Annual Report

Number	Permit Section	Question
1	S5.A.2	Attach updated annual Stormwater Management Program Plan (SWMP Plan). (S5.A.2) **Saved Document Name: SWMP Plan for 2019_1_03282019094801**
2	S9.D.5	Attach a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.5. **Not Applicable**
3	S5.A.3	Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of implementing the SWMP. **Yes**
4	S5.A.5.b	Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b) **Yes**
5	S5.C.1.a.i and ii	Attach description of public education and outreach efforts conducted per S5.C.1.a.i and ii. **Saved Document Name: Public Outreach Summary_5_03292019113351**
6	S5.C.1.b	Created stewardship opportunities (or partnered with others) to encourage resident participation in activities such as those described in S5.C.1.b. **Yes**
8	S5.C.2.a	Describe the opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's SWMP. (S5.C.2.a) **The SWMP, contact information, and survey are available to the Public on the City's website. Physical copies are displayed at the front counter in the Engineering Dept. and are provided at the annual Home Show and County Fair.**
9	S5.C.2.b	Posted the updated SWMP Plan and latest annual report on your website no later than May 31. (S5.C.2.b) **Yes**
9b	S5.C.2.b	List the website address. **https://www.cityofpa.us/376/Stormwater-Management-Program**
10	S5.C.3.a.i - vi	Maintained a map of the MS4 including the requirements listed in S5.C.3.a.i.-vi. **Yes**
11	S5.C.3.b.v	Implemented a compliance strategy, including informal compliance actions as well as enforcement provisions of the regulatory mechanism described in S5.C.3.b. (S5.C.3.b.v) **Yes**
12	S5.C.3.b.vi	Updated, if necessary, the regulatory mechanism to effectively prohibit illicit discharges into the MS4 per S5.C.3.b.vi. (Required no later than February 2, 2018) **Not Applicable**
13	S5.C.3.c.i	Implemented procedures for conducting illicit discharge investigations in accordance with S5.C.3.c.i. **Yes**
13b	S5.C.3.c.i	Cite methodology **IDDE Response Policy (PW-0610) included in SWMP**

Number	Permit Section	Question
14	S5.C.3.c.i	Percentage of MS4 coverage area screened in reporting year per S5.C.3.c.i. (Required to screen 40% of MS4 no later than December 31, 2017 (except no later than June 30, 2018 for the City of Aberdeen) and 12% on average each year thereafter. (S5.C.3) **15**
15	S5.C.3.c.ii	List the hotline telephone number for public reporting of spills and other illicit discharges. (S5.C.3.c.ii) **360-417-4745**
15b	S5.C.3.c.ii	Number of hotline calls received. **6**
16	S5.C.3.c.iii	Implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.3.c.iii. **Yes**
17	S5.C.3.c.iv	Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste. (S5.C.3.c.iv) **Yes**
17b	S5.C.3.c.iv	Describe the information sharing actions. (S5.C.3.c.iv) **The City trains its staff through IDDE Awareness Training, and provides guidance and education to local businesses via personalized business inspections. A utility bill mailer was sent to all City residents which describes what illicit discharges are and how to report them. Additionally, an IDDE poster is located in the entrance of City Hall.**
18	S5.C.3.d	Implemented an ongoing program to characterize, trace, and eliminate illicit discharges into the MS4 per S5.C.3.d. **Yes**
19	S5.C.3.d.iv	Number of illicit discharges, including illicit connections, eliminated during the reporting year. (S5.C.3.d.iv) **33**
20	S5.C.3.d.iv	Attach a summary of actions taken to characterize, trace and eliminate each illicit discharge found by or reported to the permittee. For each illicit discharge, include a description of actions according to required timeline per S5.C.3.d.iv **Saved Document Name: 2018 IDDE Inspection Listing S_20_03282019095935**
21	S5.C.3.e	Municipal illicit discharge detection staff are trained to conduct illicit discharge detection and elimination activities as described in S5.C.3.e. **Yes**
22	S5.C.4.a	Implemented an ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites per the requirements of S5.C.4.a. **Yes**
24	S5.C.4.a.i	Number of exceptions granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1) **0**
25	S5.C.4.a.i	Number of variances granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1) **0**
26	S5.C.4.b.i	Reviewed Stormwater Site Plans for all proposed development activities that meet the thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.i) **Yes**
26b	S5.C.4.b.i	Number of site plans reviewed during the reporting period. **124**

Number	Permit Section	Question
27	S5.C.4.b.ii	Inspected, prior to clearing and construction, permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential, or alternatively, inspected all construction sites meeting the minimum thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.ii) **Yes**
27b	S5.C.4.b.ii	Number of construction sites inspected per S5.C.4.b.ii. **7**
28	S5.C.4.b.iii	Inspected permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. (S5.C.4.b.iii) **Yes**
28b	S5.C.4.b.iii	Number of construction sites inspected per S5.C.4.b.iii. **24**
29	S5.C.4.b.ii, iii and	Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects). (S5.C.4.b.ii, iii and v) **4**
30	S5.C.4.b.iv	Inspected all permitted development sites that meet the thresholds in S5.C.4.a.i upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. (S5.C.4.b.iv) **Yes**
31	S5.C.4.b.ii-iv	Achieved at least 80% of scheduled construction-related inspections. (S5.C.4.b.ii-iv) **Yes** Comment: Achieved 95%
32	S5.C.4.b.iv	Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects. (S5.C.4.b.iv) **Yes**
33	S5.C.4.c	Implemented provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.4. a and b. (S5.C.4.c) **Yes**
35	S5.C.4.c.iii	Annually inspected stormwater treatment and flow control BMPs/facilities per S5.C.4.c.iii. **Yes**
35b	S5.C.4.c.iii	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.4.c.iii **Not Applicable**
36	S5.C.4.c.iv	Inspected new residential stormwater treatment and flow control BMPs/facilities and catch basins every 6 months per S5.C.4.c.iv to identify maintenance needs and enforce compliance with maintenance standards. **Yes**
37	S5.C.4.c.v	Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C4.c.v) **Yes** Comment: Achieved 100%
38	S4.C.4.c.vi	Verified that maintenance was performed per the schedule in S5.C.4.c.vi when an inspection identified an exceedance of the maintenance standard. **Yes**

Number	Permit Section	Question
38b	S5.C.4.c.vi	Attach documentation of any maintenance delays. (S5.C.4.c.vi) **Saved Document Name: 2018 Annual O&M SW Insp_38b_03282019043341**
39	S5.C.4.d	Provided copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to representatives of proposed new development and redevelopment. (S5.C.4.d) **Yes**
40	S5.C.4.e	All staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement are trained to conduct these activities. (S5.C.4.e) **Yes**
42	S5.C.4.g	Participated and cooperated with the watershed-scale stormwater planning process led by a Phase I county. (S5.C.4.g) **Not Applicable**
43	S5.C.5.a	Updated and implemented maintenance standards as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the Stormwater Management Manual for Western Washington (as amended 2014). (Required no later than December 31, 2016, except no later than June 30, 2017 for Permittees in Lewis and Cowlitz counties, and no later than June 30, 2018 for the City of Aberdeen, S5.C.5.a). **Yes**
44	S5.C.5.a	Applied a maintenance standard that is not specified in the Stormwater Management Manual for Western Washington. **No**
45	S5.C.5.a.ii	Performed timely maintenance per S5.C.5.a.ii. **Yes**
46	S5.C.5.b	Annually inspected all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities. (S5.C.5.b) **Yes**
46b	S5.C.5.b	Number of known municipally owned or operated stormwater treatment and flow control BMPs/facilities. (S5.C.5.b) **160**
46c	S5.C.5.b	Number of facilities inspected during the reporting period. (S5.C.5.b) **160**
46d	S5.C.5.b	Number of facilities for which maintenance was performed during the reporting period. (S5.C.5.b) **88**
47	S5.C.5.b	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.5.b. **Not Applicable**
48	S5.C.5.c	Conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms as per S5.C.5.c. **Not Applicable**
49	S5.C.5.d	Inspected all municipally owned or operated catch basins and inlets as per S5.C.5.d, or used an alternative approach. (Required once no later than August 1, 2017 and every two years thereafter, except once no later than June 30, 2018 and every two years thereafter for the City of Aberdeen) **Yes**
49b	S5.C.5.d	Number of known catch basins. **2648**

Number	Permit Section	Question
49c	S5.C.5.d	Number of catch basins inspected during the reporting period. **1496**
49d	S5.C.5.d	Number of catch basins cleaned during the reporting period. **1496**
50	S5.C.5.d.i-ii	Attach documentation of alternative catch basin cleaning approach, if used. (S5.C.5.d.i or ii) **Not Applicable**
51	S5.C.5.f	Implemented practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.5.f) **Yes**
52	S5.C.5.g	Implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.5.g.) **Yes**
53	S5.C.5.h	Implemented a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under an NPDES permit that covers stormwater discharges associated with the activity. (S5.C.5.h) **Yes**
54	S7.A	Complied with the Total Maximum Daily Load (TMDL)-specific requirements identified in Appendix 2. (S7.A) **Not Applicable**
55	S7.A	For TMDLs listed in Appendix 2: Attach a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A) **Not Applicable**
56	S8.A	Attach a description of any stormwater monitoring or stormwater-related studies as described in S8.A. **Saved Document Name: 2018_56_03282019043819**
57	S8.B.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for status and trends monitoring. (S8.B.1) **Yes**
58	S8.C.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for effectiveness studies. (S8.C.1) (Required to begin no later than August 15, 2014) **Yes**
59	S8.D.1	Contributed to the RSMP for source identification and diagnostic monitoring information repository in accordance with S8.D.1. (Required to begin no later than August 15, 2014) **Yes**
60	G3	Notified Ecology in accordance with G3 of any discharge into or from the Permittees MS4 which could constitute a threat to human health, welfare or the environment. (G3) **Yes**
61	G3	Number of G3 notifications provided to Ecology. **2**
62	G3.A	Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment per G3.A. **Yes**

Number	Permit Section	Question
63	S4.F.1	Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1) **Not Applicable**
64	S4.F.3.a	If requested, submitted an Adaptive Management Response report in accordance with S4.F.3.a. **Not Applicable**
65	S4.F.3.d	Attach a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d) **Saved Document Name: PA grab sample 2018_65_03282019044115**
66	G20	Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20) **Not Applicable**
67	G20	Number of non-compliance notifications (G20) provided in reporting year. **0**
67b	G20	List the permit conditions described in non-compliance notification(s). **Not Applicable**

Attachments:

View Files Attached to Submission

	DocDescr	DocName	DocExt	DocID	SubID	AppName
View	WAR045028_38b_03282019043341	2018 Annual O&M SW Insp_38b_03282019043341	.pdf	790074	1665097	wqwebportal
View	WAR045028_20_03282019095935	2018 IDDE Inspection Listing S_20_03282019095935	.pdf	789798	1665097	wqwebportal
View	Question 14_S5.C.3.c.i	2018 IDDE Screening Summary and Map	.pdf	790262	1665097	wqwebportal
View	Annual Development Review	2018 Inspection Documentation Tracking List	.pdf	790085	1665097	wqwebportal
View	WAR045028_38b_03282019043143	2018 SW Fac. Annual Inspection_38b_03282019043143	.pdf	790070	1665097	wqwebportal
View	WAR045028_56_03282019043819	2018_56_03282019043819	.pdf	790079	1665097	wqwebportal
View	WAR045028_65_03282019044115	PA grab sample 2018_65_03282019044115	.pdf	790084	1665097	wqwebportal
View	WAR045028_5_03292019113351	Public Outreach Summary_5_03292019113351	.pdf	790254	1665097	wqwebportal
View	WAR045028_1_03282019094801	SWMP Plan for 2019_1_03282019094801	.pdf	789785	1665097	wqwebportal

Close

This is a copy of the City's stormwater management plan. It defines what the City plans to do to make stormwater cleaner.

We would like your input on methods to improve the quality of stormwater and the environment.

Please let us know if you have any comments, ideas or concerns! You can return this directly to the City offices at 321 East Fifth Street, attention Stormwater Engineer. You can also call the stormwater hotline at 360-417-4830, or send an email to stormwater@cityofpa.us

City of Port Angeles

Stormwater Management Program

Revised: March 19, 2019

As required by the

Western Washington Phase II Municipal Stormwater Permit

State of Washington – Department of Ecology

Municipal Stormwater Permit Coverage Number: WAR04-5028

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Appendices

Background and Intent

The City of Port Angeles (City) was issued a Western Washington Phase II Municipal Stormwater Permit (Permit) on January 17, 2007. The Permit was issued by the State of Washington's Department of Ecology (Ecology) in compliance with the State of Washington Water Pollution Control Law (Chapter 90.48 Revised Code of Washington) and the Federal Water Pollution Control Act (Title 33 United States Code, Section 1251 et seq). The Permit was renewed on August 1, 2013 for a five year term (2013-2018), however, Ecology extended the permit an additional year into 2019.

The 2019-2024 Permit is currently being updated by Ecology and is scheduled for its second reissuance on July 1, 2019. As such, this document will reflect the City's plans for ongoing compliance with the existing 2013-2018 permit, however, once the new Permit is issued in 2019, the City will begin the process of planning and making modifications to this document with the intent of fully complying with the new permit requirements. The Permit authorizes the City to discharge from the municipal separate storm sewer system (MS4) to surface waters and ground waters of the state.

The City is developing this Stormwater Management Program (SWMP) to address the specific requirements of Special Condition S5 of the Permit: "Stormwater Management Program for Cities, Towns, and Counties." The SWMP is a set of planned actions and activities designed to reduce the discharge of pollutants to the maximum extent practicable and to protect water quality. The City has teamed with Kitsap County to enhance the Public Education and Outreach components of the SWMP. The Permit includes broad ranging requirements which are implemented by various Departments within the City, inter-departmental coordination mechanisms are detailed in Appendix C.

The organization of the City's SWMP reflects the five core components required by Special Condition S5 under the active Permit:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Controlling Runoff from New Development, Redevelopment, and Construction Sites
5. Pollution Prevention and Operation and Maintenance for Municipal Operations

The City's SWMP will be updated and submitted to the Department of Ecology annually as required. Electronic copies of updates will be available on the City's stormwater web page. Updates for each calendar year will be submitted by March 31 of the following year. Many of the activities described in the SWMP are planned activities, and their inclusion in this document does not guarantee that they will be implemented as described.

The public is encouraged to participate in the development of the SWMP. Please contact the Department of Public Works and Utilities with questions, comments, or suggestions.

Mail: 321 East Fifth St, Port Angeles, WA 98362

Phone:	(360) 417-4830 (Stormwater Informational Hotline) (360) 417-4745 (Illicit Discharge Hotline) (360) 417-4701 (City Stormwater Engineer)
Email:	illicit-discharge@cityofpa.us
Website:	http://www.cityofpa.us …. CLICK >> Business… Stormwater Management Program.
Web Form:	Click Stormwater Management Program planning document (PDF).

1) Public Education and Outreach

The City's public education and outreach program is being developed consistent with the Permit goal: "to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts."

a) Education and Outreach Program

The Permit has established education and outreach goals for four categories based on target audiences and subject areas. The City's program is structured to match these four categories, listed as i-iv below.

A matrix has been prepared to show planned activities for the year, and their relationship to the required target audiences. This matrix is attached as Appendix A to this document. Updates of actual education and outreach activities will be provided with the Annual Report for the year. The following sections provide details on anticipated and ongoing public education and outreach program activities.

i.) General public

Education and outreach goals:

- *General impacts of stormwater flows into surface waters*
- *Impacts from impervious surfaces*
- *Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping, and buffers*

The program to meet these goals may include the following components:

- **Stormwater website**: the City's stormwater website contains information on general stormwater impacts, impervious surfaces, and opportunities for the public to help improve stormwater quality within the watershed. The webpage may be found at (http://www.cityofpa.us CLICK>> Departments…Public Works & Utilities…Divisions…Stormwater Utility). The website will be updated as more information becomes available. Specific updates are planned to include a list of frequently asked questions, a list of upcoming stormwater-related events, additional links to other websites, and copies of educational materials developed under this program.

- **Localized groups**: Annually, the City may hold a public meeting to discuss the stormwater management plan. In these meetings we discuss local water quality, the effects of impervious surfaces on stream health, and stormwater pollutants generated by home and automobile owners. Meetings may be held with groups such as Streamkeepers, EcoNet, and North Peninsula Builders Association.

- **Informational brochures:** will be made available at facilities such as Port Angeles City Hall (customer service and billing desk, Public Works and Utilities reception area), Clallam County Courthouse, Port Angeles Public Library, City Pier (Arthur D. Feiro Marine Life Center), Peninsula College, and others. The informational brochures are designed to address the education goals listed above. As brochures are developed, electronic copies will be made available through the City's stormwater webpage.

