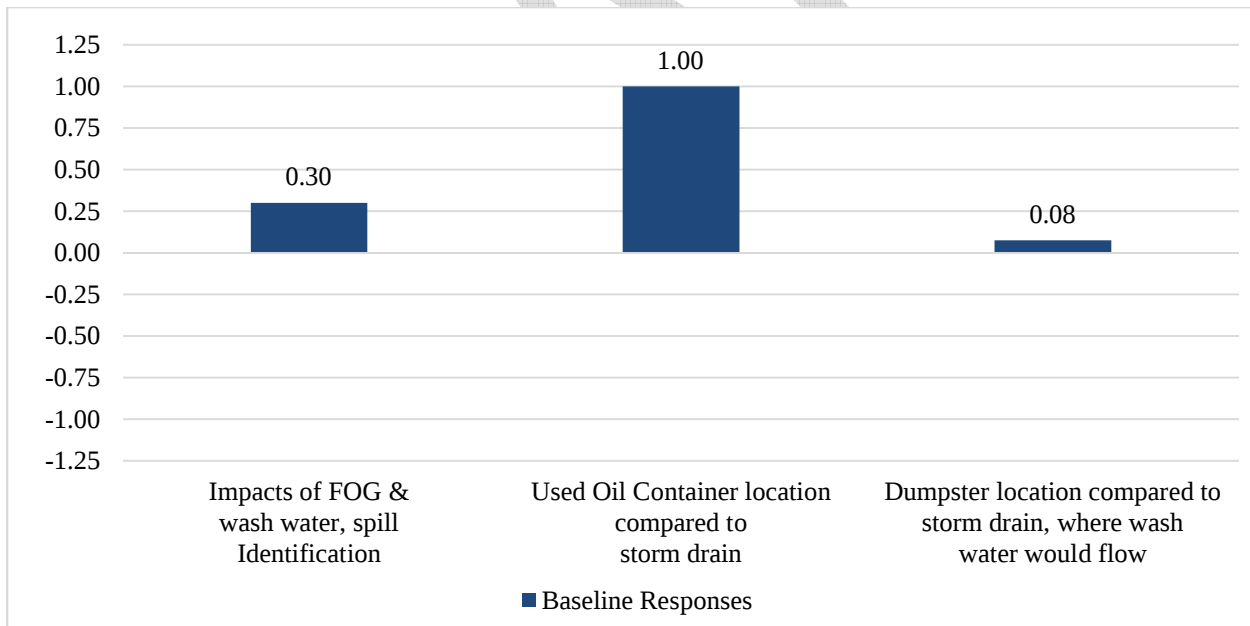


Figure 6.2 Baseline Awareness of Impacts of F.O.G. and Wash Water

Restaurant staff were also asked whether they used employee training BMPs, grease trap BMPs and grease interceptor BMPs, cooking oil container BMPs, dumpster BMPs, and mop water BMPs. The specific questions asked are included in Tables 6.2-6.7. The overall rating for each category of BMPs is summarized in Figure 6.3.

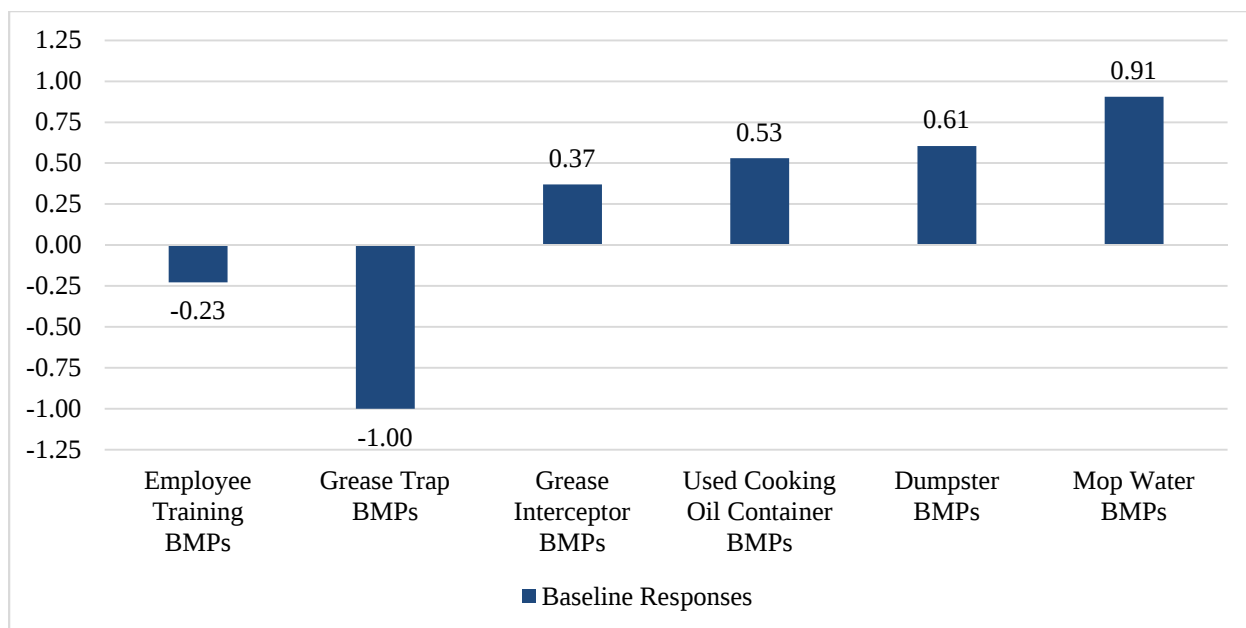


Figure 6.3 Baseline Adoption of BMPs for F.O.G. and Wash Water

In terms of employee training, fast-food restaurants had typically adopted a staff training program covering proper F.O.G. and wash water practices (0.38, see Figure 6.4). Frequent training was partially adopted, and reported to be typically informal, on-the-job training, which occurred once when staff were hired (-0.13). Some fast-food restaurants also adopted training for specific employees for tasks specific to grease traps or interceptors (0.33). In general, the fast-food restaurants did adopt the use of an employee training log to demonstrate when training had occurred (-0.83), though the restaurants that did maintain a log updated it frequently (1.00). No adoption was reported for the use of a manual for operation and maintenance of stormwater BMPs, including grease traps or interceptors (-1.00).

On average, fast-food restaurant staff were partially aware of and partially adopting spill clean-up procedures (0.00). Specifically, fast-food restaurant employees did not know how to clean a spill as they had never experienced one, or the employees used improper practices to clean a spill. This may be due to the partial awareness of what a spill is (0.30), reported in Figure 6.2. There generally was no adoption of the practice of having a spill kit on site at most fast-food restaurants (-0.80), and no adoption of posting the spill hotline (-1.00), as none of the staff surveyed reported knowing where to find the spill hotline. Figure 6.4 (below) shows the average result for each question related to employee training BMPs, and Table 6.2 defines what adoption of desired behaviors looks like for each question.

Of the restaurants surveyed during the baseline survey site visits, one fast-food restaurant reported adopting the use of a grease trap; however, that response was found to be inconsistent and removed from the data set, along with the responses the fast-food restaurant gave for the other questions about grease traps (see Table 6.3). The remaining fast-food restaurants reported that they did not adopt the use of a grease trap. Figure 6.5 illustrates this through an average Likert scale value of -1. Because the remaining questions for grease trap BMPs were not applicable to those restaurants, only the average Likert scale value for whether the fast-food restaurants implemented a grease trap is shown in Figure 6.5. Table 6.3 includes the specific questions that were asked to determine if the fast-food restaurants had a grease trap.

Most of the fast-food restaurants surveyed indicated they did not adopt the use of a grease interceptor (-0.43). Of those who indicated that they adopted the use of a grease interceptor, all hired a contractor to empty and maintain the grease interceptor, and partially adopted a frequent inspection schedule, typically once every 3-6 months (0.00, a 3 month or less schedule is preferred). If they hired a contractor, staff were partially aware of what the contractor typically looked for during their inspection (0.00) or at what percent

full the interceptor was when it was cleaned (0.00). However, none reported ever observing overflows from the manhole lids (1.00) and all of the staff surveyed were aware of the proper procedures if an issue was ever observed (1.00). The fast-food restaurants which had grease interceptors indicated that they thought the contractor maintained the log of maintenance and updated it during each visit (1.00) but reported that the fast-food restaurant staff did not have access to the log (0.00). Figure 6.6 summarizes these responses and Table 6.4 contains the list of questions asked as well as how responses were coded.

All of the fast-food restaurants surveyed reported adopting the proper procedures to dispose of liquid and solid F.O.G (1.00), and almost all had adopted procedures to tell when the used cooking oil containers should be picked up (0.82). Staff surveyed were partially aware of and could partially adopt proper protocols if they observed the container had a leak or other defect (0.40). However, most of the staff indicated partial or no adoption of closing the lid when the container was not in use and admitted to the lid being left open at least sometimes (-0.10). Figure 6.7 summarizes these responses and Table 6.5 contains the list of question asked related to the cooking oil container.

For dumpsters, fast-food restaurant staff appeared to be more conscientious of closing the lid when the dumpster wasn't in use, as most staff surveyed adopted the practice of closing the lid when staff weren't disposing of trash (0.76). Most of the staff also were aware of and could adopt the proper practices when the dumpster became full (0.79) and were only partially aware of what to do if the dumpster leaked or had other defects (0.42). On average, the fast-food restaurants were partially adopting proper procedures when cleaning dumpsters (0.45), though a few of the fast-food restaurants surveyed reported washing their dumpsters in the parking lot, where water could potentially flow to the storm drain. Figure 6.8 summarizes these responses and Table 6.6 contains the list of questions asked related to the dumpster.

Mop water BMPs were widely adopted by the fast-food restaurants. All of the restaurants that were surveyed adopted the practice of disposing of mop water in a mop sink or floor drain (1.00) and washing mops and other cleaning equipment in a mop sink or floor drain (1.00). Most of the restaurants maintained a cleared path to the drain (0.63). All of the fast-food restaurants adopted the practice of storing their cleaning chemicals indoors (1.00). Figure 6.9 summarizes these responses and Table 6.7 contains the list of questions asked related to mop water disposal.

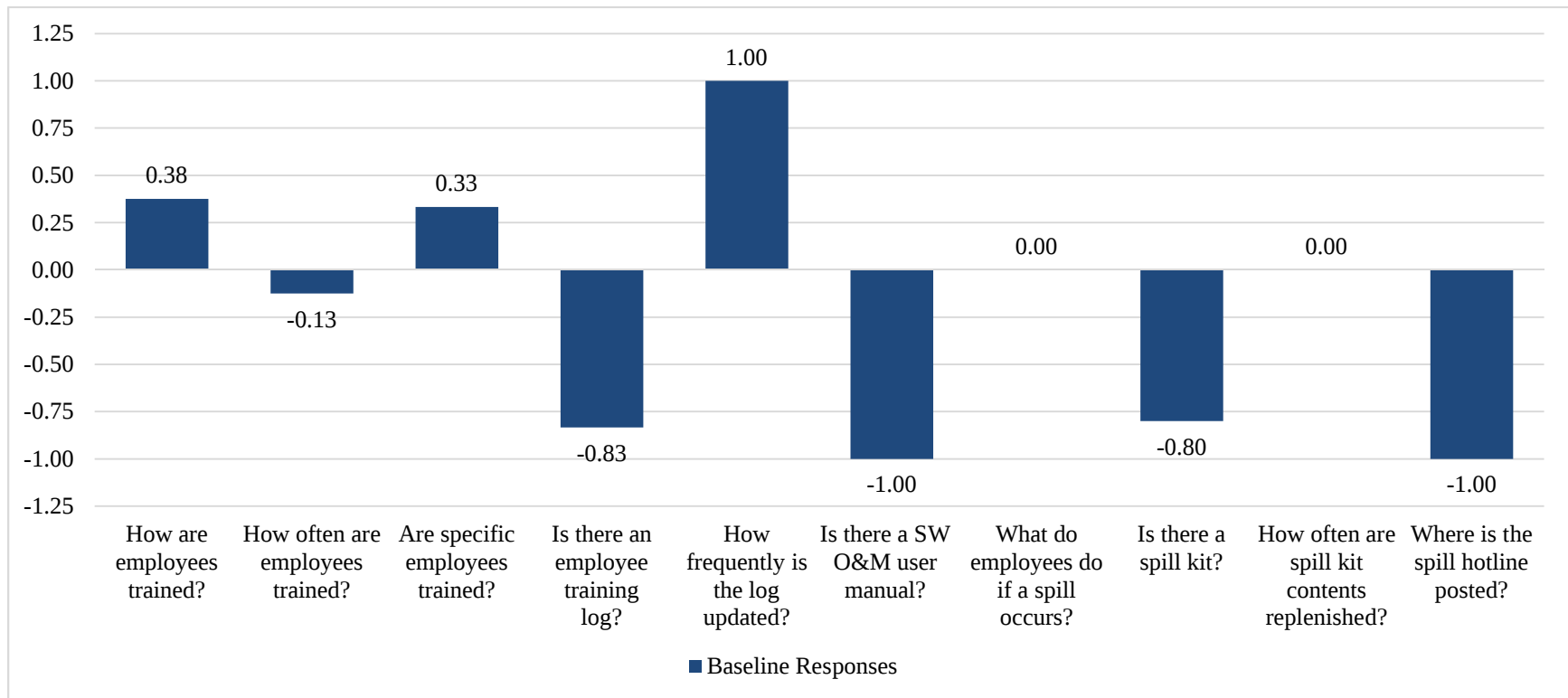


Figure 6.4 Baseline Awareness and Adoption of Employee Training BMPs

Table 6.2 Baseline Questions and Definitions for Employee Training BMPs

Employee Training BMPs	Adoption Level Definitions	Adoption Level Examples
What are the impacts of FOG/wash water if they reach the storm system?	Aware (1): Fully understands what the impacts of FOG/wash water are on stormwater AND infrastructure. Partially Aware (0): Somewhat understands what the impacts of FOG/wash water are on stormwater; OR understands there are impacts on infrastructure. Not Aware (-1): Does not know what the impacts of FOG/wash water are on stormwater. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Aware (1): Understood that it is not good for FOG to enter the storm drain and that proper disposal is incredibly important. Partially Aware (0): F.O.G. could block up the storm drain; admitted to not really knowing. Not Aware (-1): Kind of know but not really. Just understand that the business is to avoid dumping/spilling F.O.G. at all costs, not sure much of why.
How are employees educated on FOG/wash water disposal?	Adoption (1): There are formal (not on-the-job training) procedures specific to FOG/wash water to teach them why exposure to stormwater is bad. Partial Adoption (0): There are informal (on-the-job training) procedures in place which don't necessarily focus on the impacts of FOG/wash water on stormwater. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): Managers are trained with a procedural list. Partial Adoption (0): The manager shows staff where the F.O.G. goes, nowhere else.
How often are employees trained on FOG/wash water management?	Adoption (1): There are formal (not on-the-job training) procedures specific to FOG/wash water to teach them why exposure to stormwater is bad. Training occurs at time of hire and is recurring. Partial Adoption (0): There are informal (on-the-job training) procedures in place which don't necessarily focus on the impacts of FOG/wash water on stormwater. Training occurs at time of hire. No Adoption (-1): There are no procedures in place to train them on proper FOG/wash water disposal. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): They train all the time – the manager is always reinforcing correct practices. They're trained upon hire. Partial Adoption (0): Staff are trained when hired No Adoption (-1): Staff look through the pamphlets (not on F.O.G. and wash water BMPs) when the city or health district come in.
Are specific employees trained to inspect and clean the grease traps/interceptors?	Adoption (1): Specific employees are trained to inspect and clean the grease trap/interceptor. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): Employees are not trained to inspect and clean the grease trap/interceptor. Unsure: No restaurants surveyed gave a response that indicated this response.	Adoption (1): All staff are trained except maybe the drive through employees who do not spend time in the kitchen. No Adoption (-1): No, specific employees are not trained to inspect and/or clean the grease trap/interceptor (even though the restaurant has this infrastructure and someone should be trained).

Employee Training BMPS	Adoption Level Definitions	Adoption Level Examples
	N/A: Restaurant(s) does not have a grease interceptor or grease trap, so this question does not apply.	
Is there an employee training log?	Adoption (1): There is an official employee training log. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is no official employee training log. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): The fast-food restaurant has a record of training. No Adoption (-1): No, there is not a record of training.
How frequently is the log updated?	Adoption (1): The employee training log is frequently updated. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: Restaurant management was unsure about the answer to this question. N/A: If restaurant management responded no to having a training log, this question will not apply.	Adoption (1): The training log is updated when needed (when training occurs).
Is there a SW O&M user manual for the following BMPs?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is no official user manual for SW O&M BMPs. Unsure: Restaurant management was unsure about the answer to this question. N/A: None of the surveyed restaurants indicated this response.	No Adoption (-1): No, there is not a SW O&M Manual Unsure: There may be a manual, not sure.
What does a spill look like?	Aware (1): Fully understands what a spill that may impact stormwater may be. Partially Aware (0): Somewhat understands what a spill that may impact stormwater may be. Not Aware (-1): Does not understand what a spill that may impact stormwater may be. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Aware (1): When oil/grease is spilled on the ground. Partially Aware (0): The only time a spill occurs is when someone overfills a fryer, but this does not happen very often. Not Aware (-1): N/A, there isn't really anything that could spill.

Employee Training BMPS	Adoption Level Definitions	Adoption Level Examples
What do employees do if a spill occurs?	Adoption (1): Employees would fully know proper BMP protocol for cleaning a spill. Partial Adoption (0): Employees may clean spill with improper practices; OR there are no protocols in place because the restaurant has never experienced a spill. No Adoption (-1): Employees would not know protocol for cleaning a spill. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): Employees use degreasers/mops for about an hour and it goes into the utility drain. The manager said all of the fast-food restaurant's drains lead into the grease interceptor. Partial Adoption (0): Indoors, staff use hot water and dawn soap, then mop the spill up. The spill goes into the utility drain indoors. Outdoors, there is no spill kit but the staff power wash and use a cleaning chemical. No Adoption (-1): The fast-food restaurant staff don't really know how to get a spill up off of the ground if it occurs.
Is there a spill kit on the premises?	Adoption (1): There is a spill kit on premises with proper SW spill kit materials. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is not a spill kit on premises with proper SW spill kit materials. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): Yes, there is a spill kit. No Adoption (-1): No, they use degreaser.
How often are the contents of the spill kit replenished?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a spill kit, this question does not apply. M: Missing data. Restaurant management was not able to answer this question.	M: Representatives were not able to enter the kitchen.
Where is the spill hotline information posted?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): The spill hotline is not posted anywhere. Unsure: Restaurant management was unsure about the answer to this question. N/A: None of the surveyed restaurants indicated this response.	No Adoption (-1): N/A (The spill hotline is not posted or available at the restaurant). Unsure: Not sure

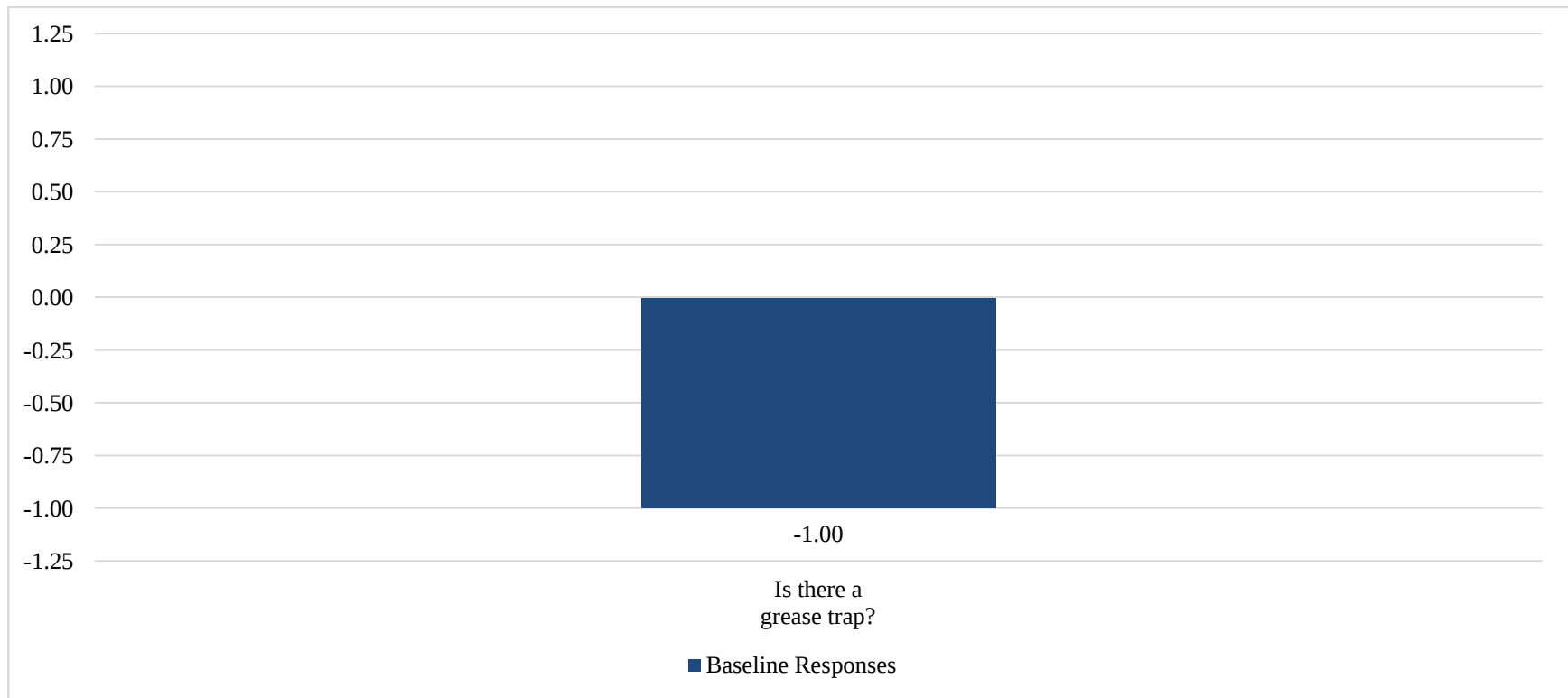


Figure 6.5 Baseline Awareness and Adoption of Grease Trap BMPs

Table 6.3 Baseline Questions and Definitions for Grease Trap BMPs

Grease Trap BMPs	Adoption Level Definitions	Adoption Level Examples
Is there a grease trap?	Adoption (1): There is a grease trap installed. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is not a grease trap installed. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): Yes, there is a grease trap (the “yes” responses turned out to be incorrect and were flagged and removed from the dataset). No Adoption (-1): No, there is no grease trap.
How often does the grease trap leak? (Always/Sometimes/Never)	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease trap, this question does not apply.	Because grease traps were not installed, further responses were not reported.
How is the grease trap opened?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease trap, this question does not apply.	Because grease traps were not installed, further responses were not reported.
Are employees trained to open the grease trap?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response.	Because grease traps were not installed, further responses were not reported.

Grease Trap BMPs	Adoption Level Definitions	Adoption Level Examples
	N/A: If the restaurant(s) did not have a grease trap, this question does not apply.	
How often are the levels in the grease trap checked?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease trap, this question does not apply.	Because grease traps were not installed, further responses were not reported.
At what level (0-100%) is FOG waste cleaned out?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease trap, this question does not apply.	Because grease traps were not installed, further responses were not reported.

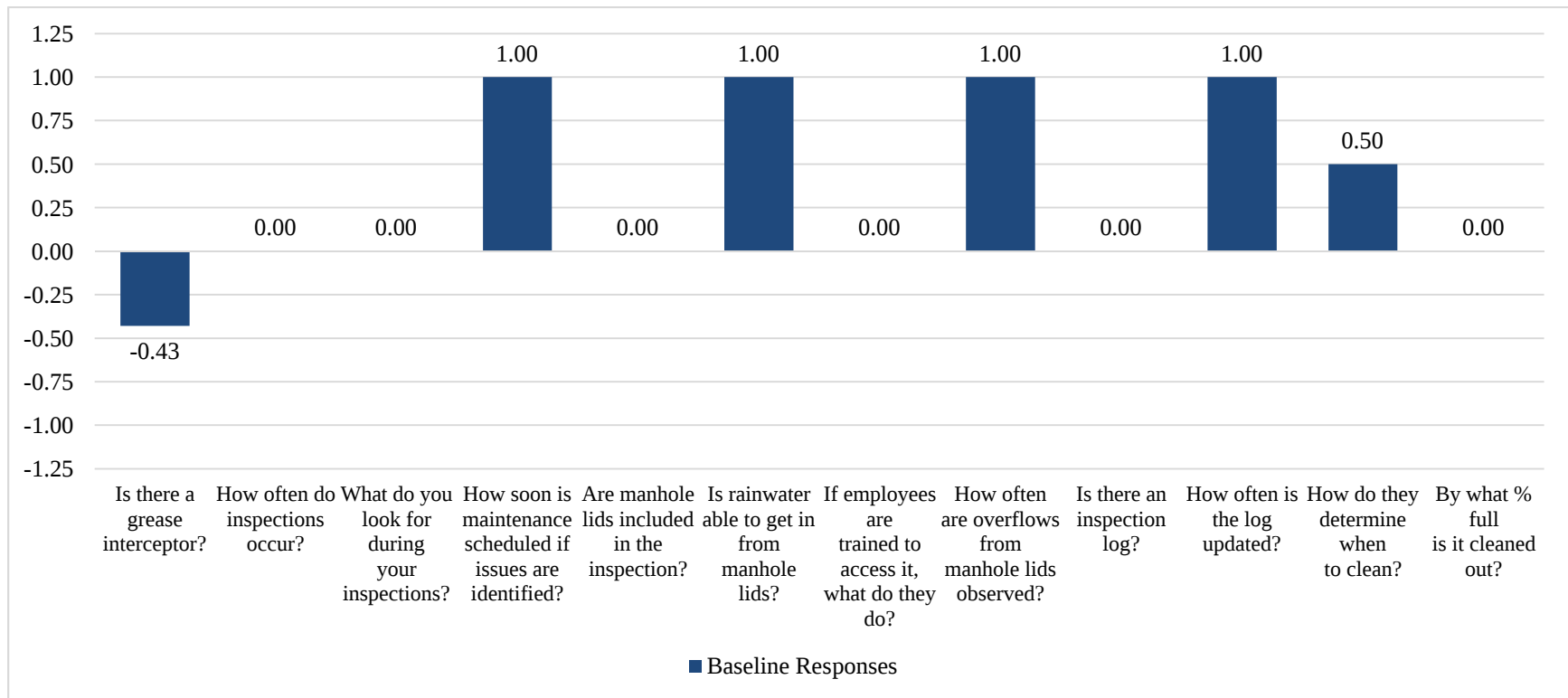


Figure 6.6 Baseline Awareness and Adoption of Grease Interceptor BMPs

Table 6.4 Baseline Questions and Definitions for Grease Interceptor BMPs

Grease Interceptor BMPs	Adoption Level Definitions	Adoption Level Examples
Is there a grease interceptor?	Adoption (1): There is a grease interceptor installed. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is no grease interceptor installed. Unsure: None of the surveyed restaurants indicated this response. N/A: None of the surveyed restaurants indicated this response.	Adoption (1): Yes, there is a grease interceptor. No Adoption (-1): No, there is not a grease interceptor.
How frequently are inspections of the grease interceptor completed?	Adoption (1): A trained contractor is hired to clean the grease interceptor out on a regular basis. Partial Adoption (0): A trained contractor is hired to clean the grease interceptor, but less frequently than the BMP recommends (every 3 months or sooner). No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): Contractor cleans the grease interceptor out every three months. Partial Adoption (0): Two times a year, every May and December the grease interceptor is inspected and/or cleaned.
What do you look for during your inspections?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): A trained contractor is hired to do the inspections. Restaurant management trusts that their inspection checklist is up to code. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Partial Adoption (0): The contractor cleans the grease interceptor out, the manager doesn't know more than that.
If defects are apparent during the inspection, how soon is maintenance scheduled?	Adoption (1): Restaurant management is fully aware of what to do if there is a defect with the grease interceptor. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): If the fast-food restaurant staff notice something funky with the interceptor, they will call the contractor/company who maintains the grease interceptor, and the contractor will tend to the issue within a day or two.