- **Newspaper advertisements**: the City plans to periodically place stormwater-related information in the local newspaper (Peninsula Daily News). This information will be designed to address the education goals listed above and will be timed to reflect the greater impact during the wet winter season. Electronic copies of all newspaper advertisement will be made available through the City's stormwater webpage.
- **Utility bill mailers**: Annually, educational mailers will be sent out with the monthly utility bills, thereby reaching all of the City's utility customers. The mailers will be developed to create a progressive flow of general stormwater related information with practical tips for home and business owners to help improve water quality. Copies of mailers will also be made available on the City's stormwater website and as handouts. The 2018 utility bill mailer may feature topics such as: LID code update, BMPs, dog waste, car washing, and yard debris.
- **Participation in existing events**: educational materials (posters, brochures/handouts, maps, etc) will be distributed at existing local and regional events that attract members of the target audiences. City representatives will be present to answer questions. Events include: Clallam County Fair, Clallam County Home and Lifestyle Show, and others. Event-specific materials will be developed and distributed as appropriate. Announcements of upcoming events and copies of materials used at events will be available on the City's stormwater website.

ii.) General public, home-based and mobile businesses

Education and outreach goals:

- *BMPs for use and storage of automotive chemicals, hazardous cleaning and yard care products, carwash soaps, and other hazardous materials*
- *Impacts of illicit discharges and how to report them*

The program to meet these goals may include the following components:

- **Site visits to business owners by City Pollution Prevention Specialist**: The City received grant funding through the State Department of Ecology to support a Pollution Prevention Specialist position. This person will schedule site visit appointments at businesses within the City. The purpose will be to educate them about stormwater pollution and their connection to the local water ways, to educate them about the impacts of illicit discharges and how to report them, to help them implement BMPs on use and storage of hazardous materials, to fill out the Department of Ecology's Source Control Checklist and to report that information to Ecology and the City.
- **Illicit discharge information for the general public**: general illicit discharge information will be distributed to the general public. The information will take the form of one or more of the general public program components described in the previous section. Information will include a description of illicit discharges, applicable laws, environmental effects, preventative measures, reporting

measures, and links to other sources of information. A "Stormwater Pollution Hotline" is available for public reporting of illicit discharges (360-417-4745).

iii.) Homeowners, landscapers, and property managers

Education and outreach goals:

- *Yard care techniques protective of water quality*
- *BMPs for use and storage of pesticides and fertilizers*
- *BMPs for carpet cleaning and auto repair and maintenance*
- *Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees*
- *Stormwater pond maintenance*

The program to meet these goals may include the following components:

- **Informational mailers to target audience:** mailers designed to address the specific education goals will be sent to the target audience. The audience will be selected based on classification in directories such as telephone books and web searches.
- **Informational brochures at City Hall, at local public events and at target commercial establishments:** informational brochures/handouts will be designed to address the specific education goals. The brochures will be placed or displayed at City Hall, at local public events and at businesses within the target group or that cater to the target audience. Examples may include: lawn and garden stores, hardware stores, general stores, landscaping businesses, florists, real estate offices, property management offices, and others. Permission to place the brochures will be obtained from business owners prior to placement. Brochures will be replaced periodically.
- **BMP and LID incentives programs:** the City will implement a new stormwater rebate program that will offer financial incentive to small development projects who implement certain stormwater LID BMPs, on their properties. This program will be advertised on the City website and at local public events. The City has also implemented a rain garden rebate program for existing homes and businesses to further encourage LID. The rain garden rebate reimburses an approved applicant the cost of up to $1000 for the material required. Program details can be found on the Stormwater webpage.

iv.) Engineers, contractors, developers, review staff, and land use planners

Education and outreach goals:

- *Technical standards for flow control and pollution prevention*
- *Technical standards for stormwater site and erosion control plans*
- *Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees*

The program to meet these goals may include the following components:

- **Stormwater Management Manual for Western Washington:** a copy of the most recent version of the Department of Ecology's manual is available at the City's Public Works and Utilities Department's Engineering Services Office so that designers can access the manual without purchasing or printing it. Staff are available by appointment to assist with the use of the manual.
- **City staff will organize workshops or one on one meetings with developers:** The city stormwater engineer meets regularly with developers and engineers to help them interpret the City stormwater regulations, and to recommend low impact development techniques as generally lower cost stormwater solutions.
- **BMP and LID incentives programs:** see description in previous section
- **City staff training:** City engineering and review staff will attend training sessions as available to further knowledge of technical standards, LID techniques, regulatory requirements, and other stormwater-related topics.

b) Measurement of Understanding and Adoption Among Targeted Audiences

The City entered into a 3-year interlocal agreement with Kitsap County in 2018. In conjunction with Kitsap County, the City will measure the understanding and adoption of a targeted behavior for at least one target audience in at least one subject area.

c) Public Education and Outreach Recordkeeping

The City will track and maintain records of all public education and outreach activities conducted. An electronic database of this information is maintained by the City's Public Works and Utilities Department. The database contains the following entries:

- Name of outreach activity/distribution/event
- Date(s)
- Location(s)
- City personnel involved
- Target audience(s)
- Contact information for other group(s)
- Subject area(s)
- Attendance/distribution (actual or approximate)
- Educational materials used (flyers, handouts, slide shows, posters, etc)
- Notes/other

The public education and outreach database is available from the City upon request. An updated version will be included with each annual report. Copies of all material used during public education and outreach activities will be maintained, as well as photos, descriptions of feedback, lessons learned, and other information.

2) Public Involvement and Participation

The SWMP will include opportunities for public involvement and participation to ensure that the program addresses the goals and expectations of the public as well as the requirements of the Permit. Public comments will be tracked and responded to as appropriate.

a) Public Involvement in SWMP

The public will have the following opportunities for participation:

- Direct contact with City staff: An email address, phone number, and mailing address will be provided on all City stormwater information distributed. The public will be encouraged to contact City staff at any time with questions or concerns.
- Web page: The City's stormwater web site (http://www.cityofpa.us CLICK>> Departments…. Public Works & Utilities…. Divisions…. Stormwater Utility) includes the SWMP, encourages public involvement and participation in the development of the SWMP, and gives contact information.
- Public hearings: All City policy decisions will follow standard City procedure and will be brought before City Council through the public hearing process. This includes rate changes, new or revised ordinances, and other official policy decisions. The public will be notified as required and will have a chance to comment during the hearings.
- Engineering counter handout: The SWMP is available in the Public Works and Utilities (PW&U) reception area.
- Stormwater workshops: The City stormwater engineer will hold public information sessions on the stormwater management program to stakeholder groups such as Streamkeepers, EcoNet, and North Peninsula Builders Association.

The current contact information for public involvement is:

Mail:	321 E Fifth Street, Port Angeles, WA 98362
Phone:	(360) 417-4830 (Stormwater Hotline) (360) 417-4745 (Illicit Discharge Hotline) (360) 417-4701 (City Stormwater Engineer)
Email:	illicit-discharge@cityofpa.us
Website:	http://www.cityofpa.us …. CLICK >> Business…. Stormwater Management Program.
Web Form:	Click Stormwater Management Planning Document (PDF) on the webpage.

All opportunities for public involvement and comments received will be tracked on a spreadsheet maintained by the Department of Public Works and Utilities. The City will consider comments as they are received and will follow up with the public as appropriate.

b) Availability of Information to the Public

The most recent annual report to Department of Ecology, the SWMP, and other submittals required by the Permit will be made available to the public on the City's stormwater webpage. The documents will also be available to the public at the Department of Public Works and Utilities (321 East Fifth St, Port Angeles) upon request. Staff will be available by appointment to discuss the documents with any interested parties.

3) Illicit Discharge Detection and Elimination

a) Municipal Storm Sewer System Map

The City's stormwater system is mapped electronically in the City's Geographic Information System (GIS). The data contained in the map is updated and corrected continuously as information is gathered in the field or as new development occurs. Updates are made based on field sketches, design plans, as-built plans, aerial photography, and/or other sources of information that become available.

The stormwater GIS layers contain information on manholes, catchbasins, outfalls, pipes, ditches, culverts, detention ponds, and drainage basins. Other layers within the City's overall GIS dataset contain information relevant to stormwater as well, for example: land use, land cover, zoning, impervious surfaces, topography, natural hydrology, and combined sewers. Aerial photography is also available, with the most recent flyover performed in 2012. This information is available to City employees at any time, and can be made available to the public or other organizations upon request. It can also be accessed on the web at the following address:

https://pawa.maps.arcgis.com/apps/webappviewer/index.html?id=e58c0d47915c44cf833174513da11086

i) Location of Known Outfalls, Receiving Waters and Structural BMPs

The locations of all known outfalls, receiving waters, and structural BMPs owned, operated and/or maintained by the City have been mapped in the GIS. Additional information regarding tributary conveyances (pipes, ditches, etc), associated drainage areas, and land use will be developed where required.

ii) Connections to MS4

The City continuously updates the stormwater GIS with any new connections or infrastructure allowed or authorized by the City. New connections are mapped from development plans, project plans, field reports, and/or other sources as appropriate.

iii) Areas Not Discharging to Surface Waters

Most of the areas served by the City-owned MS4 discharge into surface waters, however there are three west side basins which generally infiltrate (Lincoln Park Pond, Big Boy Pond and 10th and N open space). All of these areas have overflow structures that allow

the water to discharge to surface waters. Also the City has many surface water catch basins which drain to the City's wastewater plant. These basins have been mapped.

iv) Information Available to Ecology

The City's stormwater GIS is available to Ecology upon request. The City can provide the required mapping information in electronic format and can meet the mapping standards described on Ecology's website, with the exception of metadata, which the City does not have available in electronic format at this time.

v) Information Available to Secondary and Co-Permittees

The City does not currently have any secondary or co-permittees.

b) Illicit Discharge Ordinance

The City developed a comprehensive stormwater ordinance including an illicit discharge provision for the separate stormwater system. The ordinance was written to satisfy the criteria listed in the Permit, including: discharge categories that are NOT prohibited (3.b.i), discharge categories that ARE prohibited (3.b.ii), categories of discharge identified as significant sources of pollution to waters of the State (3.b.iv), escalating enforcement procedures (3.b.v), and enforcement strategies (3.b.vi). The ordinance was passed by the City Council on June 16th, 2009.

c) Priority IDDE Screening Basins

In order for the City to comply with its NPDES phase II permit, all permittees shall complete a field screening of at least 40% of the City MS4 system no later than December 31, 2017. The City of Port Angeles has elected to screen on average 12% of its MS4 system beginning in 2014. Each priority field screening basin contains approximately 12% of the cities stormwater catch basins; for a total of eight screening basins, each approximately 300 acres in size. Screening of these basins is accomplished through the use of existing City inspection programs. Every Stormwater catch basin within the priority screening basin is visually inspected during its years screening. Existing programs and tasks are also leveraged to fulfill this requirement including Business Inspections, Manhole Inspections, Outfall Inspections, and Stormwater BMP Inspections.

d) Detection Program

The City has developed and implemented an "Illicit Discharge Detection and Elimination (IDDE) Response Policy". This Policy is included as Appendix B to this document. This policy contains all of the elements required by the Permit. The implementation of this Policy will continue in 2018. Each element is discussed in the following sections.

i) Priority Areas

Prioritization was completed on February 12, 2010.

Prioritization of Port Angeles Receiving Waterbodies

Prioritization is based on the Department of Ecology's 303d list, as well as the significance of the waterbody for potential salmon recovery.

303d list of most impacted to least impacted waterbodies in the Port Angeles area

Peabody Creek
Tumwater Creek
Port Angeles Harbor
Dry Creek
Valley Creek
Ennis / White Creek

Creeks with high salmon recovery potential

Ennis / White Creek system

Proposed highest priority waterbodies for visual inspection:

Peabody Creek
Tumwater Creek
Ennis / White Creek system

ii) Field Assessment

Field assessment has been completed on Peabody, Tumwater, Valley, Mills. Dry, White and the Ennis Creek systems. Inspections and re-inspections of priority water bodies will be made as part of the annual Field Screening of 12.5% of the City MS4. Field assessment activities include visual inspection during dry weather and field screening for illicit discharges in accordance with the City's "Illicit Discharge Detection and Elimination (IDDE) Response Policy". This Policy is included as Appendix B to this document. Updates to Appendix B are anticipated in 2019 to incorporate any necessary changes required by the updated Phase II Permit.

iii) Nature of Discharges

Any illicit discharges discovered by or reported to the City will be characterized using the City's IDDE Response Policy in terms of potential public or environmental threat. The City will investigate any complaints, reports, or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping within seven days. Problems and violations determined to be emergencies or otherwise judged to be urgent or severe will be investigated immediately.

Follow up training for maintenance staff in the use of the Policy for characterization will be conducted in 2019.

iv) Tracing Source(s) of Discharges

The City will trace the source of illicit discharges using one or more of the following means and methods:

- Visual observation
- Tracing upstream from manhole to manhole
- Dye testing
- Sewer inspection camera
- Water sampling and analysis
- Site inspections of potential sources

Additional tracing methods will be employed as available and applicable. The results of the tracing investigation will be entered onto the appropriate data base and used for follow-up activities. A drainage contaminate survey was performed on Peabody Creek with a goal of detecting and eliminating illicit connections contributing to high levels of fecal coliform. Sampling of priority areas identified in the contaminate survey continues alongside periodic sampling of Tumwater and Valley Creeks.

v) Removing Source(s) of Discharges

Once identified, sources of illicit discharges will be removed, using the City's enforcement authority as needed.

e) Public Information

The City will utilize its Public Education and Outreach Program, as described in Section 1, to disseminate information about illicit discharges.

i) Distribute Information to Target Audiences

See Section 1.A – Public Education and Outreach Program.

ii) Hotline for Public Reporting of Discharges and Spills

The City's Illicit Discharge Hotline (360-417-4745) will be used for public reporting of discharges and spills. Outside of traditional working hours, this number is forwarded to the Public Works On-Call number for after-hours response. The hotline number will be published with all stormwater information and is available on the City's stormwater website. The public will also be able to report discharges, spills, or other concerns via the City's storm water webpage, utilizing an online form, where information on the spill and photos can be submitted. An email address is also available: illicit-discharge@cityofpa.us. Both the hotline and email are forwarded directly to City staff.

f) Program Evaluation and Assessment

The City will track the following information, as required by the Permit:

- Number and type of spills or illicit discharges identified
- Inspections made

- Feedback received from public education efforts (see Section 1 – Public Education and Outreach)

Public reporting of illicit discharges will be tracked using the form developed by the Center for Watershed Protection and incorporated into the City's IDDE Policy. Electronic and paper copies of all records, including follow up reports and actions, will be maintained at the Public Works and Utilities office. A summary of this information will be included in the City's Annual Report.

g) Illicit Discharge Training

The City will provide appropriate training for municipal field staff as described below.

i) Field Staff Training

The City will ensure that all municipal field staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, improper disposal, and illicit connections are trained to conduct these activities. Follow-up training will be provided as needed to address changes in procedures, techniques, or requirements. The City will document and maintain records of training provided and staff trained. Refresher training for City field staff is performed annually.

ii) Ongoing Training Program

The City has developed and implemented an ongoing training program for all municipal field staff, which, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. Staff has been trained on the identification of an illicit discharge/connection and on the proper procedures for reporting and responding to the illicit discharge/connection. Follow-up training is provided annually to address changes in procedures, techniques, or requirements. City staff will continue to attend select sessions held through the Statewide LID Training Program to assist staff in design, implementation, and maintenance of LID best management practices and facilities. The City will document and maintain records of future training provided and staff trained.

4) Controlling Runoff from New Development, Redevelopment, and Construction Sites

The City has developed and will continue to implement and enforce a program to reduce pollutants in stormwater runoff from new development and redevelopment construction projects, in accordance with Appendix 1 of the Permit. The program will apply to both private and public development, including roadway projects.

a) Stormwater Ordinance

The City developed and adopted an ordinance that addresses runoff from new development, redevelopment, and construction site activities at sites 2,000 sq-ft and greater. The ordinance adopts most of the Department of Ecology's 2014 Stormwater Management Manual for Western Washington and the Low Impact Development

Technical Guidance Manual. Please see the Port Angeles Municipal Code, Section 13.63 for more detail.

In conjunction with the Stormwater Ordinance, the City has developed and implemented a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The program is being applied to all sites with greater than or equal to 7,000 sq. feet of land disturbance or projects that install 2,000 sq. feet of new or replaced hard surface. The program applies to both private and public development, including roads. The program is enforced through the City Ordinance described above as well as through the City's development standards (The City of Port Angeles Urban Services Standards and Guidelines, USSG).

i) Minimum Requirements, Technical Thresholds, and Definitions

The minimum requirements, technical thresholds, and definitions in Appendix 1 of the permit have been effective for the City since 2009. As required by the permit, the lowered thresholds were adopted and enforced January 1st, 2017.

ii) Site Planning Process, and BMP Selection and Design

The site planning processes and Best Management Practice (BMP) selection and design criteria contained in the Department of Ecology manual have been effective for the City since 2009.

iii) Legal Authority to Inspect Private Facilities

The ordinance includes provisions allowing City inspectors the legal authority to inspect private stormwater facilities that discharge into the City's MS4.

iv) LID Required

As of December 31, 2016 the City has updated its development codes to require LID where feasible.

v) Erosivity Waiver

The City does not allow developers to apply the Erosivity Waiver in Appendix 1, Minimum Requirement #2 of the permit. Therefore, the City does not plan to include enforcement sanctions for construction sites that provide notice of intent to apply the waiver but do not meet the requirements.

b) Permitting Process

The City has developed a permitting process with plan review, inspection, and enforcement capability as described below. The permitting process is applied to both private and public projects that consist of greater than or equal to 7,000 sq. feet of land disturbance or projects that install 2,000 sq. feet of new or replaced hard surface. Permitting is administered by qualified personnel.

i) Review of Stormwater Site Plans

The City reviews stormwater site plans as part of the permitting process. Plans are reviewed for compliance with the stormwater ordinance (PAMC 13.63) and the City's Urban Services Standards and Guidelines, which implement the ordinance. The review includes the minimum requirements, technical thresholds, and definitions in Appendix 1 of the Permit. The City works with developers to ensure that stormwater site plans meet the criteria established by both the Department of Ecology and the City.

ii) Pre-Construction Inspection of Development Sites

During site plan review, City staff uses the definitions and requirements in Appendix 7 of the Permit (Identifying Construction Site Sediment Transport Potential) to determine which sites have a high potential for sediment transport. These high priority sites will be inspected by qualified personnel prior to clearing and grading activities.

iii) Inspection of Development Sites During Construction

Qualified City staff inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Escalation of enforcement is described in Ordinance and is implemented when necessary.

iv) Post-Construction Inspection of Development Sites

Qualified City staff inspect all permitted development sites upon completion of construction and prior to final approval or occupancy. The purpose of the inspection is to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. City staff also verifies that a maintenance plan is completed and that responsibility for maintenance is clearly assigned. Enforcement is used as required.

v) Inspection Compliance

The City maintains compliance with sections ii, iii, and iv above by the presence and records of an established inspection program designed to inspect all sites and achieving at least 80% of scheduled inspections.

vi) Enforcement Strategy

The City has developed an enforcement strategy to respond to cases of non-compliance. This enforcement strategy is included in the City's Stormwater Ordinance PAMC 13.63.

vii) Erosivity Waiver

At this time, the City does not allow developers to apply the Erosivity Waiver in Appendix 1, Minimum Requirement #2 of the Permit. Therefore, the City will perform review and inspection tasks for all construction sites as described above.

c) Operation and Maintenance of Post-Construction Stormwater Facilities

The City has developed and implemented a program to verify adequate long-term operation and maintenance of post-construction stormwater facilities and BMPs that are permitted pursuant to the City's permit process.

i) Operations and Maintenance Ordinance

The City has developed a comprehensive stormwater ordinance which requires private developers to clearly identify the party responsible for maintenance, requires inspection of facilities an accordance with Chapter 4, Volume V of the Department of Ecology's Stormwater Management Manual for Western Washington, and establishes enforcement procedures.

ii) Maintenance Standards

The City has adopted the 2014 Department of Ecology's Stormwater Management Manual for Western Washington. The City is currently implementing the maintenance standards included in Chapter 4 of Volume V.

iii) Annual Inspections

The City will continue to annually inspect all private stormwater treatment and flow control facilities (other than catch basins) permitted. This inspection schedule may be adjusted for a different frequency if maintenance records justify the change.

iv) Inspections During Construction

The City will inspect all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development every six months during the period of heaviest house construction. The purpose of the inspections will be to identify maintenance needs and enforce compliance with maintenance standards as necessary.

d) Recordkeeping

The City will keep and maintain records of inspections and enforcement actions by staff. This will include inspection reports, warning letters, notices of violations, and other enforcement actions. Records of maintenance inspections and maintenance activities will also be maintained.

e) Notice of Intent Availability

Copies of the "Notice of Intent for Construction Activity" and the "Notice of Intent for Industrial Activity" are available to representatives of proposed new development and redevelopment. Paper copies can be found at City Hall at the front desk of the Engineering Department. The City's stormwater website also directs owners of construction sites and industrial facilities to the Ecology websites where they can find additional information and electronic copies of the notices of intent.

f) Training

The City staff responsible for implementing the program to control runoff from new development, redevelopment, and construction sites have been trained to conduct these activities. Follow-up training will be provided as required. The City will document and maintain records of training.

5) Pollution Prevention and Operation and Maintenance for Municipal Operations

The City has developed and implemented an operations and maintenance program that includes a training component and has the goal of preventing or reducing pollutant runoff from municipal operations. The program elements are described below.

a) Maintenance Standards

The City has adopted the 2014 Department of Ecology's Stormwater Management Manual for Western Washington including the maintenance standards included in Chapter 4 of Volume V. The City is using the maintenance standards to determine if/when maintenance is required.

When an inspection identifies an exceedance of a maintenance standard, maintenance shall be performed within the following timeframes:

- Within 1 year for wet pool facilities and retention/detention ponds
- Within 6 months for typical maintenance
- Within 9 months for maintenance requiring re-vegetation
- Within 2 years for maintenance that requires capital construction of less than $25,000

These timeframes may be exceeded if there are circumstances that are beyond the City's control. Such circumstances may include, but not be limited to, denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each such exceedance of the required timeframes, the City will document the extenuating circumstances.

b) Annual Inspections

The City will perform annual inspections of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins. The City will take appropriate maintenance actions in accordance with the maintenance standards in Chapter 4, Volume V of the Department of Ecology's Stormwater Management Manual for Western Washington (2014).

The City may reduce the inspection frequency based on inspection records. The reduction will be based on inspection records for double the length of time of the proposed inspection frequency, or upon written statements based on actual inspection and maintenance experience and certified as required.

c) Spot Checks

The City will perform "spot checks" of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major storm events (greater than 24-hour 10-yr). If the spot checks indicated widespread damage and/or maintenance needs, the City will inspect all stormwater treatment and flow control facilities that may be affected. Repairs and other maintenance actions will be taken based on inspection results and in accordance with the City's maintenance standards.

d) Catch Basin Inspections

Over the past two years the City has inspected all catch basins and inlets owned and/or operated by the City as required by the last Permit. Catch basins and inlets will continue to be cleaned based on inspection results and in accordance with the maintenance standards established in the 2014 *Stormwater Management Manual for Western Washington*. Decant water will be disposed of in accordance with Appendix 6 of the Permit – *Street Waste Disposal*.

The City continues to inspect the City's stormwater CBs every two years for maintenance requirements.

e) Inspection Program

The City's inspection program will be constructed to comply with the requirements in sections a, b, c, and d above. The inspection program will be designed to inspect all sites and to achieve inspection at 95% of sites. The program will include full documentation of activities using City Works, a data base program which overlays the City's existing GIS program.

The City also has an existing large diameter culvert inspection program. The major culverts that conduct the City creeks under roads are visually inspected in the late summer every two to three years. Maintenance deficiencies are corrected before the wet winter season begins.

f) Road Runoff Control and Maintenance

The City has established and implemented practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City, and road maintenance activities conducted by the City. The following activities have been addressed:

- Pipe cleaning
- Culvert cleaning
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management

- Dust control

g) Public Land Runoff Control and Maintenance

The City has established and implemented policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the City, including, but not limited to, parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities. The following policies and procedures have been adopted:

- Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans
- Sediment and erosion control
- Landscape maintenance and vegetation disposal
- Building exterior cleaning and maintenance

h) Training Program

The City has implemented an on-going operations and maintenance training program for employees whose construction, operations or maintenance job functions may impact stormwater quality. The training addresses the importance of protecting water quality, the requirements of the permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training will be provided as needed to address changes in procedures, techniques, or requirements. Training is documented.

i) Stormwater Pollution Prevention Plans

The City has developed and implemented a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities that it owns and/or operates. The City's applicable facilities and current status of SWPPPs or similar documents for each are summarized in the following table. While not all of the documents listed are specifically SWPPPs, they all have relevance to the prevention, containment, and handling of substances that could result in the pollution of municipal stormwater. The City has SWPPPs for all facilities that are required to have them.

Table 1: Status of Stormwater Pollution Prevention Plans for City Facilities

Facility Name	Facility Use	Document	Status

Sanitary and Storm Sewer Collection System	Collection of sanitary and combined sewerage	"Illicit Discharge Detection and Elimination (IDDE) Response Policy"	Most Recent Revision: December 2014
Corp Yard	Maintenance, equipment & materials storage for water, wastewater, & streets utilities	"City of Port Angeles Maintenance Facility Stormwater Pollution Prevention Plan"	Updated February 2016
Port Angeles Wastewater Treatment Plant	Wastewater treatment plant (secondary treatment)	"City of Port Angeles Wastewater Treatment Plant SWPPP"	December, 2001
Regional Transfer Station	Solid waste transfer station (previously a landfill)	"Port Angeles Transfer Station/ Landfill Stormwater Pollution Prevention Plan"	Updated July 2018
Electric Utility Handling & Warehouse Building	Electric transformer storage and handling	"Spill Prevention Control and Countermeasure Plan"	Completed November 2003
CSO Facilities	Combined sewer collection, storage, and conveyance, and discharge	"Amendment to the 2006 CSO Facilities Reduction Plan"	Updated August 2012

Several of these facilities are regulated by their own environmental permits. See Table 2 below for a listing of individual stormwater or other related permits.

Table 2: Existing Individual Stormwater and Stormwater-Related Permits

Facility Name	Type of Permit	Permit Number
Regional Transfer Station	NPDES General Permit for Stormwater Discharges Associated with Industrial Activities	WAR005613
City of Port Angeles Municipal Solid Waste Facility	Solid Waste Handling Facility Permit	SLW98-0001
Port Angeles Wastewater Treatment Plant/CSO Facilities	NPDES Waste Discharge Permit	WA0023973

In addition, there are approximately twenty non-City-owned facilities in Port Angeles that are regulated by NPDES General Industrial Stormwater Discharge Permits. Because these facilities are regulated directly by the Department of Ecology, their individual stormwater collection infrastructure is not considered part of the municipal stormwater system, although in some cases they do discharge into it.

j) Recordkeeping

The City will maintain records of inspections and maintenance and repair activities conducted.

k) Stormwater NPDES and Capital Needs Assessment

The City retained Herrera Environmental Consultants to complete a comprehensive study of the Stormwater Utility. This project utilized Ecology grant funding to develop a functional resourcing and financial analysis of the staffing, equipment and funding mechanisms necessary to meet the requirements outlined in the NPDES Phase II Municipal Stormwater Permit. Additionally, the analysis included a capital facilities program (CFP) component defining a range of funding support options for CFP projects. The analysis assessed the gap between current resources and the resources necessary to meet operating costs and capital costs under the current (2013-2018) Phase II Permit regulatory requirements. In 2012, the City's stormwater rate was $6 per month for each equivalent residential unit (ERU). This analysis showed a funding gap and resulted in sequential stormwater rate increases to cover necessary expenses:

-Effective January 2018. $16.87 per month for each ERU

This revenue is not sufficient to implement all projects in the 6 year Capital Facilities Plan. The City plans to evaluate the Stormwater Utility revenues and obligations again in 2019 to seek public input.

Documents Referenced

"City of Port Angeles Maintenance Facility SWPPP" City of Port Angeles, 2016

"Amendment to the 2006 CSO facilities Reduction Plan" City of Port Angeles, June 2007

"Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments" Center for Watershed Protection, October 2004

"Port Angeles Transfer Station/ Landfill Stormwater Pollution Prevention Plan" City of Port Angeles, July 2018

"Spill Prevention Control and Countermeasure Plan" (Electric Utility) City of Port Angeles, November 2003

"Western Washington Phase II Municipal Stormwater Permit" State of Washington Department of Ecology, Issued August 1, 2013 and Modified on January 2015.

"Washington State Department of Ecology 2014 Stormwater Management Manual for Western Washington"

"City of Port Angeles Municipal Code Title 13.63, Stormwater Ordinance" last modified in December 2016

"City of Port Angeles Urban Service Standards and Guidelines" last modified in 2017

"Stormwater NPDES and Capital Needs Assessment" Prepared for City of Port Angeles December 2012

SWMP Appendix A
Public Outreach Plan Activity Matrix

2019 Planned Activities / Events	Location(s)	City Personnel	Target Audience	Contact Information (other groups)	Subject Area(s)
Library "Science, Technology, Engineering & Math Career Day	Port Angeles Library	Vince McIntyre	5th grade Port Angeles students	vmcintyre@cityofpa.us	LID - Watersheds, Rain gardens, pervious pavement, pollution prevention
KONP Home Show	Port Angeles High School Gymnasium	Lucio Baack, Vince McIntrye	General public	lbaack@cityofpa.us	IDDE Program, LID Rain Garden Rebate Program, Natural Yard Care
County Fair	Port Angeles	Vince McIntyre, Lucio Baack, Bob Kajfasz	General public	vmcintyre@cityofpa.us	Focusing on pet waste awareness, natural yardcare.
Utility Bill Mailer	Port Angeles	Vince McIntyre	General Public	vmcintyre@cityofpa.us	LID, Pollution Prevention Hotline
Business Stormwater Education	Site visits to businesses within the City	Rachel Bowen	Local businesses within the City	rbowen@cityofpa.us	IDDE, Pollution Prevention
Local Cinemas	Deer Park	Vince McIntyre	General public	vmcintyre@cityofpa.us	Pollution Prevention
Stormwater Runoff Controls Workshop	Port Angeles	Vince McIntyre	Landscapers/ Contractors	vmcintyre@cityofpa.us	Runoff Development Controls, how to use Developer Tool Kit

SWMP Appendix B
Illicit Discharge Detection and Elimination (IDDE) Response Policy

ILLICIT DISCHARGE DETECTION and ELIMINATION (IDDE) RESPONSE
PW- 0610

1.0 PURPOSE:

1.1 To establish a uniform procedure for IDDE response within the City of Port Angeles.

2.0 ORGANIZATIONS and SPECIFIC POSITIONS AFFECTED:

2.1 Public Works & Utilities Department staff
2.2 Key response personnel in order of response to pollution report:

1.	Stormwater Lead Worker		Cell: 461-5174
2.	Streets Superintendent	Office: 417-4825	Cell: 912-0260
3.	Assistant Stormwater Engineer	Office: 417-4720	
4.	Stormwater Engineer	Office: 417-4811	Cell: 460-3456
5.	Source Control Coordinator	Office: 417-4693	Cell: 808-6930
6.	Deputy Director of Public Works	Office 417-4803	Cell: 808-3089

3.0 POLICY:

3.1 This policy will implement an ongoing program to detect and address non-stormwater discharges, including spills, and illicit connections into the City's municipal separate storm sewer system. It shall be followed throughout the Public Works and Utilities organization. The Stormwater Engineer is the authorized department representative for the implementation of this program and the maintenance of this policy.

4.0 SAFETY ASPECTS:

4.1 Follow all safety measures as promulgated in the Public Works and Utilities Department Accident Prevention Plan.
4.2 Do not enter private property without permission (If the property owner is unwilling to allow access, and access is necessary for the investigation, contact the legal department or stormwater engineer for assistance).

5.0 DEFINITIONS:

5.1 Illicit discharge: any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.
5.2 Small non-hazardous spills: Under 5 gallons of oil based products, paints or automotive fluids.
5.3 Large non-hazardous spills: Over 5 gallons of oil based products, paints or automotive fluids.
5.4 Hazardous or very large spills: Spills over 20 gallons of any chemical, flammable, or unknown substance. * Gasoline is very flammable. Treat a gasoline spill of over five gallons as a hazardous spill.

5.5 A discharge which could constitute a threat to human health, welfare, or the environment: Large non-hazardous spills, hazardous or very large spills, or discharges exceeding thresholds in Section 7.3(3),

5.5 Dangerous system: A flooded stream system or a flooded large diameter culvert or manhole.

6.0 EQUIPMENT FOR RESPONSE PERSONNEL:

Required Equipment:

- Appropriate PPE (e.g., nitrile gloves, glasses, reflective vests, etc.)
- This SOP
- Hand Sanitizer

Other Equipment As Needed:

- System map
- Spill trailer or spill kit
- Sterile sample bottles

7.0 PROCEDURES:

7.1 Illicit Discharge Contact Methods

a. The official number for the public or City staff to report suspected illicit discharges is:

Public Works Emergency and Afterhours Phone Number	360-417-4745

b. Illicit discharges can also be reported by email using the following address:

illicit-discharge@cityofpa.us

c. Discharge reporting numbers and email addresses shall be posted on the City website.

d. During normal working hours, the PWU clerical staff will receive calls and emails. For each call or email a CityWorks Service Request will be created and populated and forwarded to the key response personnel. . PWU clerical staff will be responsible for maintaining the official record of all such contacts. The report of an illicit discharge will also be directly made to one of the following staff personnel in the order listed:

- Stormwater Leadworker
- Streets Superintendent
- Deputy Director of Operations
- Stormwater Engineer
- Source Control Coordinator

In addition, email reports shall be automatically distributed to all of the personnel

listed above.

e. After normal working hours, the PWU on-call staff member will be responsible for handling the call, filling out the Illicit Discharge Contact Form (Appendix 8.1), doing the initial visual inspection of the incident, making initial containment if appropriate, and notifying management and requesting additional support when necessary. All recorded information shall be forwarded to the personnel listed in paragraph (d) no later than 08:00 A.M. the following workday.

f. Illicit discharges or spills observed by City field personnel during the course of work should be immediately reported to their direct supervisor. In addition, City field personnel shall report the incident using one of the methods listed above to ensure that the key stormwater personnel are notified.

7.2 Priority Area Identification and Reconnaissance

a. The Stormwater Engineer, shall be responsible for conducting a process for locating priority areas likely to have illicit discharges and/ or source control violations. This shall include at a minimum evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in spills.

b. The lead organization for illicit discharge identification and field reconnaissance response shall be Operations Division, with the primary role for managing it being the Streets Section Superintendent. The Engineering Division shall provide technical support where appropriate. The responsibilities include:

(1) At a minimum, visually inspect all priority outfalls in the yearly Field Screening basin during dry weather conditions. Priority outfalls will be as designated by the Stormwater Engineer after consultation with the Streets Division Superintendent. Annually inspect and document the condition, sediment loading, blockages, and any other abnormal conditions for all priority culverts/outfalls.

(2) In addition, during dry weather, conduct stream reconnaissance for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges. Stream reconnaissance will be conducted on one of the City's six stream systems or shoreline annually within the Port Angeles City limits.

(3) Flows suspected of containing illicit discharges due to the presence of odors, colors or sheens shall be tested. Testing will be done either in the field by trained personnel or by the COPA WW Lab. Test parameters include but are not limited to ammonia, surfactants, flouride, fecal coliform, pH, , turbidity, and temperature, . Testing will be performed by the lab within four hours of sample delivery, or by 10:00 am the next day, if the sample is delivered to the lab after 2:00 pm on any business day or on a weekend. Screening for illicit connections shall be conducted using: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004.

(4) The results of the inspections and testing shall be documented and maintained on the Spill (Illicit Discharge Characterization) Field Sheet in Appendix 8.5 and input into the City's maintenance tracking software and GIS system to allow tracking of outfall locations, inspection dates, chemical tests conducted, and follow-up procedures implemented to correct any detected illicit discharge. The physical condition of the outfall shall also be noted during the inspections. Illicit discharge data will be used in the preparation of the annual report for the permit.

c. Results from the program shall be compiled and analyzed by the Stormwater Engineer, who may request additional requirements be done to achieve the overall objectives of this element.

7.3 Illicit Discharge Response, Characterization, and Tracing

a. The lead organization for illicit discharge response shall be Operations Division, with the primary role for managing being the Streets Division Superintendent. The Engineering Division shall provide technical support where appropriate.

b. If the material is unknown, chemical or hazardous in nature contact the fire department.

c. Containment. The qualified onsite responding personnel shall immediately assess a spill and determine if it is containable, recoverable, or neither. Attempt to contain and recover the material to the maximum extent practical using the procedure below, if feasible, safe to do so and the appropriate equipment is available. Block the nearby storm drains, so that the area impacted is minimized. If the appropriate equipment is not available, the material is unknown, chemical, or hazardous, wait for properly trained personnel to contain the materials.

<u>Small non-hazardous spills</u>

- Use a rag, damp cloth, or absorbent materials for general cleanup of liquids
- Use brooms of shovels for the general cleanup of dry materials
- If water is used, it must be collected and properly disposed of. The wash water cannot be allowed to enter the storm drain
- Dispose of any waste materials properly
- Clean or properly dispose of any equipment used to clean the spill

<u>Large non-hazardous spills</u>

- Use absorbent materials for general clean up of liquids
- Use brooms, shovels or street sweepers for the general cleanup of dry materials
- If water is used, it must be collected and properly disposed of. The wash water cannot be allowed to enter the storm drain
- Clean or dispose of any equipment used to clean up the spill properly

d. F<u>or hazardous or very large spills, chemical spills, or spills of unknown materials immediately contact the Fire Department, followed by the Streets Division Superintendent or Deputy Director of Operations.</u>

e. Illicit discharges indicated by the presence of odors, colors or sheens shall be tested. Testing will be done either in the field by trained personnel or by the COPA WW Lab.. Test parameters include but are not limited to ammonia, surfactants, flouride, fecal coliform, pH, turbidity, and temperature. Screening for illicit connections shall be conducted consistent with the Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004. The following additional guidance pertains:

(1) The spill or illicit discharge will be characterized by the key response personnel, by the stormwater field crew or by on call staff if the discharge occurs after hours. The discharge will be characterized using Appendix 8.4 (Spill Characterization Field Sheet), visual observation and field testing as an unlikely, potential, suspect or obvious discharge. Characterization (or referral to the appropriate agency) shall occur within 7 days of any complaints, reports or monitoring information that indicates a potential illicit discharge, or shall occur immediately on the next business day for discharges deemed to be emergencies, urgent or severe.

(2) Take a sample of the material in a sterile collection bottle and take the sample to the COPA WW lab for analysis.