Grease Interceptor BMPs	Adoption Level Definitions	Adoption Level Examples
Are manhole lid positions included in the inspection?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): A trained contractor is hired to do the inspections. Restaurant management is not sure what if manhole lids are included in their inspection. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Partial Adoption: Manager was unsure; the contractor inspects the grease interceptor.
Is rainwater able to get into grease interceptor from manhole lids?	Adoption (1): No rainwater is able to get into the grease interceptor from the manhole lids. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): No, rainwater is not able to enter the grease interceptor from manhole lids.
If employees are trained to access the grease interceptor, what are those steps?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: Employees are not trained to access grease interceptor because a company is hired to do all work involved with the grease interceptor; OR if the restaurant(s) did not have a grease interceptor, this question does not apply.	None of the fast-food restaurants indicated employees are trained to access the grease interceptor.
How often are overflows of grease interceptor manhole lids observed?	Adoption (1): The restaurant has never experienced any overflows. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): Overflows from the manhole lids are never observed.

Grease Interceptor BMPs	Adoption Level Definitions	Adoption Level Examples
Is there an inspection log?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): There is written record of the work that has been done, but this information may not be saved in-house. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Partial Adoption (0): The manager has a record from the contractor/company, and they also send the manager a checklist of their work after it is done but the manager doesn't keep it.
How frequent is the inspection log updated?	Adoption (1): Written records of work complete is sent from the contractor after every service has been completed. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): The log is updated each time after service is done by the contractor/company.
How do they determine when to clean (i.e. timeframe, odor, percent full, etc.)?	Adoption (1): Grease interceptor is cleaned out on a regular basis at frequency recommended by BMP (every 3 months or sooner). Partial Adoption (0): Grease interceptor is cleaned out on a regular basis, but less frequently than the BMP recommends (every 3 months or sooner). No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Adoption (1): The grease interceptor is cleaned every three months. Partial Adoption (0): The grease interceptor is cleaned every 6 months.
By what % (0-100% full) are settled solids and floating FOG cleaned out?	Adoption (1): No restaurants surveyed gave a response that indicated this level of adoption. Partial Adoption (0): Levels of fog are cleaned out at a ratio greater than what BMP recommends (25% FOG). No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed gave a response that indicated this level of adoption. N/A: If the restaurant(s) did not have a grease interceptor, this question does not apply.	Partial Adoption (0): The manager was unsure but knows usually the composition is about 50% water and 50% yuck (F.O.G.).

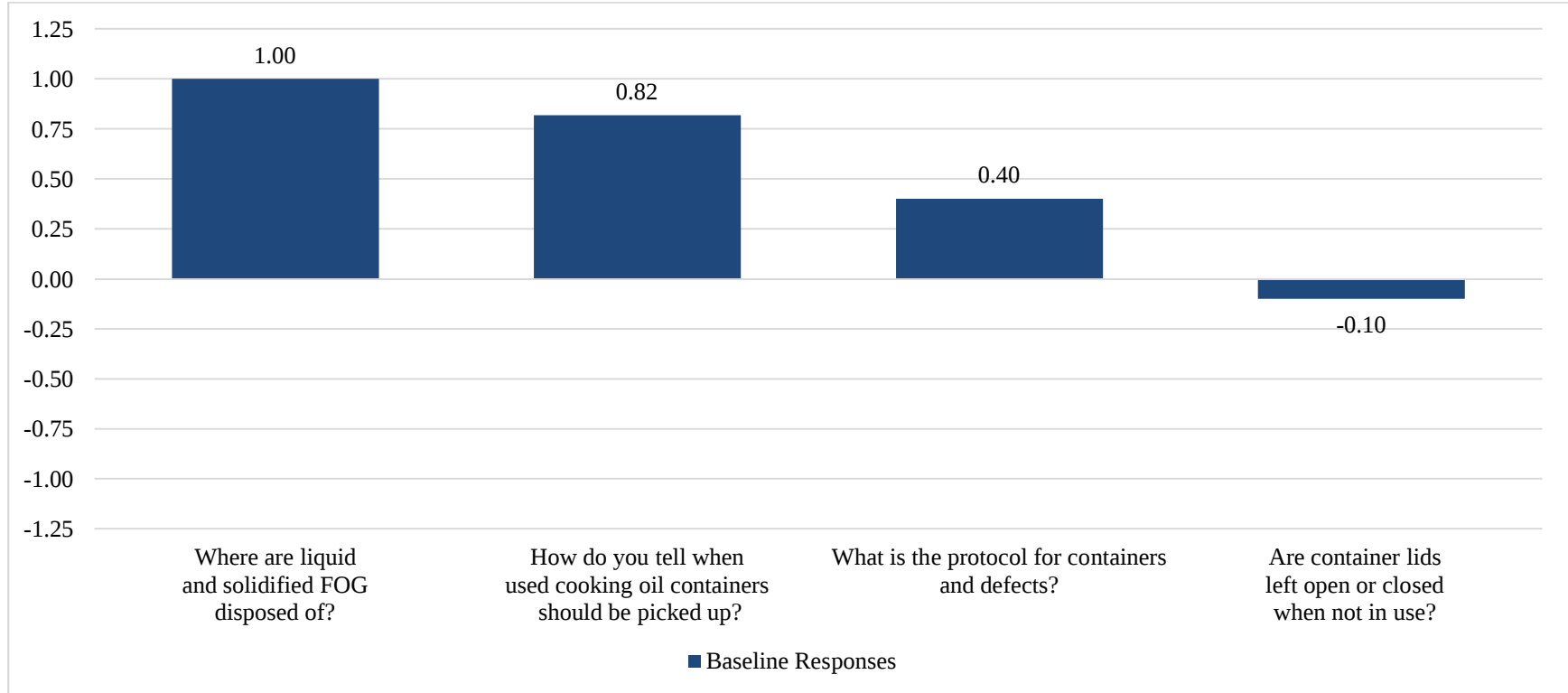


Figure 6.7 Baseline Awareness and Adoption of Used Cooking Oil Container BMPs

Table 6.5 Baseline Questions and Definitions for Used Cooking Oil Container BMPs

Used Cooking Oil Container BMPs	Adoption Level Definitions	Adoption Level Examples
Where are liquid and solidified FOG disposed of?	Adoption (1): Restaurant has a used cooking oil container; OR the restaurant does not have a used cooking oil container but disposes of FOG with practices that are safe for stormwater. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: None of the surveyed restaurants indicated this response. N/A: Restaurant does not have a used oil container.	Adoption (1): The oil is first placed into 5-gallon buckets and then carried out into the oil container in the parking lot.
Where are the containers located?	Aware (1): Management is aware of where the containers are located. Partially Aware (0): No restaurants surveyed gave a response that indicated this level of awareness. Not Aware (-1): No restaurants surveyed gave a response that indicated this level of awareness. Unsure: None of the surveyed restaurants indicated this response. N/A: Restaurant does not have a used oil container, so this question does not apply.	Aware (1): The container is in an enclosure outside close to the back door.
How do you determine when used cooking oil containers are scheduled to be picked up (i.e. odor, % full, overflowing, etc.)	Adoption (1): Containers are picked up on a regular schedule. Partial Adoption (0): Containers are picked up when almost completely full; OR containers have evidence of spills around them, possibly from overflowing containers. No Adoption (-1): None of the surveyed restaurants indicated this response. Unsure: Restaurant management was unsure about the answer to this question. N/A: Restaurant does not have a used oil container, so this question does not apply.	Adoption (1): On the used cooking oil container, there is a light that comes on and tells staff when it is full. The staff then call the contractor/company to clean it out and the contractor/company usually come the next day. Partial Adoption (0): The containers are not cleaned often enough, and staff call when the containers are full.
What is the protocol for containers and defects?	Adoption (1): Restaurant management knows to have containers replaced if there are any defects. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): There is no protocol for containers with defects.	Adoption (1): If there was a defect, the manager would call the contractor/company and have them replace the container. No Adoption (-1): The fast-food restaurant doesn't have any protocol.

Used Cooking Oil Container BMPs	Adoption Level Definitions	Adoption Level Examples
	Unsure: None of the surveyed restaurants indicated this response. N/A: Restaurant does not have a used oil container, so this question does not apply.	
Are container lids left open or closed when not in use?	Adoption (1): Containers are always left closed when not in use. Partial Adoption (0): Container lids are sometimes left open. No Adoption (-1): Container lids are regularly left open. Unsure: None of the surveyed restaurants indicated this response. N/A: Restaurant does not have a used oil container, so this question does not apply.	Adoption (1): The container cannot be opened (the restaurant has a system where oil is piped directly to container). Partial Adoption (0): Sometimes the lid on the dumpster is left open, sometimes the lid is left closed. No Adoption (-1): The lid on the dumpster is left open.

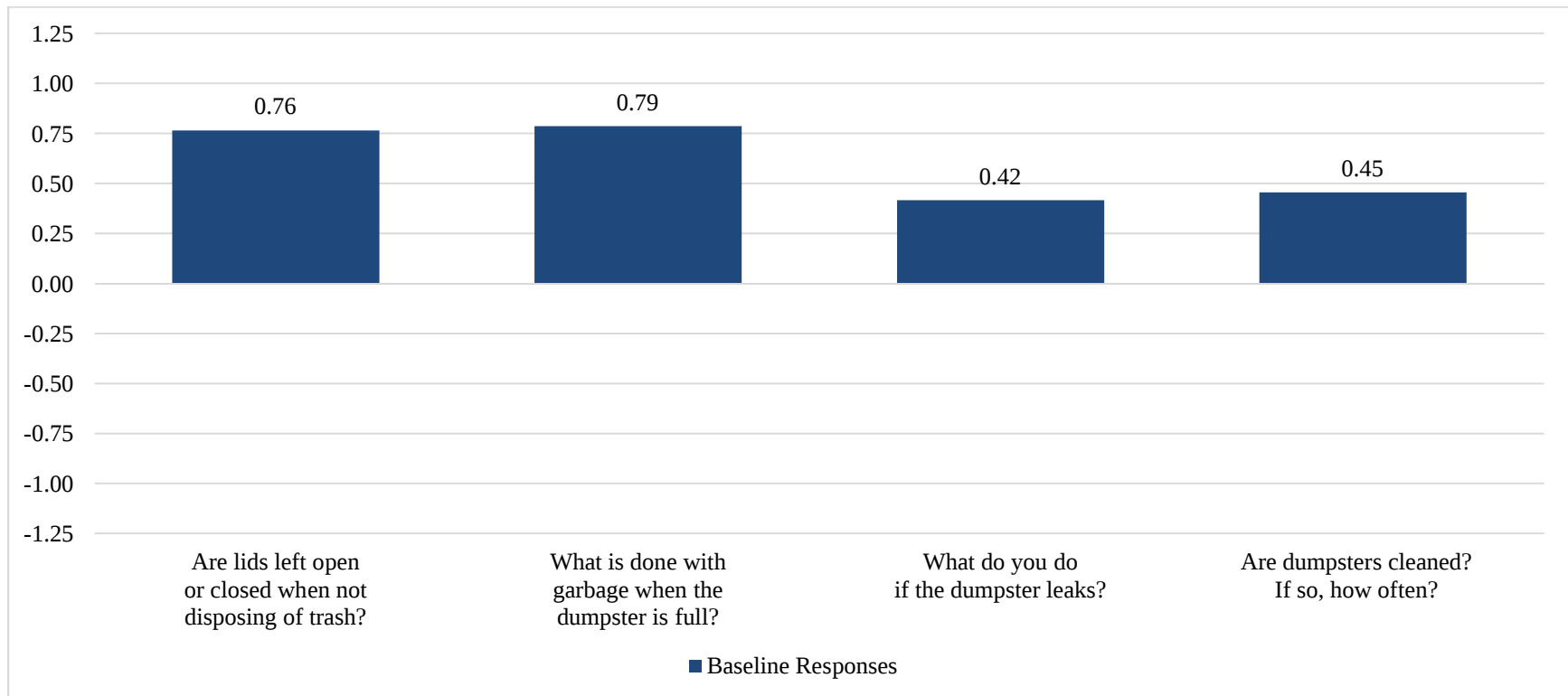


Figure 6.8 Baseline Awareness and Adoption of Dumpster BMPs

Table 6.6 Baseline Questions and Definitions for Dumpster BMPs

Dumpster BMPs	Adoption Level Definitions	Adoption Level Example
Can you show me dumpsters in relation to the storm drain?	Aware (1): Dumpsters are located in an area that does not drain pollutants directly to the storm drain, and also may impede surface water runoff to the nearest storm drain. Management knew where nearest storm drain is. Partially Aware (0): Dumpsters are located in an area upstream of the nearest storm but may not impede flow. Management may not have known where storm drain was. Not Aware (-1): Dumpsters are located in an area that drains pollutants directly to the storm drain or impedes surface water runoff to the nearest storm drain. Management did not know where nearest storm drain was. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Aware (1): There is a storm drain on the other side of parking lot. Partially Aware (0): The manager didn't know where the storm drain was (nearest was in road; there was a swale over in parking lot).
Are dumpster container lids left open or closed when not disposing or trash?	Adoption (1): Dumpster lids are always left closed when not in use. Partial Adoption (0): Dumpster lids are sometimes left open when not in use. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): The lid is kept closed – the manager doesn't want to attract flies. Partial Adoption (0): The dumpster lid is left open sometimes.
What is done with garbage when the dumpster is full?	Adoption (1): Dumpster does not get full; OR extra garbage is taken to the dump personally if it will not fit into the dumpster container. Partial Adoption (0): Extra garbage is packed down as much as possible but may keep lid ajar or spill over the top. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): The staff would call waste management. Partial Adoption (0): The staff pack the garbage in the dumpster as much as possible, but this only happens if the garbage company forgets about the fast-food restaurant.
What do you do if the dumpster leaks?	Adoption (1): Restaurant management knows to call to get the dumpster replaced if it leaks or has any defects. Partial Adoption (0): The restaurant has never had this issue before, so may not know to call to get the dumpster replaced if it leaks or has any defects.	Adoption (1): The dumpster hasn't had a leak, but the staff or manager would probably call waste management. Partial Adoption (0): The fast-food restaurant is getting it replaced now because of a leak, but what leaks out is mostly soda from customers since they do not dispose of oil outside.

Dumpster BMPs	Adoption Level Definitions	Adoption Level Example
	No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	
Are dumpsters cleaned? If so, how often?	Adoption (1): Dumpsters are not cleaned. Partial Adoption (0): Dumpsters are usually cleaned, but they have not been practicing that recently. No Adoption (-1): Dumpsters are cleaned. Unsure: Restaurant management was unsure about the answer to this question. N/A: No restaurants surveyed indicated this response.	Adoption (1): The dumpster is not cleaned. Partial Adoption (0): The dumpster is not cleaned, except maybe when they switch to a smaller dumpster in the winter, but the manager was not sure. No Adoption (-1): Staff spray the dumpster outside with a power washer. Employees will do this themselves, as the fast-food restaurant doesn't have a power washer.
Where does the wash water flow?	Aware (1): No restaurants surveyed gave a response that indicated this level of awareness. Partially Aware (0): No restaurants surveyed gave a response that indicated this level of awareness. Not Aware (-1): Wash water drains to a non-porous surface which could enter storm system. Unsure: No restaurants surveyed indicated this response. N/A: Dumpsters are not washed so this question does not apply.	Not Aware (-1): The wash water would flow into the paved parking lot (there was a catch basin observed downstream of the dumpster area).

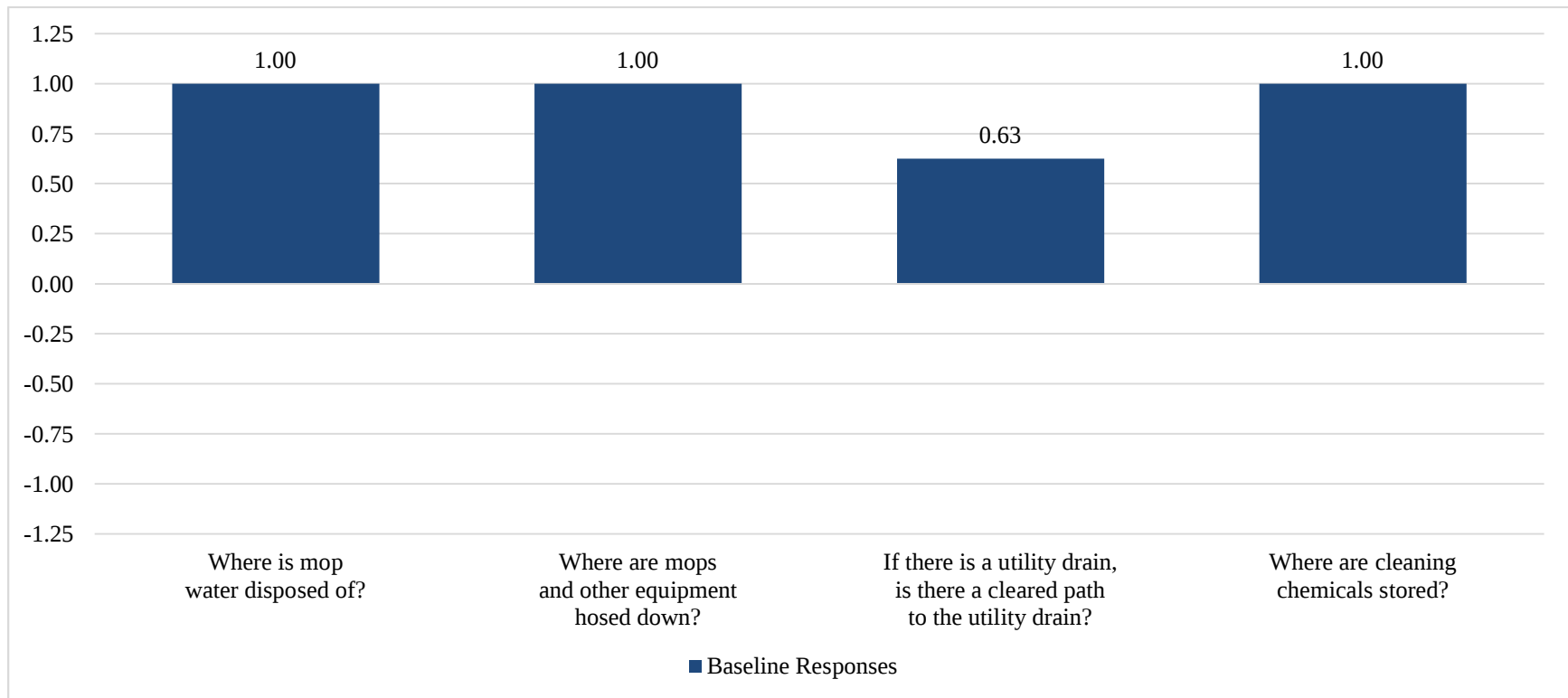


Figure 6.9 Baseline Awareness and Adoption of Mop Water BMPs

Table 6.7 Baseline Questions and Definitions for Mop Water BMPs

Mop water BMPs	Adoption Level Definitions	Adoption Level Examples
Where is mop water disposed of?	Adoption (1): Mop wash water is disposed of in a mop sink or floor drain. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): Mop water is disposed of in a utility sink.
Where are mops and other equipment hosed down?	Adoption (1): Mops and other cleaning equipment are hosed down in a mop sink or floor drain. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): Mops and other equipment are hosed down in a utility sink
If there is a utility drain, is there a cleared path to the utility drain?	Adoption (1): There is a cleared walking path to the mop sink or floor drain. Partial Adoption (0): There is a cleared walking path to the mop sink or floor drain, but it is covered since it is not often used. No Adoption (-1): There is not a cleared walking path to the mop sink or floor drain. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): Yes, there is a cleared path to the mop sink Partial Adoption (0): There is a utility drain, but it is covered because the staff do not use it. No Adoption (-1): No, there is not a cleared path to the mop sink/utility drain.
Where are cleaning chemicals stored?	Adoption (1): Cleaning chemicals are stored internally in the store with no exposure to stormwater. Partial Adoption (0): No restaurants surveyed gave a response that indicated this level of adoption. No Adoption (-1): No restaurants surveyed gave a response that indicated this level of adoption. Unsure: No restaurants surveyed indicated this response. N/A: No restaurants surveyed indicated this response.	Adoption (1): Cleaning chemicals are stored on a shelf in the back room where utility sink is located.

6.2 Objective #2: Implement E&O program targeting adoption of BMPs for F.O.G. and wash water

Succinct Objective Response: An E&O program targeting fast-food restaurants and the use of BMPs for F.O.G. and wash water was updated and implemented during the study.

Prior to the start of the study, there was no active E&O program regarding F.O.G. and wash water management and disposal practices for fast-food restaurants. In 2013, a version of the E&O program evaluated for this study took place in response to an illicit discharge from an overflowing grease interceptor at a local fast-food business. A revamped E&O program addressing F.O.G. and wash water management and disposal practices for fast-food restaurants in the City of Ellensburg city limits was implemented during the study and will be revised and re-implemented following the study. The following bullets describe each E&O program.

- **2013 E&O Program** – The E&O program implemented following the discharge involved delivering an educational flier on F.O.G. and wash water to local fast-food businesses, with no follow up visits. The lead entity discussed the information on the flier with restaurant staff on-site following the delivery of the flier. The flier focused on impacts of F.O.G. and wash water, maintenance of the grease trap, proper disposal of F.O.G., and proper disposal of mop water. A copy of the 2013 flier is included in Appendix B of the study QAPP.
- **2021 E&O Program** – The E&O program for the study involved delivery of a flier addressing F.O.G. and wash water BMPs to the fast-food restaurants identified for the study, either immediately following the baseline site visit or, for restaurants where baseline site visits were not able to be scheduled, approximately one month after the baseline site visits occurred for the other restaurants. The lead entity or representative discussed the information on the flier with restaurant staff on-site following the delivery of the flier. The flier included common infrastructure in fast-food restaurants for managing and disposing of F.O.G. and wash water, as well as BMPs specific to each item identified by literature. A copy of the 2021 flier is included in Appendix C.
- **Future E&O Program** – The E&O program will be revised and implemented based upon the results of this study. See Section 8 for further discussion on recommendations for the E&O program.

6.3 Objectives #3 and #4: Following E&O program implementation, measure adoption of targeted behaviors and evaluate program effectiveness at fast-food restaurants

Succinct Objective Response: While an increase in awareness and adoption of some BMPs were observed when comparing baseline and follow-up survey responses, no statistically significant change in awareness or adoption of targeted behavior was measured during the study. Recommendations to improve the effectiveness of the E&O program are included in Section 8.

The following paragraphs discuss whether a change in awareness or adoption of targeted behaviors (use of F.O.G. and wash water BMPs) occurred by comparing baseline and follow-up survey results. Changes less than 0.05 were considered insignificant and could be attributed to the different baseline and follow-up sample sizes. Figures 6.10 and 6.11 compare baseline and follow-up survey results for awareness and adoption of the use of targeted behaviors, respectively.

As shown in Figure 6.10, a likely insignificant increase in awareness occurred regarding understanding of what a spill looks like and understanding of the impacts of F.O.G. and wash water on stormwater (0.30 to 0.32). No change was measured for awareness of the used cooking oil container location in relation to the

nearest storm drain as fast-food restaurant staff were fully aware before (1.0) and remained fully aware (1.0) of the location after the E&O program. Fast-food restaurant staff's awareness of the dumpster location in relation to the storm drain and wash water would flow increased from partial awareness (0.08) to approaching full awareness (0.53) during the follow-up survey. This indicates a change in awareness may have occurred following the E&O program surrounding dumpster proximity to the storm drain, and how wash water from the dumpster could reach the storm drain.