(3) The sample results should be compared to the following thresholds to determine if further IDDE investigation is necessary:

Indicator	Threshold	Comments
pH	<5 or > 10	Good indicator for industrial discharge
Ammonia	>5 mg/L	Good indicator of sanitary sewage, main ingredient in fertilizers
Detergents/ Surfactants	>1 mg/L	Excellent indicator of wash water
Fecal Coliform	>2000 CFU/100mL (Dry Weather) or >5000 CFU/100mL (Wet Weather)	Human sources include failing septics, wastewater leaks or cross-connections. Animal sources include pets, livestock, and wildlife.

f. Verifying and tracing the discharge shall be considered the initiation of the investigation and shall be performed within 21 days of a discharge characterization, unless tracing requires entry into a dangerous system, as defined in 5.5. If a dangerous system exists, verifying and tracing shall be performed when low flow conditions in the stormwater or stream system resume. The Stormwater Engineer shall determine when a dangerous system exists and shall document the delay and set the date to resume the investigation. In all cases, initial investigation shall be performed within 9 months of the discharge characterization. If the tracing

confirms an illicit connection, the connection shall be removed using the City's enforcement authority within 6 months.

Procedures for tracing the source of an illicit discharge include visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures. The equipment and methods described in "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments", Chapter 13 shall be used to trace the spill or illicit discharge to its source. The following additional guidance pertains:

(1) Review information collected when illicit discharge was initially identified (Spill Characterization Field Sheet).

(2) Consider storm drainage basin and land uses.

(3) Revisit outfall to verify reported discharge is still present.

(4) Contact COPA lab for determination of probable source.

(5) Survey the general area / surrounding properties to identify potential sources of the illicit discharge.

(6) Investigate illicit discharges using visual inspections of upstream points.

(7) Utilize M&O resources and equipment as required (traffic control, video truck, additional staff).

(8) Document investigation results for NPDES Permit compliance.

(9) If source cannot be found, add the location to a future inspection program.

g. Results shall be documented and reported to the Deputy Director of Operations and the Stormwater Engineer.
h. The Stormwater Engineer shall be responsible for administering the City's response to violations and ensuring consistency with City ordinances. All violation letters to property owners will be signed by the City Engineer level or higher. Technical assistance for eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated will be coordinated by the Stormwater Engineer.
i. The IDDE Incident Closure From will be completed by the personnel responsible for investigating the specific IDDE. This form is to be reviewed by the Stormwater Engineer. When the form is completed by operations personnel it shall be signed by the Deputy Director of Operations unless a violation letter has been issued, whereby the City Engineer shall sign. When the form is completed by engineering personnel it shall be signed by the City Engineer.

7.4 Regulatory Reporting Requirements

a. With in 24 hours all spills/ discharges which could constitute a threat to human health, welfare, or the environment shall be reported to Ecology regional office (Appendix 8.1).

b. Immediately report spills or discharges which might cause bacterial contamination of marine waters such as discharges resulting from broken sewer line to Ecology regional office, and Department of Health, Shellfish Program. (Appendix 8.1).

c.. Immediately report discharges of any size oil or other hazardous substance to Ecology and Washington Emergency Management Division (Appendix 8.1).

d. Reportable spills/illicit discharges shall be reported to the appropriate regulatory agencies by the following personnel in the order listed:

- Stormwater Leadworker
- Streets Superintendent
- Deputy Director of Operations
- Stormwater Engineer
- Source Control Coordinator

Reporting requirements are detailed in Appendix 8.1. If none of the personnel listed above can be reached, contact your supervisor for guidance. The Pollution Investigation Checklist shall be followed and returned to the Stormwater Engineer no later than 08:00 A.M. the following workday. If there is any doubt as to whether a spill is reportable, contact the appropriate regulatory agency for clarification.

7.5 Field Screening

Each year field screening will be performed on average of 12% of the MS4. Percent of MS4 will be measured based on the combination of the number of catch basins and geographic area within City limits. Detection, response and elimination methods will be used as outlined in this policy.

7.6 Public Education

The Stormwater Engineer shall conduct a program to inform City employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Acceptable methods to accomplish this provision include direct training, contract training, brochures, internet, mailers, etc.

The Source Control Coordinator will conduct site visits to target businesses to educate them on the proper requirements for stormwater discharges.

7.7 IDDE Assessment

The Stormwater Engineer shall be responsible for program evaluation and assessment, including tracking the number and type of illicit discharges, including spills identified; inspections made; and any feedback received from public education efforts. A summary of this information shall be included in the City's annual report.

7.8 Training for City Staff

The Streets Division Superintendent will be responsible for arranging for or conducting training requirements for the Streets and Stormwater workforce as well as on-call personnel.

The Stormwater Engineer will be responsible for arranging for or conducting

training for the Engineering Division staff and clerical staff for requirements needed to implement the policy contained herein. The following topics will be covered where appropriate:

TOPIC	TARGET AUDIENCE
Proper chain of contact for initial spill reporting	Clerical staff / on-call staff
Properly filling out the Spill Characterization Field Sheet and Pollution Investigation Checklist.	Field crews / on-call staff
Spill containment and response	Field crews / on-call staff
Simulated spill drill response, containment, and cleanup.	Stormwater Engineer, field crews, on-call staff, clerical staff
IDDE Characterization and Tracing	Stormwater Engineer, Streets Superintendent, Stormwater Leadworker, Deputy Director of Operations, Field Staff, On Call Staff
Requirements in this SOP	Stormwater Engineer, Streets Division, on-call staff, Clerical Staff

8.0 APPENDIX:

8.1 Combined Contact & Pollution Investigation Checklist
8.2 Public Works & Utilities Emergency Call List for Spill/ Pollution Incidents
8.3 Spill Response (Discharge Type) Chart
8.4 Spill Characterization Field Sheet and Identification Figures
8.5 Stormwater Sampling Checklist 8.6 IDDE Incident Closure Form

APPENDIX 8.1

COMBINED CONTACT & POLLUTION INVESTIGATION CHECKLIST

This checklist is to be used as an aid in preparing your report and included with the report when forwarded to the Public Works and Utilities Department.

SPILL INVESTIGATION

1. Date and time notification received or spill discovered _____
2. Name of City employee that discovered/reported the spill _____
3. If spill reported by public, name of staff reported to: _____
   By: _____
   (Reporting Citizen's Name) (Address) (Phone #)
4. Call to Key Response Personnel received by _____
   (This is the key response person who will report to the incident)
5. Notification of Authorities: (See PW 0808_04 Emergency Call List)
   Required when a discharge or spill could constitute a threat to human health, welfare, or the environment.

Oil Spill	Phone No.	Name	Date	Time
(Petroleum or Hazardous Materials)				
WS Emergency Management Division (24hrs)-**Immediate**	1-800-258-5990	_____		
National Response Center-**Immediate**	1-800-424-8802	_____		
Ecology Regional Office-SW-**24 Hrs**	360-407-6300	_____		
City of PA Stormwater Eng.-**24 Hrs**	360-460-3456	_____		

Bacterial-				
WWTP or Collections System Failure				
Ecology Regional Office-SW-**Immediate**	360-407-6300	_____		
WS DOH Shelfish Protection-**Immediate**	360-236-3330	_____		
(If no answer)	360-786-4183	_____		
Clallam County Enviro Health-**24 Hrs**	360-417-2415	_____		
City of PA Stormwater Eng.-**24 Hrs**	360-460-3456	_____		

ERTS # _____

6. Spill/ Discharge Scene:
   a) Location/Address_____
   b) Time of arrival _____
7. Type and Amount of pollutant and discharge _____
8. In the judgment of the qualified onsite personnel, is the spill Containable? Recoverable? Or Neither? (Circle)

Initial Containment Measures _____

_____

9. Ultimate discharge:
   a) Date/Time discharge terminated_____
   b) Date/Time cleanup commenced _____
   c) Final Cleanup measures _____
   d) Date/Time cleanup completed _____
10. Additional remarks (as necessary) _____

_____

_____

Signature _____ Title _____

APPENDIX 8.2
PUBLIC WORKS & UTILITIES
EMERGENCY CALL LIST

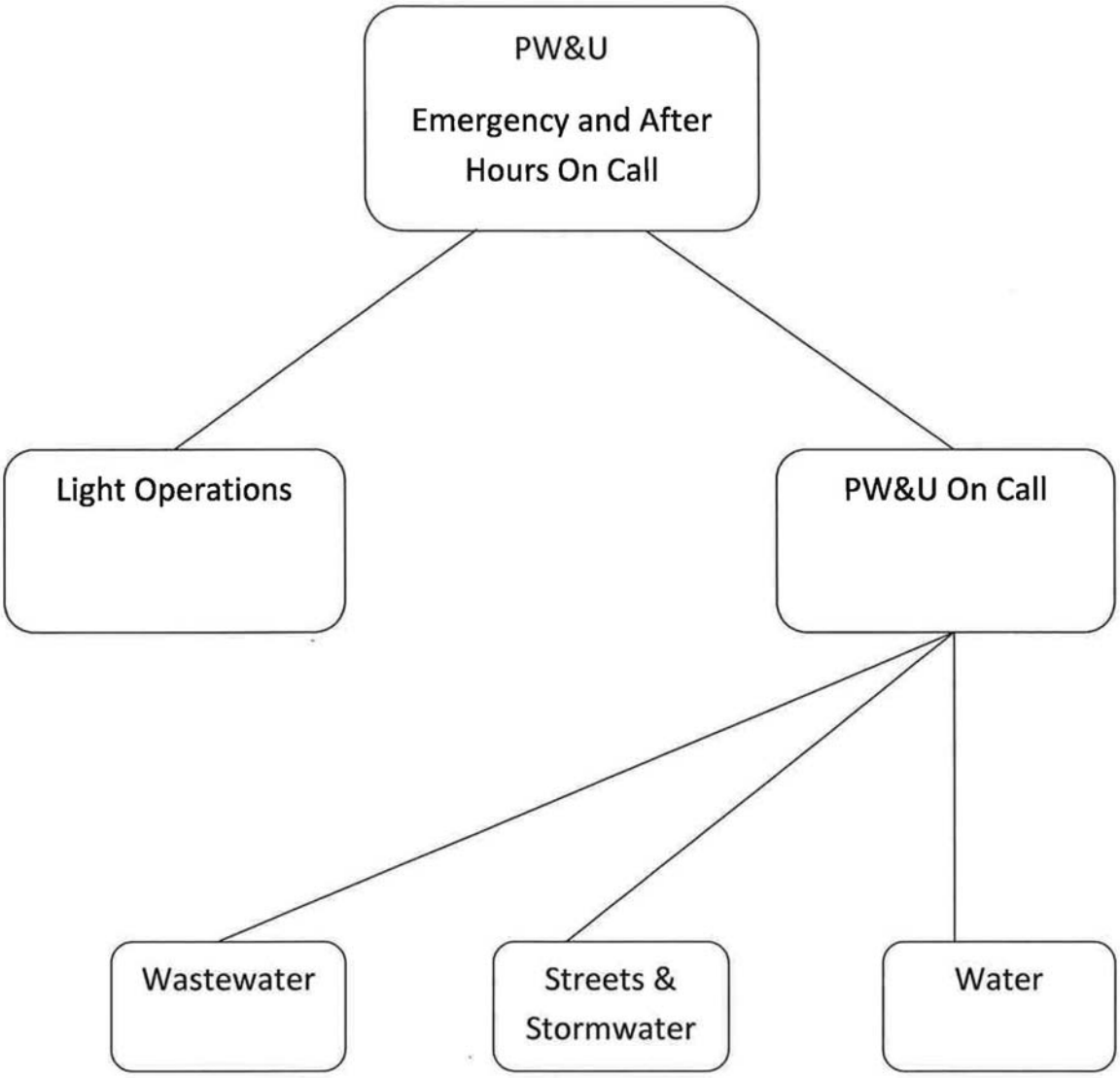
FOR POLLUTION INCIDENTS

The following phone/checklist is for the investigation and notification of the proper agencies of a pollution incident. By providing the applicable information, an accurate, orderly investigation and record will be assured. This checklist is to be used as an aid in preparing a final report and shall be included with the report when forwarded to the Public Works & Utilities Director.

City of Port Angeles	Contact Person	Phone Nos.
Street/Stormwater Division	1) Eric Wheatley	Work: 360-417-4825 Cell: 360- 912-0260
	2) Mike Brockopp	Work: 360-565-3854 Cell: 360-461-5174
	3) Guy Wehr	Work: 360-417-4827 Cell: 360-460-9676
	4) Street/Stormwater On-Call	Cell: 360-477-1260
Stormwater Engineer	Jonathan Boehme	Work: 417-4811 Cell: 460-3456
Wastewater Collection	1) Jeff D. Young	Work: 360-417-4845 Cell: 360-461-1044
	2) Jay Divelbiss	Work: 360-417-4845 Cell: 360-460-3976
Wastewater Treatment Plant	1) Jeff D. Young	Work: 360-417-4845 Cell: 360-461-1044
	2) Gary Richmond	Work: 360-417-4845 Cell: 360-808-4757
	3) WWTP on-call	Cell: 360461-0111
Deputy Director of Operations	Mike Puntenney	Work: 360-417-4803 Cell: 360-808-3089
Fire Department	1) Coral Wheeler	Work: 360-417-4650 Dispatch: 360-417-4797

Agency	Contact Person	Phone Nos.
WS Department of Ecology Water Quality, SW Regional Office. *Notification shall be provided not later than 24 hours from the time the Permittee becomes aware of the circumstances. If this information is provided orally, a written submission covering these points shall be provided within five (5) days of the time the Permittee becomes aware of the circumstances, unless the Department waives or extends this requirement on a case-by-case basis.*	24 Hour Spill Reporting	360-407-6300
WS Department of Health Shellfish/Marine Division	Dept. of Health Shellfish Program – Appropriate Person: Mark Toy	360-236-3306 Page: 360-786-4183 (After hours only)
Clallam County Department of Health	Andy Brastad	360-417-2415 Fax: 417-2313
Feiro Marine Lab (Water intake at mouth of Peabody Creek)		360-417-6254
Lower Elwha Klallam Tribe	Matt Beirne	360-457-4012 ext 12
Port of Port Angeles	Randy Brackett 24 Hours	360-417-3446 360-457-1909

APPENDIX 8.3


PW&U
Emergency and After Hours On Call
Light Operations
PW&U On Call
Wastewater
Streets & Stormwater
Water

APPENDIX 8.4 - SPILL (ILLICIT DISCHARGE) CHARACTERIZATION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Incident Date / Today's Date:		Time (Military):	
Investigators:		Form Completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- ☐ Other:_____
- ☐ Known Industries: _____

Notes (e.g., origin of outfall, suspected violator information, if known):

Section 2: Outfall Description – Skip this section if spill occurs in the public right of way or on private property

LOCATION	MATERIAL	SHAPE		DIMENSION (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	**In Water:** ☐ No ☐ Partially ☐ Fully **With Sediment:** ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ Rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes	☐ No	***If No, Skip to Section 5***		
Flow Description (If Present)	☐ Trickle	☐ Moderate	☐ Substantial		

Section 3: Quantitative Characterization - Skip this section if spill occurs in the public right of way or on private property

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐ Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐ Flow #2	Flow depth		In	Tape Measure
	Flow width	_____' _____"	Ft, In	Tape Measure
	Measured length	_____' _____"	Ft, In	Tape Measure
	Time of travel		S	Stop Watch
Temperature – field measure			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			Mg/L	Test strip – or lab

Section 4: Physical Indicators for Flowing Spills or Illicit Discharges Only
Are physical indicators present in the flow? ☐ Yes ☐ No (*If No, Skip to Section 5*)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/Sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See Severity	☐ 1 – Slight cloudiness	☐ 2 - Cloudy	☐ 3 - Opaque
Floatables – Does Not Include Trash!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Spills or Illicit Discharges
Are physical indicators that are not related to flow present? ☐ Yes ☐ No (*If No, Skip to Section 6*)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Spill or Illicit Discharge Characterization

☐ Unlikely	☐ Potential (presence of two or more indicators)	☐ Suspect (one of more indicators with a severity of 3)	☐ Obvious

Section 7: Data Collection –Two samples must be taken for lab analysis. Test parameters are in 7.2 b 3 and 7.3 e

1. Sample for the lab?	☐ Yes	☐ No		
2. Collected from:	☐ Flow	☐ Pool		
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM	☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Figure 8.4.1: Characterizing Submersion and Flow

Spill Characterization Field Sheet Section 2

If discharge is discovered in a pipe or open drainage ditch, fill in this section using Figure 8.4.1 above to determine the level of flow and submergence. If the discharge is discovered on the pavement or in a curb and gutter, skip to the bottom of Section 2 and determine if flow is present or not.

Spill Characterization Field Sheet Section 3

Use this section if the discharge is coming from a pipe or ditch. If you have the Horiba water quality meter, test for temperature and pH and record the results. Ammonia is one of the parameters that will be tested by the City lab.

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Figure 8.4.2: Section 3 of the ORI Field Sheet

Spill Characterization Field Sheet Section 4

Odor

Section 4 asks for a description of any odors that emanate from the outfall and an associated severity score. Since noses have different sensitivities, the entire field crew should reach consensus about whether an odor is present and how severe it is. A severity score of one means that the odor is faint or the crew cannot agree on its presence or origin. A score of two indicates a moderate odor within the pipe. A score of three is assigned if the odor is so strong that the crew smells it a considerable distance away from the outfall.

Tip

Make sure the origin of the odor is the outfall. Sometimes shrubs, trash or carrion, or even the spray paint used to mark the outfall can confuse the noses of field crews.

Color

The color of the discharge, which can be clear, slightly tinted, or intense is recorded next. Color can be quantitatively analyzed in the lab, but the spill characterization field sheet only asks for a visual assessment of the discharge color and its intensity. The best way to measure color is to collect the discharge in a clear sample bottle and hold it up to the light (Figure 8.4.3).

Field crews should also look for downstream plumes of color that appear to be associated with the outfall. Figure 8.4.4 illustrates the spectrum of colors that may be encountered during a spill investigation, and offers insight on how to rank the relative intensity or strength of discharge color. Color often helps identify industrial discharges.

Turbidity

The spill characterization field sheet asks for a visual estimate of the turbidity of the discharge, which is a measure of the cloudiness of the water. Like color, turbidity is best observed in a clear sample bottle, and can be quantitatively measured using field probes. Crews should also look for turbidity in the plunge pool below the outfall, and note any downstream turbidity plumes that appear to be related to the outfall. Field crews can sometimes confuse turbidity with color, which are related but are not the same. Remember, turbidity is a measure of how easily light can penetrate through the sample bottle, whereas color is defined by the tint or intensity of the color observed. Figure 8.4.4 provides some examples of how to distinguish turbidity from color, and how to rank its relative severity. Also, under high intensity or long duration rainfall, Port Angeles streams will be turbid from natural processes upstream. If turbid water is encountered in the stream, investigate waters upstream to determine the source.