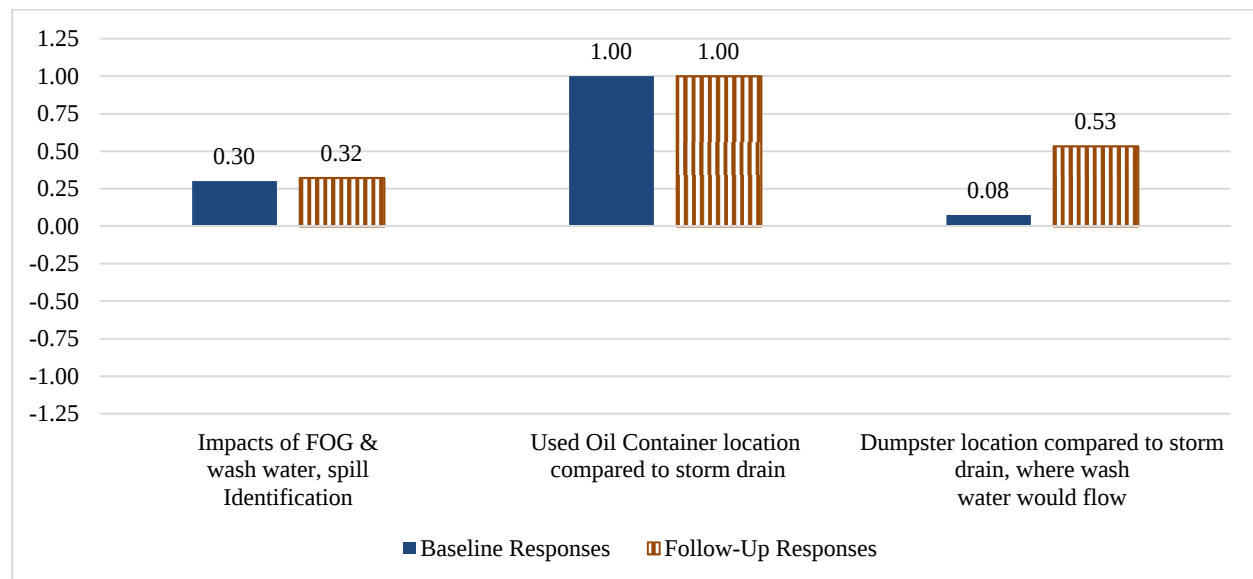


Figure 6.10 Measurement of Change in Awareness of Impacts of F.O.G and Wash Water

A summary of awareness and adoption of F.O.G. and wash water BMPs is shown in Figure 6.11. Insignificant change was measured for mop water, grease interceptor and grease trap BMPs, and grease traps BMPs remained at an average value of -1 because none of the participating fast-food restaurants reported having one. Mop water BMPs remained the most frequently adopted BMPs by fast-food restaurant staff.

Changes of 0.10 were measured for BMPs related to used cooking oil containers and dumpster BMPs. An increase in awareness and adoption of cooking oil containers was measured (0.53 to 0.63), while a decrease in awareness and adoption of dumpster BMPs was observed (0.61 to 0.51). The improvement related to cooking oil container BMPs was mostly attributed to an increase fast-food restaurant staff reporting they knew the proper procedures if defects were observed and that container lids were closed when not disposing of F.O.G. The decrease in average Likert scale value for dumpster BMPs appears to be mostly due to an increase in fast-food restaurant staff reporting they wash out the dumpsters in the parking lot occasionally.

An improvement in awareness and adoption of employee training BMPs was also measured (-0.23 to -0.11) during the study. The increase appears to be attributed mostly to more fast-food restaurants reporting that they train staff on F.O.G. or wash water more than just upon hiring. This increase may also be due to the four additional fast-food restaurants surveyed during the follow-up site visit, as all four reported that they train staff on F.O.G. and wash water on a recurring basis. For comparison, four of the other ten fast-food restaurants surveyed reportedly train staff on F.O.G. and wash water on a recurring basis.

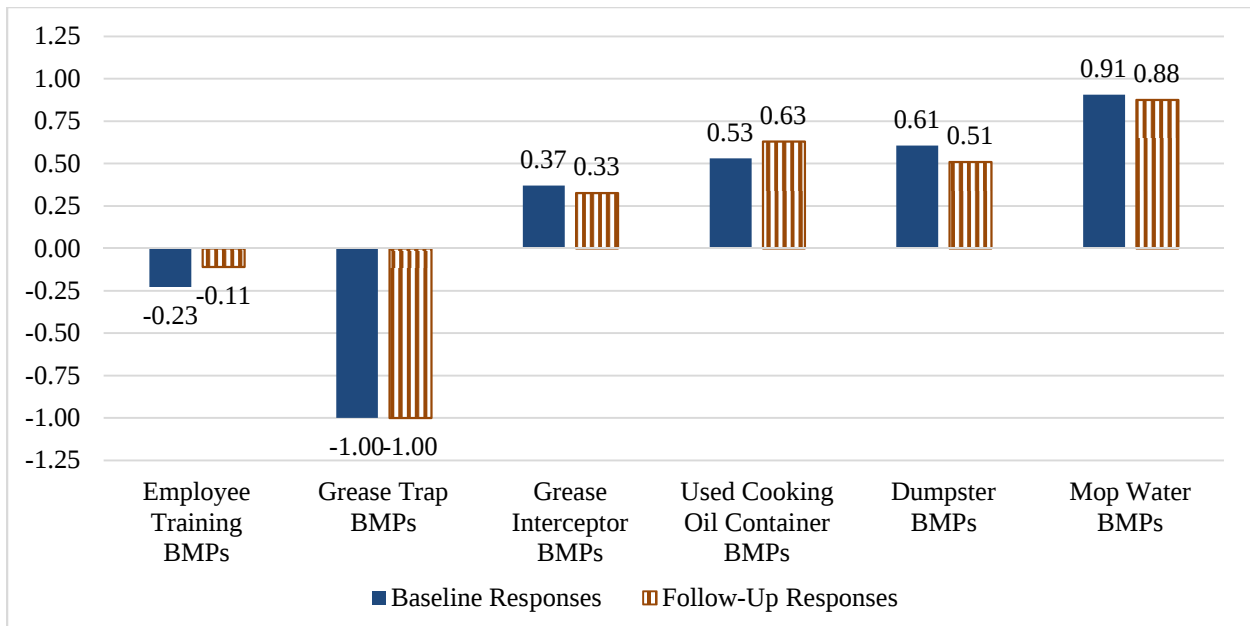


Figure 6.11 Measurement of Change in Awareness and Adoption of BMPs

An overall measurement of change in awareness and adoption of F.O.G. and wash water BMPs is shown in Figure 6.12. The ratings in Figure 6.12 are an average of the Likert scale values from all of the survey responses for awareness and adoption of F.O.G. and wash water BMPs. An increase in awareness of the impacts of F.O.G. and wash water was measured (0.35 to 0.54). However, an insignificant change (less than 0.05) in awareness and adoption of BMPs overall was measured (0.31 to 0.28). In order to better understand whether a statistically significant change had occurred during the study, overall change was also measured through a statistical analysis.

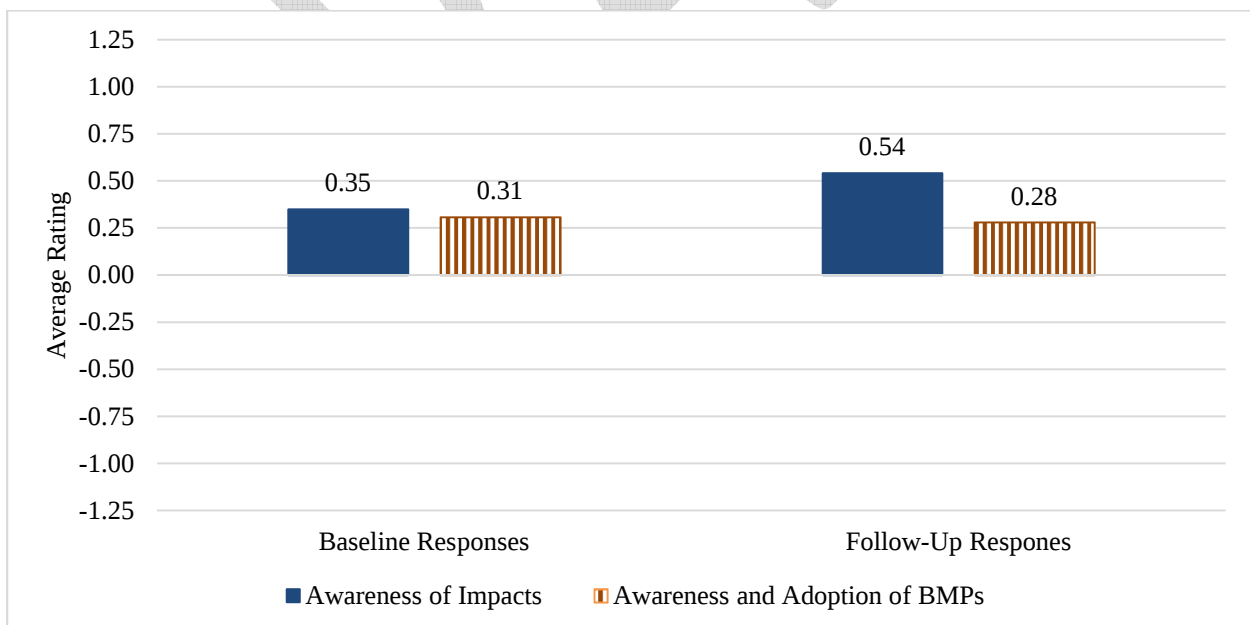


Figure 6.12 Overall Change in Awareness and Adoption during Study

To evaluate whether a change in awareness or adoption occurred, a statistical comparison was made to determine if a statistically significant change in awareness or adoption of car washing BMPs could be observed during the study. The analysis was performed according to procedures in Section 13.3 of the study

QAPP. Table 6.8 and Table 6.9 contain the results of the comparison for awareness of impacts of F.O.G. and wash water and adoption of BMPs, respectively.

As discussed in the study QAPP (see Section 4.2), effectiveness was evaluated for this study by comparing the baseline and follow-up survey site visits to determine whether there was any change in adoption of targeted behavior following the implementation of the E&O program. As shown in Table 6.9, a statistically significant change in adoption was not achieved (shown by all p-values being more than 0.05), which indicates the E&O program was not effective as it was implemented during the study for increasing awareness and adoption of BMPs. Despite the statistical insignificance of the results (Table 6.8 and 6.9), results in Figures 6.11 and 6.12 indicate the E&O program may have improved overall awareness and awareness of dumpster proximity to the storm drain system to some extent, as well as increased adoption of some BMPs (e.g., used cooking oil container BMPs). Additionally, successful municipal E&O programs reported in the literature appear to be implemented for more than one year in order to achieve a statistically significant behavior change or awareness (Blanc & Arthur, 2013). As such, revisions to the E&O program are recommended in Section 8 to improve the effectiveness of the E&O program in future years, which includes an increase in number of site visits or inspections during the next permit cycle.

Table 6.8 Statistical Comparison of Awareness During Study

Summary of Average Awareness During Study	
Topic of Awareness	Statistically Significant Change? P<0.05 ²
Awareness of Impacts ¹	0.639

¹ Awareness of impacts includes: impacts of FOG/wash water to storm system, identifying spills, location of cooking oil containers, dumpster location in relation to storm drain, and where wash water would flow in relation to dumpsters.

² The P-value used was adjusted for ties.

Table 6.9 Statistical Comparison of BMP Awareness and Adoption During Study

Summary of Specific BMP Awareness and Adoption During Survey	
BMP Type ¹	Statistically Significant Change? P<0.05 ²
Grease Interceptor BMPs	0.356
Used Cooking Oil Container BMPs	0.404
Dumpster BMPs	0.837
Mop Water BMPs	0.904
Employee Awareness/Training	0.139

¹ Statistical analysis could not be run for grease trap BMPs. No fast-food restaurants reported using grease traps.

² The P-value used was adjusted for ties.

6.4 Objective #5: Identify barriers to adoption of targeted behaviors

Succinct Objective Response: During the baseline and follow-up surveys, fast-food restaurant staff were asked to identify barriers that prevent their staff from implementing the BMPs (adopting targeted behaviors). The most reported response to whether there were barriers preventing fast-food restaurant

staff from implementing BMPs was that there were none or none that the fast-food restaurant staff could think of at the time of the survey site visit (n=104, of the baseline and follow-up participants surveyed, “none” was reported 104 times). Convenience (n=15) and lack of education (n=9) were the next most mentioned barriers, followed by corporate policy (n=6) and space (n=6), external factors (n=4), cost (n=2) and staff turnover (n=2). No consistent pattern was observed for the barriers between baseline and follow-up survey site visits.

Information on barriers was collected during the study to determine ways to improve the E&O program. Barriers limit the ability of the target audience (fast-food restaurant staff) to adopt targeted behaviors (implementing F.O.G. and wash water BMPs) and E&O programs can be designed address or remove barriers. During the baseline and follow-up survey site visits, fast-food restaurant staff were asked to identify any barriers which could limit their ability to implement F.O.G. and wash water BMPs. The responses were reviewed and coded into eight categories of barriers. The barrier categories are listed and defined in Table 6.10. Table 6.10 also provides examples of specific responses that fell within the barrier category.

Table 6.10 Barriers Identified During Study

Barrier	Definition	Example of Specific Response
<i>None</i>	Staff were not able to list any barriers during survey visit Staff indicated there were no barriers to adopting BMPs	<i>Barrier to implement Dumpster BMPs:</i> Staff could not think of any barriers at the time
<i>Lack of Education</i>	Not aware of the BMP or importance of the BMP/impacts to stormwater	<i>Barrier to implement Employee Training BMPs:</i> Did not know the spill hotline was available
<i>Staff Turnover</i>	Staff leave and new staff are hired	<i>Barrier to implement Employee Training BMPs:</i> New store manager
<i>Corporate Policy</i>	Guidelines from corporate level prevent practices from being changed without their permissions	<i>Barrier to implement Employee Training BMPs:</i> Need approval from higher up management
<i>Convenience</i>	Employees tend to not carry out BMP because other ways to take care of shift responsibilities are easier to carry out	<i>Barrier to implement Employee Training BMPs:</i> Keep used oil container lid open to prevent spills when they are carrying the FOG waste outside
<i>Cost</i>	The cost of implementing the BMP prevents behavior to change	<i>Barrier to implement Grease Trap BMPs:</i> Can't afford grease trap, cost to maintain
<i>Space</i>	Space is confined in or outside the restaurant; layout of property generally prevents BMP area to be adopted/installed	<i>Barrier to implement Employee Training BMPs:</i> Limited storage for spill kit
<i>External Factors</i>	Waste management, residents of Ellensburg, or other factors outside of the restaurants control inhibiting BMPs	<i>Barrier to implement Used Cooking Oil Container BMPs:</i> Issues with waste management; homeless people may open container

The frequency that barriers were reported for each BMP during the baseline and follow-up site visits are summarized in Figures 6.13-6.18. The values in the figures are normalized by the number of total responses received for the BMP. For example, 10 barriers were mentioned by fast-food restaurant staff when asked about Used Cooking Oil Container BMPs during the baseline survey site visit. The frequency

at which a specific barrier, such as convenience (n=5) was mentioned would be equal to the number of times mentioned divided by 10. Convenience would therefore have been reported 50% ($5/10 = 0.5$) of the time during the baseline survey site visits. The following paragraphs discuss the frequency at which barriers were mentioned for each BMP.

For all of the BMPs, the most frequently reported barrier category was “none”, or that no barriers existed to prevent fast-food restaurant staff from implementing the BMPs (n=104, of the baseline and follow-up participants surveyed, “none” was reported 104 times). The frequency that “none” was mentioned decreased or remained approximately the same (less than 0.05 difference) from the baseline to follow-up site visits, except for the used cooking oil container BMPs, for which the frequency increased from 0.4 to 0.79 (n=7). Convenience (n=15) and lack of education (n=9) were the next most mentioned barriers, followed by corporate policy (n=6) and space (n=6), external factors (n=4), cost (n=2) and staff turnover (n=2). No consistent pattern was observed for the barriers between baseline and follow-up survey site visits.

The BMP with the highest number of reported barriers other than “none” occurred for the employee training BMPs (4 reported for baseline, 13 reported for follow-up). Lack of education was the most frequently reported barrier (n=6 times in total), specifically that fast-food restaurant staff did not have access to information or were not aware that information or resources were available. The number of times lack of education was mentioned during the study increased from baseline to follow-up, however two of the times lack of education was mentioned during the follow-up site visit were by fast-food restaurants not included in the baseline sample. Corporate policy was also mentioned (n=4) by fast-food restaurant staff as barriers to implementing employee training BMPs. Examples of corporate policy barriers included needing approval or having to convince upper management to implement employee training BMPs and having a specific vendor that the fast-food restaurant is required to use for employee training. Convenience (n=3), space (specific to storage of a spill kit for employees, n=2), and staff turnover (n=2) were also mentioned. The only two factors that were not identified as barriers to employee training BMPs were cost and external factors.

Of the grease trap and grease interceptor BMPs, convenience, cost, and space were listed as barriers to implementing the BMPs. During the baseline survey site visit, only convenience was mentioned as a barrier (n=1) specific to implementing grease trap BMPs. The specific response referenced the work that would be needed to maintain a grease trap. During the follow-up survey site visit, cost (n=1) and space (n=1) were mentioned as barriers specific to implementing grease trap BMPs. Cost (n=1) was also listed as a barrier to implementing grease interceptor BMPs during the follow-up survey site visit. Fast-food restaurant staff typically mentioned space and cost in the context that there wasn’t a place to install a grease trap or interceptor, and that the restaurant would not be able to afford to install one.

Convenience, external factors, and education were mentioned as barriers to implementing used cooking oil container BMPs. Convenience was mentioned during the baseline (n=5) and follow-up (n=1) survey site visits. Convenience was typically related to leaving the lid open, placing buckets near the container, or allowing spills to happen because of the weight of the oil that needed to be lifted to dispose of it into the container. External factors were mentioned twice during the follow-up survey, and specific responses were related to difficulties arranging pickup of the container. Education was mentioned during the baseline survey site visit (n=1) by a business that used a different system to collect oil (pipes routed used

oil directly to a container outdoors). The specific business was not aware that other fast-food restaurants had specific containers for collecting used cooking oil.

Corporate policy, convenience, education, space, and external factors were mentioned as barriers to implementing dumpster BMPs. Only convenience was mentioned during the baseline (n=2) and follow-up (n=2) survey visit. Specific responses related to convenience had to do with difficulty opening and closing the lid, the distance of the dumpster from the door, and cleaning around the dumpster area. The mention of space as a barrier also had to do with distance of the dumpster from the door. Corporate policy and external factors were mentioned at the same frequency (n=2). Specific corporate policy barriers mentioned included having to use cleaning chemicals for the dumpster provided by corporate and needing approval to have access to spill kits to keep water from entering the storm drain. External factors were related to customers parking in front of dumpsters or waste management companies not picking up the dumpster. The single mention of education as a barrier specifically cited a lack of education on proper procedures to clean around the dumpster area to keep stormwater clean.

For mop water BMPs, education (n=1) and convenience (n=1) were mentioned as barriers during the baseline survey site visit and space (n=2) was listed as a barrier during the follow-up survey site visit. Convenience and education were both related to staff washing mops in the incorrect location, due to lack of awareness or unwillingness to wash mops in the correct location. Space was mentioned in the context of not having a place to install a mop sink or not having enough storage to keep a path clear to the mop sink or utility drain.

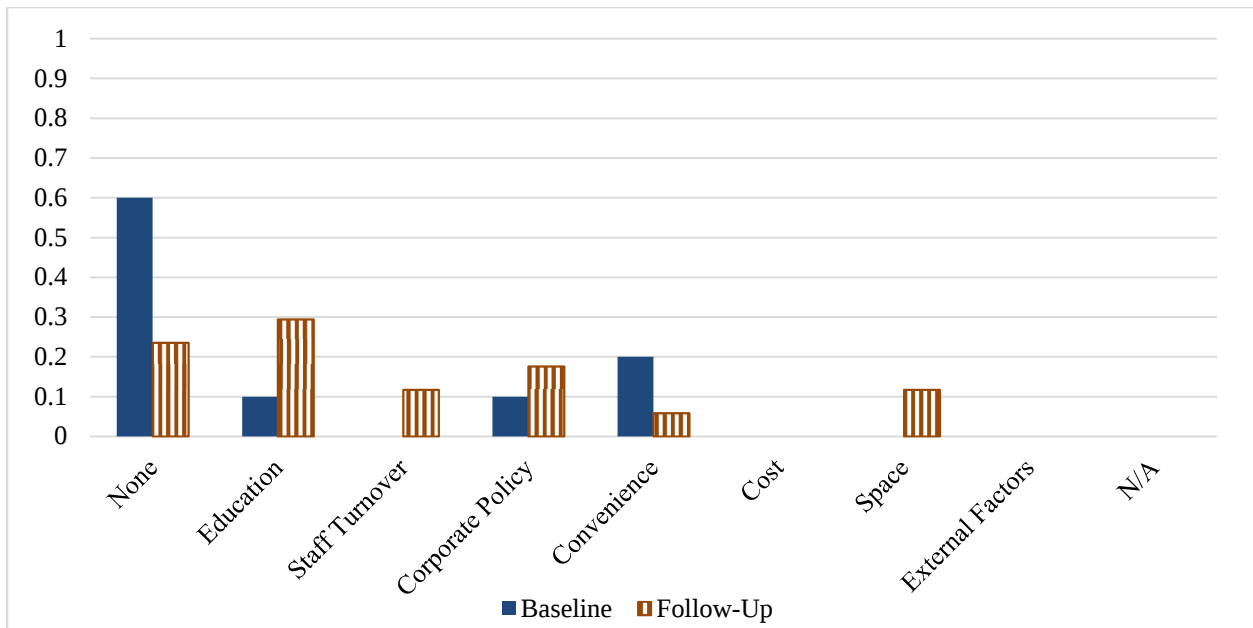


Figure 6.13 Barriers to Adopting Employee Training BMPs

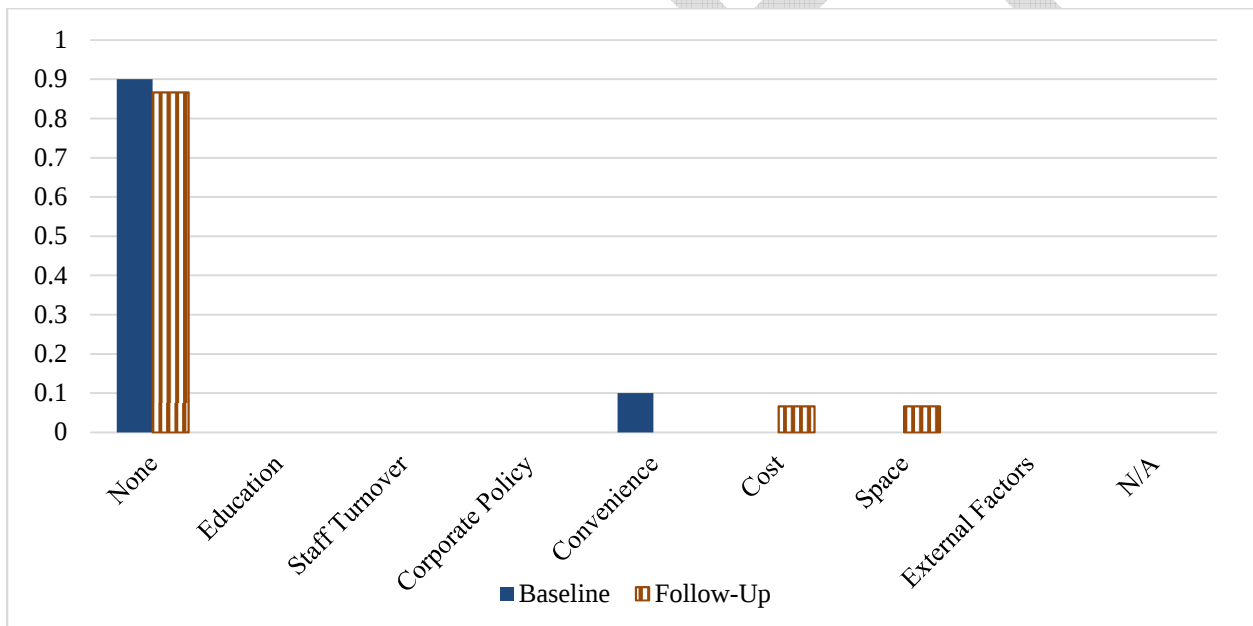


Figure 6.14 Barriers to Adopting Grease Trap BMPs

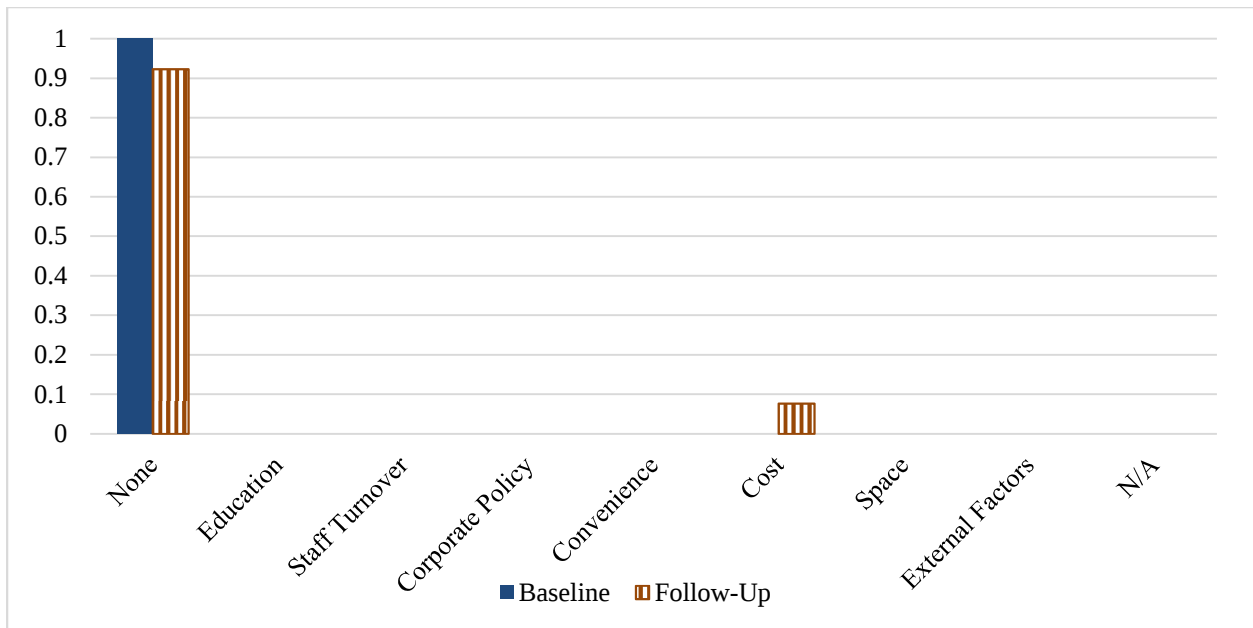


Figure 6.15 Barriers to Adopting Grease Interceptor BMPs

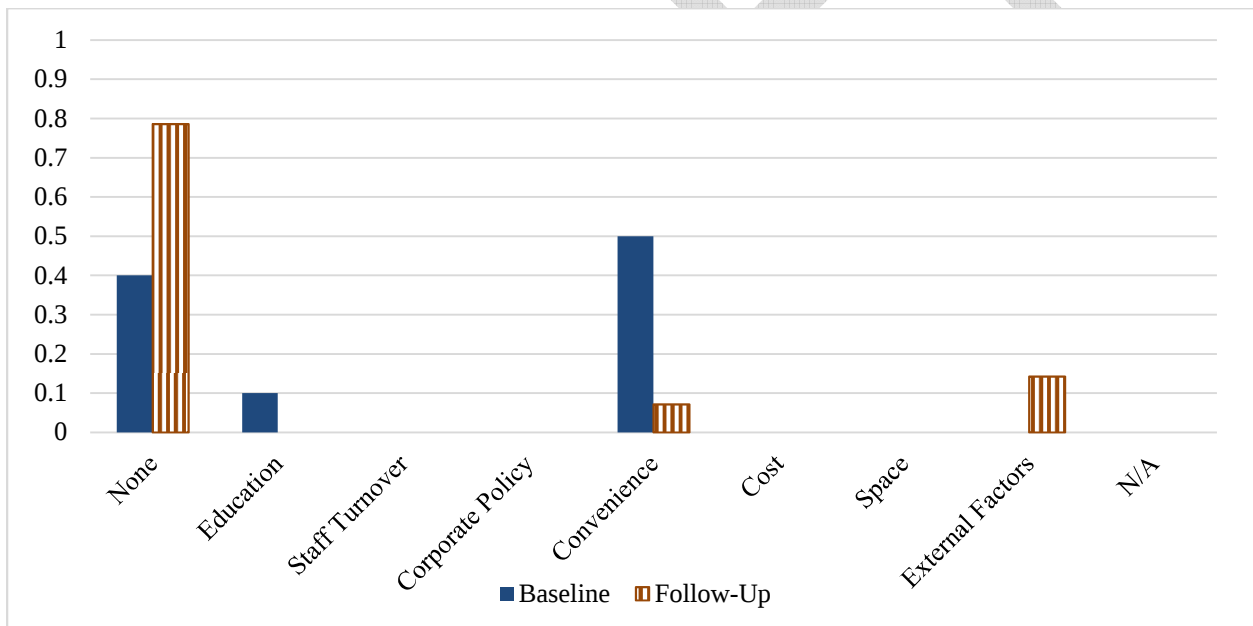


Figure 6.16 Barriers to Adopting Used Cooking Oil Container BMPs

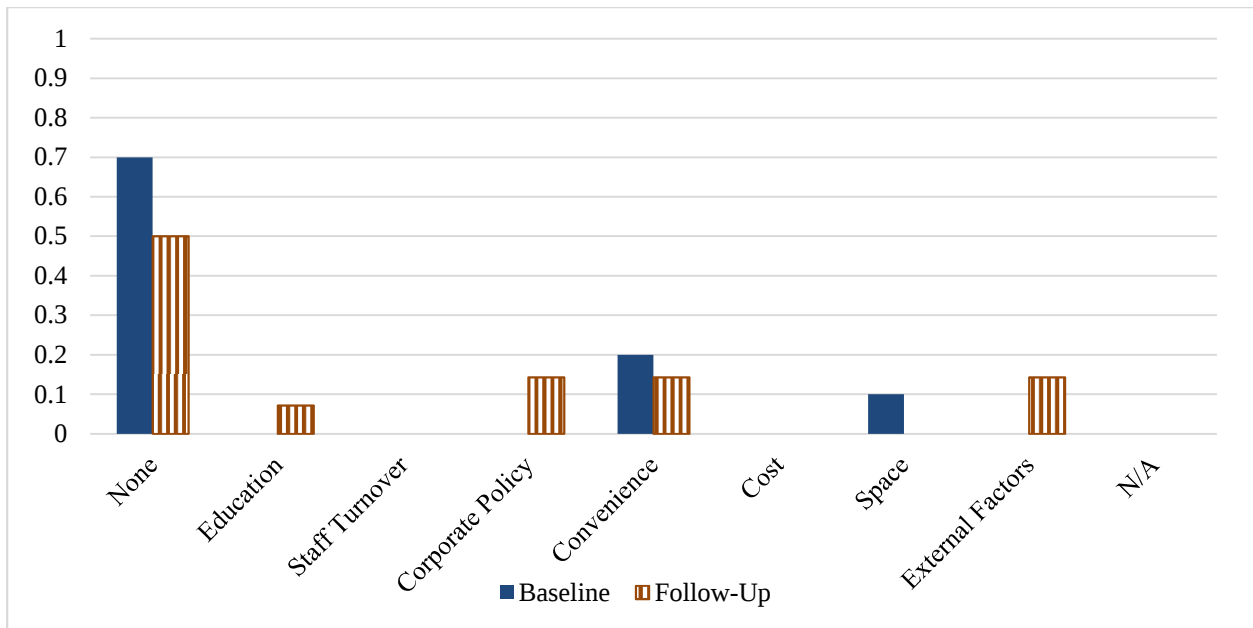


Figure 6.17 Barriers to Adopting Dumpster BMPs

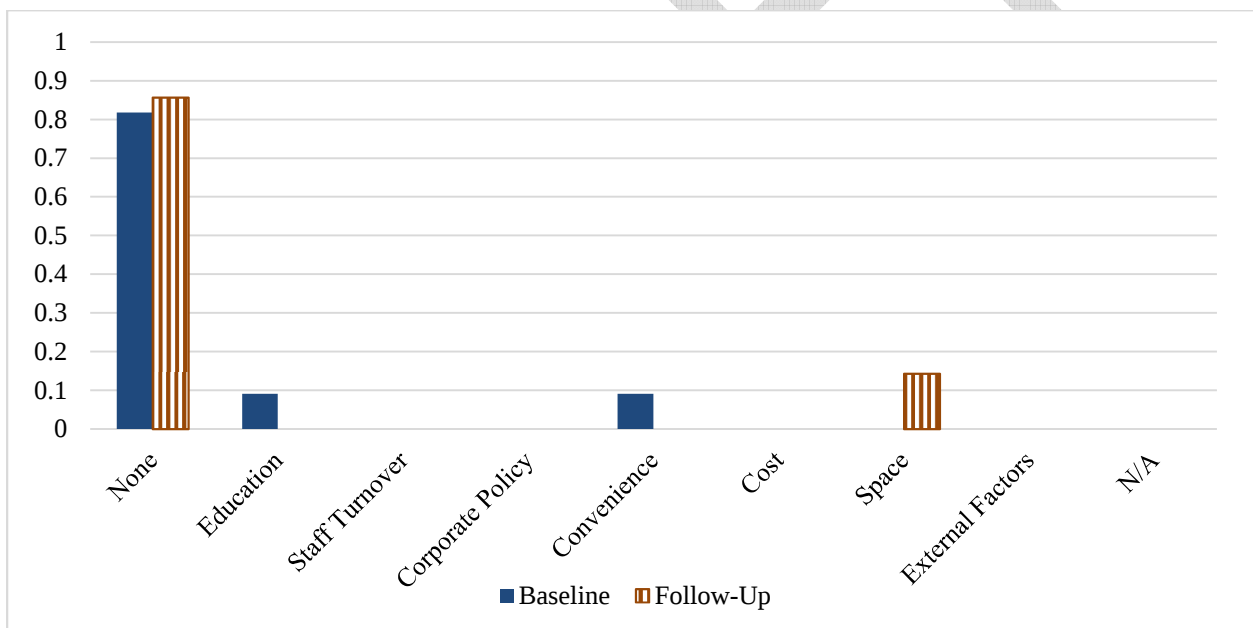


Figure 6.18 Barriers to Mop Water BMPs

Table 6.11 Summary of Barriers Listed During Study for Each BMP

BMP TYPE	None		Education		Staff Turnover		Corporate Policy		Convenience		Cost		Space		External Factors	
	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up
Employee Training BMPs	6	4	1	5	0	2	1	3	2	1	0	0	0	2	0	0
Grease Trap BMPs	9	13	0	0	0	0	0	0	1	0	0	1	0	1	0	0
Grease Interceptor BMPs	10	12	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Used Cooking Oil Container BMPs	4	11	1	0	0	0	0	0	5	1	0	0	0	0	0	2
Dumpster BMPs	7	7	0	1	0	0	0	2	2	2	0	0	1	0	0	2
Mop Water BMPs	9	12	1	0	0	0	0	0	1	0	0	0	0	2	0	0
Total Mentions	45	59	3	6	0	2	1	5	11	4	0	2	1	5	0	4

8.0 E&O RECOMMENDATIONS

Results from the study were used to develop recommendations intended to improve the effectiveness of the E&O program and to direct ongoing resources related to the program more effectively. Each recommendation is noted below. The subsequent paragraphs in this section provide more details along with the justification for each recommendation.

1. Continue the E&O program by implementing more visits to fast-food restaurants to support the upcoming source control program permit requirements, at a frequency specified by the permit. The visits are expected to begin during the next permit cycle (2024-2029). The visits should include a brief discussion of the information on the E&O flier.
2. Revise the E&O flier to feature:
 - a. Discharge of materials other than stormwater to the storm drainage system and/or surface and ground waters, specifically F.O.G. and wash water is prohibited by City of Ellensburg municipal code.
 - b. How F.O.G. and wash water BMPs and impacts to stormwater may affect personal interests or hobbies of staff, such as fishing, swimming, boating, etc.

Recommendations for future action are based on the evaluation of whether the level of awareness and adoption related to F.O.G. and wash water changed, as well as the barriers identified during the study. The adoption of BMPs related to F.O.G. and wash water was found to be insignificant, and while an increase in awareness of the impacts of F.O.G. and wash water was observed, it was found to be not statistically significant. Barriers identified during the study which limit staff's ability to adopt BMPs were related to convenience, lack of education, corporate policies, space, external factors, cost, and staff turnover. The following paragraphs describe how the recommendations can specifically address educational or corporate issues to improve the effectiveness of the E&O program. Supporting literature is included with the recommendations.

1. ***Continue E&O Program and increase frequency of touch-points.*** While the results of the survey site visits indicated an overall increase in the awareness of the fast-food restaurant staff, the increase was not be statistically significant. Awareness is important so staff understand the impacts of their actions on polluting stormwater and downstream receiving waters. Survey responses collected during the study indicated that many (9 out of 14 surveyed) fast-food restaurant employees are trained upon hiring only. Literature suggests that continuing the E&O program, as well as increasing the number of visits, especially at fast-food restaurants, will improve awareness over time. As stated in Scott, Oliveira, Freitag, Guyer, and Boughton, 2013, the body of research related to communication of E&O programs suggests that a persistent, targeted program that reiterates key messages will eventually lead to reduced issues related to F.O.G.

To implement a persistent, targeted program, "Spot check inspections" may be useful to increase touch-points while limiting the amount of time spent visiting fast-food restaurants (Evans, 2005). Spot-check inspections are 15 to 30-minute visits implemented on a specific frequency, which focus on high-level, basic performance metrics for restaurants, though the visits could be tailored to deliver E&O materials, answer questions from the management, and/or address other needs. The frequency of the spot-check inspections should be higher for high-risk, low-performing fast-food restaurants (restaurants that overall scored low and did not show improvements during the

study), and lower for low-risk, high-performing fast-food restaurants (restaurants that overall scored high and showed improvements during the study). Moreover, the visits could be tailored to support upcoming source control program permit requirements. Specifically, permittees in Eastern Washington anticipate being required to conduct inspections of pollutant-generating sources at businesses during the next permit cycle (2024-2029), and the spot-check inspections could be tailored to deliver E&O material related to F.O.G. and wash water while meeting the quota of inspections they must complete annually.

While metrics related to effectiveness of the “spot check inspections” were not available in the Evans and John, 2005 study, the authors reported that the jurisdiction who implemented the program was able to reduce the number of inspections after one year of implementing the program. Moreover, it is expected that issues related to scheduling site visits during the study may be limited by spot-check inspections, as they are designed to take little of the fast-food restaurant staff’s time and may not include an inspection of the kitchen due to the length of the visit. It’s worth noting that scheduling kitchen inspections may require approval from the regional corporate office for some restaurant chains due to internal policies.

2. Additionally, ***tying issues featured in E&O visits and materials to personal interests*** may further accelerate awareness and adoption. Scott, Oliveira, Freitag, Guyer, and Boughton, 2013 recommended targeted interpersonal communication to shift towards achieving awareness and positive behavior change through personal interest. This is supported by observations made during staff disseminating the E&O materials during site visits. Specifically, they noted that when they provided examples of how outside of work hobbies are impacted by employees’ actions related to F.O.G., the employee appeared to have more of an understanding of the issues related to F.O.G. and wash water on stormwater pollution. Based on these observations and recommendations from Scott, et.al., 2013, using targeted interpersonal communication may improve the effectiveness of the flier and site visits by incorporating imagery of hobbies such as fishing, and the impacts of F.O.G. and wash water on those activities or by verbally providing examples during site visits or through other E&O opportunities.
3. ***Limit the impact of detrimental corporate policies.*** During the study, barriers were identified that related to corporate policies or were the results of corporate policies. These barriers included:
 - a. *Corporate policy* - corporate office prevents practices in the restaurant from being changed without their permission
 - b. *Space* - space is limited by the restaurant footprint or design, which limits the ability to implement BMPs
 - c. *Cost* - The cost of a BMP prevents the fast-food restaurant from implementing the BMP, such as a grease trap or grease interceptor
 - d. *Convenience* – Fast-food restaurant staff tend not to carry out BMPs because the existing methods of carrying out their shift responsibilities are easier

One of the issues more frequently attributed to corporate policy was power washing or otherwise cleaning of dumpsters and the surrounding area in the parking lot as reported by fast-food restaurant staff. Fast-food restaurant staff did not mention the use of a spill kit or way to keep water or cleaning chemicals from entering storm drains, and because staining of pavement leading away from the dumpster was observed at a few locations, it appears that the wash water reaches the nearest storm drain. The Ellensburg City Code Section 9.25.310 states that parking lot

washing or other associated activities which contain chemicals and could produce byproducts should not be allowed to enter the storm sewer (City of Ellensburg, 2018). However, City staff have expect that this activity may still be performed on Sundays when City staff are not available to officially observe the activity.

Because of the timing of the activity, it is recommended that a combination of E&O and enforcement target this activity. In the case studies from Dallas, Texas and California discussed previously (Blanc & Arthur, 2013), the E&O programs mentioned were paired with new or revised ordinances to require use of certain practices. The City of Dallas specifically updated ordinances related to grease traps, requiring the use of grease traps and reporting of grease traps maintenance. It is expected that the combination of E&O program and regulations resulted in the increase of awareness and decreased sewer overflows related to F.O.G. observed in both cases. Los Angeles also observed a 52% decrease in F.O.G.-related spills following implementation of F.O.G.-related requirements and inspections in the early 2000s (Anonymous, 2005). For Ellensburg, it is recommended that the E&O flier features a reminder that improper dumpster cleaning procedures are enforceable by City ordinances, as ordinances are in place to prohibit illicit discharges from entering the storm sewer.

Implementation Plan

The estimated funding and staffing needed to implement the recommendations in Section 8.0 are shown in Table 8.1.

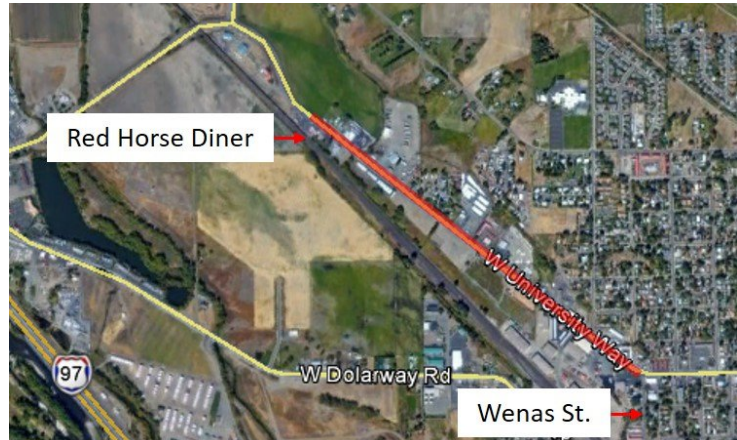
Table 8.1 Budget and Funding for Recommendations Implementation Plan

Recommendations	Budget	Budget Source	Staff
Continue the E&O program by implementing more visits to fast-food restaurants to support the upcoming source control program permit requirements. The visits are expected to begin during the next permit cycle (2024-2029). The visits should include a brief discussion of the information on the E&O flier.	\$75,000	Stormwater Utility Budget Rate Increase potentially	.5-.75 FTE
Revise the E&O flier to feature: - Discharge of materials other than stormwater to the storm drainage system and/or surface and ground waters, specifically F.O.G. and wash water is prohibited by City of Ellensburg municipal code. - How F.O.G. and wash water BMPs and impacts to stormwater may affect personal interests or hobbies of staff, such as fishing, swimming, boating, etc.	N/A	N/A	Osborn Consulting, Inc. revised the flier to incorporate these recommendations.

H. Achievements and Planned Activities

1. Stormwater Gateway Grant WQC-2019 EllePW-00012

In 2017 the City applied for grant funding with the Washington State Department of Ecology's Stormwater Financial Assistance Program. The application requested funding to retro-fit two miles of University Avenue and install stormwater treatment (bio-infiltration swales) along with porous concrete pedestrian/bicycle paths on both sides of the road. At the time of writing this plan, the project is at 100% design and expected to be constructed 2021-2022.



Attached is the fact sheet that outlines the entire project. (See below)

University Way from Wenas Street to Red Horse Diner

The proposed project is located in the City of Ellensburg along a one-mile stretch of University Way between the Red Horse Diner and Wenas Street. This city street is on the national highway system and includes two lanes and a center turning lane (each 12-foot wide) and two 4-foot wide shoulders. University Way has an annual average daily traffic (AADT) count of 7,400 to 11,000 making it the second busiest arterial in Ellensburg and the main arterial from I-90 to downtown Ellensburg and Central Washington University. This area is zoned as light industrial and the land cover within the 100-foot right-of-way (measured from the centerline to both sides of the street) is primarily pollutant generating impervious surfaces (PGIS).

Background Information

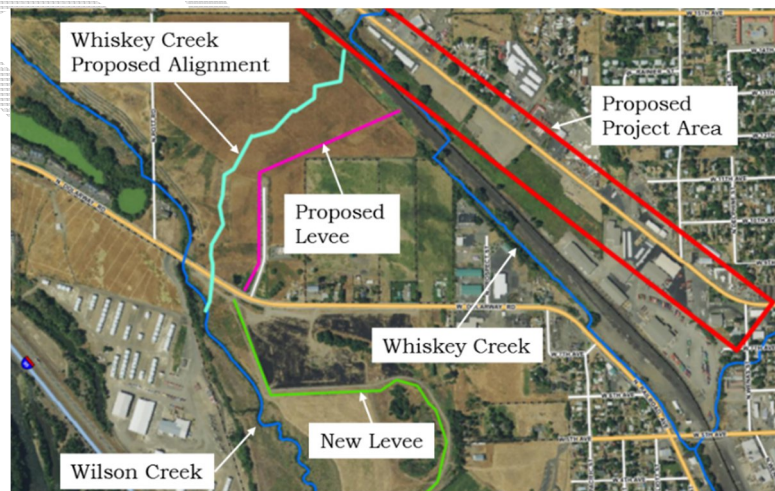
This location was selected for a stormwater LID retrofit project because water quality impairments have been documented in the creeks adjacent to the project and stormwater has been identified as a pollutant source. The project site was developed prior to the implementation of the Phase II NPDES MS4 permit. As such, no structural treatment or flow control BMPs are located within the project area. Instead, untreated runoff is collected in grate inlets and conveyed through an existing storm drain network to both Whiskey and Mercer Creeks. Mercer Creek and Whiskey



Creek are both tributaries of Wilson Creek. Wilson Creek is listed on Ecology's 303d water body list for bacteria, TSS, and temperature. Wilson Creek has a TMDL for these parameters, which calls for the city to reduce untreated stormwater runoff from municipal applications. Whiskey Creek is the preferred conduit for the reintroduction of steelhead as

defined in the Yakima Basin Integrated Plan (YBIP).

Flooding is an issue in the project area. During rain on snow events, businesses along University Way have reported flooding on their property. The 6-year improvement plan for the project area focuses on floodplain projects and creek realignment. A new levee was constructed southwest of the project area and another levee is proposed west of the project area. The proposed realignment of Whiskey Creek is part of a Washington State Department of Ecology's Floodplains by Design project that is intended to improve the creek habitat suitability for steelhead salmon. The proposed alignment will connect to Reecer Creek which was also recently realigned. Reducing pollutant loading from stormwater (TSS and dissolved metals Cu and Zn) from the 2nd busiest street in Ellensburg to these Creeks will support the City in meeting their TMDL obligations for improving water quality and providing a habitat suitable for anadromous fish populations.



Project Goals & Approach

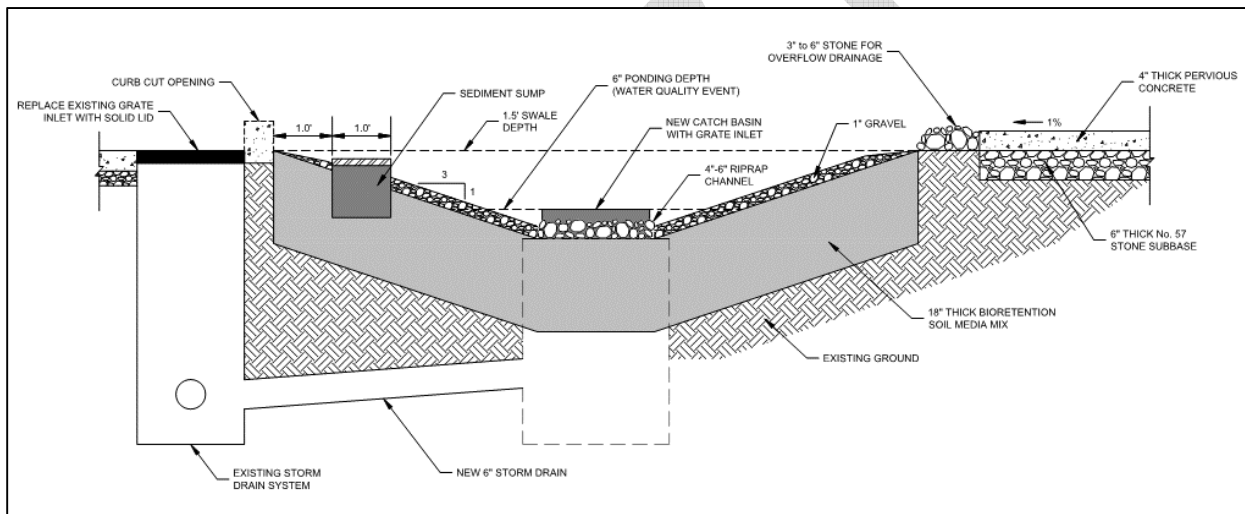
Project Goals	Approach
Improve water quality in Whiskey, Mercer, and Wilson Creeks	Decrease pollutant loading to creeks by: • Remove PGIS within the right-of-way • Provide treatment of stormwater runoff using BMPs bio-infiltration swales • Reduce vehicular traffic on University Way by adding bus stops, bike lanes & sidewalk
Bring street up to municipal standards	• Move power lines underground • Upgrade lighting • Install curbs and gutters (where existing is nonstandard or degraded)
Provide example of how to implement LID in a semi-arid location and provide community beautification benefits	• Use BMPs that do not require <i>supplemental water source</i> such as permeable pavement and bio-infiltration swales with a rock mulch • Use drought tolerant trees
Improve interconnectedness of pedestrian pathways in natural and urban areas	Connect proposed permeable paver sidewalk to levee extension trail and maybe John Wayne trail in near future.
Integrated watershed approach	Incorporate recommendations for management of municipal stormwater from YBIP, the Wilson Creek TMDL, and the City's transportation utility into the design

Project Vision for Stormwater Management

Existing PGIS adjacent to the road (and within in the right-of-way) will be removed and replaced with a permeable concrete/paver pedestrian pathway (7-feet-wide on the north side and 12-feet-wide on the south side). Linear bio-infiltration swales will be constructed parallel to the road and located between the road and sidewalk. The swale design will resemble a dry riverbed with rip-rap at the swale base, 1-inch gravel on the side slopes, and drought tolerant trees planted in the swale. The existing grate inlets on University will be replaced with solid lids and new curb cuts will be added to intercept and direct stormwater runoff to the swales. The swales will be designed to provide treatment for the water quality event (6-month, 24-hour) which will occur as runoff ponds in the swale and infiltrates through a bio-infiltration soil media to the underlying soils. Runoff from larger rainfall events will overflow into catch basin installed in the swales (the rim elevation of grate inlet is 6 inches above the swale bottom) which will connect to the existing storm drain network.



University Way today (left) and after stormwater retrofit construction (right)



Proposed bio-infiltration swale and permeable concrete sidewalk cross section

Hydrological & Geotechnical Information

Ellensburg is located in Central Washington, a semi-arid region with climate conditions characterized by cold winters with snowfall and hot dry summers with high winds and short-duration high intensity rainfall events. The Mean Annual Precipitation in Ellensburg is 9 inches, of which 22 inches is in the form of snow. The Soil Web survey indicates that the hydrologic soil group is predominantly C and D. As such, the infiltration rate for the conceptual BMP design was assumed to be 0.5-inches/hour. The groundwater elevation is estimated to be within 5- to 10-feet of the ground elevation and highest during the summer months due to irrigation returns from upland areas. Both a geotechnical and groundwater investigation will be conducted prior to the start of design to verify the actual field conditions.