Figure 8.4.3: Using a sample bottle to estimate color and turbidity

Color: Brown; Severity: 2
Turbidity Severity: 2

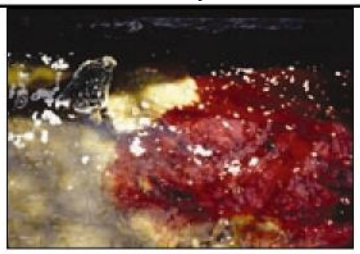
Color: Blue-green; Severity: 3
Turbidity Severity: 2

Highly Turbid Discharge
Color: Brown; Severity: 3
Turbidity Severity: 3

Sewage Discharge
Color: 3
Turbidity: 3

Paint
Color: White; Severity: 3
Turbidity: 3

Industrial Discharge
Color: Green; Severity: 3
Turbidity Severity: 3



Blood
Color: Red; Severity: 3
Turbidity Severity: None

Failing Septic System:
Turbidity Severity: 3

Turbidity in Downstream Plume
Turbidity Severity: 2
(also confirm with sample bottle)

High Turbidity in Pool
Turbidity Severity: 2
(Confirm with sample bottle)

Iron Floc
Color: Reddish Orange; Severity: 3
(Often associated with a natural source)

Slight Turbidity
Turbidity: 1
(Difficult to interpret this observation; May be natural or an illicit discharge)

Construction Site Discharge
Turbidity Severity: 3

Discharge of Rinse from Floor Sanding
(Found during wet weather)
Turbidity Severity: 3

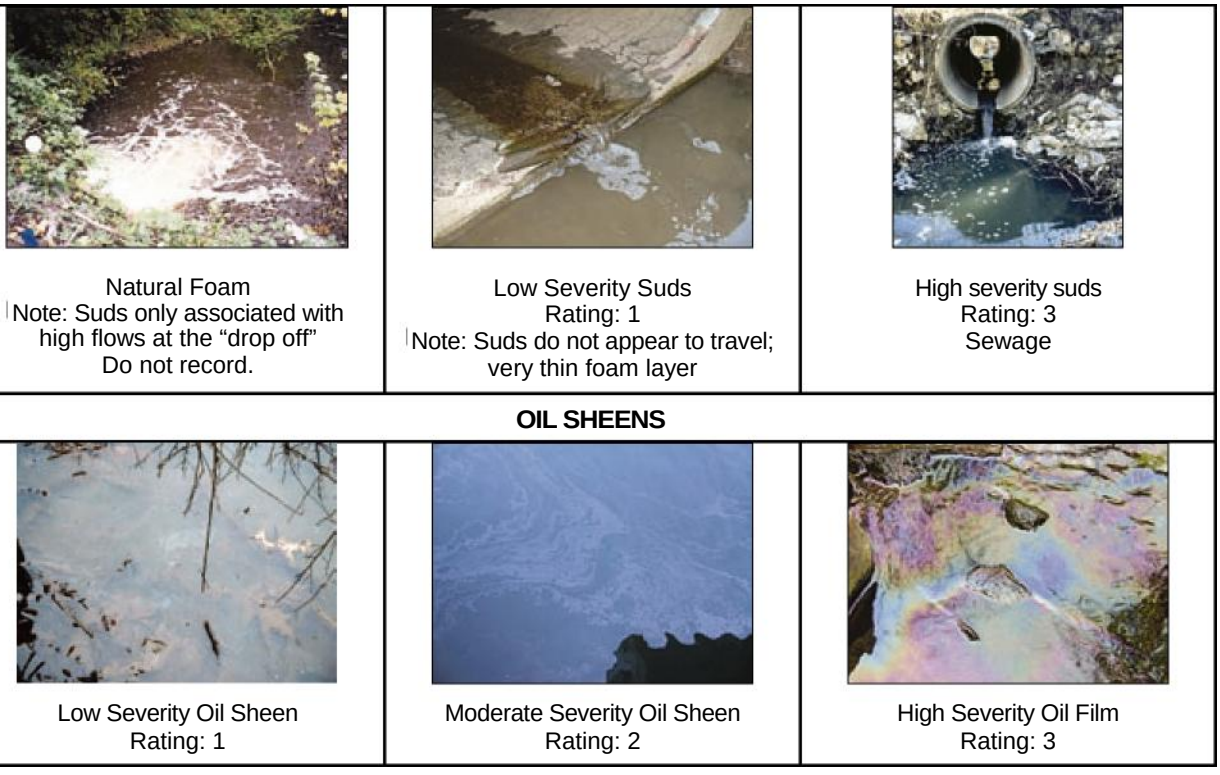
Figure 8.4.4: Interpreting Color and Turbidity

Floatables

The last sensory indicator is the presence of any floatable materials in the discharge or the plunge pool below. Sewage, oil sheen, and suds are all examples of floatable indicators; trash and debris are generally not in the context of the Outfall Reconnaissance Inventory (ORI). The presence of floatable materials is determined visually, and some guidelines for ranking their severity are provided in Figure 8.4.5, and described below.

If you think the floatable is sewage, you should automatically assign it a severity score of three since no other source looks quite like it. Surface oil sheens are ranked based on their thickness and coverage. In some cases, surface sheens may not be related to oil discharges, but instead are created by in-stream processes, such as shown in Figure 8.4.6. A thick or swirling sheen associated with a petroleum-like odor may be diagnostic of an oil discharge.

Suds are rated based on their foaminess and staying power. A severity score of three is designated for thick foam that travels many feet before breaking up. Suds that break up quickly may simply reflect water turbulence, and do not necessarily have an illicit origin. Indeed, some streams have naturally occurring foams due to the decay of organic matter. On the other hand, suds that are accompanied by a strong organic or sewage-like odor may indicate a sanitary sewer leak or connection. If the suds have a fragrant odor, they may indicate a sanitary sewer leak or connection. If the suds have a fragrant odor, they may indicate the presence of laundry water or similar wash waters.



SUDS

Figure 8.4.5: Determining the Severity of Floatables

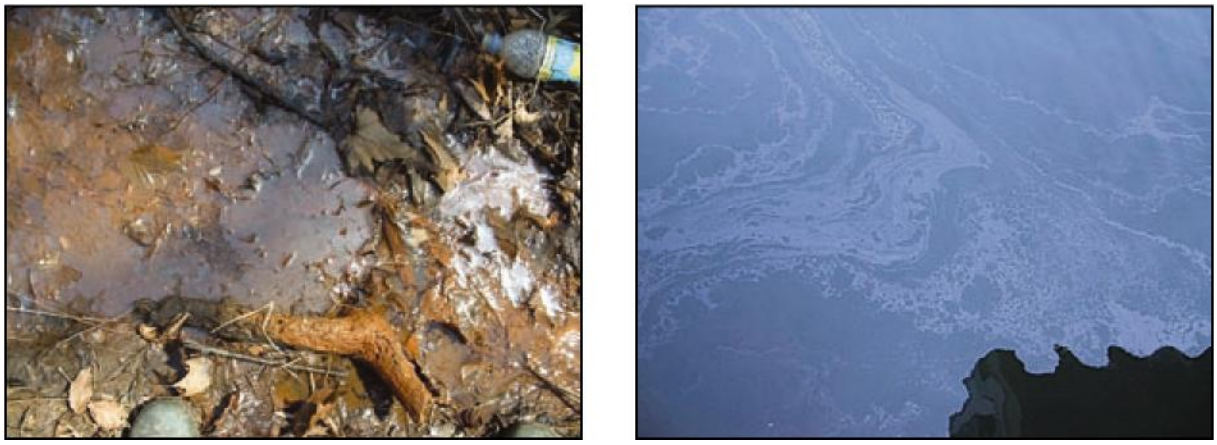


Figure 8.4.6: Synthetic versus Natural Sheen (a) Sheen from bacteria such as iron floc forms a sheet-like film that cracks if disturbed (b) Synthetic oil forms a swirling pattern

Sample Collection Field Sheet Section 5

Section 5 of the ORI field sheet examines physical indicators found at both flowing and non-flowing outfalls that can reveal the impact of past discharges. Physical indicators include outfall damage, outfall deposits or stains, abnormal vegetation growth, poor pool quality and benthic growth on pipe surfaces. Common examples of physical indicators are shown in Figures 8.4.7 and 8.4.8. Many of these physical conditions can indicate that an intermittent or transitory discharge has occurred in the past, even if the pipe is not currently flowing. Physical indicators are not ranked according to their severity, because they are often subtle, difficult to interpret and could be caused by other sources. Still physical indicators can provide strong clues about the discharge history of a storm water outfall, particularly if other discharge indicators accompany them.

Bacterial growth at this outfall indicates nutrient enrichment and a likely sewage source.

This bright red bacterial growth often indicates high manganese and iron concentrations. Surprisingly, it is not typically associated with illicit discharges.

Sporalitis filamentous bacteria, also known as “sewage fungus” can be used to track down sanitary sewer leaks.

Algal mats on lakes indicate eutrophication. Several sources can cause this problem. Investigate potential illicit sources.

Illicit discharges or excessive nutrient application can lead to extreme algal growth on stream beds.

The drainage to this outfall most likely has a high nutrient concentration. The cause may be an illicit discharge, but may be excessive use of lawn chemicals.

This brownish algae indicates an elevated nutrient level.

Figure 8.4.7: Interpreting Benthic and Other Biotic Indicators

Reddish staining on the rocks below this outfall indicate high iron concentrations.

Toilet paper directly below the storm drain outlet.

Watershed Protection??

Trash is not an indicator of illicit discharges, but should be noted.

Staining at the base of the outfall may indicate a persistent, intermittent discharge.

Excessive vegetation may indicate enriched flows associated with sewage.

Brownish stain of unclear origin. May be from degradation of the brick infrastructure.

Cracked rock below the outfall may indicate an intermittent discharge.

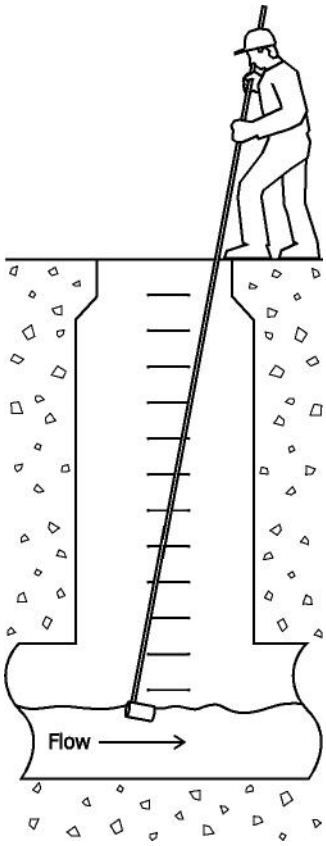
Poor pool quality. Consider sampling from the pool to determine origin.

Figure 8.4.8 **Typical Findings at Both Flowing and Non-Flowing Outfalls**

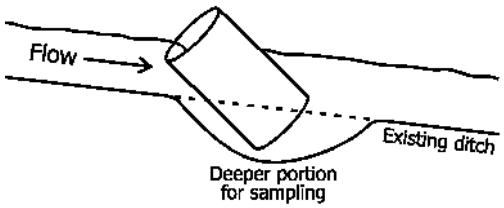
Appendix 8.5 – Stormwater Sampling Checklist

General Sampling Techniques

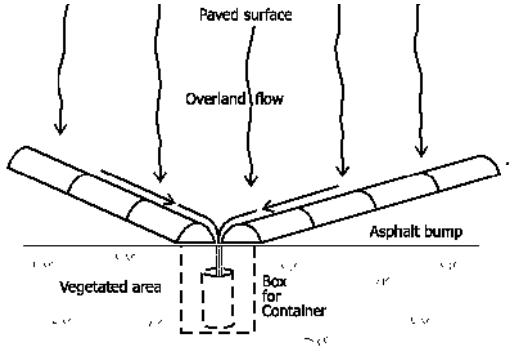
- If possible, notify the wastewater lab ahead of an illicit discharge investigation, a stream survey or a priority outfall survey so they will be aware that timely testing may be required.
- Collect two sample bottles for each sample site from the lab. Lab note: for fecal coliform samples: Bacteria sample containers should be 250-mL or 500mL pre-autoclaved (sterilized) polypropylene bottles with aluminum foil wrapped caps used to preserve sterility near the bottle opening. No preservative should be added. However, if sampling near a major road or highway, EDTA should be added to neutralize the high metals
- Prepare and carry a small sample cooler with ice.
- When collecting the sample:
    - Safety is most important. If a trip hazard is present or if there is deep, or swift water, samples should be taken with a partner. Do not enter any manhole or long culvert, unless you have been trained to enter confined spaces.
    - Wear disposable powder free gloves.
    - The sample should be collected by hand (grab sample) or with sample bottle attached to an extension pole. Samples cannot be pumped or transferred from container to container (dipper).
    - Care should be used at all times to avoid contamination of the inside of the sample bottle cap. (Do not touch the inside of the bottle cap with your hands, or place the open side on the ground.)
    - Do not rinse the bottle.
    - Do not disturb sediment from the stream bed, pipe or manhole. If the flow is too shallow to take a sample without sediment, the flow can be dammed to create a deep spot, or the ditch can be deepened with a shovel to create a small sampling pocket. See examples below.
    - Always collect samples from the active part of the stream or pipe flow.
    - Face the opening of the bottle upstream (or into the tidal flow in marine water).
    - Plunge the sample bottle to mid flow depth and sweep up.
    - Leave ½ inch headspace in the bottle for mixing.
    - As soon as the sample is collected, cap the bottle and label it.
    - Immediately store in a cooler with ice.
    - Deliver to the lab within 6 hours.



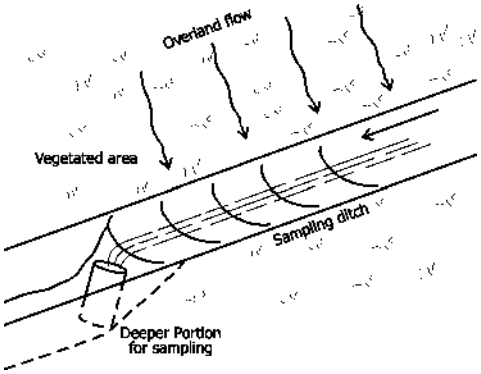
When sampling from a manhole, use a pole to safely sample from above ground. Avoid touching the sides of the manhole or pipes with the bottle to prevent contamination. Place the opening of the bottle upstream so that the flow enters the bottle directly.



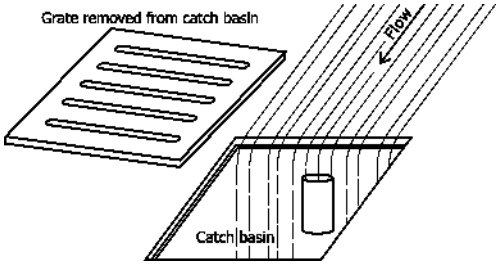
Deepening an existing ditch can allow samples to be collected directly into bottles in some cases. Be careful not to stir up solids from the sides or bottom of the ditch



Overland flow on paved areas can be sampled by constructing asphalt or concrete bumps to collect and concentrate the flow. A box positioned below ground surface in the paved area or the edge of an unpaved area can provide a place to collect samples directly into bottles.



Overland flow from vegetated areas can be sampled by constructing a shallow ditch to intercept the runoff and a deepened area to place bottles to catch the runoff.



Runoff entering a catch basin can sometimes be collected directly into bottles by removing the grate and allowing the runoff to fall into the bottles.

Do not touch openings of bottles. Keep bottles clean to prevent contamination.

Do not allow bottle lids to touch ground. Keep lids clean to prevent contamination.

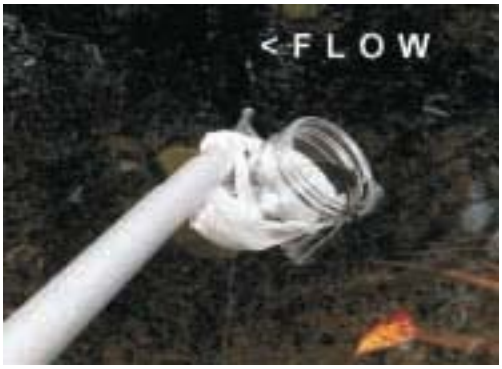
Do attach a bottle to a pole for sampling in manholes or when a hand sample would be in stagnant water. A boathook is used in this example and the bottle is attached to it with filament strapping tape.

Do not sample in stagnant areas with little flow. Do not stir up bottom sediments or allow foreign materials to enter the sample bottle. (Do be careful to grab a clean sample in cases where stormwater runoff is shallow.) If the runoff is so shallow that it is not possible to sample without the sample being contaminated in the process, then find an alternative way to sample.

If the water is too shallow to sample with the bottle upright on the pole, try taping it on sideways, but tilted up slightly.

Do not sample with the bottle opening facing downstream, when using a pole or when sampling by hand. Water flowing past your container, pole, or hand and into the container can be contaminated by such contact.

Do not allow water to overfill the bottle, particularly not for sample bottles with preservative. Oil and grease samples should be collected from water falling into the bottle when possible, or otherwise in a single swoop.



Do sample with the opening of the bottle facing upstream, into the flow so the water will enter directly into the bottle. This is true when sampling either by hand or with a pole. Do sample water that is rapidly flowing rather than stagnant.

Do collect samples without overfilling the bottle.

Appendix 8.6 – IDDE Incident Closure Form

IDDE INCIDENT CLOSURE FORM

Initial investigation date: **Cityworks WO#:**	**Title:**	**Investigators:**
☐ **No investigation made:**	**Reason:**	
☐ **Referred to different department/agency:**	**Department/Agency:**	
☐ **Investigated: No action necessary**		
☐ **Investigated: Requires action**	☐ **Report to Ecology** **ERTS #**	
☐ **Enforcement Required?**	☐ **Referred to Stormwater Engineering for Enforcement**	
Description of Event:		
Description or Actions Taken:		
Conclusion/Findings:		
Date of Case Closed:		

X_____
Deputy Director of Public Works & Utilities

SWMP Appendix C
NPDES Phase II Municipal Stormwater Permit
Inter-Departmental Coordination Mechanisms

City of Port Angeles
NPDES Phase II Municipal Stormwater Permit
Inter-Departmental Coordination Mechanisms

Background

The Western Washington Phase II Municipal Stormwater Permit (NPDES permit or "Permit") is a federal permit issued to municipalities which allows municipal stormwater systems to discharge to waters of the state. The NPDES (National Pollutant Discharge Elimination System) Permit includes broad ranging requirements which are implemented by various departments within the City, including Public Works, Parks & Recreation, Community & Economic Development (CED), Fire and Police.

Furthermore, it is a condition of the 2013 – 2018 NPDES permit (Section S5.A.5.b) that each jurisdiction develops a coordination mechanism to identify departmental responsibilities to eliminate barriers to compliance with the terms of the permit. These operating guidelines have been created to provide clarification of departmental roles and responsibilities for the purposes of complying with the NPDES permit.

Section 1. Name

The name of this group shall be known as the "Stormwater Permit Coordination Group (SWPCG)".