Project Budget

The estimate for the design and construction costs for the Gateway to Ellensburg Project is \$3.3M. The City of Ellensburg's plans for funding the project include the following combination of sources:

- Stormwater Retrofits – Ecology grant funding from the Stormwater Financial Assistance Program (SFAP).
- The City's Gas and Light Department will underground and re-locate their utilities at their own expense of \$1.8M.
- Relocate Utilities – The City plans to fund the design/construction for relocating utilities prior to construction of the stormwater retrofit project because they are currently located where the proposed BMPs will be installed. This includes:
 - o Utilities and Lighting – \$1.3M to move utilities and lighting. Both utilities and lighting will be upgraded to current municipal standards.
 - o Gas – \$0.5M to relocate gas lines.

Project Timeline

Winter/Spring/Fall 2019	Begin Design
2020	Design/Permit
2021	Begin Construction of Overall Project
2022	Finish Construction
December 31, 2023	Final Acceptance/Closeout Grant

The project has been delayed one calendar year because of issues with the private franchise communication companies. At the time of writing, it is hopeful that this project will get out to bid sometime Spring 2022. It's possible the City may need to negotiate an extension to the funding agreement to allow for the delay. At the time of writing, that is being discussed with the Department of Ecology.

2. Gateway II WQC-2020 EllePW-00053

The city was successful obtaining grant funding from the Department of Ecology to design, permit and construct Gateway II. Gateway II is the same identical project as Gateway I in scope and size, just on the opposite end of town. The agreement between Ecology and the City is fully executed. Once the annual report and management plan are finished in March 2021, we will begin our search for a consultant to begin designing the project. Next page is an artist rendition of what the project might look like when finished on one side of the street. The project will be constructed on both sides of the street.

At the time of writing the project is proceeding into the 30% design phase. Locates, surveying and geo-tech are complete. It's anticipated at the time of writing to be finished with design and go out to bid sometime spring 2023.



3. Reecer/Currier Floodplain Project

The city has been working on flood management projects with regards to West Ellensburg and Reecer Creek since 2010. Phase I re-located a section of Reecer Creek into a new channel that supported fish habitat and constructed a setback levee. Phase II bonded five million dollars to acquire 56 acres of land, extend the setback levee up to the Burlington Northern Railway, build a new fish passable 35 foot bridge on Dolarway and three contiguous flood swales. The project is slated for construction 2021-2022.

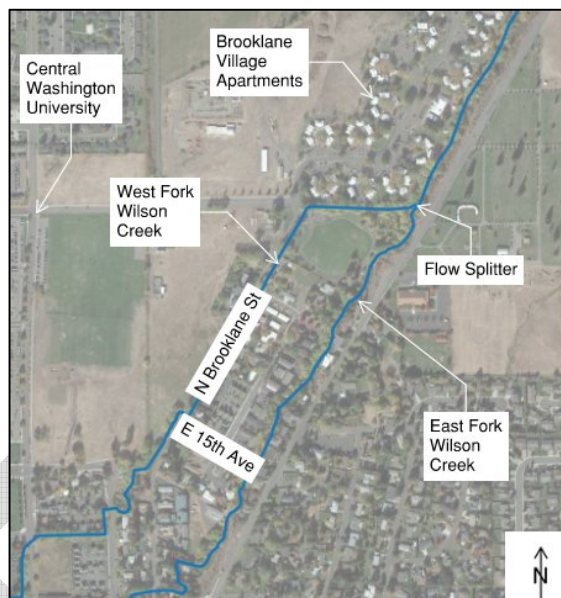
The construction of the project has been delayed. It was decided to proceed with the Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) with FEMA to get the project certified before building. During the CLOMR process FEMA can make changes to the design and it's best to wait and get through the certification process until we get the project out to bid.

4. Brook Lane/Wilson Creek Re-alignment Project

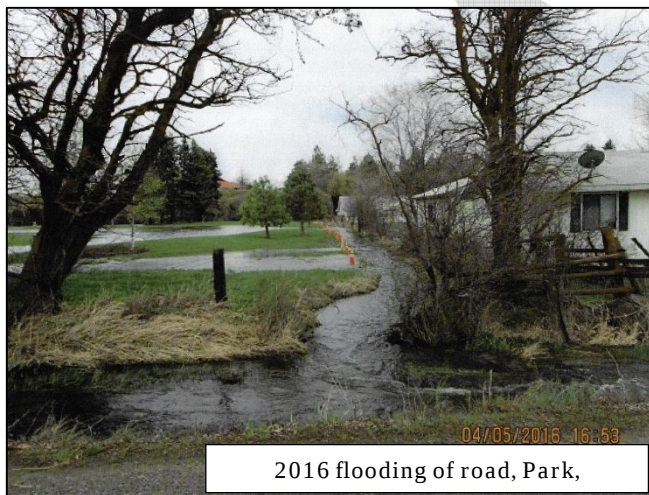
In 2020 The City along with Osborn Consulting made application to the Department of Ecology's Water Quality program for re-aligning Wilson Creek on Brook Lane. Wilson Creek is currently in a roadside ditch along Brook Lane and it poses a flooding problem for homeowners. It's also a water quality and a habitat issue. The funding guidelines did not match the project scope and it was decided to not apply for that round of funding. Instead the City waited one year for the Department of Ecology's Floodplain by Designs (FbD) funding program to open funding. In 2021 and 2022 the City and Osborn successfully made it through round one of the funding application and presented the project to the FbD hearings board on February 15, 2022. The presentation to move Wilson Creek off Brook Lane and improve the habitat, reduce flooding impacts to homeowners and greatly improve water quality was very well received. The City and Osborn will now make application for the last and final round 2, in hopes of getting the project funded. Page 89 is the fact sheet that explains the project in detail.

Project Location

The proposed project is located in the City of Ellensburg (City) along an approximately ½-mile stretch of the west fork of Wilson Creek along N Brooklane Street (St) between the mainstem Wilson Creek split, northeast of McElroy Park, and E 15th Avenue (Ave). N Brooklane St serves as a boundary between a residential neighborhood to the east and the Central Washington University (CWU) campus, to the west. Cyclical springtime flooding occurs in Wilson Creek, inundating McElroy Park and properties on the east side of N Brooklane St, where the creek is part of the frontage. The creek is confined to a drainage ditch and follows a straight alignment with the exception of angular bends at roadway crossings, diminishing the potential for natural processes to reduce flood risk. The proposed alignment will route West Fork Wilson Creek through adjacent CWU property to follow a sinuous alignment and include natural habitat elements.



Background Information



2016 flooding of road, Park,

Rapid spring snowmelt causes routine flooding along West Fork Wilson Creek. Approximately 20 residences and/or structures along N Brooklane St and south of McElroy Park are constructed within the effective floodplain of this reach of the creek and experience repeated property damage (homeowner reports indicate 1- to 2-year cyclical flooding) as a result of the flooding. Wilson Creek is also listed on Ecology's 303d water body list for bacteria and temperature, both of which can be harmful to fish populations. Wilson Creek has a TMDL for these parameters, which calls for the City to reduce untreated stormwater runoff from municipal applications. No structural treatment BMPs are located within the project area. A

stream overflow pond and constructed wetland area were built in the northeast portion of McElroy Park, otherwise no other flood mitigation BMPs are located within the project area. Projected effects of climate change indicate the severity and frequency of these flood events are likely to increase.

The Washington State Department of Fish and Wildlife (WDFW) reports documented presence of the following salmonid species in Wilson Creek: Coho, and Summer Steelhead. The Yakima Basin Integrated Plan (YBIP) describes Coho spawning and rearing in Wilson Creek. Native trout have also been documented in the project area. According to the YBIP, Wilson Creek provides year-round flow in the lower reaches of the stream despite upstream irrigation withdrawal.

A segment of the Palouse to Cascades State Park Regional Trail (Regional Trail) was recently constructed through the CWU property and the proposed realignment of Wilson Creek will serve as a recreational and educational complement to the new trail. Creating a natural stream section with riparian buffer will provide suitable habitat for anadromous fish populations while reducing flood risk and pollutant loading from stormwater (TSS, dissolved oxygen demand, and dissolved metals Cu and Zn).

A Cultural Resources Assessment has been completed for a portion of project area however a comprehensive assessment of the entire site will be completed prior to the start of design. Comprehensive modeling efforts will be included as part of the project design to assess the stream-design cross-section, upstream hydrology, size of up to four fish passable culverts, and no net rise downstream of the project.

Project Goals & Approach

The proposed design would simultaneously realize multiple habitat, flood mitigation, educational, and recreational benefits in the project area. Below is a description of project goals and actionable approaches:

Project Goals	Approach
Reduce flooding in McElroy Park and private properties on N Brooklane Street	• Realign stream away from confined, straight ditch along north side of McElroy Park, and the east side of N Brooklane Street. • Increase channel length and provide a wider, more meandering channel alignment to increase floodplain storage and reduce local flooding.
Improve fish habitat	• Reduction of bacteria loads (described above), improves dissolved oxygen (DO) content in the water column, improving fish habitat. • Natural, sinuous channel design with floodplain and potential side channels will create habitat complexity for native and anadromous fish species. • Riparian buffer plantings provide habitat diversity and create shade to reduce stream temperatures. • Incorporate large woody material within the channel and floodplain areas in multiple orientations both above and partially below grade. These placements will create channel complexity, reduce shear stresses acting on the channel bed, interface with sub-grade stream flow, aggrade sediment, and contribute to the long-term stability of the stream system while creating high flow refugia and overhead cover for fish species. • Identify a streambed material gradation which replicates natural channel conditions, and incorporate it along the proposed channel alignment. A low flow channel and in-stream pools will be graded into the streambed during construction to prevent fish stranding and create additional channel complexity. Streambed habitat boulders may be incorporated pending observations of the existing stream system. • Fish passable culverts at a minimum of four road/trail crossings. • Increase the length of open channel by approximately 600 feet, and a total new channel length of approximately 2,500 linear feet, resulting in a significant increase in fish habitat compared to the existing condition. • In addition, Margaritifera mussels have been documented during recent surveys of Wilson Creek, and are unique species, important to food web dynamics; improving fish habitat as described would also benefit other aquatic species in the reach, including these mussels and lamprey.
Provide climate resilience	• Using the WDFW Future Projects for Climate-Adapted Culvert Design web application, determine the year 2080 100-year stream flow and assess channel hydraulics for the future condition. • Consideration of the year 2080 100-year bankfull width may also be incorporated into the proposed design.
Provide education/outreach opportunity for CWU and the public	• The new stream location will enhance and provide a complementary public amenity adjacent to the existing Regional Trail within the CWU campus • This reach of Wilson Creek is part of the Adopt-a-Stream Program by the Mid-Columbia Fisheries Enhancement Group. • Restoration of a stream reach to a natural state yields opportunity to educate the public about urban stream water quality and stream processes. • Provide multiple CWU departments with an on-site restored stream for future study/research, increasing potential for the long-term sustainability of stream system and creating educational opportunities for CWU students.

Improve water quality in Wilson Creek	Decrease pollutant loading to/of the creek by: • Removing N Brooklane Street sheet flow connection and Brooklane Village Apartments direct discharge connections, from routing untreated pollution-generating impervious surface (PGIS) runoff within the Right-of-Way. • Addressing bacteria impairment in Wilson Creek through increased dispersion via the riparian zone and reducing the potential for stagnation in the new creek alignment and section.
Stakeholder Coordination	Ongoing coordination is occurring with CWU, Kittitas County, Mid-Columbia Fisheries Enhancement Group, WDFW, Department of Ecology, Yakama Nation representatives, and City Park Staff. Future coordination efforts are anticipated to include Brooklane Property owners.

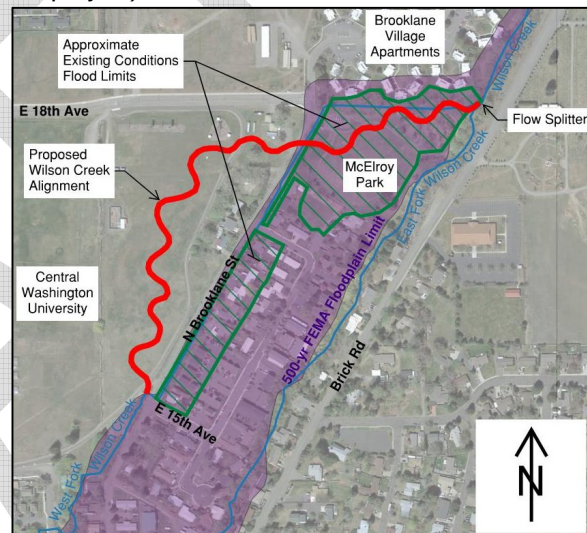
Project Vision for Stream Realignment and Floodplain Creation

This project presents a unique opportunity to accomplish both water quality and fish habitat improvements while achieving contemporaneous benefits of flood mitigation, and long-term education and public outreach through partnership with CWU (who is donating land for the project).

Wilson Creek currently flows in a straight, confined alignment without adequate room in the ROW for a floodplain or riparian buffer. Not only is this poor habitat for salmon and other fish that could potentially utilize the stream, but this has led to cyclical flooding of several properties in the area as well as water quality degradation. Realigning the stream away from the Brooklane Village Apartments and N Brooklane Street into adjacent CWU land will provide ample space for a natural stream morphology which will provide significantly improved fish habitat while accommodating an adequate riparian zone for floodplain engagement and water treatment through direct natural and physical mechanisms.

The existing creek channels will remain to continue providing collection and conveyance of N Brooklane St roadway runoff, to the downstream confluence with the stream in high-flow events. The riparian zone will increase dispersion, a preferred method for reducing bacterial pollutant loads, and provide shade. Cooler water temperatures reduce bacterial growth potential, and increase DO in the water body. This combination of symbiotic factors offers ideal habitat for fish and aquatic organisms. An adequately sized creek channel section will reduce localized flooding and improve quality and diversity of fish habitat concurrently.

The extents of the stream realignment will be entirely accessible to the public via McElroy Park and the existing multi-use trail on the CWU parcel(s). This location provides an exciting opportunity for public outreach about the benefits of water quality in the context of stormwater and fish habitat, as well as natural stream processes. A long-term partnership with multiple CWU departments and engagement with local stewards elevates potential for the long-term health of the creek and project sustainability. The City will work with CWU to develop and execute monitoring plans to meet the requirements of Ecology grant funding.





Reecer Creek channel vegetation (Rebecca Wassell, 2017) – target riparian zone density for Wilson Creek

Project Budget

The estimate for the feasibility exercise and design costs for the Wilson Creek Project is approximately \$1.2M, anticipated to be funded by a Floodplains by Design Grant and matching funds provided by the City. Following completion of design, the City will pursue construction funding, anticipated to include the following combination of sources:

- Floodplains by Design Grant – Ecology grant funding from the FbD Grant Program.
- Kittitas County Flood Control Zone District – Funding could be applied to advance design or potentially a [matching] portion of construction funding
- Nonpoint Source Water Quality Improvements and Stream Restoration – Ecology grant funding from the Centennial and Section 319 Grants will be pursued in future grant cycles for construction funding of the project
- CWU In-Kind Public Property Donation – CWU has been involved in discussions for the stream realignment and has agreed to donate property required for the project. Donation of CWU (and City Park) property equates to roughly 30 acres of land.

Project Timeline

Fall 2021-2022	Develop grant pre-application
January 14, 2022	Deadline to submit grant pre-application
February 14 – 18, 2022	Presentations to grant reviewers
April 29, 2022	Full grant applications due
August 1, 2022	Grant notification and award
July 2023	Legislative Budget Released for Funding
July 2023 – Fall 2024	Feasibility Analysis, Modeling, and Project Design
Fall 2023, Fall 2024	Seek additional grant funding for construction

I. S7 Permit Requirements (TMDL)

The Utility will resume distributing literature to citizens at recreational swimming areas and streamside homeowners to not feed water fowl. This information is on a flier and goes out in the utility billing. The plan is to get another round of those in time for summer sometime May 2022. This is the requirement under S.5.B.1 in appendix 2 NPDES permit TMDL.



In addition to the waterfowl education, the city is required to have pet waste stations at all public parks, city property and open spaces. The City has pet waste stations at all locations, and they are maintained by city staff. Parks staff just ordered another two-year supply and Storm paid for it out of the Capacity Grant 2022.



J. Operation and Maintenance Plan Update 2020

Every five years the NPDES permit requires permittees to update their stormwater operation and maintenance plan. The plan shall document all field activities performed by city work crews and address pollution prevention at the shop. The plan addresses best management practices for each activity. The plan update is available upon request and was completed July 2017. The plan serves as the stormwater pollution prevention plan (SWPPP) for the city shop/treatment plant as approved by Ecology. The plan is slated to be updated summer 2022. The link below is access the 2017 version.

https://g3coe-my.sharepoint.com/:w:/g/personal/morrowj_ci_ellensburg_wa_us/EX4kyLNvWIFDvUlbg2rut4Bw9TnL5S0uBZWVnA92xGWSQ?e=LnMp1m

Appendices:

Stormwater Utility Budget

https://q3coe-my.sharepoint.com/:x:/g/personal/morrowj_ci_ellensburg_wa_us/Eb7CyVktgwZPmrQ3fuGfCxBXuYqZ1lqmnOy4h56xR6CVw?e=ui61rj

DRAFT

DRAFT



AGENDA REPORT

Meeting Date:	April 21, 2022
Agenda Subject:	2021-2023 Capacity Grant Agreement with the Department of Ecology
Submitted by:	Jon Morrow Public Works & Utilities
Recommended Action or Motion:	Item has already gone to Council for authorization. This is informational only.
Background/Summary:	This is a revolving fund every two years with the Department of Ecology. The funds can only be spent on permit compliance related items. The funds will be spent on Mutt Mitts for all City Parks and City Hall, and help pay for the street sweepings and vector solids to be disposed of.
Previous Council Action:	Council authorized the 2020-2022 Capacity Grant.
Analysis:	The amount changes each biennium and can vary from one grant cycle to the next.
Financial Impact:	Amend the Stormwater Utility budget to reflect the increase in revenue and there is no match to the Capacity Grants.
Attachments:	2021-2023 Stormwater Capacity Grant Agreement.pdf



Agreement No. WQSWCAP-2123-EllePW-00169

WATER QUALITY STORMWATER CAPACITY AGREEMENT

BETWEEN

THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

AND

CITY OF ELLENSBURG

This is a binding Agreement entered into by and between the state of Washington, Department of Ecology, hereinafter referred to as "ECOLOGY," and City of Ellensburg, hereinafter referred to as the "RECIPIENT," to carry out with the provided funds activities described herein.

GENERAL INFORMATION

Project Title:	2021-2023 Biennial Stormwater Capacity Grants
Total Cost:	\$70,000.00
Total Eligible Cost:	\$70,000.00
Ecology Share:	\$70,000.00
Recipient Share:	\$0.00
The Effective Date of this Agreement is:	07/01/2021
The Expiration Date of this Agreement is no later than:	03/31/2023
Project Type:	Capacity Grant

Project Short Description:

This project will assist Phase I and II Permittees in implementation or management of municipal stormwater programs.

Project Long Description:

N/A

Overall Goal:

This project will improve water quality in the State of Washington by reducing stormwater pollutants discharged to state water bodies.

Agreement No: WQSWCAP-2123-EllePW-00169
Project Title: 2021-2023 Biennial Stormwater Capacity Grants
Recipient Name: City of Ellensburg

RECIPIENT INFORMATION

Organization Name: City of Ellensburg

Federal Tax ID: 91-6001245

DUNS Number: 060041985

Mailing Address: 501 North Anderson St
Ellensburg, WA 98926

Physical Address: 501 North Anderson St
Ellensburg, Washington 98926

Organization Email: morrowj@ci.ellensburg.wa.us

Contacts

Agreement No: WQSWCAP-2123-EllePW-00169
Project Title: 2021-2023 Biennial Stormwater Capacity Grants
Recipient Name: City of Ellensburg

Project Manager	Jon Morrow Stormwater Utility Manager 501 North Anderson Street Ellensburg, Washington 98926 Email: morrowj@ci.ellensburg.wa.us Phone: (509) 925-8619
Billing Contact	Michelle Dufault P.W. Operations Analyst 501 N. Anderson Street Ellensburg, Washington 98926 Email: dufaultm@ci.ellensburg.wa.us Phone: (509) 962-7234
Authorized Signatory	Ryan Lyyski Public Works and Utilities Director 501 North Anderson Street Ellensburg, Washington 98926 Email: lyyskir@ci.ellensburg.wa.us Phone: (509) 962-7230

Agreement No: WQSWCAP-2123-EllePW-00169
Project Title: 2021-2023 Biennial Stormwater Capacity Grants
Recipient Name: City of Ellensburg

ECOLOGY INFORMATION

Mailing Address: Department of Ecology
Water Quality
PO BOX 47600
Olympia, WA 98504-7600

Physical Address: Water Quality
300 Desmond Drive SE
Lacey, WA 98503

Contacts

Project Manager	Kyle Graunke PO Box 47600 Olympia, Washington 98504-7600 Email: kygr461@ecy.wa.gov Phone: (360) 407-6452
Financial Manager	Kyle Graunke PO Box 47600 Olympia, Washington 98504-7600 Email: kygr461@ecy.wa.gov Phone: (360) 407-6452

AUTHORIZING SIGNATURES

RECIPIENT agrees to furnish the necessary personnel, equipment, materials, services, and otherwise do all things necessary for or incidental to the performance of work as set forth in this Agreement.

RECIPIENT acknowledges that they had the opportunity to review the entire Agreement, including all the terms and conditions of this Agreement, Scope of Work, attachments, and incorporated or referenced documents, as well as all applicable laws, statutes, rules, regulations, and guidelines mentioned in this Agreement. Furthermore, the RECIPIENT has read, understood, and accepts all requirements contained within this Agreement.

This Agreement contains the entire understanding between the parties, and there are no other understandings or representations other than as set forth, or incorporated by reference, herein.

No subsequent modifications or amendments to this agreement will be of any force or effect unless in writing, signed by authorized representatives of the RECIPIENT and ECOLOGY and made a part of this agreement. ECOLOGY and RECIPIENT may change their respective staff contacts without the concurrence of either party.

This Agreement shall be subject to the written approval of Ecology's authorized representative and shall not be binding until so approved.

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

Washington State
Department of Ecology

City of Ellensburg

By: _____

By: _____

Vincent McGowan, P.E.

Date

Ryan Lyyski

Date

Water Quality

Public Works and Utilities Director

Program Manager

Template Approved to Form by
Attorney General's Office

SCOPE OF WORK

Task Number: 1 Task Cost: \$2,000.00

Task Title: Project Administration/Management

Task Description:

A. The RECIPIENT shall carry out all work necessary to meet ECOLOGY grant or loan administration requirements. Responsibilities include, but are not limited to: maintenance of project records; submittal of requests for reimbursement and corresponding backup documentation; progress reports; and a recipient closeout report (including photos).

B. The RECIPIENT shall maintain documentation demonstrating compliance with applicable procurement, contracting, and interlocal agreement requirements; application for, receipt of, and compliance with all required permits, licenses, easements, or property rights necessary for the project; and submittal of required performance items.

C. The RECIPIENT shall manage the project. Efforts include, but are not limited to: conducting, coordinating, and scheduling project activities and assuring quality control. Every effort will be made to maintain effective communication with the RECIPIENT's designees; ECOLOGY; all affected local, state, or federal jurisdictions; and any interested individuals or groups. The RECIPIENT shall carry out this project in accordance with any completion dates outlined in this agreement.

Task Goal Statement:

Properly managed and fully documented project that meets ECOLOGY's grant and loan administrative requirements.

Task Expected Outcome:

- * Timely and complete submittal of requests for reimbursement, quarterly progress reports, Recipient Closeout Report, and two-page Outcome Summary Report.

- * Properly maintained project documentation.

Recipient Task Coordinator: Jon Morrow

Project Administration/Management

Deliverables

Number	Description	Due Date
1.1	Progress Reports that include descriptions of work accomplished, project challenges, and changes in the project schedule. Submitted at least quarterly in EAGL.	
1.2	Recipient Closeout Report (EAGL Form).	
1.3	Two-page draft and Final Outcome Summary Reports.	

Agreement No: WQSWCAP-2123-EllePW-00169

Project Title: 2021-2023 Biennial Stormwater Capacity Grants

Recipient Name: City of Ellensburg

SCOPE OF WORK

Task Number: 2

Task Cost: \$68,000.00

Task Title: Permit Implementation

Task Description:

Conduct work related to implementation of municipal stormwater National Pollutant Discharge Elimination System (NPDES) permit requirements. If the RECIPIENT is out of compliance with the municipal stormwater National Pollutant Discharge Elimination System (NPDES) permit, the RECIPIENT will ensure funds are used to attain compliance where applicable. The following is a list of elements RECIPIENT's project may include.

- 1) Public education and outreach activities, including stewardship activities.
- 2) Public involvement and participation activities.
- 3) Illicit discharge detection and elimination (IDDE) program activities, including:
 - a) Mapping of municipal separate storm sewer systems (MS4s).
 - b) Staff training.
 - c) Activities to identify and remove illicit stormwater discharges.
 - d) Field screening procedures.
 - e) Complaint hotline database or tracking system improvements.
- 4) Activities to support programs to control runoff from new development, redevelopment, and construction sites, including:
 - a) Development of an ordinance and associated technical manual or update of applicable codes.
 - b) Inspections before, during, and upon completion of construction, or for post-construction long-term maintenance.
 - c) Training for plan review or inspection staff.
 - d) Participation in applicable watershed planning effort.
- 5) Pollution prevention, good housekeeping, and operation and maintenance program activities, such as:
 - a) Inspecting and/or maintaining the MS4 infrastructure.
 - b) Developing and/or implementing policies, procedures, or stormwater pollution prevention plans at municipal properties or facilities.
- 6) Annual reporting activities.
- 7) Establishing and refining stormwater utilities, including stable rate structures.
- 8) Water quality monitoring to implement permit requirements for a Water Cleanup Plan (TMDL). Note that any monitoring funded by this program requires submittal of a Quality Assurance Project Plan (QAPP) that the DEPARTMENT approves prior to awarding funding for monitoring.
Monitoring, including:
 - a) Development of applicable QAPPs.
 - b) Monitoring activities, in accordance with a DEPARTMENT- approved QAPP, to meet Phase I/II permit requirements.
- 9) Structural stormwater controls program activities (Phase I permit requirement)
- 10) Source control for existing development (Phase I permit requirement), including:
 - a) Inventory and inspection program.
 - b) Technical assistance and enforcement.
 - c) Staff training.
- 11) Equipment purchases that result directly in improved permit compliance. Equipment purchases must be specific to implementing a permit requirement (such as a vacuum truck) rather than general use (such as a pick-up truck). Equipment

Agreement No: WQSWCAP-2123-EllePW-00169
Project Title: 2021-2023 Biennial Stormwater Capacity Grants
Recipient Name: City of Ellensburg

purchases over \$5,000 must be pre-approved by Ecology.