Section 2. Purpose

The effective management of stormwater has an important role to play in reversing the ongoing degradation of wetlands, streams, harbors, and Strait of Juan de Fuca. The purpose of this group is to insure the fulfillment of the conditions of the City's NPDES Permit by removing internal barriers to permit implementation and by requiring and empowering City departments to cooperate and coordinate with the City's Stormwater Management Program. The SWPCG serves as the coordinating body.

Section 3. Mission

The NPDES permit is a broad ranging federal stormwater permit which requires citywide compliance, and as such, shall be viewed as a citywide permit. The mission of the SWPCG is to provide a coordinated, efficient and effective response to all Permit conditions. Each city department is subject to implementing compliance activities when applicable to that department. Each department has an important contribution to make in improving the quantity or quality of stormwater discharged under the Permit.

Section 4. Duration

The SWPCG shall continue indefinitely in order to preserve momentum and effectively manage the work required for Permit compliance.

Section 5. Membership

The core membership of the SWPCG consists of members from the following departments: Public Works including Engineering and Operations Divisions, Parks & Recreation ,CED, Fire, and Police, as well as the NPDES Permit Coordinator.

On behalf of the Public Works Department, the Permit Coordinator shall lead the group, in coordinating compliance with the NPDES permit. All departments responsible for complying with any portion of the NPDES permit shall work cooperatively with the lead department, responding and providing information in a timely manner, including accurate tracking and reporting data.

Each department, division, section, or workgroup engaging in any activities or programs that the Permit Coordinator determines may be subject to or could support compliance with the municipal permit is expected to comply with municipal permit requirements. Other City workgroups or departments may be added should current needs or future requirements call for expanded responsibility.

A. Coordination framework and expectations:

1. The Permit Coordinator shall be responsible for coordinating the City's municipal permit compliance activities
2. Each departmental representative shall be familiar with all municipal permit requirements, particularly those applicable to their department or workgroup.
3. Each departmental representative may propose options for funding and staffing to meet municipal permit requirements.
4. Each departmental representative shall communicate regularly with department management on the status of applicable compliance activities.
5. The Permit Coordinator, in collaboration with departmental representatives, shall prepare and provide submittals to Ecology to comply with municipal permit requirements. Submittals include, but are not limited to, annual reports, stormwater management program (SWMP) plans, compliance reports and other submittals as required by Ecology.
6. Upon request from the Permit Coordinator, departmental representatives or other staff shall provide information regarding department-specific compliance activities in a timely manner. The Permit Coordinator shall indicate the timeline for any request and may extend the timeline at the request of the department representative if there is flexibility to do so.
7. The Permit Coordinator shall communicate as necessary with departmental representatives and other management about municipal permit requirements, the SWMP, and the status of the City's compliance.

Any Permit Coordinator responsibilities listed above may be delegated to appropriate staff, but the Permit Coordinator shall retain accountability to the City Engineer.

Signature authority for all documents related to the municipal permit that require an official signature shall reside with the Public Works Director, as delegated in a letter from the City Manager to Ecology on September 10, 2013.

B. Non-compliance:

All city departments are responsible for working with the NPDES Permit Coordinator to resolve instances of permit noncompliance, including:

1. Notifying the NPDES Permit Coordinator as soon as they become aware of any instance of non-compliance; and
2. Identifying steps and a timeline for resolving issues of non-compliance that will be identified in G3 or G20 notifications to Ecology.

Section 6. Meetings

Meetings shall be facilitated by the City Engineer or the Permit Coordinator. Meetings shall be open to any/all staff that need permit information or to share challenges to permit implementation. Meeting frequency, time, and location shall be set by the City Engineer or Permit Coordinator based on the need to meet in order to respond to policy, procedures or barriers to implementation.

Section 7. Attendance Policy

Attendance at the meetings is important to continue being an informed SWPCG member and to provide useful input into the process. Meeting attendance is expected of SWPCG members or a designee. If unable to attend a meeting, it is the member's responsibility to inform themselves on issues discussed in those meetings.

Section 8. Departmental Responsibilities

It is the responsibility of each department head to assign the duties and responsibilities to the pertinent members of their staff, as well as ensure they are being implemented correctly.

A. Public Works

The Public Works Department is responsible for the majority of the NPDES compliance efforts including Sections: S5.C.1 Public Education and Outreach, S5.C.2 Public Involvement, S5.C.3 Illicit Discharge Detection and Elimination, Section S5.C.4. Controlling Runoff from New Development, Redevelopment, and Construction Sites (for both public and private projects), and S5.C.5 Municipal Operations and Maintenance. These responsibilities include, but are not limited to:

Engineering Division

1. NPDES Permit coordination.
2. Program development appropriate/applicable to the department.
3. Annual reporting.
4. Development and submittal of the Stormwater Management Program Plan.
5. Serving as point of contact for the Department of Ecology regarding issues of the Permit.
6. Submitting G3 and G20 noncompliance notifications.

7. Updating codes, policies, plans and standards applicable to the Public Works Department for permit compliance.
8. Private stormwater facility maintenance verification.
9. Enforcement of maintenance or water quality violations.
10. Conducting, tracking, and reporting development review in compliance with adopted standards and policies.
11. Tracking, reporting and justifying any deviations (e.g. variances, exceptions etc.) from adopted stormwater development review standards.
12. Inspection of development sites.
13. Collection of final stormwater system record drawings for new development/ redevelopment and distribution of them to designated GIS and Public Works staff.
14. Maintaining and updating stormwater system maps for both public and private facilities.
15. Collection and processing of maintenance covenants and operations and maintenance manuals for new development/redevelopment.

Operations Division

16. Inspection and maintenance of municipal stormwater components and facilities.
17. Illicit discharge/illicit connection detection and elimination.
18. Operations and maintenance procedures are in place and followed to reduce stormwater impacts to all lands owned and maintained by the City in accordance with the Ecology Stormwater Management Manual for Western Washington.

C. Community & Economic Development

CED is responsible for implementation of and compliance with portions of Section S5.C4 of the NPDES Permit entitled "Controlling Runoff from New Development, Redevelopment and Construction Sites". These responsibilities include, but are not limited to:

1. Updating codes, policies, plans, programs, procedures, and standards appropriate/applicable to CED for permit compliance.
2. Processing permit applications and collecting required documents for all building permits, including stormwater plans and erosion and sediment controls
3. Inspection of building sites for erosion and sediment controls as required by Ecology Stormwater Management Manual for Western Washington

C. Parks & Recreation

Parks is responsible for implementation of and compliance with portions of S5.C.3 Illicit Discharge Detection and Elimination and S5.C.5 Municipal Operations and Maintenance. These responsibilities include, but are not limited to:

1. Updating codes, policies, plans, programs, procedures, and standards appropriate/applicable to Parks for permit compliance.
2. Operations and maintenance procedures are in place and followed to reduce stormwater impacts to all lands owned and maintained by the City in accordance with the Ecology Stormwater Management Manual for Western Washington.

3. Report observations of illicit discharges to the Permit Coordinator or other designee

D. Police and Fire

The Police and Fire Departments has permit responsibilities under S5.C.3 Illicit Discharge Detection and Elimination. As field personnel, it is their responsibility to report observations of illicit discharges to the Permit Coordinator or other designee. They may also be called upon to assist in enforcement activities or during an illicit discharge event.

Section 9. Permit Coordinator's Role

The Permit Coordinator's role is to assure the integrity and fulfillment of the Permit. The Coordinator's role includes, but is not limited to:

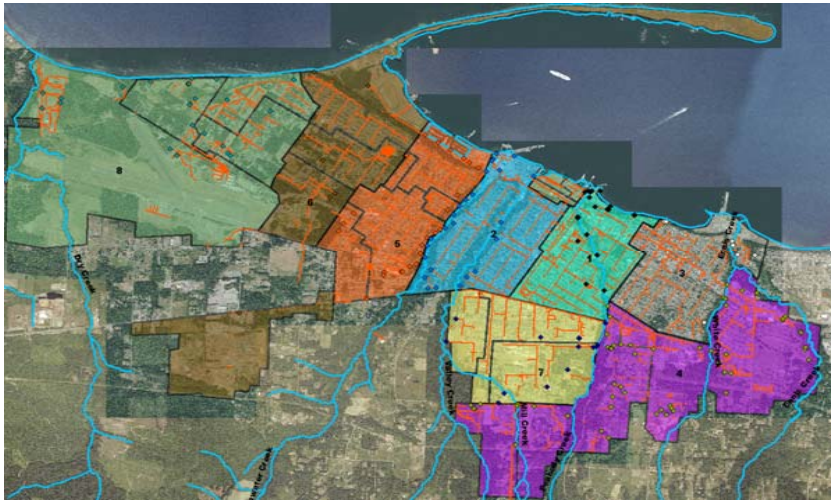
1. Coordinate NPDES Permit compliance efforts for the City, including collecting tracking and reporting data from the different departments, as well as preparing and submitting annual reports and updates to the Stormwater Management Program Plan to the Department of Ecology.
2. Assist the different City departments in identifying and understanding their individual responsibilities for complying with the pertinent sections of the Permit.
3. Provide permit compliance guidance to individual departments who are developing or updating their departmental programs or procedures which are necessary to comply with Permit requirements.
4. Develop and implement programs and activities associated with the Public Works Department.
5. Work with individual departments to assist in resolving issues of non-compliance, as well as drafting and submitting G3 or G20 Non-Compliance Notification letters to Ecology.
6. Coordinate required illicit discharge detection and reporting training for all municipal field staff. Assist in other training activities where applicable.
7. Ensure policies are followed.
8. Manage communication and information exchange among the SWPCG. Determine meeting topics and agendas. Assist the City Engineer with meeting facilitation. Provide meeting materials to SWPCG before meetings and take meeting notes.

2018 Activities / Events	Date(s)	Location(s)	City Personnel	Target Audience	Contact Information (other groups)	Subject Area(s)	Attendance/Distribution	Educational Materials Used	Notes/Other
KONP Home Show	March 10th and 11th, 2018	Port Angeles High School Gymnasium	Lucio Baack, Vince, McIntyre, Jonathan Boehme	General public	lbaack@cityofpa.us	IDDE Program, LID Rain Garden Rebate Program, Natural Yard Care	7,000, Dirrectly spoke to over 100 specifically about stormwater.	Promoted the pollution prevention hotline, and rain garden rebate program. Focus on the water quality benefits of a rain garden using a rain garden model with circulating water. Natural Yard care, handed out 180 native trees and highlighted ways to care for yard in a natural way not harmful to environment.	
County Fair	August 16 - 19 2018	Port Angeles	Jonathan Boehme, Lucio Baack Vince McIntyre	General public	jboehme@cityofpa.us	Focusing on pet waste awareness, natural yardcare.	Dirrectly spoke to over 994 specifically about pet waste and stormwater.	Handed out 250 Puget Sound Starts Hear Pet waste dispensers, 62 refill roles, 1 spill keychains, 18 we scoop stickers, and discussed the importance of picking up after our pets with each person. Over 1000 people participated in the "Poop Toss" game. Also provided information on how to apply for City rain garden rebates and perform natural yard care.	
Riverfest	28-Sep-17	Sequim	Vince McIntyre	General public	Vmcintyr@cityofpa.us	Focusing on pet waste awareness,	Over 600 Kids	Used the "Poop Toss" game to raise arareness of pet waste best management practices.	
Utility Bill Mailer	October	Port Angeles	Jonathan Boehme	General Public	jboehme@cityofpa.us	Stormwater maintenance, Pollution Prevention Hotline, Upcoming Stormwater Development Workshop	7,000-10,000	Flier focused on stormwater maintenance and the pollution reporting hotline.	
Innovative Stormwater Management	5-Oct-18	John Wayne Marina	Jonathan Boehme	Development Community	jboehme@cityofpa.us	Stormwater management ideas for future development of Feiro Marine Life Center	25	Powerpoint presentation with LID topics	
Business Stormwater Education	January through December 2018	Site visits to businesses within the City	Rachel Bowen	Local businesses within the City		IDDE, Pollution Prevention	Over 70 Businesses	Pollution Prevention and reporting information	Mostly positive response from business owners
Television Ads	May throught September	Comcast Spotlight network	Jonathan Boehme	General Public	jboehme@cityofpa.us	PSSH	250,000 Impressions	Pollution Prevention	
Local Cinemas	Months of May, and June	Deer Park and Lincoln Cinemas	Jonathan Boehme	General public	jboehme@cityofpa.us	Pollution Prevention	12,000 Impressions	One minute add highlighting natural lawn care shown before feature films	

CITY OF PORT ANGELES

Stormwater Education Tracking for IDDE

Date:	Address:	Contact Name:	Business Name	Business/ Residential:	Method of Contact:	City Staff:	Type of Education:	Basin:
1/4/2018	109 N. Ennis St.	Bruce Carlson	Bruce's Specialty Auto	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	3
1/8/2018	521 E. 1st St.	Ed Kiesling	Royal Victorian	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	1
1/9/2018	1912 W. 18th Street	Stoney Hutto	Clallam County Juveniile	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
1/9/2018	111 E. 2nd St.	Joanne Crawford	Port Angeles Inn	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	2
1/9/2018	101 E. 2nd St.	Liz Conrad	Quality Inn Uptown	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	2
1/11/2018	214 E Lauridsen Blvd	Jeff Jernigan	All View Motel	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	7
1/16/2018	415 E 1st St	David Patel	Flagstone Motel	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	1
1/30/2018	1940 E. 1st St.	Yuan Tian	Asian Buffet	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	4
1/30/2018	812 E. 1st St.	Zhang Chuanman	Angeles Motel	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	3
1/31/2018	825 E. 5th St.	Rochelle Hoffman	ABHS Specialty Services II	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	3
1/31/2018	106 W. Front St.	Phillip Che	Golden Gate Chinese Restaura	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
2/7/2018	535 E. Front St.	Dhaval Patel	Riviera Inn	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	1
2/13/2018	Sumara Drive	Wilhelm Beckmann	Sudzy Dogz	Business	Phone Call	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
2/16/2018	612 S. Lincoln Street	Russ Mackrow	Shirley's Café	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	1
2/16/2018	903 W. 8th Street	Renu and Kasemsri Cha	Sabai Thai	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	5
2/20/2018	2201 W. 16th Street	Matt Petree	Evergreen Court Apartments	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
2/28/2018	1605 E. Front Steet	Lisa Pene	Front Street Alibi	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
2/28/2018	1133 E. Park Ave.	Isiah Juarez	Laurel Park Assisted Living	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	7
3/1/2018	128 W. 1st St.	Mac Smith	Easy Street Coffee & Tea Hou	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	8
3/9/2018	612 S. Lincoln Street	Tanner Stephens	Westside Pizza	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	1
3/9/2018	1127 W. Hwy 101	Raynaldo Garcia	Fairmount Restaurant	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	5
3/9/2018	1137 W. Hwy 101	Mike Kang	Fairmount Grocery	Business	In Person	Prince, Nicholas	Education about stormwater ordinances, only rain is permitted down the storm drain	5
7/13/2018	502 East Park Street	Jim Kesser	St. Andrew's Place	Business	In Person	Bowen, Rachel	made suggestions to wash kitchen mats in a wash basin inside instead of current practice outside to avoid FOG into stormwater system.	7
7/17/2018	328 East 7th Street	D. Bellamente	PA senior center	busines	in person	Bowen, Rachel	Let them know where stormwater drains on prop. Located; talked about washing kitchen mats inside to avoid FOG into stormwater; will bring them printouts of property with stormwater basins labeled for employees	1
7/18/2018	120 E 5th Street	Trevor	Firehouse Grill LLC	Business	in person	Bowen, Rachel	Let them know where stormwater drain is on prop. Gave education on stormwater ordinances	1
7/18/2018	200 W. 1st Street	Kyla	Country Aire	Business	in person	Bowen, Rachel	Saw that country aire was doing pressure washing on banisters on storefront. Talked with PIC Kyla about obtaining a permit next time. Gave informational flyer about pressure washing and contacts for permits	8
7/19/2018	1233 E. 1st Street	Sam Haque	USA Food Mart and Deli	Business	in person	Bowen, Rachel	Showed Sam where stormwater drains. Education about stormwater ordinances	3
7/19/2018	907 East Front Street	Steve Chamberlain	The First Race Car Wash	Business	in person	Bowen, Rachel	Showed Steve where his stormwater drains are. He has water reclaimation system and it is unlikely that water could get to stormwater. Education about stormwater ordinances	3
7/19/2018	105 N. Liberty Street	Gary Kettel	Wash n' Go Car wash	Business	Phone Call	Bowen, Rachel	Let Gary know about substantial sedimentation in the storm drain. Told him that it needs to be cleaned out when he gets a chabnce.	3
7/24/2018	1127 East 1st Street	Tommy Lee	La Bella Nails & Spa	Business	in person	Bowen, Rachel	Told Tommy about location of nearest storm drains to business. Talked about only rain down the drain and the requirements for permits if he does any pressure washing.	3
7/24/2018	207 W. 1st Street	Bliss Wood	Bliss Salon and Apparel	Business	in person	Bowen, Rachel	Let Bliss know of location of storm drains nearest to her business. Let her know of city ordinances on storm drains.	8
7/24/2018	229 W. 1st Street	Randal	Bar N9ne	Business	in person	Bowen, Rachel	Grease recycler behind business had a small spill. It does not seem to be in any close proximity to a storm drain but I asked the manager to clean it up. Let him know about city ordinances on stormwater and that he does have stormdrains close to him at the front of the business.	8
7/31/2018	633 East 1st Street	Ket Voang	Midtown Public House	Business	in person	Bowen, Rachel	Told him of location of stormwater drains nearby. GRS near recycler bin needs to be cleaned up to avoid GRS down stormwater drains. Talked about stormwater ordinances, only rain down the storm drain.	1
7/31/2018	525 E 8th St	Ryley Justus	Common Grounds Café	Business	in person	Bowen, Rachel	Talked about location of stormwater drains in parking lot. Looks like there may have been previous discharge of unknown origin but was not active. Told Ryley about stormwater ordinances, only rain down the drain.	1
8/1/2018	532 East 1st Street	Nick	Mobile Music	Business	in person	Bowen, Rachel	Told Nick about location of storm drains and not to wash cars near them, only rain down the drain. They do have their own oil water separator on site!	1
8/1/2018	528 East 1st St.	Breann	Beauty and the Beach	Business	in person	Bowen, Rachel	Told Breann about locations of storm drains nearby and stormwater ordinances.	1
8/1/2018	114 Lauridsen Blvd	Jessica	Saar's Super Saver Foods	Business	in person	Bowen, Rachel	Told Jessica about location of storm drain under trash compactor. Trash compactor does not seem to leaking any longer. Educated about stormwater ordinances, only rain down the drain.	7
8/3/2018	1233 E 1st Street	unknown	N/A	Residential	in person	Bowen, Rachel	Witnessed a man pouring out a small amount of liquid from a gas can at the Reino Gas Station. Stopped and talked to him about properly disposing of waste and that they are very close to storm drains that flow into White Creek. Let him know that only rain is allowed down the drain.	3
8/7/2018	128 S. Laurel Street	Ben Skerbeck	Peninsula Dental	Business	in person	Bowen, Rachel	Catch basin was pretty full but Dr. Skerbeck is now cleaning it out more frequently. He has also stopped washing cars in his lot and I reminded him of stormwater ordinances.	2
8/7/2018	1405 E. Front St.	Unknown	Papa Murphy's	Business	in person	Bowen, Rachel	While talking to employee about cleaning out their grease interceptor they asked about dumping water down a drain. I told them about city ordinances and that only rain can go down the drain.	3
8/8/2018	728 E. Front Street	Candi	Habitat for Humanity	Business	in person	Bowen, Rachel	Let them know of their nearby storm drains and city ordinances	3
8/8/2018	603 S. Lincoln Street	Martha	Goodwill	Business	in person	Bowen, Rachel	Let them know of their nearby storm drains and city ordinances	1
8/8/2018	1936 E. 1st Street	Unknown	Autozone	business	in person	Bowen, Rachel	Saw evidence of them cleaning up an oil spill. Went in to thank them for cleaning it up and of nearby storm drains. Talked about only rain down the drain.	4
8/9/2018	225 E. 5th Street	James	William Shore Memorial Pool	Business	in person	Bowen, Rachel	Showed James where their storm drains were located and to make sure that during construction the drains were protected from consturction dust, sediment, discharges. Talked about city ordinances and only rain down the drain.	1
8/11/2018	123 E. Front Street	Tyler	Farmer's Market of Clallam Co	Business	in person	Bowen, Rachel	Showed Tyler where nearby storm drains at the farmer's market were. Talked about stormwater ordinances and making sure all vendors properly dispose of waste	8
8/11/2018	123 E. Front Street	Ana	Farmer's Market of Clallam Co	Residential	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
8/11/2018	123 E. Front Street	Unknown	Farmer's Market of Clallam Co	Residential	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
8/11/2018	123 E. Front Street	Unknown	Farmer's Market of Clallam Co	Residential	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
8/11/2018	123 E. Front Street	Unknown	Farmer's Market of Clallam Co	Residential	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
8/14/2018	131 E 1st St BLDG 1	Richard Moon	Num Num Donuts	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	1
8/21/2018	808 Marine Drive	Dan Schleever	High Tide Seafoods	business	in person	Bowen, Rachel	Told him of storm drain in his parking lot. Capful from storm drain is a small pool of water from their transport truck that has algae in it due to being nutrient rich. Let him know he should try to collect that water and put it in sanitary sewer because of stormwater ordinances	5
8/22/2018	1116 E. Lauridsen Boulevard	Joel Fletcher	Crestwood Convalescent Cent	Business	in person	Bowen, Rachel	Leak from sprinkler system is draining a lot of municipal water into storm drain. Told Joel that not even municipal water is supposed to go down the storm drain and the only allowable discharge is rainwater. He is contact with a plumber to get the issue fixed.	4
8/24/2018	229 W 1st St	Rudy	Bar N9ne	Business	in person	Bowen, Rachel	Rudy thinks spilled oil from recycler is not from them. Told him about the importance of avoid oil discharges to storm drain and city ordinances; only rain down the drain.	8
8/27/2018	218 E. 12th Street	Ron	Jefferson Elementary School	School	in person	Bowen, Rachel	Ron was dumping grey water from GR during once yearly cleaning. Told him of stormwater ordinances; only rain down the drain. The GW will now be diposed of inside!	1