Documentation of all tasks completed is required. Documentation may include: field reports, dates and number of inspections conducted, dates of trainings held and participant lists, number of illicit discharges investigated and removed, summaries of planning, stormwater utility or procedural updates, annual reports, copies of approved QAPPs, summaries of structural or source control activities, summaries of how equipment purchases have increased or improved permit compliance. Capital construction projects, incentives or give-a-ways, grant application preparation, TAPE review for proprietary treatment systems, or tasks that do not support Municipal Stormwater Permit implementation are not eligible expenses.

Task Goal Statement:

This task will improve water quality in the State of Washington by reducing the pollutants delivered by stormwater to lakes, streams, and the Puget Sound by implementing measures required by Phase I and II NPDES permits.

Task Expected Outcome:

RECIPIENTS will implement measures required by Phase I and II NPDES permits.

Recipient Task Coordinator: Jon Morrow

Permit Implementation

Deliverables

Number	Description	Due Date
2.1	Documentation of tasks completed	

Agreement No: WQSWCAP-2123-EllePW-00169
Project Title: 2021-2023 Biennial Stormwater Capacity Grants
Recipient Name: City of Ellensburg

BUDGET**Funding Distribution EG220305**

NOTE: The above funding distribution number is used to identify this specific agreement and budget on payment remittances and may be referenced on other communications from ECOLOGY. Your agreement may have multiple funding distribution numbers to identify each budget.

Funding Title: 2021-23 capacity grant Funding Type: Grant
Funding Effective Date: 07/01/2021 Funding Expiration Date: 03/31/2023

Funding Source:

Title: Model Toxics Control Operating Account (MTCOA)

Fund:

Type: State

Funding Source %: 100%

Description: MTCA

Approved Indirect Costs Rate: Approved State Indirect Rate: 30%

Recipient Match %: 0%

InKind Interlocal Allowed: No

InKind Other Allowed: No

Is this Funding Distribution used to match a federal grant? No

2021-23 capacity grant	Task Total
Project Administration/Management	\$ 2,000.00
Permit Implementation	\$ 68,000.00

Total: \$ 70,000.00

Agreement No: WQSWCAP-2123-EllePW-00169

Project Title: 2021-2023 Biennial Stormwater Capacity Grants

Recipient Name: City of Ellensburg

Funding Distribution Summary**Recipient / Ecology Share**

Funding Distribution Name	Recipient Match %	Recipient Share	Ecology Share	Total
2021-23 capacity grant	0.00 %	\$ 0.00	\$ 70,000.00	\$ 70,000.00
Total		\$ 0.00	\$ 70,000.00	\$ 70,000.00

AGREEMENT SPECIFIC TERMS AND CONDITIONS

N/A

SPECIAL TERMS AND CONDITIONS**GENERAL FEDERAL CONDITIONS**

If a portion or all of the funds for this agreement are provided through federal funding sources or this agreement is used to match a federal grant award, the following terms and conditions apply to you.

A. CERTIFICATION REGARDING SUSPENSION, DEBARMENT, INELIGIBILITY OR VOLUNTARY**EXCLUSION:**

1. The RECIPIENT/CONTRACTOR, by signing this agreement, certifies that it is not suspended, debarred, proposed for debarment, declared ineligible or otherwise excluded from contracting with the federal government, or from receiving contracts paid for with federal funds. If the RECIPIENT/CONTRACTOR is unable to certify to the statements contained in the certification, they must provide an explanation as to why they cannot.
2. The RECIPIENT/CONTRACTOR shall provide immediate written notice to ECOLOGY if at any time the RECIPIENT/CONTRACTOR learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.
3. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meaning set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact ECOLOGY for assistance in obtaining a copy of those regulations.
4. The RECIPIENT/CONTRACTOR agrees it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under the applicable Code of Federal Regulations, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.
5. The RECIPIENT/CONTRACTOR further agrees by signing this agreement, that it will include this clause titled "CERTIFICATION REGARDING SUSPENSION, DEBARMENT, INELIGIBILITY OR VOLUNTARY EXCLUSION" without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
6. Pursuant to 2CFR180.330, the RECIPIENT/CONTRACTOR is responsible for ensuring that any lower tier covered transaction complies with certification of suspension and debarment requirements.
7. RECIPIENT/CONTRACTOR acknowledges that failing to disclose the information required in the Code of Federal

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Regulations may result in the delay or negation of this funding agreement, or pursuance of legal remedies, including suspension and debarment.

8. RECIPIENT/CONTRACTOR agrees to keep proof in its agreement file, that it, and all lower tier recipients or contractors, are not suspended or debarred, and will make this proof available to ECOLOGY before requests for reimbursements will be approved for payment. RECIPIENT/CONTRACTOR must run a search in <http://www.sam.gov> and print a copy of completed searches to document proof of compliance.

B. FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (FFATA) REPORTING REQUIREMENTS:

CONTRACTOR/RECIPIENT must complete the FFATA Data Collection Form (ECY 070-395) and return it with the signed agreement to ECOLOGY.

Any CONTRACTOR/RECIPIENT that meets each of the criteria below must report compensation for its five top executives using the FFATA Data Collection Form.

- Receives more than \$25,000 in federal funds under this award.
- Receives more than 80 percent of its annual gross revenues from federal funds.
- Receives more than \$25,000,000 in annual federal funds.

Ecology will not pay any invoices until it has received a completed and signed FFATA Data Collection Form. Ecology is required to report the FFATA information for federally funded agreements, including the required DUNS number, at www.fsrs.gov <http://www.fsrs.gov> within 30 days of agreement signature. The FFATA information will be available to the public at www.usaspending.gov <http://www.usaspending.gov>.

For more details on FFATA requirements, see www.fsrs.gov <http://www.fsrs.gov>.

C. FEDERAL FUNDING PROHIBITION ON CERTAIN TELECOMMUNICATIONS OR VIDEO SURVEILLANCE SERVICES OR EQUIPMENT:

As required by 2 CFR 200.216, federal grant or loan recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

1. Procure or obtain;
2. Extend or renew a contract to procure or obtain; or
3. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment, video surveillance services or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in [Public Law 115-232](https://www.govinfo.gov/content/pkg/PLAW-115publ232/pdf/PLAW-115publ232.pdf) <https://www.govinfo.gov/content/pkg/PLAW-115publ232/pdf/PLAW-115publ232.pdf>, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

Recipients, subrecipients, and borrowers also may not use federal funds to purchase certain prohibited equipment, systems, or services, including equipment, systems, or services produced or provided by entities identified in section 889, are recorded in the [System for Award Management \(SAM\)](https://sam.gov/SAM) <https://sam.gov/SAM> exclusion list.

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GENERAL TERMS AND CONDITIONS

Pertaining to Grant and Loan Agreements With the state of Washington, Department of Ecology

GENERAL TERMS AND CONDITIONS

For DEPARTMENT OF ECOLOGY GRANTS and LOANS

06/24/2021 Version

1. ADMINISTRATIVE REQUIREMENTS

- a) RECIPIENT shall follow the "Administrative Requirements for Recipients of Ecology Grants and Loans – EAGL Edition." (<https://fortress.wa.gov/ecy/publications/SummaryPages/1701004.html>)
- b) RECIPIENT shall complete all activities funded by this Agreement and be fully responsible for the proper management of all funds and resources made available under this Agreement.
- c) RECIPIENT agrees to take complete responsibility for all actions taken under this Agreement, including ensuring all subgrantees and contractors comply with the terms and conditions of this Agreement. ECOLOGY reserves the right to request proof of compliance by subgrantees and contractors.
- d) RECIPIENT's activities under this Agreement shall be subject to the review and approval by ECOLOGY for the extent and character of all work and services.

2. AMENDMENTS AND MODIFICATIONS

This Agreement may be altered, amended, or waived only by a written amendment executed by both parties. No subsequent modification(s) or amendment(s) of this Agreement will be of any force or effect unless in writing and signed by authorized representatives of both parties. ECOLOGY and the RECIPIENT may change their respective staff contacts and administrative information without the concurrence of either party.

3. ACCESSIBILITY REQUIREMENTS FOR COVERED TECHNOLOGY

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

4. ARCHAEOLOGICAL AND CULTURAL RESOURCES

RECIPIENT shall take all reasonable action to avoid, minimize, or mitigate adverse effects to archaeological and historic archaeological sites, historic buildings/structures, traditional cultural places, sacred sites, or other cultural resources, hereby referred to as Cultural Resources.

The RECIPIENT must agree to hold harmless ECOLOGY in relation to any claim related to Cultural Resources discovered, disturbed, or damaged due to the RECIPIENT's project funded under this Agreement.

RECIPIENT shall:

- a) Contact the ECOLOGY Program issuing the grant or loan to discuss any Cultural Resources requirements for their project:
 - Cultural Resource Consultation and Review should be initiated early in the project planning process and must be completed prior to expenditure of Agreement funds as required by applicable State and Federal requirements.
 - * For state funded construction, demolition, or land acquisitions, comply with Governor Executive Order 21-02, Archaeological and Cultural Resources.

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- For projects with any federal involvement, comply with the National Historic Preservation Act of 1966 (Section 106).
 - b) If required by the ECOLOGY Program, submit an Inadvertent Discovery Plan (IDP) to ECOLOGY prior to implementing any project that involves field activities. ECOLOGY will provide the IDP form.
- RECIPIENT shall:
- Keep the IDP at the project site.
 - Make the IDP readily available to anyone working at the project site.
 - Discuss the IDP with staff, volunteers, and contractors working at the project site.
 - Implement the IDP when Cultural Resources or human remains are found at the project site.
- c) If any Cultural Resources are found while conducting work under this Agreement, follow the protocol outlined in the project IDP.
- Immediately stop work and notify the ECOLOGY Program, who will notify the Department of Archaeology and Historic Preservation at (360) 586-3065, any affected Tribe, and the local government.
- d) If any human remains are found while conducting work under this Agreement, follow the protocol outlined in the project IDP.
- Immediately stop work and notify the local Law Enforcement Agency or Medical Examiner/Coroner's Office, the Department of Archaeology and Historic Preservation at (360) 790-1633, and then the ECOLOGY Program.
- e) Comply with RCW 27.53, RCW 27.44, and RCW 68.50.645, and all other applicable local, state, and federal laws protecting Cultural Resources and human remains.

5. ASSIGNMENT

No right or claim of the RECIPIENT arising under this Agreement shall be transferred or assigned by the RECIPIENT.

6. COMMUNICATION

RECIPIENT shall make every effort to maintain effective communications with the RECIPIENT's designees, ECOLOGY, all affected local, state, or federal jurisdictions, and any interested individuals or groups.

7. COMPENSATION

- a) Any work performed prior to effective date of this Agreement will be at the sole expense and risk of the RECIPIENT. ECOLOGY must sign the Agreement before any payment requests can be submitted.
- b) Payments will be made on a reimbursable basis for approved and completed work as specified in this Agreement.
- c) RECIPIENT is responsible to determine if costs are eligible. Any questions regarding eligibility should be clarified with ECOLOGY prior to incurring costs. Costs that are conditionally eligible require approval by ECOLOGY prior to expenditure.
- d) RECIPIENT shall not invoice more than once per month unless agreed on by ECOLOGY.
- e) ECOLOGY will not process payment requests without the proper reimbursement forms, Progress Report and supporting documentation. ECOLOGY will provide instructions for submitting payment requests.
- f) ECOLOGY will pay the RECIPIENT thirty (30) days after receipt of a properly completed request for payment.
- g) RECIPIENT will receive payment through Washington State's Office of Financial Management's Statewide Payee Desk. To receive payment you must register as a statewide vendor by submitting a statewide vendor registration form and an IRS W-9 form at website, <https://ofm.wa.gov/it-systems/statewide-vendorpayee-services>. If you have questions about the vendor registration process, you can contact Statewide Payee Help Desk at (360) 407-8180 or email PayeeRegistration@ofm.wa.gov.
- h) ECOLOGY may, at its sole discretion, withhold payments claimed by the RECIPIENT if the RECIPIENT fails to satisfactorily comply with any term or condition of this Agreement.
- i) Monies withheld by ECOLOGY may be paid to the RECIPIENT when the work described herein, or a portion thereof, has been completed if, at ECOLOGY's sole discretion, such payment is reasonable and approved according to this Agreement, as appropriate, or upon completion of an audit as specified herein.

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j) RECIPIENT must submit within thirty (30) days after the expiration date of this Agreement, all financial, performance, and other reports required by this Agreement. Failure to comply may result in delayed reimbursement.

8. COMPLIANCE WITH ALL LAWS

RECIPIENT agrees to comply fully with all applicable federal, state and local laws, orders, regulations, and permits related to this Agreement, including but not limited to:

- a) RECIPIENT agrees to comply with all applicable laws, regulations, and policies of the United States and the State of Washington which affect wages and job safety.
- b) RECIPIENT agrees to be bound by all applicable federal and state laws, regulations, and policies against discrimination.
- c) RECIPIENT certifies full compliance with all applicable state industrial insurance requirements.
- d) RECIPIENT agrees to secure and provide assurance to ECOLOGY that all the necessary approvals and permits required by authorities having jurisdiction over the project are obtained. RECIPIENT must include time in their project timeline for the permit and approval processes.

ECOLOGY shall have the right to immediately terminate for cause this Agreement as provided herein if the RECIPIENT fails to comply with above requirements.

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

9. CONFLICT OF INTEREST

RECIPIENT and ECOLOGY agree that any officer, member, agent, or employee, who exercises any function or responsibility in the review, approval, or carrying out of this Agreement, shall not have any personal or financial interest, direct or indirect, nor affect the interest of any corporation, partnership, or association in which he/she is a part, in this Agreement or the proceeds thereof.

10. CONTRACTING FOR GOODS AND SERVICES

RECIPIENT may contract to buy goods or services related to its performance under this Agreement. RECIPIENT shall award all contracts for construction, purchase of goods, equipment, services, and professional architectural and engineering services through a competitive process, if required by State law. RECIPIENT is required to follow procurement procedures that ensure legal, fair, and open competition.

RECIPIENT must have a standard procurement process or follow current state procurement procedures. RECIPIENT may be required to provide written certification that they have followed their standard procurement procedures and applicable state law in awarding contracts under this Agreement.

ECOLOGY reserves the right to inspect and request copies of all procurement documentation, and review procurement practices related to this Agreement. Any costs incurred as a result of procurement practices not in compliance with state procurement law or the RECIPIENT's normal procedures may be disallowed at ECOLOGY's sole discretion.

11. DISPUTES

When there is a dispute with regard to the extent and character of the work, or any other matter related to this Agreement the determination of ECOLOGY will govern, although the RECIPIENT shall have the right to appeal decisions as provided for below:

- a) RECIPIENT notifies the funding program of an appeal request.
- b) Appeal request must be in writing and state the disputed issue(s).
- c) RECIPIENT has the opportunity to be heard and offer evidence in support of its appeal.
- d) ECOLOGY reviews the RECIPIENT's appeal.
- e) ECOLOGY sends a written answer within ten (10) business days, unless more time is needed, after concluding the review.

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The decision of ECOLOGY from an appeal will be final and conclusive, unless within thirty (30) days from the date of such decision, the RECIPIENT furnishes to the Director of ECOLOGY a written appeal. The decision of the Director or duly authorized representative will be final and conclusive.

The parties agree that this dispute process will precede any action in a judicial or quasi-judicial tribunal.

Appeals of the Director's decision will be brought in the Superior Court of Thurston County. Review of the Director's decision will not be taken to Environmental and Land Use Hearings Office.

Pending final decision of a dispute, the RECIPIENT agrees to proceed diligently with the performance of this Agreement and in accordance with the decision rendered.

Nothing in this Agreement will be construed to limit the parties' choice of another mutually acceptable method, in addition to the dispute resolution procedure outlined above.

12. ENVIRONMENTAL DATA STANDARDS

a) RECIPIENT shall prepare a Quality Assurance Project Plan (QAPP) for a project that collects or uses environmental measurement data. RECIPIENTS unsure about whether a QAPP is required for their project shall contact the ECOLOGY Program issuing the grant or loan. If a QAPP is required, the RECIPIENT shall:

- Use ECOLOGY's QAPP Template/Checklist provided by the ECOLOGY, unless ECOLOGY Quality Assurance (QA) officer or the Program QA coordinator instructs otherwise.
- Follow ECOLOGY's Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, July 2004 (Ecology Publication No. 04-03-030).
- Submit the QAPP to ECOLOGY for review and approval before the start of the work.

b) RECIPIENT shall submit environmental data that was collected on a project to ECOLOGY using the Environmental Information Management system (EIM), unless the ECOLOGY Program instructs otherwise. The RECIPIENT must confirm with ECOLOGY that complete and correct data was successfully loaded into EIM, find instructions at:

<http://www.ecy.wa.gov/eim>.

c) RECIPIENT shall follow ECOLOGY's data standards when Geographic Information System (GIS) data is collected and processed. Guidelines for Creating and Accessing GIS Data are available at:

<https://ecology.wa.gov/Research-Data/Data-resources/Geographic-Information-Systems-GIS/Standards>. RECIPIENT, when requested by ECOLOGY, shall provide copies to ECOLOGY of all final GIS data layers, imagery, related tables, raw data collection files, map products, and all metadata and project documentation.

13. GOVERNING LAW

This Agreement will be governed by the laws of the State of Washington, and the venue of any action brought hereunder will be in the Superior Court of Thurston County.

14. INDEMNIFICATION

ECOLOGY will in no way be held responsible for payment of salaries, consultant's fees, and other costs related to the project described herein, except as provided in the Scope of Work.

To the extent that the Constitution and laws of the State of Washington permit, each party will indemnify and hold the other harmless from and against any liability for any or all injuries to persons or property arising from the negligent act or omission of that party or that party's agents or employees arising out of this Agreement.

15. INDEPENDENT STATUS

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

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16. KICKBACKS

RECIPIENT is prohibited from inducing by any means any person employed or otherwise involved in this Agreement to give up any part of the compensation to which he/she is otherwise entitled to or receive any fee, commission, or gift in return for award of a subcontract hereunder.

17. MINORITY AND WOMEN'S BUSINESS ENTERPRISES (MWBE)

RECIPIENT is encouraged to solicit and recruit, to the extent possible, certified minority-owned (MBE) and women-owned (WBE) businesses in purchases and contracts initiated under this Agreement.

Contract awards or rejections cannot be made based on MWBE participation; however, the RECIPIENT is encouraged to take the following actions, when possible, in any procurement under this Agreement:

- a) Include qualified minority and women's businesses on solicitation lists whenever they are potential sources of goods or services.
- b) Divide the total requirements, when economically feasible, into smaller tasks or quantities, to permit maximum participation by qualified minority and women's businesses.
- c) Establish delivery schedules, where work requirements permit, which will encourage participation of qualified minority and women's businesses.
- d) Use the services and assistance of the Washington State Office of Minority and Women's Business Enterprises (OMWBE) (866-208-1064) and the Office of Minority Business Enterprises of the U.S. Department of Commerce, as appropriate.

18. ORDER OF PRECEDENCE

In the event of inconsistency in this Agreement, unless otherwise provided herein, the inconsistency shall be resolved by giving precedence in the following order: (a) applicable federal and state statutes and regulations; (b) The Agreement; (c) Scope of Work; (d) Special Terms and Conditions; (e) Any provisions or terms incorporated herein by reference, including the "Administrative Requirements for Recipients of Ecology Grants and Loans"; (f) Ecology Funding Program Guidelines; and (g) General Terms and Conditions.

19. PRESENTATION AND PROMOTIONAL MATERIALS

ECOLOGY reserves the right to approve RECIPIENT's communication documents and materials related to the fulfillment of this Agreement:

- a) If requested, RECIPIENT shall provide a draft copy to ECOLOGY for review and approval ten (10) business days prior to production and distribution.
- b) RECIPIENT shall include time for ECOLOGY's review and approval process in their project timeline.
- c) If requested, RECIPIENT shall provide ECOLOGY two (2) final copies and an electronic copy of any tangible products developed.

Copies include any printed materials, and all tangible products developed such as brochures, manuals, pamphlets, videos, audio tapes, CDs, curriculum, posters, media announcements, or gadgets with a message, such as a refrigerator magnet, and any online communications, such as web pages, blogs, and twitter campaigns. If it is not practical to provide a copy, then the RECIPIENT shall provide a description (photographs, drawings, printouts, etc.) that best represents the item.

Any communications intended for public distribution that uses ECOLOGY's logo shall comply with ECOLOGY's graphic requirements and any additional requirements specified in this Agreement. Before the use of ECOLOGY's logo contact ECOLOGY for guidelines.

RECIPIENT shall acknowledge in the communications that funding was provided by ECOLOGY.

20. PROGRESS REPORTING

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- a) RECIPIENT must satisfactorily demonstrate the timely use of funds by submitting payment requests and progress reports to ECOLOGY. ECOLOGY reserves the right to amend or terminate this Agreement if the RECIPIENT does not document timely use of funds.
- b) RECIPIENT must submit a progress report with each payment request. Payment requests will not be processed without a progress report. ECOLOGY will define the elements and frequency of progress reports.
- c) RECIPIENT shall use ECOLOGY's provided progress report format.
- d) Quarterly progress reports will cover the periods from January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31. Reports shall be submitted within thirty (30) days after the end of the quarter being reported.
- e) RECIPIENT must submit within thirty (30) days of the expiration date of the project, unless an extension has been approved by ECOLOGY, all financial, performance, and other reports required by the Agreement and funding program guidelines. RECIPIENT shall use the ECOLOGY provided closeout report format.

21. PROPERTY RIGHTS

- a) Copyrights and Patents. When the RECIPIENT creates any copyrightable materials or invents any patentable property under this Agreement, the RECIPIENT may copyright or patent the same but ECOLOGY retains a royalty free, nonexclusive, and irrevocable license to reproduce, publish, recover, or otherwise use the material(s) or property, and to authorize others to use the same for federal, state, or local government purposes.
- b) Publications. When the RECIPIENT or persons employed by the RECIPIENT use or publish ECOLOGY information; present papers, lectures, or seminars involving information supplied by ECOLOGY; or use logos, reports, maps, or other data in printed reports, signs, brochures, pamphlets, etc., appropriate credit shall be given to ECOLOGY.
- c) Presentation and Promotional Materials. ECOLOGY shall have the right to use or reproduce any printed or graphic materials produced in fulfillment of this Agreement, in any manner ECOLOGY deems appropriate. ECOLOGY shall acknowledge the RECIPIENT as the sole copyright owner in every use or reproduction of the materials.
- d) Tangible Property Rights. ECOLOGY's current edition of "Administrative Requirements for Recipients of Ecology Grants and Loans," shall control the use and disposition of all real and personal property purchased wholly or in part with funds furnished by ECOLOGY in the absence of state and federal statutes, regulations, or policies to the contrary, or upon specific instructions with respect thereto in this Agreement.
- e) Personal Property Furnished by ECOLOGY. When ECOLOGY provides personal property directly to the RECIPIENT for use in performance of the project, it shall be returned to ECOLOGY prior to final payment by ECOLOGY. If said property is lost, stolen, or damaged while in the RECIPIENT's possession, then ECOLOGY shall be reimbursed in cash or by setoff by the RECIPIENT for the fair market value of such property.
- f) Acquisition Projects. The following provisions shall apply if the project covered by this Agreement includes funds for the acquisition of land or facilities:
 - 1. RECIPIENT shall establish that the cost is fair value and reasonable prior to disbursement of funds provided for in this Agreement.
 - 2. RECIPIENT shall provide satisfactory evidence of title or ability to acquire title for each parcel prior to disbursement of funds provided by this Agreement. Such evidence may include title insurance policies, Torrens certificates, or abstracts, and attorney's opinions establishing that the land is free from any impediment, lien, or claim which would impair the uses intended by this Agreement.
- g) Conversions. Regardless of the Agreement expiration date, the RECIPIENT shall not at any time convert any equipment, property, or facility acquired or developed under this Agreement to uses other than those for which assistance was originally approved without prior written approval of ECOLOGY. Such approval may be conditioned upon payment to ECOLOGY of that portion of the proceeds of the sale, lease, or other conversion or encumbrance which monies granted pursuant to this Agreement bear to the total acquisition, purchase, or construction costs of such property.

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22. RECORDS, AUDITS, AND INSPECTIONS

RECIPIENT shall maintain complete program and financial records relating to this Agreement, including any engineering documentation and field inspection reports of all construction work accomplished.

All records shall:

- a) Be kept in a manner which provides an audit trail for all expenditures.
 - b) Be kept in a common file to facilitate audits and inspections.
 - c) Clearly indicate total receipts and expenditures related to this Agreement.
 - d) Be open for audit or inspection by ECOLOGY, or by any duly authorized audit representative of the State of Washington, for a period of at least three (3) years after the final grant payment or loan repayment, or any dispute resolution hereunder.
- RECIPIENT shall provide clarification and make necessary adjustments if any audits or inspections identify discrepancies in the records.

ECOLOGY reserves the right to audit, or have a designated third party audit, applicable records to ensure that the state has been properly invoiced. Any remedies and penalties allowed by law to recover monies determined owed will be enforced. Repetitive instances of incorrect invoicing or inadequate records may be considered cause for termination.

All work performed under this Agreement and any property and equipment purchased shall be made available to ECOLOGY and to any authorized state, federal or local representative for inspection at any time during the course of this Agreement and for at least three (3) years following grant or loan termination or dispute resolution hereunder.