9/12/2018	1210 B. East Front Street	Robert	Dominos	business	in person	Bowen, Rachel	Followed up after report about car wash and soapy water going to storm drain. Talked to manager about stormwater ordinances and left business cards so that the next group who want to do a car wash here can get in touch with me first to check out a fish friendly car wash kit.	3
9/27/2018	311 S. Valley Street	Larry Briggs	Peninsula Bottling Company	Business	in person	Bowen, Rachel	Followed up after report about car wash runoff from a contracted mobile car wash here. Brought a map of the facility labeled with storm drains and city sewer manholes.	2
10/3/2018	130 S. Lincoln Street	Margaret Goette	New Moon Craft Tavern	Business	In person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	1
10/3/2018	107 E. 1st Street	Unknown	First Street Haven	business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
10/3/2018	704 Marine Drive	Emily Achten	The empossible Eden Café	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	5
10/5/2018	104 W first Street	Paul Tesreu	Barbecue.	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
10/11/2018	106 W Front Street	Khanh Lam	New Saigon	Business	in person	Bowen, Rachel	New Saigon is moving to building that had Golden Gate. Talked to Khanh about taking care of his GRS recycler to not allow FOG down storm drains and city ordinances	8
10/26/2018	1105 E. 1st Street	Heather	Taco Time	Business	in person	Bowen, Rachel	Talked about keeping FOG out of stormwater by cleaning up grease recycler better and city ordinances.	3
11/15/2018	302 Tumwater Truck Road BLDG	Thomas Rodocker	Rodocker Woodworks	Business	in person	Bowen, Rachel	Talked about preventing sawdust, sandblasting, and other operations from washing away into storm drains. Only rain down the drain	2
11/29/2018	102 W. Front Street	Tom Oxford	New Day Eatery	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
11/29/2018	101 E Front Street	Unknown	Cornerhouse Restaurant	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	8
12/4/2018	1414 E. 1st Street	Carrol	Holiday Lodge	Business	in person	Bowen, Rachel	Talked about stormwater ordinances; only rain down the drain	3
12/4/2018	121 1/2 W 1st Street	Scott Sullivan	Strait Slice Pizza Co	Business	in person	Bowen, Rachel	Had been washing kitchen mats outside, talked about stormwater ordinances and moving cleaning to a grassy area or car wash.	8
12/13/2018	1421 E. 1st Street	Chuck Gates	Olympic Marine Inc	Business	in person	Bowen, Rachel	responded to a report of an illicit discharge here. Municipal water running through boat's cooling systems has been getting into stormwater. Let Chuck know that even if the source is uncontaminated only rain is allowed down the drain.	3
12/19/2018	1940 E. 1st Street	Yuan Tian	Asian Buffet	Business	in person	Bowen, Rachel	Advised Yuan to clean up grease recycling bin so that FOG does not go into the storm drain. Talked about stormwater ordinances; only rain down the drain.	3
12/24/2018	114 East Lauridsen Boulevard	Jessica Taylor	Saar's Super Saver Foods	Business	email	Bowen, Rachel	Confirmed that the trash compactor above the storm drain has been refurbished. Told Jessica to have employees regularly inspect the trash compactor for leaks to avoid leachate from going down the drain	1
12/27/2018	125 W Front Street	Unknown	Previously Station 51 Tap Hou	Business	in person	Bowen, Rachel	Construction is underway here to open a new business in what was Station 51 Tap House. Greg Haskins had noticed debris in the catch basin. I looked and did not see any debris, but spoke with one of the contractors about stormwater regulations and being mindful of their construction activities and the stormwater system.	8

Image 1: City Booth at the 2018 Clallam Co. Fair.

Image 2: City Booth at the 2018 Home Show.

THE CITY OF PORT ANGELES

Stormwater Rains

NEWSLETTER

October 2018 | City of Port Angeles Public Works & Utilities | Volume 6

STORMWATER MAINTENANCE

One important but often overlooked aspect of stormwater is maintenance. The Stormwater Utility has a crew that helps keep the stormwater pipes clean and our streets from flooding in part by cleaning stormwater catch basins and street sweeping. Last year this crew cleaned over 2000 individual catch basins in the City and swept about 10,000 miles of streets. They also inspected and maintained 72 rain gardens, 30 other stormwater treatment facilities, and 20 flow control facilities. **If you see this large vactor truck (photo left) and its crew on the side of the road cleaning a catch basin, slow down and give them a friendly wave to thank them for their hard work.**

SAVE THE DATE STORMWATER 101 DEVELOPMENT WORKSHOP

Stormwater runoff is the leading threat to Washington's urban waters in both degraded quality and increased quantity. As a result, Ecology has imposed specific requirements applicable to new development and re-development projects.

The City would like to invite all local developers, builders, planners, and architects to a stormwater informational workshop! This workshop will provide technical guidance on how to interpret and navigate through the State's minimum requirements using the City's templates. Plenty of time will be allotted for Q&A throughout the presentation and appointments can be made following the presentation to go over your specific project.

This presentation is scheduled for January 24th, 2019 at City Hall in the Council Chambers. We hope to see you there!

FALL IS IN THE AIR

Those bright red, gold and orange leaves that are falling from many trees are beautiful, but they also end up falling on the street and into the storm drains. You can assist the hard working Stormwater crew to prevent flooding when the fall rains arrive by:

Clearing Catch Basins

Inspect the catch basin in front of your house, particularly now that rain is in the forecast.

If the grates are clogged with leaves or litter and it's safe to do so, use a rake or pitch fork to clear the debris.

Do not attempt to remove the grate--only clear the debris on top of it.

Disposing of Leaves and Debris

Dispose of leaves and yard debris in your yard waste container.

Do not rake or blow leaves from your yard into the street or leave them piled up in the road, parking area or right-of-way.

Rain Garden

If you have a rain garden in front of your home now it a good time to pull any weeds, trim dead plant debris. and clear overflow inlets.

Getting Help

If you see a catch basin filled with debris below the grate, or are personally unable to clear a basin, notify Public Works at 360-417-4745.

STREAM STEWARDS CLASS

Learn more about river and stream restoration efforts along the Strait of Juan de Fuca. The class highlights stream and watershed ecology, salmon, Tribal treaty rights, water quality and quantity, and habitat conservation and restoration. The WSU Extension office is offering a 5 week course on Thursdays, beginning October 18th to November 15th. Cost is $25. To sign up, visit the Clallam County Extension website, or contact Kory Kirby at (360) 565-2679; wsustreamstewards@gmail.com.

Capital Projects to Improve Water Quality

IN-PROGRESS — 10TH STREET RECONSTRUCTION (I TO N)

The project is best know for replacing the tired road between I and N Streets. However this project also includes a major upgrade to stormwater conveyance and treatment along 10th Street. When the project is complete a new storm main will convey stormwater runoff under 10th Street between M and N Streets, providing capacity for future development in the vicinity. To the left is a photo of the completed stormwater outfall near N Street. To keep the stormwater clean as it falls on the new 10th Street road surface, stormwater treatment vaults with bioretention media and trees will be installed. The project is scheduled for completion November 2018.

For project updates go to the Project Webpage: www.cityofpa.us CLICK... Government... Major Projects... 10th Street Reconstruction

DESIGN — H Street Outfall - Near Hill St

To address residential flooding near H Street a new stormwater outfall will be designed and constructed to convey water from above the bluff to the Harbor through the abandoned Industrial Water Line. This project will convey water treated by the 4th Street Rain Garden Project completed in 2014. The project is scheduled for construction in Summer of 2019.

COPA STORMWATER MANAGEMENT PLAN

The City has a stormwater management plan designed to protect our local water bodies.

LEARN MORE:

To learn more about the Stormwater Management Plan visit: http://cityofpa.us/ Click... BUSINESS... STORMWATER MANAGEMENT

Copies are also available at City Hall.

ONLINE SURVEY:

An online survey is available on the City website for you to provide input on the plan. Topics include:

What stormwater pollution topics would you like to see discussed in future newsletters or presentations?

What would you like to see incorporated into the plan?

WEST SOUND STORMWATER OUTREACH GROUP

2018 SUMMARY OF ACTIVITIES

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The WSSOG: Who We Are

The West Sound Stormwater Outreach Group is a group of jurisdictions working together to improve water quality, meet key requirements of the NPDES Phase II Stormwater Permit, and serve the collective needs of our jurisdictions in promoting good stewardship and preservation of our local waterways.

STELLA COLLIER BAINBRIDGE ISLAND	TERESA SMITH BREMERTON	WAYNE MATTHEWS GIG HARBOR
CAMMY MILLS MICHELLE PERDUE KITSAP COUNTY	NIKKI BENNETT US NAVY	JONATHAN BOEHME PORT ANGELES
ZACK HOLT PORT ORCHARD	ANJA HART POULSBO	

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Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors. Permittees may meet this requirement individually or as a member of a regional group.

NPDES Municipal Stormwater Permit - S5.C.1.c

2018 Highlights

OVERVIEW

In 2018, the group focused on maintaining and improving existing programs, preparing to embark on a new priority behavior to meet the upcoming permit revision, and monitoring regional efforts on potential future project targets.

We set the stage for the next round of NPDES permits, providing feedback to Ecology.

The group also closed the year by contracting with a consultant, C+C, to facilitate a three-year project with the group to select a new behavior and target audience and develop a social marketing campaign for the next permit cycle.

Pet Waste in Public Areas

THE MUTT MITT PROGRAM

Members of the WSSOG continue to meet the requirements of S5.C.1.c through the highly successful Mutt Mitt program.

This program focuses on encouraging dog walkers to pick up after their pets when they are in public places such as parks, apartment complexes, or neighborhoods.

Adoption of the target behavior is measured in part through growth of the program. As of the end of 2018, there are a total of 505 pet waste stations distributed throughout the Kitsap Peninsula, Gig Harbor and Port Angeles. It is noteworthy that some communities have adopted the behavior, without the support of the Mutt Mitt program, purchasing their own pet waste stations and bags. This may be an indicator of a growing social norm related to scooping.

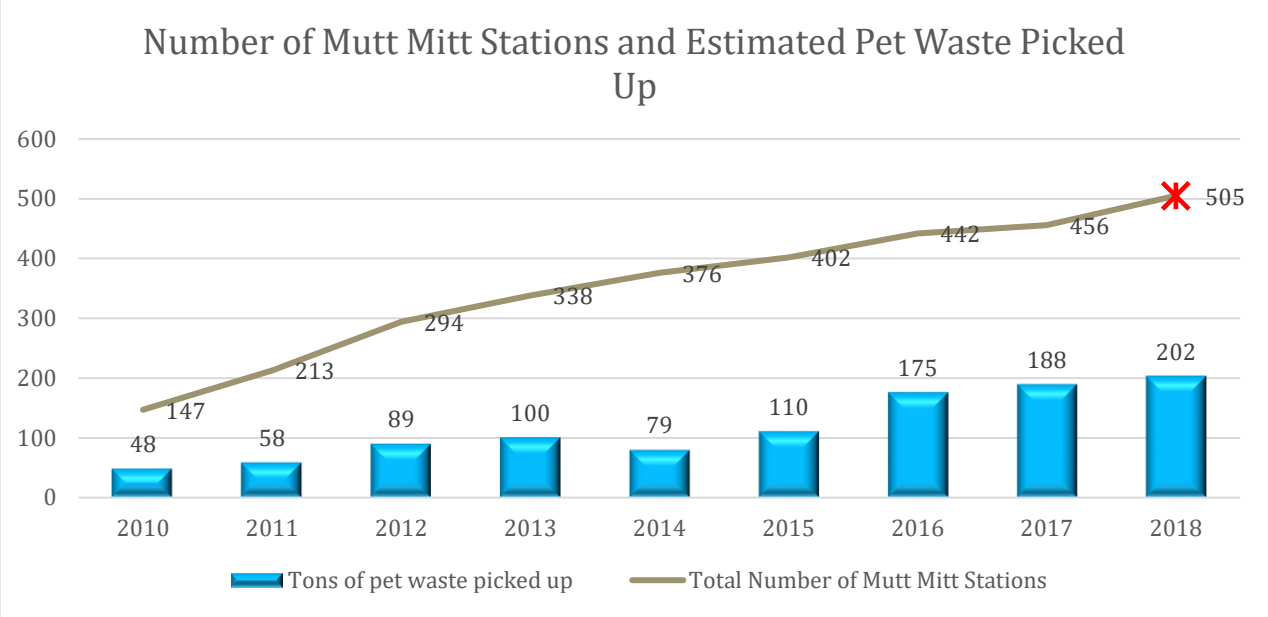
Bag total by location	
Bainbridge Island	64,000
Bremerton	174,000
Gig Harbor	144,000
Port Angeles	160,000
Port Orchard	32,000
Poulsbo	85,320
Kitsap County	384,900
Private Mutt Mitt Sponsors	176,995
Total	**1,221,215**

This means that dog walkers throughout the region see similar desirable behavior messaging for adoption as the norm. In 2018, 49 new Mutt Mitt stations were installed through the Mutt Mitt program.

When asked to report their bag usage, 29% of private station sponsors reported using a total of 176,995 bags, which are purchased with their own funding. Actual bag use is likely much higher since more than 70% of sponsors did not report bag usage. NPDES municipal permittee sponsored stations distributed a total of 1,044,220 bags. Therefore, the total number of bags distributed was 1,221,215, the equivalent of 201.5 tons of dog poop picked up.

Dog walkers depend upon stations that are reliably stocked with bags to help them adopt this behavior. It is essential that Mutt Mitt branded stations are continuously stocked and in good

working order. Kitsap County conducts inspections of all Mutt Mitt stations located within Bainbridge Island, Bremerton, Port Orchard and Poulsbo on an annual basis and all other stations located within the County on a biannual basis.



In 2018, 87% of all Mutt Mitt stations passed their inspection, meaning that they were stocked with bags. A total of 18 stations failed their inspection. This pass rate is higher than what's been seen in 2017 (79%) and 2016 (80%), but similar to 2015 (87%). Fewer stations were inspected in 2018 due the process of migrating asset data into new tracking and management software.

Each year, all stations within Bainbridge Island, Bremerton, Port Orchard and Poulsbo are inspected. Prior to 2016, all Kitsap stations were inspected annually. Starting in 2016, Kitsap stations were divided roughly in half by location (north and south). Stations in the south end of the county are inspected on odd years and stations in the north end are inspected on even years. In addition, any station that failed the previous year is included for inspection.

TALKING (AND TOSSING) POOP FOR WATER QUALITY

The popular Poop Toss game continues to be used by the jurisdictions at multiple community events. The humorous nature of the game attracts participants of all ages and makes it easy to start a conversation about a topic people might otherwise have preferred to avoid.

PET WASTE IN PUBLIC AREAS

Bainbridge Islanders toss it 'out of the park' and into the trash!

Not only do game participants learn about the correct behavior when they play, they also receive a PSSH-branded clip-on bag dispenser for playing, which gives them the tool they need to implement the behavior and a physical reminder to reinforce the action long after the staff contact.

ILLICIT DISCHARGE DETECTION AND ELIMINATION OUTREACH

Illicit Discharge Detection and Elimination Outreach

KEEPING SMALL SPILLS FROM BECOMING BIG PROBLEMS – REGIONAL SPILLS HOTLINE

The group continued to promote the Spills Happen campaign, meant to encourage people to report spills. Jurisdictions are currently posting the hotline on their websites as well as utilizing it on print materials.