RECIPIENT shall provide right of access to ECOLOGY, or any other authorized representative, at all reasonable times, in order to monitor and evaluate performance, compliance, and any other conditions under this Agreement.

23. RECOVERY OF FUNDS

The right of the RECIPIENT to retain monies received as reimbursement payments is contingent upon satisfactory performance of this Agreement and completion of the work described in the Scope of Work.

All payments to the RECIPIENT are subject to approval and audit by ECOLOGY, and any unauthorized expenditure(s) or unallowable cost charged to this Agreement shall be refunded to ECOLOGY by the RECIPIENT.

RECIPIENT shall refund to ECOLOGY the full amount of any erroneous payment or overpayment under this Agreement.

RECIPIENT shall refund by check payable to ECOLOGY the amount of any such reduction of payments or repayments within thirty (30) days of a written notice. Interest will accrue at the rate of twelve percent (12%) per year from the time ECOLOGY demands repayment of funds.

Any property acquired under this Agreement, at the option of ECOLOGY, may become ECOLOGY's property and the RECIPIENT's liability to repay monies will be reduced by an amount reflecting the fair value of such property.

24. SEVERABILITY

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

25. STATE ENVIRONMENTAL POLICY ACT (SEPA)

RECIPIENT must demonstrate to ECOLOGY's satisfaction that compliance with the requirements of the State Environmental Policy Act (Chapter 43.21C RCW and Chapter 197-11 WAC) have been or will be met. Any reimbursements are subject to this provision.

26. SUSPENSION

When in the best interest of ECOLOGY, ECOLOGY may at any time, and without cause, suspend this Agreement or any portion thereof for a temporary period by written notice from ECOLOGY to the RECIPIENT. RECIPIENT shall resume performance on the next business day following the suspension period unless another day is specified by ECOLOGY.

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27. SUSTAINABLE PRACTICES

In order to sustain Washington's natural resources and ecosystems, the RECIPIENT is fully encouraged to implement sustainable practices and to purchase environmentally preferable products under this Agreement.

- a) Sustainable practices may include such activities as: use of clean energy, use of double-sided printing, hosting low impact meetings, and setting up recycling and composting programs.
- b) Purchasing may include such items as: sustainably produced products and services, EPEAT registered computers and imaging equipment, independently certified green cleaning products, remanufactured toner cartridges, products with reduced packaging, office products that are refillable, rechargeable, and recyclable, 100% post-consumer recycled paper, and toxic free products.

For more suggestions visit ECOLOGY's web page, Green Purchasing,

<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Sustainable-purchasing>.

28. TERMINATION

a) For Cause

ECOLOGY may terminate for cause this Agreement with a seven (7) calendar days prior written notification to the RECIPIENT, at the sole discretion of ECOLOGY, for failing to perform an Agreement requirement or for a material breach of any term or condition. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

Failure to Commence Work. ECOLOGY reserves the right to terminate this Agreement if RECIPIENT fails to commence work on the project funded within four (4) months after the effective date of this Agreement, or by any date mutually agreed upon in writing for commencement of work, or the time period defined within the Scope of Work.

Non-Performance. The obligation of ECOLOGY to the RECIPIENT is contingent upon satisfactory performance by the RECIPIENT of all of its obligations under this Agreement. In the event the RECIPIENT unjustifiably fails, in the opinion of ECOLOGY, to perform any obligation required of it by this Agreement, ECOLOGY may refuse to pay any further funds, terminate in whole or in part this Agreement, and exercise any other rights under this Agreement.

Despite the above, the RECIPIENT shall not be relieved of any liability to ECOLOGY for damages sustained by ECOLOGY and the State of Washington because of any breach of this Agreement by the RECIPIENT. ECOLOGY may withhold payments for the purpose of setoff until such time as the exact amount of damages due ECOLOGY from the RECIPIENT is determined.

b) For Convenience

ECOLOGY may terminate for convenience this Agreement, in whole or in part, for any reason when it is the best interest of ECOLOGY, with a thirty (30) calendar days prior written notification to the RECIPIENT, except as noted below. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

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

In the event of termination or suspension, ECOLOGY will reimburse eligible costs incurred by the RECIPIENT through the effective date of termination or suspension. Reimbursed costs must be agreed to by ECOLOGY and the RECIPIENT. In no

Agreement No: WQSWCAP-2123-EllePW-00169

Project Title: 2021-2023 Biennial Stormwater Capacity Grants

Recipient Name: City of Ellensburg

event shall ECOLOGY's reimbursement exceed ECOLOGY's total responsibility under the Agreement and any amendments.

If payments have been discontinued by ECOLOGY due to unavailable funds, the RECIPIENT shall not be obligated to repay monies which had been paid to the RECIPIENT prior to such termination.

RECIPIENT's obligation to continue or complete the work described in this Agreement shall be contingent upon availability of funds by the RECIPIENT's governing body.

c) By Mutual Agreement

ECOLOGY and the RECIPIENT may terminate this Agreement, in whole or in part, at any time, by mutual written agreement.

d) In Event of Termination

All finished or unfinished documents, data studies, surveys, drawings, maps, models, photographs, reports or other materials prepared by the RECIPIENT under this Agreement, at the option of ECOLOGY, will become property of ECOLOGY and the RECIPIENT shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

Nothing contained herein shall preclude ECOLOGY from demanding repayment of all funds paid to the RECIPIENT in accordance with Recovery of Funds, identified herein.

29. THIRD PARTY BENEFICIARY

RECIPIENT shall ensure that in all subcontracts entered into by the RECIPIENT pursuant to this Agreement, the state of Washington is named as an express third party beneficiary of such subcontracts with full rights as such.

30. WAIVER

Waiver of a default or breach of any provision of this Agreement is not a waiver of any subsequent default or breach, and will not be construed as a modification of the terms of this Agreement unless stated as such in writing by the authorized representative of ECOLOGY.

End of General Terms and Conditions



AGENDA REPORT

Meeting Date:	April 21, 2022
Agenda Subject:	Reecer Creek Floodplain Mapping and Levee Certification Support Services Agreement with Aspect Consulting
Submitted by:	Jon Morrow Public Works & Utilities
Recommended Action or Motion:	Informational only. Item has already gone before Council for authorization. No action required.
Background/Summary:	Aspect Consulting, LLC has been helping the City with design/permitting and certification work for the past several years for future construction of a new bridge and levee on Dolarway Road. In 2020 the City bonded to acquire the land and pay for construction of the project. The bridge, flood swales and levee were previously designed with Stormwater Utility funds. At that time, Kittitas County initiated a project to update flood maps to reflect new FEMA flood standards which necessitated FEMA certification of the new bridge and levee before construction. Aspect was hired to work with the County Flood District and their consultant, Watershed Sciences, to re-model the existing design and redesign the project to the new FEMA flood standards (elevation changes and tying to existing high ground). Prior to this work commencing, the County committed one million dollars towards the project to help with redesign and construction. In order to pay Aspect for this work, the County required an Interlocal Agreement (ILA) to reimburse the City, and for all future work (amendments to Aspect's contract) would require additional or amended ILA's. The work required to certify the bridge and levee certified through FEMA is called a Conditional Letter of Map Revision (CLOMR) - a letter that indicates a proposed project would be recognized by FEMA. Once a project that has received a CLOMR is constructed, FEMA reviews the "As-built" certification to ensure it meets proposed standards and can then issue a revision to the Flood Insurance Rate Map (FIRM). The original contract scope and fee with Aspect must be expanded to reflect the added elements of design and modeling for the CLOMR. The Bond requires that 85% of the

funds be spent by March 6, 2023. The CLOMR process with FEMA could likely take up to an additional year to complete the certification. Because of the Bond requirements, elements of the project will need to proceed to construction, concurrent with the CLOMR certification process. The agreement with Aspect allows the City achieve three things: 1) it provides services to continue with the CLOMR process; 2) provides three separate bid packages to phase construction appropriately; and 3) allows the City to meet the requirements of the Bond. Each bid package will have a revised engineer's estimate to reflect the costs for bridge, flood swales and levee with the current inputs.

Previous Council Action: Council authorized the Public Works and Utilities Director to sign Amendment #2 of the original contract with Aspect on January 4, 2021 for Conditional Letter of Map Revision (CLOMR) certification services.

Analysis: The Bond covenants require 85 percent be spent by March 6, 2023. Staff anticipate the CLOMR certification work will be completed in early 2023. The agreement attached would have the Bond pay for the continued certification work, while at the same time provide three new bid packages so the project can proceed. Reimbursement from Kittitas County will be addresses through a future Interlocal Agreement for the attached scope of work and a portion of the construction cost from the remaining balance of the County Flood District committed one million dollars in funding.

Financial Impact: The cost of this contract, including management reserve, is \$136,052. Funding for the project, including this contract, is from the 2020 Waterworks Bond and the County's committed funds. Budget for the balance of the Waterworks Bond will need to be carried-forward from 2021 and the balance of the County's commitment added for 2022.

Attachments:

[Aspect-Signed_Levee_Cert_Support_Contract_Package_22_0328.pdf](#)

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CITY OF ELLENSBURG
AND
ASPECT CONSULTING, LLC**

**RELATING TO: Reecer Creek Floodplain Mapping and Levee Certification Support
Services**

THIS TIME AND MATERIALS STANDARD BILLING RATE CONTRACT is made and entered into this _____ day of _____, 2022 ("Effective Date"), by and between THE CITY OF ELLENSBURG, a Washington municipal corporation (hereinafter called the "CITY") and (ASPECT CONSULTING), a LLC authorized to do business in the state of Washington (hereinafter called the "CONSULTANT"). This CONTRACT continues services initiated under a prior contract between CITY and CONSULTANT dated the 13th Day of February 2020.

1. RECITALS.

1.1. The CITY desires to obtain professional services for work related to the Reecer Creek Floodplain Mapping and Levee Certification Support Services project.

1.2. The CITY has solicited for such professional services as required by law, including RCW Chapter 39.80 if applicable.

1.3. CONSULTANT represents that it is available and able to provide qualified personnel and facilities necessary for the work and services contemplated herein, and can accomplish the work and services within the required time period and in accordance with CITY's specifications, WSDOT Standard Specifications (as applicable), and professional standards.

1.4. CONSULTANT agrees to perform the work and services specified herein in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the above representations and the terms, conditions, covenants, and agreements set forth below, the parties hereto agree as follows:

2. SCOPE OF WORK.

2.1. The scope of professional services to be performed and the results to be achieved by the CONSULTANT shall be as detailed in the attached Exhibit A and shall include all services and material necessary to accomplish the work ("Services").

2.2. The CITY may review the CONSULTANT'S work product, and if it is not

satisfactory, the CONSULTANT shall make such changes as may be required by the CITY. Such changes shall not constitute "Extra Work" as related in Section 13 of this Agreement.

2.3. The CONSULTANT agrees that all services performed under this Agreement shall be in accordance with the standards of the profession and in compliance with applicable federal, state and local laws.

2.4. The Scope of Work may be amended upon written approval of both parties.

3. TIME OF PERFORMANCE. The CONSULTANT may begin work upon the Effective Date of this Agreement by both parties, or the CITY's issuance of a Notice to Proceed, whichever is applicable, and the duration of the Agreement shall extend through December 31, 2023. The work shall be completed in accordance with the schedule set forth in the attached Exhibit B.

4. PAYMENT. The CITY shall pay the CONSULTANT as set forth in this section of the Agreement. Such payment shall be full compensation for work performed, services rendered, and all labor, materials, supplies, equipment and incidentals necessary to complete the work.

4.1. Payment shall be on the basis of the CONSULTANT'S standard billing rates multiplied by the actual hours worked as set forth in the attached Exhibit C.

4.2. The CONSULTANT shall submit invoices to the CITY on a monthly basis. Invoices shall detail the work, hours, employee name, and hourly rate; shall itemize with receipts and invoices the non-salary direct costs; shall indicate the specific task or activity in the Scope of Work to which the costs are related; and shall indicate the cumulative total for each task.

4.3. The CITY shall review the invoices and make payment for the portion of the project or tasks that have been completed less the amounts previously paid.

4.4. The CONSULTANT invoices are due and payable within 30 days of receipt. In the event of a disputed billing, only the disputed portion will be withheld from payment.

4.5. Final payment for the balance due to the CONSULTANT will be made after the completion of the work and acceptance by the CITY.

4.6. Payment for "Extra Work" performed under Section 13 of this Agreement shall be as agreed to by the parties in writing.

4.7. The CITY may desire to establish a Management Reserve Fund to provide

the Agreement Administrator with the flexibility to authorize additional funds to the Agreement for allowable unforeseen costs, or reimbursing the CONSULTANT for allowable unforeseen costs, or reimbursing the CONSULTANT for additional work beyond that already defined in this Agreement. Such authorization(s) shall be in writing and shall not exceed the lesser of \$30,000 or 25% of the Maximum Compensation as shown in Section 5 of this Agreement. The amount included for the Management Reserve Fund is \$30,000.00. This fund may not be replenished. Any changes requiring additional costs in excess of the Management Reserve Fund shall be made in accordance with Section 13 – Extra Work.

5. MAXIMUM COMPENSATION.

5.1. The CONSULTANT's total compensation and reimbursement under this Agreement, including labor, direct non-salary reimbursable costs and outside services, shall not exceed the maximum sum of \$136,052. This amount is the maximum amount to be paid under this Agreement and shall not be exceeded without prior written authorization from CITY in the form of a negotiated and executed amendment of this Agreement.

5.2. The budget for each task is as set forth in the attached Exhibit D. Budgets for task(s) may be modified upon mutual agreement between the two parties, but in any event, the total payment to CONSULTANT shall not exceed the maximum amount per Section 5.1 above.

6. RELATIONSHIP OF PARTIES.

6.1. The relationship created by this Agreement is that of owner-independent contractor. Neither the CONSULTANT nor CONSULTANT's employees are employees of the CITY and are not entitled to the benefits provided by the CITY to its employees. The CONSULTANT, as an independent contractor, has the authority to control and direct the performance of the details of the services to be provided. No employee, agent, representative or subconsultant of CONSULTANT shall be or shall be deemed to be the employee, agent representative or subconsultant of the CITY. The CONSULTANT shall assume full responsibility for all wages, along with any Federal, State, and local taxes or contributions imposed or required, including, but not limited to, unemployment insurance, Social Security, and income tax, payable as a result of work performed under this Agreement.

6.2. Employees of the CONSULTANT, while engaged in the performance of any work or services under this Agreement, shall be considered employees of the CONSULTANT only and not of the CITY, and claims that may arise under the Workman's Compensation Act on behalf of said employees while so engaged, and any and all claims made by a third party as a consequence of any negligent act or omission on the part of the CONSULTANT'S employees while so engaged, on any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility

of the CONSULTANT. On or before the Effective Date, CONSULTANT shall file, maintain and/or open all necessary records with the Internal Revenue Service and the State of Washington, and as may be required by RCW 51.08.195, to establish CONSULTANT's status as an independent contractor.

7. OWNERSHIP OF DOCUMENTS.

7.1. The work product and all documents produced under this Agreement shall be furnished by the CONSULTANT to the CITY, and upon completion of the work shall become the property of the CITY, for use without restriction and without representation as to suitability for reuse by any other party unless specifically verified or adapted by the CONSULTANT, except that the CONSULTANT may retain one copy of the work product and documents for its records. The CONSULTANT will be responsible for the accuracy of the work, even though the work has been accepted by the CITY.

7.2. In the event that the CONSULTANT shall default on this Agreement or in the event that this Agreement shall be terminated prior to its completion as herein provided, all work product of the CONSULTANT, along with a summary of work as of the date of default or termination, shall become the property of the CITY. Upon request, the CONSULTANT shall tender the work product and summary to the CITY. Tender of said work product shall be a prerequisite to final payment under this Agreement. The summary of work done shall be prepared at no additional cost to the CITY.

7.3. CONSULTANT will not be held liable for reuse of documents produced under this Agreement or modifications thereof for any purpose other than those authorized under this Agreement without the written authorization of CONSULTANT.

8. RECORDS. As a public agency, the CITY is subject to the Public Records Act, Chapter 42.56 RCW (the "Act"). To the extent that CONSULTANT keeps records that are deemed public records and are needed for the CITY to respond to a request under the Act, as determined by the CITY, CONSULTANT agrees to make them promptly available to the CITY. Pursuant to Chapter 40.14 RCW, CONSULTANT shall retain records associated with this Agreement in accordance with the applicable retention schedule. CONSULTANT also agrees to indemnify and hold the CITY harmless from any claims or losses caused by CONSULTANT'S failure to make records available to the CITY as provided in this Agreement.

9. NONDISCRIMINATION. The CONSULTANT shall conduct its business in a manner, which assures fair, equal and non-discriminatory treatment of all persons, in particular:

9.1. The CONSULTANT shall maintain open hiring and employment practices and will welcome applications for employment in all positions, from qualified individuals who are members of minorities protected by federal equal opportunity/affirmative action requirements; and,

9.2. The CONSULTANT shall comply with all requirements of applicable federal, state or local laws or regulations issued pursuant thereto, relating to the establishment of non-discriminatory requirements in hiring and employment practices and assuring the service of all persons without discrimination as to any person's race, creed, color, religion, national origin, status as a military veteran, marital status, gender, sexual orientation, disability or other legally protected classification.

10. SUBCONTRACTING.

10.1. The CONSULTANT shall not sublet or assign any of the work covered by this Agreement without the written consent of the CITY.

10.2. In all solicitation either by competitive bidding or negotiation made by the CONSULTANT for work to be performed pursuant to a subcontractor, including procurement of materials and equipment, each potential subconsultant or supplier shall be notified by the CONSULTANT of CONSULTANT's obligations under this Agreement, including the nondiscrimination requirements.

10.3. In performing this Agreement, the CONSULTANT shall not subcontract with or employ any CITY employee without the CITY's written consent.

11. SUPERVISION, INSPECTION AND PERFORMANCE.

11.1. Even though CONSULTANT is an independent contractor with the authority to control and direct the performance and details of the Services, the Services must meet the approval of CITY and shall be subject to CITY's general right of inspection and supervision to secure the satisfactory completion of this Agreement.

11.2. CONSULTANT represents that it has or will obtain all personnel necessary to perform the Services and that such personnel shall be qualified, experienced, and licensed as may be necessary or required by applicable laws and regulations to perform the Services. All Services shall be performed by CONSULTANT, its employees, or by subconsultants whose selection has been authorized by CITY; provided that CITY's authorization shall not relieve CONSULTANT or its subconsultants from any duties or obligations under this Agreement, or at law, to perform the Services in a satisfactory and competent manner. CONSULTANT shall ensure that all contractual duties, requirements and obligations that CONSULTANT owes to CITY shall also be owed to CITY by CONSULTANT's subconsultants retained to perform the Services.

11.3. CONSULTANT shall be responsible for the professional quality, technical adequacy, accuracy, timely completion, and coordination of the Services and all plans, designs, drawings, specifications, reports, and other work performed pursuant to this Agreement. CONSULTANT shall perform the Services in accordance with the standard of care of its profession in the same or similar localities at the time services are

performed. CONSULTANT shall be responsible for the professional standards, performance, and actions of all persons and firms performing the Services under this Agreement. CONSULTANT shall, without additional compensation, correct any specific breach of a contractual obligation in the Services and revise any errors or omissions in any plans, designs, drawings, specifications, reports, and other products prepared under this Agreement.

12. CHANGES IN WORK. Other than changes directed by the CITY as set forth in Section 1 above, either party may request changes in the scope of work. Such changes shall not become part of this Agreement unless and until mutually agreed upon and incorporated herein by written amendments to this Agreement executed by both parties.

13. EXTRA WORK. The CITY may desire to have the CONSULTANT perform work or render services in connection with this project, in addition to the Scope of Work set forth in Exhibit A and minor revisions to satisfactorily completed work. Such work shall be considered as "Extra Work" and shall be addressed in a written supplement to this Agreement. The CITY shall not be responsible for paying for such extra work unless and until the written supplement is executed by both parties.

14. TERMINATION.

14.1. The CITY may terminate this Agreement in whole or in part whenever the CITY determines, in its sole discretion that such termination is in the best interests of the CITY, upon not less than ten (10) days' written notice to the CONSULTANT. Written notice will be by certified mail sent to the CONSULTANT'S designated representative at the address provided by the CONSULTANT. If this Agreement is terminated in its entirety by the CITY for its convenience, the CITY shall pay the CONSULTANT for satisfactory services performed through the date of termination, but no amount shall be allowed for anticipated profit on unperformed Services or other work.

14.2. The CITY may terminate this Agreement, in whole or in part and at any time, in writing if CONSULTANT substantially fails to fulfill any or all of its material obligations through no fault of CITY. If CITY terminates all or part of this Agreement for default, CITY shall determine the amount of Services satisfactorily performed to the date of termination and the amount owing to CONSULTANT using the criteria set forth below; provided that (a) no amount shall be allowed for anticipated profit on unperformed Services or other work, and (b) any payment due to CONSULTANT at the time of termination may be adjusted to the extent of any additional costs CITY incurs or will incur because of CONSULTANT's default. In such event, CITY shall consider the actual costs incurred by CONSULTANT in performing the Services to the date of termination, the amount of Services originally required which was satisfactorily completed to the date of termination, whether the Services or deliverables were in a form or of a type which is usable and suitable to CITY at the date of termination, the cost to CITY of either completing the Services itself or employing another firm to complete the Services in addition to the inconvenience and time which may be required

to do so, and other factors which affect the value to CITY of the Services performed to the date of termination. Under no circumstances shall payments made under this provision exceed the Schedule of Charges. This provision shall not preclude CITY from filing claims and/or commencing litigation to secure compensation for damages incurred beyond that covered by withheld payments.

14.3. In the event this Agreement is terminated prior to the completion of the work, a final payment shall be made to the CONSULTANT, which, when added to any payments previously made, shall compensate the CONSULTANT for the portion of work completed. Whenever the Agreement is terminated in accordance with this Section 14, the CONSULTANT shall be entitled to payment for actual work performed up to the termination date. Upon such termination, whether for convenience or default, an equitable adjustment in the contract price will be made by the CITY for partially completed items of work, but such adjustment shall not include provision for loss of anticipated profit on deleted or uncompleted work. Termination under this Section 14 shall not constitute a breach of the Agreement by the CITY.

15. INDEMNIFICATION/HOLD HARMLESS.

15.1. CONSULTANT shall defend, indemnify and hold the CITY, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the negligent acts, errors or omissions of the CONSULTANT in performance of this Agreement.

However, should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the CONSULTANT and the CITY, its officers, officials, employees, and volunteers, the CONSULTANT's liability, including the duty and cost to defend, hereunder shall be only to the extent of the CONSULTANT's negligence.

15.2. It is further specifically and expressly understood that the indemnification provided herein constitutes the CONSULTANT's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties.

15.3. The provisions of this section shall survive the expiration or termination of this Agreement. Further, the indemnity obligations shall extend to claims that are not reduced to a suit and to any claims that may be compromised prior to the culmination of any litigation or the institution of any litigation. Inspection, acceptance or payment by CITY of or for any Services performed by CONSULTANT shall not be grounds for avoidance of any Indemnity Obligations.

16. INSURANCE.

16.1. The CONSULTANT shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the CONSULTANT, its agents, representatives, employees or subcontractors.

16.2. CONSULTANT'S maintenance of insurance as required by the Agreement shall not be construed to limit the liability of the CONSULTANT to the coverage provided by such insurance, or otherwise limit the CITY'S recourse to any remedy available at law or in equity.

16.3. Minimum Scope of Insurance. CONSULTANT shall obtain insurance of the types described below:

16.3.1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contract liability coverage; and,

16.3.2. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors, and personal injury and advertising injury. The CITY shall be named or added as an additional insured under the Consultant's Commercial General Liability insurance policy using ISO endorsement form CG 20 26, or coverage at least as broad; and,

16.3.3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington; and

16.3.4. Professional Liability insurance appropriate to the CONSULTANT's profession.

16.4. Minimum Amounts of Insurance. CONSULTANT shall maintain the following insurance limits:

16.4.1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.

16.4.2. Commercial General Liability insurance shall be written with limits no less than \$2,000,000 each occurrence, \$2,000,000 general aggregate.

16.4.3. Professional Liability insurance shall be written with limits no less than \$2,000,000 per claim and \$2,000,000 policy aggregate limit.

16.5. Other Insurance Provisions. The insurance policies are to contain, or be

endorsed to contain, the following provisions for Automobile Liability, Professional Liability and Commercial General Liability insurance:

16.5.1. The CONSULTANT's insurance coverage shall be primary insurance with respect to the CITY. Any insurance, self-insurance, or insurance pool coverage maintained by the CITY shall be excess of the CONSULTANT's insurance and shall not contribute with it.

16.5.2. Any payment of deductible or self-insured retention shall be the sole responsibility of the CONSULTANT.

16.5.3. The CONSULTANT'S insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respects to the limits of the insurer's liability.

16.6. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

16.7. Verification of Coverage. CONSULTANT shall furnish the CITY with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the CONSULTANT before commencement of the work.

16.8. Cancellation. CONSULTANT will provide notice to the CITY of any cancellation of coverage by no later than three (3) days after CONSULTANT is notified by its insurer that coverage will or has been canceled, whichever occurs earliest.

16.9. CITY Full Availability of CONSULTANT Limits. If the CONSULTANT maintains higher insurance limits than the minimum amounts shown above, the CITY shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the CONSULTANT, irrespective of whether such limits maintained by the CONSULTANT are greater than those required by this Agreement or whether any certificate of insurance furnished to the CITY evidences limits of liability lower than those maintained by the CONSULTANT.

17. APPLICABLE LAW/VENUE. This Agreement shall be construed and interpreted in accordance with the laws of the State of Washington, and in the event of dispute the venue of any litigation brought hereunder shall be Kittitas County.

18. NOTICE. All communications regarding this Agreement shall be sent to the parties at the addresses listed below, or at such other address as given pursuant to this Section, and shall be effective on the next business day if sent by registered or certified mail or deposited with an overnight delivery service.

City of Ellensburg

Department of Stormwater
Attention: Jon Morrow
501 N. Anderson
Ellensburg, WA 98926

ASPECT Consulting LLC
Attention: John Knutson
1106 N 35th Avenue
Yakima, WA 98902

19. ENTIRE AGREEMENT. The written terms and provisions of this Agreement, together with all referenced Exhibits, supersede all prior verbal statements of any officer or other representative of CITY, and such statements shall not be effective or be construed as entering into or forming a part of, or altering in any manner whatsoever, this Agreement. The entire agreement between the parties with respect to the subject matter hereunder is contained in this Agreement and the referenced Exhibits.

20. PRIORITY OF DOCUMENTS. In the event that the language and provisions of this Agreement are contrary to or conflict with any language or provisions set forth in any exhibit to this Agreement, the language and provisions of this Agreement shall control, and the contrary or conflicting language or provisions of the exhibit(s) shall be disregarded and shall be considered void.

21. MODIFICATION. No waiver, alteration, or modification of any of the provisions of this Agreement shall be binding unless in writing and signed by a duly authorized representative of CITY and CONSULTANT.

22. ASSIGNMENT. Any assignment of this Agreement by CONSULTANT without the prior written consent of CITY shall be void.

23. WAIVER. A waiver of any breach by either party shall not constitute a waiver of any subsequent breach.

24. THIRD-PARTY BENEFICIARIES. There are no third-party beneficiaries to this Agreement.

25. EXHIBITS AND SIGNATURES. This Agreement, including its exhibits, constitutes the entire Agreement, supersedes all prior written or oral understandings, and may only be changed by a written amendment executed by both parties. The following exhibits are hereby made a part of this Agreement:

Exhibit A – Scope of Work

Exhibit B – Schedule for the Work

Exhibit C – Consultant Labor Costs and Non-salary Reimbursable Costs

Exhibit D – Budget for Each Task

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first written above.

CONSULTANT:

By: 

Printed Name: **John Knutson, PE**

Title: **Principal Water Resources Engineer**

Tax ID#: **91-2149055**

THE CITY OF ELLENSBURG:

By: _____

Printed
Name: _____

Title: _____

ATTEST: _____
Clerk

Approved as to Form:

City Attorney

Reecer Creek Floodplain Mapping and Levee Certification Support Services – Phase 2

Scope of Work

Aspect Consulting LLC

Prepared March 16th, 2022

Background

Aspect Consulting, LLC (Aspect) has developed this Scope of Work to provide continuing consulting services to the City of Ellensburg for the **Reecer Creek Floodplain Mapping and Levee Certification Support Services Project** (Project). The goal of the Project is ultimately to design, construct, and FEMA certify the overall Reecer Creek Flood Protection System between Interstate 90 and University Way.

The Project has been progressing in a phased manner. To date, Aspect has provided the following services:

- ✓ *Coordinated with the City, Kittitas County FCZD, the FCZD's consultant (Watershed Science and Engineering), and FEMA regarding levee construction and certification standards, modeling methods, planned improvements; and potential changes needed to meet FEMA's standards and updated flood modeling approaches and results.*
- ✓ *Completed a Final Design Package and Bidding Documents for Lower Levee to I-90 Bridge Connection. Aspect subsequently updated the design to account for backwater flooding from the Yakima River, which is higher than the Reecer Creek flood elevation.*
- ✓ *Prepared a Levee Technical Report to support the levee certification and FEMA Conditional Letter of Map Revision (CLOMR) process. The Technical Report documents that the existing and proposed levee system complies with the federal CFRs governing levee certification. Aspect also performed unplanned work related to missing compaction data for the existing levee system and development of a Levee System Operation and Maintenance Plan (Levee O&M Plan).*

Along with the work conducted under the prior phase of this Project, Aspect previously completed a Final Design Package and Bidding Documents for the proposed Upper Levee (north of Dolarway Road) and associated floodplain swale network and Dolarway Road relief culvert.

Since completion of the above work, further discussions have occurred between the City, County, stakeholders, adjacent landowners, FEMA, and other interested parties. The outcome of discussions include:

- ✓ *Some stakeholders prefer that the upper end of the proposed levee north of Dolarway Road terminate on dry ground just below where Whiskey Creek passes from the eastside to the westside of West University Way.*
- ✓ *Discussions with FEMA indicate that some armoring on the I-90 embankment just southwest of the Reecer Creek Bridge outlet might help secure FEMA's agreement that*

the Reecer Creek Flood Protection system can be terminated at the downstream end of the I-90/Reecer Creek Bridge while still allowing the levee system to be certified. The armor would reinforce the argument that the I-90 freeway grade will not “unravel” and allow floodwater to cross from the westside to the eastside of I-90 (back into the area protected by the Lower Reecer Creek Levee).

- ✓ *The City has committed to constructing some new components of the Reecer Creek Flood Protection System on an accelerated timeframe, potentially while the CLOMR process is still underway. These components will need to be separated out, finalized and prepared for bidding (Dolarway Road relief culvert and roadway changes, floodplain swale segments, and portions of the new levee).*

The scope of work provided below addresses these three items plus additional ongoing coordination and support by Aspect as interagency discussions, floodplain mapping, and the CLOMR process continue. It is assumed that coordination and support services will continue through 2023.

Scope of Work

Scope of Work provided below addresses:

- ✓ *Task 1 – Revise the final design and bidding package for the upper levee and swale network to reflect the levee terminating on high ground just south of where Whiskey Creek crosses under West University Way. This work will include updating and segmenting the construction plans, specifications, cost estimate, and bid documents to allow the City’ to bid and award the advance construction of some new components.*
- ✓ *Task 2 – Update the Reecer Creek Levee Technical Report to reflect the design changes made in Task 1.*
- ✓ *Task 3 – Provide additional coordination with the City, County, FEMA, and others during the design update and levee certification and CLOMR processes, covering through 2023.*
- ✓ *Task 4 – Management Reserve Fund*
- ✓ *Optional Task 5 – If required by FEMA, prepare a final design and bidding package to place a blanket of armor stone on the I-90 embankment just south of the Reecer Creek bridge outlet. This work will be incorporated into the prior lower levee to I-90 connection design/bidding package. It is assumed that approximately 2 ft of existing embankment material will be removed and replaced with armor stone (no net fill) for approximately 50 ft south of the Reecer Creek bridge outlet. Existing utilities will be investigated but it is assumed that no survey or geotechnical work will be required. Doing this work would also result in the need to update the Reecer Creek Levee Technical Report*

Aspect’s project management time is embedded in each task.

Task 1: Revise Upper Levee and Swale Design Package

Aspect will develop a Revised Final Design Package for the planned upper levee. Aspect’s Task 1 services include:

- 1.1. Prepare revised design and construction drawings, plans, and profiles reflecting the upper levee terminating on dry ground on City property just south of where Whiskey

Creek crosses under West University Way. This will also involve revising the alignment of the easternmost floodplain swale along with associated TESC and planting plans.

- 1.2. Divide the construction plans, TESC plans, and details into two to three discrete phases so the City can bid some advance work (Dolarway Road relief culvert and roadway changes, floodplain swale segments, and portions of the new levee).
- 1.3. Prepare specifications tailored to each discrete phase of work.
- 1.4. Prepare revised final materials quantities and construction cost estimates separated into each construction phase.
- 1.5. Prepare the revised final bid schedules for each phase.
- 1.6. Complete internal QA/QC review on the revised design and bidding packages, make any associated changes, and provide the revised final packages to the City.

Task 1 Deliverables

- *Revised Final Upper Levee Design Packages (PDF format). Each package will contain:*
 - *Revised final topographical basemap, design, TESC on 11" x 17" plan sheets.*
 - *Revised final Revised Final standard details and specifications.*
 - *Revised final special provisions and specifications.*
 - *Revised final engineers estimate of probable project cost.*
 - *Revised final bid schedule.*

Task 1 Assumptions

- *No new survey or geotechnical work is needed.*
- *No utility conflicts.*
- *No design review cycle by the City.*
- *No permitting or agency coordination support.*

Task 2: Update the Levee Technical Report

Aspect will update the Levee Technical Report to reflect design changes from Task 1. Aspect's Task 2 services include:

- 2.1. Review and update the prior Levee Technical Report as needed to reflect design changes from Task 1. Examples of necessary updates include:
 - Updating text and replacing exhibits depicting the upper levee and swale alignment.
 - Updating freeboard profiles based on the new upper levee alignment.
 - Replacing design drawings as needed.
- 2.2. Prepare the revised Levee Technical Report to support the CLOMR and certification process.

Task 2 Deliverables

- *Revised final Levee Technical Report (PDF format).*

Task 2 Assumptions

- *No review cycle on the Revised Levee Technical Report.*

Task 3: Coordinate with City, County, and FEMA During Design Updates and Levee Certification and CLOMR Processes

Aspect will continue to coordinate with the City, County, FEMA, and other agencies and stakeholders as needed during the project, covering 2022 and 2023. Potential Task 3 services include:

- 3.1 Prepare for and hold project status meetings with the City.
- 3.2 Prepare for and hold project team meetings with the City, County, and WSE.
- 3.3 Prepare for and hold agency coordination or information meetings with FEMA, Ecology, and USACOE.
- 3.4 Prepare for and hold miscellaneous stakeholder or agency meetings that may arise (WDFW, Yakama Nation, MCFEG, property owners, etc.).
- 3.5 Acquire or develop levee related documents and materials as requested by FEMA.
- 3.6 Coordinate with WSE regarding flood modeling updates and products.

Task 3 Deliverables

- *Miscellaneous meeting materials (PDF format).*

Task 3 Assumptions

- *Task 3 services continue to approximately December 30, 2023.*
- *Meetings are by video conference.*
- *Coordination effort is uncertain; therefore Task 3 services will be provided on flexible time and materials basis not to exceed the Task 3 budget without authorization from the City.*

Task 4: Management Reserve Fund

Due to the uncertain nature of some of the scope of work, a Management Reserve Fund and Task 4 is established to cover unforeseen costs and/or reimburse Aspect for additional work beyond that already defined in Tasks 1 through 3 above. Aspect will not utilize Task 4 funds without written authorization from the City. Potential Task 4 services include:

- 4.1 Additional meetings and coordination efforts with the City, County, WSE, FEMA, Ecology, and USACOE.
- 4.2 Additional stakeholder or agency meetings that may arise (WDFW, Yakama Nation, MCFEG, property owners, etc.).
- 4.3 Additional technical analyses and/or reports related to levee certification.

- 4.4 Additional design/redesign work or review cycles arising out of levee certification analyses or permitting processes.
- 4.5 Other related services as requested by the City.

Task 4 Deliverables

- *To be defined on a case by case basis.*

Task 4 Assumptions

- *When authorized in writing by the City, Task 4 services will be provided on a time and materials basis.*

Optional Task 5: Update the Lower Levee to I-90 Bridge Connection Design to Include Armoring on the Southwest I-90 Embankment

This work will only proceed if determined necessary through additional discussion with FEMA. If it proceeds, Aspect will develop a Revised Final Design Package for the lower levee to I-90 bridge connection that includes an approximately 50 ft long armor blanket placed on the I-90 freeway embankment south of the Reecer Creek bridge outlet. Aspect's Task 5 services would include:

- 5.1 Complete a site visit to review conditions in the vicinity of the Reecer creek bridge outlet.
- 5.2 Gather and review existing survey, geotechnical, structural, flood, utility, easement, and as-built data for the outlet side of the I-90 bridge.
- 5.3 Assess the adequacy of existing data, extend the project topographic basemap to cover the proposed armoring area.
- 5.4 Complete calculations and prepare a plan sheet and details for the proposed armoring.
- 5.5 Update project specifications and special provisions as needed.
- 5.6 Prepare armoring materials quantities and updated construction cost estimate.
- 5.7 Prepare an updated bid schedule.
- 5.8 Complete internal QA/QC review and on the revised lower levee to I-90 bridge connection design and bidding package, make any associated changes, and provide the revised final package to the City

Optional Task 5 Deliverables

- *Revised Final Lower Levee to I-90 Bridge Connection Design Package (PDF format):*
 - *Revised final topographical basemap, design, TESC on 11" x 17" plan sheets.*
 - *Revised final standard details and specifications.*
 - *Revised final special provisions and specifications.*
 - *Revised final engineers estimate of probable project cost.*
 - *Revised final bid schedule.*

Optional Task 5 Assumptions

Exhibit A – Scope of Work

- *No survey or geotechnical work is needed.*
- *No major utility conflicts.*
- *No design review cycle by the City.*
- *No permitting support.*

Schedule for Phase 2 Services

Aspect will commence work upon receiving notice to proceed from the City. Completion of the work is dependent upon agencies and entities outside Aspect's control therefore preparing a firm completion schedule is not possible. However, Aspect will strive to complete Phase 2 by approximately December 2023. Assuming notice to proceed in early April, completion of select advance design packages under Task 1 will be completed by approximately June 1, 2022.

Exhibit C – Consultant Rate Schedule



SCHEDULE OF CHARGES

Effective January 2022

Unless otherwise stated in the proposal or services agreement, current rates are as follows:

PERSONNEL CHARGES: ENGINEERS, SCIENTISTS, AND ANALYSTS		Hourly Rate
<i>Principals and Associates</i>		
Principal Scientist/Engineer/Analyst 2		\$290
Principal Scientist/Engineer/Analyst 1		\$275
Sr. Associate Scientist/Engineer/Analyst		\$254
Associate Scientist/Engineer/Analyst		\$238
<i>Technical Professionals</i>		
Senior Scientist/Engineer/Analyst 3		\$238
Senior Scientist/Engineer/Analyst 2		\$224
Senior Scientist/Engineer/Analyst 1		\$209
Project Scientist/Engineer/Analyst 3		\$192
Project Scientist/Engineer/Analyst 2		\$178
Project Scientist/Engineer/Analyst 1		\$166
Staff Scientist/Engineer/Analyst 3		\$153
Staff Scientist/Engineer/Analyst 2		\$138
Staff Scientist/Engineer/Analyst 1		\$128
PERSONNEL CHARGES: TECHNICAL AND PROJECT SUPPORT STAFF		Hourly Rate
<i>Field/Construction Staff</i>		
Field/Construction Supervisor		\$140
Field Technician 2		\$114
Field Technician 1		\$105
<i>Design, CAD, and Graphics Staff</i>		
Engineering Designer		\$166
Sr. CAD Technician/Specialist		\$148
CAD Technician		\$130
<i>Technical Editing and Project Operations</i>		
Sr. Technical Editor		\$132
Technical Editor / Project Coordinator 3		\$120
Project Coordinator 2		\$112
Project Coordinator 1		\$105
PERSONNEL CHARGES: TECHNOLOGY AND SOFTWARE DEVELOPMENT		Hourly Rate
Sr. Technology Project Manager		\$246
Technology Project Manager		\$228
Senior Software/Database Architect/Developer		\$234
Software/Database Architect/Developer		\$207
OTHER DISBURSEMENT CHARGES		
Legal Testimony (4-hour minimum)		\$350/hr
Mileage		Federal Gov Rate Plus 15%
Subcontractors and Miscellaneous Expenses		Cost Plus 15%
Other equipment, rentals, and expenses will be provided on a per job basis.		

Client acknowledges that Aspect will adjust the Schedule of Charges annually, and that the Agreement will remain valid for any and all annually adjusted Schedule of Charges.

Exhibit D – Task Budgets

Task Title	Labor	ODC	Subs	Total
Task 1. Revise Upper Levee & Swale Design Package	\$24,354			\$24,354
Task 2. Update the Levee Technical Report	\$7,522			\$7,522
Task 3. Coord w/City, Co., FEMA, Others (thru 2023)	\$59,806	\$200		\$60,006
Task 4. Management Reserve Fund	\$30,000			\$30,000
Opt. Task 5. Update Lower Levee I-90 Bridge Connect.	\$15,054	\$100		\$15,154
Total Project Budget	\$135,752	\$300		\$136,052



AGENDA REPORT

Meeting Date:	April 21, 2022
Agenda Subject:	2021 monthly pumping report and 2022 aquifer level report.
Submitted by:	Mike Helgeson Public Works & Utilities
Recommended Action or Motion:	N/A
Background/Summary:	The City of Ellensburg Water Division takes a physical measurement of the water level in each well every March. These measurements are taken after at least 24 hours of rest at the well (no pumping). These measurements will be presented to the UAC. In a previous meeting, the UAC requested a report detailing the amount of water pumped by the City of Ellensburg during each month of 2021. A bar graph will be presented to the UAC to show the possible influence of irrigation. Staff will add this report to "Informational Updates" with each month's report.
Previous Council Action:	N/A
Analysis:	N/A
Financial Impact:	N/A



AGENDA REPORT

Meeting Date: April 21, 2022

Agenda Subject: Public Works & Utilities Issues and Updates

Submitted by: Kim Caulkins Public Works & Utilities

Recommended Action or Motion: N/A

Background/Summary: N/A

Previous Council Action: N/A

Analysis: N/A

Financial Impact: N/A

Attachments:

[UAC April 2022 Public Works & Utilities Issues Update.docx](#)

Ellensburg Utility Advisory Committee
Public Works & Utilities Issues and Updates
April 21, 2022

Consent Items

Agenda Reports for items approved by the City Council since our last meeting are attached.

All Utilities

- All utilities on the Bull Road project have been installed completing the necessary loops of the utilities. The contractor has resumed work and is now substantially complete on this project, with only punch list items remaining.
- COSA Update - Staff is responding to a preliminary data request to allow FCS Group to begin updating the information required for the Comprehensive Multi-Utility Rate Study Update.
- City Council issued a proclamation announcing April as [National Safe Digging Month](#). The proclamation serves as a reminder for everyone to call 811 before digging into the ground to prevent injury, property damage, and inconvenient outages. By calling 811 at least two business days before starting any digging projects, homeowners can obtain an underground utility locate to identify which utility lines may lie below their property. Failure to [Call Before You Dig](#) may result in damage to underground utility lines or pipes – and a costly repair bill.

Sewer

- Collections staff are working on their annual jetting and flushing.
- Staff noticed a noise coming from the motor on one of the aerators that was installed last year. The unit was removed and delivered to a motor shop in Moses Lake that is authorized to determine if the necessary repairs are covered by the warranty. Staff is waiting for the results of the inspection before determining a course of action. The WWTF division has back-up aerators on hand, and one has been placed into the basin in the interim.
- Staff held a kickoff meeting with Kennedy Jenks as they are starting the new sewer system plan.
- When conditions allow, staff continues to work on widening the access road that surrounds the lagoon to make it safer and easier to navigate.
- The new server for the telemetry system has been installed at the WWTF. Options are being explored with Connetix Engineering concerning the process for callout alarms within the rump sewage pump station.
- The 2022 Cured In Place Sewer Line Rehabilitation Project (Bid Call #2022-05) was awarded to Insituform Technologies. Contracts have been sent out for signature, and work is scheduled to begin in May.
- The Bureau of Reclamation's Schaafe Project is nearing completion. The land exchange is currently anticipated in 2022.
- The Anderson Road Sewer Extension project design is progressing, and staff is hopeful to have necessary environmental permits and approvals within the next couple of months. Once permits are received, the plans will be finalized and the project will go out to bid.

Water

- Water pumped for March 2022 was 74,653,772 gallons, compared to March 2021 which was 73,030,414 gallons.
- The motor for Rodeo Well has been repaired and installed. Rodeo well is back on-line and is operating as expected.
- Phase 1 of the annual Leak Survey has been completed. The northern half of the water system has been surveyed by Hydrevolution, LLC and crews are repairing leaks that were discovered. The southern half of the water system is tentatively scheduled to be surveyed in mid-March.
- Pump 1 of the Vuecrest Booster Station was replaced in March. Shortly before that installation, staff noticed a vibration and noise coming from Pump 2. Crews removed Pump 2 and delivered it to Pumpteck for analysis. The motor will also be removed and inspected to see if the bearings can be replaced in house or if delivery to a motor shop will be necessary.
- Staff have completed the seasonal water meter connection list.
- Crews repaired two large main breaks that were discovered. A 10" cast iron ring break surfaced on Dean Nicholson Blvd, and a crack in the bell of a 6" cast iron main was discovered on 2nd Ave during leak survey. Both repairs were made with minor interruption to customers.
- Work has begun on the Illinois Well and Helena Ave. watermain project. The contractor is currently installing the 16" ductile iron water main from Cora St. to Water Street, which is necessary for activation of the Illinois Well to allow water to be pumped from the Illinois Well to the upper pressure zone. The contractor has also began ordering material for the well house construction that will begin this summer.
- Staff has received comments from DOH on our draft water system plan update. Staff is now working with our consultant and DOH to address all comments received.

Storm

- Staff completed the annual stormwater management plan and is now working on the annual report due to Ecology March 31.
- Gateway I designs are coming along, and staff anticipates project bid in May
- Gateway II design and permitting is nearing 30%.
- Staff is planning Earth Day events with CWU for April
- Staff gave a presentation to the Flood Plains by Design division of Department of Ecology to move into the 2nd round of funding for the Brook Lane/Wilson re-alignment. The application for the 2nd round is due Late April to Ecology
- Bridge/Levee project off Dolarway is moving forward with the CLOMR/LOMR process with FEMA.
- Staff will begin inspecting and monitoring/flow data collection work for Spring/Summer/Fall.
- Staff will begin organizing field crew training sometime in April.
- Staff attended the Annual Mill Ditch water rights meeting at Calaway Trading March 4th. Staff is looking at alternatives to deliver irrigation water to downstream users in hopes of decommissioning the pump station at the end of Pott Road.

Electric

- We are advertising for two vacant Journeyperson Lineperson positions and a Temporary Lineperson.
- Potelco is on the property and filling the void of our understaffing issues. They are focusing on customer driven work as well as maintenance work.
- Potelco has started the underground re-conductor job on 18th Ave., and planned outage for residents in the area is scheduled for Tuesday 4/19/22.
- City crews have been focusing on day-to-day operations as well as smaller maintenance and service jobs.
- The City advertised for the vacant Light Engineering Technician position.

- Electrical Consultants Inc. (ECI) is scheduled visit Ellensburg to begin preliminary site evaluations for the South Substation Siting Study scheduled for April 12th and 13th.
- Potelco Inc. as part of the Electrical Utility On-Call Construction Services contract, has begun work for the City and is focused on maintenance and customer driven work.
- Staff negotiated and received a quote for the purchase of distribution transformers. The quote exceeded the signing authority of the city manager. City Council authorized the city manager to approve the purchase at the April 4th meeting. The transformer purchase was in the amount of \$627,903.76 and will require a supplemental budget adjustment of \$470,000.
- At the April 4th meeting, City Council awarded Bid Call 2021-17 - Dolarway 115kV Circuit Switcher to Southern States, in the amount of \$69,060.25. This equipment is for the Dolarway Substation Improvement Project and the engineer's estimate was \$85,000.
- At the April 4th meeting, City Council awarded Bid Call 2021-18 - Dolarway 15kV Circuit Breaker to Siemens in the amount of \$54,167.48. This equipment is for the Dolarway Substation Improvement Project and the engineer's estimate was \$80,000.
- Staff submitted grant applications for federal Community Projects Funding and Congressionally Directed Spending.

The applications included:

- o Adding additional 200 kW of solar capacity with monitoring inside the existing Renewable Energy Park.
- o Replacing modules and inverters on Phase 1 through Phase 4 as they are reaching their end of life. Incredible advancements in technology would more than triple the kWh output within the same footprint.
- o Adding renewable electric vehicle (EV) charging stations at the dog park.
- o Grid modernization infrastructure upgrade to state-of-the-art advanced metering. This would improve communication between the utility and consumers, provide the capacity for renewable energy deployment, opt-in prepayment services, energy efficiency, smart EV charging, and demand response (DR) programs.

Gas

- Staff submitted GHG reports for 2015-2021. All natural gas utilities needed to submit 2015-2021 reports to Ecology by 3/31/2022 to qualify for no cost allowances. Those reports varied from previous years but contain mostly the same information. The Gas Utility did not have 3rd party verification requirements this year. 3rd party verification requirements begin with 2023 emissions reported 3/31/2024.
- Crews performed scheduled monthly pipeline patrol tasks and installed new customer requested main and service lines. Crews are currently performing the annual atmospheric corrosion survey. Crews completed annual steel pipeline welding re-certifications and various hands-on operator qualification tasks.
- The Gas Division and MESA Products Inc. have signed a contract for the Walnut Street Rectifier & Deep Well Anodes – Relocation & Replacement project. Qualifications and material submittals are currently being reviewed. Contractor will start in June, but a specific date has yet to be defined.
- Staff continues to review material inventory and projected needs in anticipation of supply chain issues.
- USArchiving is in the process of digitizing our gas address files. They have currently digitized about a 1/3 of our address files and when finished, these files will be accessible by our crews in the field via GIS.

- A digital advertising campaign has begun to enhance the Public Awareness and Damage Prevention Program. April's advertising has an emphasis on "811 - Call Before You Dig".
- Bart Bradshaw, Gas Division Foreperson, submitted a letter announcing his retirement effective July 29, 2022. Bart has been with the Gas Division since January 2, 2002. Before being hired into the Gas Division, Bart was in the Street Division for nearly 10 years. Bart's leadership, dedication, and commitment to natural gas safety and his service to our residents and natural gas customers will be missed.

Proclamation

WHEREAS, public works professionals focus on infrastructure, facilities and services that are of vital importance to sustainable and resilient communities and to the public health, high quality of life and well-being of the people of Washington; and

WHEREAS, these infrastructure, facilities and services could not be provided without the dedicated efforts of public works professionals, who are engineers, managers and employees at all levels of government and the private sector, who are responsible for rebuilding, improving and protecting our nation's transportation, water supply, water treatment and solid waste systems, public buildings and other structures and facilities essential for our citizens; and

WHEREAS, it is in the public interest for the citizens, civic leaders and children of the state of Washington to gain knowledge of and to maintain a progressive interest and understanding of the importance of public works and public works programs in their respective communities; and

WHEREAS, the year 2022 marks the 62nd annual National Public Works Week sponsored by the American Public Works Association.

NOW, THEREFORE, the City Council and the City of Ellensburg do hereby designate the week of May 15-21, 2022 as "**National Public Works Week**"; we urge all our citizens to join with representatives of the American Public Works Association and government agencies in activities, events and ceremonies designed to pay tribute to our public works professionals, maintenance and operations personnel, engineers, managers and employees and to recognize the substantial contributions they make to protecting our national health, safety, and quality of life.

Signed this 2nd day of May, 2022

Mayor

City Clerk