OUTREACH TOOLS

The group also utilized other outreach methods, including:

- 4,000 paint sticks featuring the spills hotline phone number and a BMP message were distributed to locations throughout Kitsap County, Bainbridge Island, Bremerton, Gig Harbor, Port Orchard and Poulsbo. 1,000 more with the same message and Port Angeles' spills hotline number were distributed in that jurisdiction. Gig Harbor also distributed 60 carabiners printed with their spill hotline.
- Display of the upright "Spills Happen" banners at events, in billing offices and public spaces.
- Display of BMP-based banners with the "Spills Happen" branding at strategic locations.
- Bremerton promoted the hotline number on the City website, as well as on displays at community events such as Salmon Tours, Aqua Fair at Jarstad Park, and Kid's Fishing Day, among others.

HOTLINE CALLS

A total of 84 calls were received in 2018 by Kitsap1 to the hotline number, and 6 were reported through the See/Click/Fix app (rolled out in late 2018 and available in Kitsap County). In addition, some cities also received several reports directly to their jurisdictions. (Poulsbo – 14, Bremerton – 16, Bainbridge Island – 4, Port Angeles - 2) (See NPDES Permit S5.C.3.c.ii).

Backyard Pet Waste

POOP HAS FEET: IF IT'S IN YOUR YARD, IT'S IN YOUR HOUSE

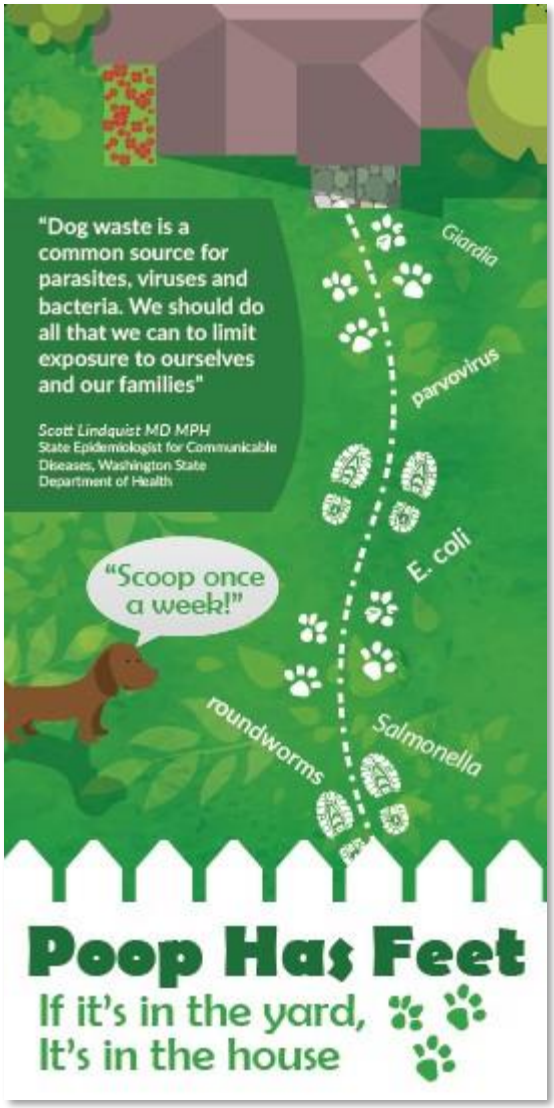
MEASURING THE CHANGE

In 2017, the group launched a campaign to encourage people to pick up after their pets at home. In 2018 we conducted a survey to help determine the success of that campaign.

For postcard recipients to receive giveaway items, they were asked to provide an email address. All those that requested items received an email with a survey request. Out of 347 emails sent, 125 people (36%) completed the survey.

The online survey was short to encourage completion. It focused on whether the recipients had engaged in three behaviors:

- increasing home scooping frequency
- disposing of waste properly
- placing the reminder sticker on their trash can



SURVEY HIGHLIGHTS

One of the goals of this campaign was to encourage people to scoop their yard at least weekly. Survey respondents indicated that most (79.66%) of them were already scooping their yard weekly or more. After receiving the postcards, the number of people who scooped at least weekly increased to 89.83%.

Similarly, most (84.75%, n=118) said that they disposed of pet waste in the garbage prior to receiving the postcard. Other places people disposed of their pet's waste prior to receiving the postcard were compost or yard waste (4.24%), an area where no one will step in it (4.24%), toilet (1.69%) and other (2.08%). The number of people disposing of their pet's waste in the garbage increased modestly to 89.93% (six additional individuals) after seeing the postcard.

BACKYARD PET WASTE

One of the primary goals of this campaign was to build a social norm around scooping by having dog owners place a sticker on their trash can to remind them to pick up weekly, as well as to signal to others that this was the right thing to do. To evaluate, one of more important behaviors surveyed was whether they used their trash can sticker. Of survey respondents, 45.69% (n=116) said they placed their sticker on their garbage can. Some used the sticker in another way (7.76%) and a few placed the sticker on their garbage can only to have it peel off (6.9%).

Because self-reporting is a somewhat problematic means of evaluation as people frequently over-report their behavior, we wanted to do some direct observations of behavior. To that end, in addition to online surveys, windshield surveys were conducted in two select neighborhoods where postcards were sent. Both neighborhoods were in Kitsap County and were selected for their density to make surveying easier. These surveys were conducted in August of 2018 early in the morning on garbage pickup days to determine if people had used the sticker they received.

In total, 883 households that received mailers were inspected, 486 in Suquamish and 397 in Manchester. Unfortunately, no reminder stickers were observed while conducting windshield surveys.

It is noteworthy however, that people's general response to the postcards was much lower in Kitsap County than the other participating jurisdictions. It may be that people's use of the stickers was higher in the individual jurisdictions than in unincorporated Kitsap County.

Puget Sound Starts Here

AROUND THE WEST SOUND

MAY IS PSSH MONTH

The group again celebrated "Puget Sound Starts Here Month", a regional effort to raise awareness about the harm to Puget Sound from polluted stormwater runoff and simple actions residents can take to reduce their impact. Local implementation of Puget Sound Starts Here (PSSH) Month included a variety of outreach approaches.

BRAND OUTREACH

Outreach efforts included the popular distribution of beverage coasters and coffee sleeves to local restaurants and coffee shops. The group had 100% participation in the PSSH campaign in 2018, including distributing pet waste leash dispensers to capitalize on the existing pet waste program.

JURISDICTION	COASTERS	COFFEE SLEEVES	LEASH DISPENSERS	TOTAL IMPRESSIONS
Bainbridge Island			200	200
Bremerton	2,500	2,500	100	5,100
Gig Harbor	350	125	80	555
Kitsap County	7,580	10,650	1,650	19,880
Poulsbo	1,600	1,360	0	2,960
Port Angeles	0	1,000	250	1,250
Port Orchard	2,625	2,200	0	4,825
				34,770

Based on feedback from participating coffee shops that hot drink sleeves are more widely received in the winter months, Kitsap County, Poulsbo and Port Orchard continued their successful secondary distribution of coffee sleeves in the winter months.

Collectively, these efforts placed close to 35,000 "Puget Sound Starts Here"-branded items in the hands of West Sound residents and visitors.

ADVERTISING

Theater Ads

Several jurisdictions continued their practice of running on-screen cinema ads featuring PSAs about stormwater best management practices.

Contracts typically included that an ad run at least two times prior to each feature film on every screen throughout the month, with amount of impressions each month depending on how many ads were in the cycle. Theatergoers could expect to see the ad within six minutes or less before the start of each movie, and if they were there earlier, could view those ads every six minutes in rotation.

The professionally produced 30-second PSAs used by Gig Harbor were produced by the City of Seattle for PSSH and featured the municipality's logo at the close. The 1:00 PSA for Port Angeles was professionally produced for the City of Olympia and used courtesy of that jurisdiction. The ad used by Bainbridge Island was repurposed from the Comcast regional advertising buy (see below).

JURISDICTION	SCREENS	LENGTH	AD BUY	PROJECTED IMPRESSIONS
Bainbridge Island	5 screens (Bainbridge Cinemas)	:30	20 weeks	24,290
Gig Harbor	10 screens (Uptown Galaxy Theater)	:30	3 months (one ad per month)	18,000
Port Angeles	8 screens (Deer Park Cinemas)	1:00	2 months	12,000

Television Ads

In 2018, the STORM regional group contracted with Comcast to create some professional :30 television spots using the PSSH branding. This campaign ran May through September on Comcast's Spotlight network and included both television and digital (web based) advertising. Participating jurisdictions also received personalized digital copies of the ads including their logos to be repurposed where they desired. Within the WSSOG group, three jurisdictions participated in the ad buy and utilized the spots in a variety of areas, including repurposing the ad for cinema.

JURISDICTION	LOCATIONS	LENGTH	AD BUY	PROJECTED IMPRESSIONS
Bainbridge Island	5 screens (Bainbridge Cinemas)	:30	20 weeks	24,290
Bremerton	Comcast Spotlight network	:30	4 months	250,000
Poulsbo	Comcast Spotlight network	:30	4 months	250,000
Port Angeles	Comcast Spotlight network	:30	4 months	250,000

REGIONAL PARTNERSHIPS FOR A COMPREHENSIVE APPROACH

Regional Partnerships for a Comprehensive Approach

STORM CONTINUES COORDINATING REGIONAL OUTREACH

Kitsap staff continues to represent the County and WSSOG cities as partners in the larger regional efforts of STORM. In 2018, Kitsap staff provided input at STORM's quarterly meetings, within the NPDES workgroup, and at the 2018 STORM Symposium. Significant accomplishments of the STORM group are summarized in their annual report **(included as Appendix A)**.

WORKGROUPS

Kitsap staff worked with several small workgroups under STORM's umbrella in 2018 on issues of regional significance, including NPDES permit feedback, Natural Yard Care, Pet Waste, and Mobile Business Outreach.

STORM STEERING COMMITTEE

Kitsap County continues to represent the County and the WSSOG partnership as a working member of the STORM steering committee. This committee meets twice a month on tasks that guide the regional STORM group. Notable projects by the committee in 2018 included compiling and providing feedback on the new NPDES permit reissuance, working on short- and long-term funding for the STORM Coordinator position, planning and facilitating the Symposium, and coordinating the regional Comcast advertising campaign.

Looking Ahead at 2019

MOVING INTO HIGH GEAR – DEVELOPING AND IMPLEMENTING

OVERVIEW

Working within the scope of the new interlocal agreements implemented in 2018, WSSOG members evaluated the Work Plan to guide 2019's activities. (Attached as Appendix B) The primary focus for the upcoming year will be to work with C+C on the development of a social marketing campaign to address the new Natural Yard Care behavior, including a pilot. Additional tasks will include the evaluation of existing programs, and potentially taking advantage of new opportunities raised by regional group efforts.

PET WASTE AND SPILLS – ONGOING CHALLENGES

The group will examine efficient and effective ways to continue the Mutt Mitt Program and IDDE program, as well as update the Backyard Pet Waste Program Plan based upon the residential intercept surveys.

We will continue to promote the Spills Hotline through various outreach channels. Additionally, in 2019, the See/Click/Fix reporting app will add new reporting capability for Kitsap jurisdictions and will be marketed as a new way for citizens to make, view and track spills reports.

LAUNCHING A NEW CAMPAIGN

Building on the successful work between the group and their consultant, C+C in 2018 to select a new behavior and priority audience, 2019 will herald the development of a complete social marketing plan. Tasks will include audience research, creative concept development, and the launch of a pilot campaign. These tasks in 2019 represent Phase 2 of a three-phase project to choose, build, and launch a social marketing campaign to address nutrients in stormwater runoff. This project will continue into 2020, where an evaluation plan will be developed and more extensive implementation of the campaign will take place.

PSSH, STORM AND BEYOND

On a regional scale, the WSSOG will monitor STORM's continuing efforts to reduce automotive leaks and will participate in the Don't Drip and Drive campaign if it is reinstated in 2019. This campaign typically entails recruiting local automotive shops to participate in offering discounts and other incentives to encourage residents to find and fix leaks.

LOOKING AHEAD AT 2019

The WSSOG will also monitor STORM's evolution of the Puget Sound Starts Here campaign and will continue to promote local awareness. In May, the group will participate in Puget Sound Starts Here Month through outreach to local restaurants and coffee shops. Expanded distribution will again take place in winter in selected jurisdictions, as well as some potential evaluation of these distribution methods.

We will continue to participate in the Mobile Business Outreach, Natural Yard Care, and Pet Waste workgroups and apply insights, approaches and materials gained from these workgroups as appropriate.

APPENDIX A: STORM ANNUAL REPORT

Appendix A: STORM Annual Report

2018 STORM Annual Report

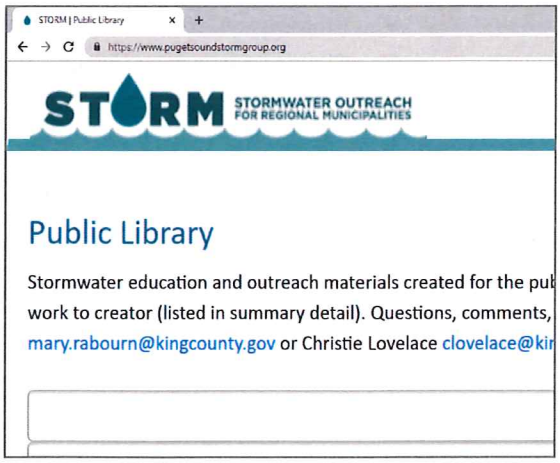
Certain Things Don't Mix

Beginning in May 2018, and in celebration of Puget Sound Starts Here Month, STORM embarked on a collective campaign to create, produce, and air a series of TV and digital media commercials throughout the Puget Sound region. Along with a creative team from Comcast Spotlight, ads were designed that focused on three stormwater BMP's: pet waste pick-up, auto leak repair, and pesticide reduction. Each BMP was paired with a metaphor based on the campaign theme "Certain Things Don't Mix" – just like stormwater pollution and Puget Sound don't mix. Those metaphors included Cheez Whiz as a coffee topper, playing fetch with a banana slug, and soccer bowling. Each jurisdiction who participated also received the ads, with their specific jurisdictional logo tagged at the end, to distribute locally. Translation of each of the commercials into Spanish, Vietnamese, and Korean is nearly complete. Results from the campaign include the following:

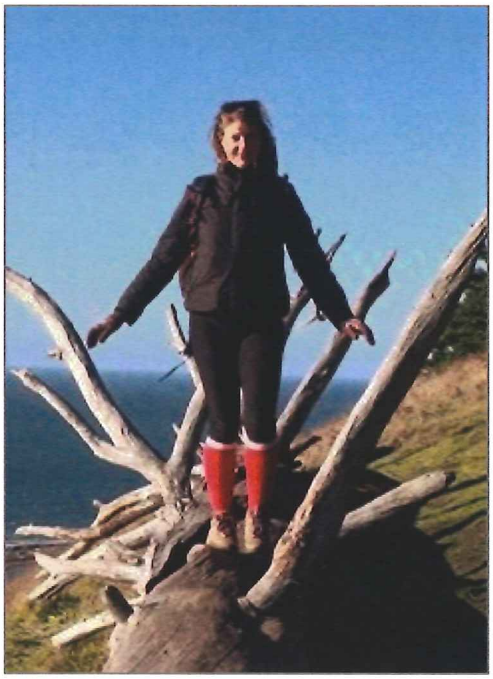
- 36 Puget Sound jurisdictions participated and contributed a total of $90,000 to a campaign that was ultimately valued at more than $120,000;
- The commercials ran a total of 805 times on premium TV channels and were delivered 252,021 times within online, digital streaming content;
- Target audiences viewed and interacted with streaming ads for a total of more than 1,952 hours, and 93% of those ads were viewed in full;
- Comcast Spotlight offered, free of charge, a promotional partnership with The Weather Channel ($30,740 value) increasing campaign exposure through the delivery of 116 additional spots.

Resource Reservoir

The Resource Reservoir has undergone updates to make it more user-friendly for stormwater education and outreach professionals! The Reservoir now includes a "Toolkit Tab", which allows easy access to the *Don't Drip and Drive*, *Puget Sound Starts Here*, and *Stormwater Messaging* toolkits. Additionally, we have begun migrating all internal STORM documents from the old Weebly webpage to a *STORM Business* tab. This will allow STORMers to access all the info they need in one place. Be sure to check it out and to upload your best education and outreach documents to share with other Puget Sound jurisdictions!



STORM Coordinator Accomplishments: Christie Lovelace



The STORM Steering Committee and encompassing STORM group have been so lucky to have Christie as our STORM Coordinator these past two years. Christie has done a fantastic job and been a joy to work with. We are truly grateful to her for all her hard work!

Her many accomplishments as Coordinator include:

- Leading the Puget Sound Starts Here website and toolkit redesign.
- Managing the continued development of the Resource Reservoir.
- Training STORM and ECO Net members on program evaluation methods.
- Coordinating the annual STORM Symposium Committee.
- Co-leading the *Certain Things Don't Mix* PSA campaign.
- Getting the STORM work groups up and running.
- Managing all communications and administrative aspects to keep the STORM group running smoothly.

Thank you, Christie, for all your hard work and a fantastic two years!

2018 STORM Symposium

This year marked the 8th anniversary of the annual STORM Symposium. Over 100 STORM members and guests attended this year's event, making it one of the most highly attended Symposiums to date. Stormwater outreach professionals representing local governments, non-profits, conservation districts, and the private sector came together for the day to hear from Sara Jo Breslow, PhD, whose keynote presentation addressed the "wicked" problem of salmon recovery in the Skagit Valley, through the lens of anthropology and political ecology. Attendees also heard from presenters on the following topics:

- Stormwater Messaging Research Project Results
- Building an Integrated Pest Management Program
- Climate Change and Stormwater
- Proposed Education and Outreach NPDES Permit Requirements

Thank you to all who attended, as well as the Symposium planning committee and all the presenters who helped make this year's event a success. A special thank you goes out to Pierce County for providing breakfast and Mercury Coffee for their generous coffee donation!

2 New STORM Steering Committee Members

Michelle Perdue, Outreach & Education Coordinator, Kitsap County Public Works. Michelle has over fifteen years of experience in municipal stormwater management, with a focus on communications. Her work has included such diverse projects as rebranding for a major interagency group, the design and production of national award-winning interpretive signage, and coordinating outreach and information for outreach programs and construction projects.

As the Regional Coordinator for the West Sound Stormwater Outreach Group (WSSOG), Michelle has been a member of STORM since 2013, and moved to a role on the Steering Committee in 2018.

Mike Halliday, Public Information Specialist, Pierce County. Mike has worked in public relations for almost 12 years and all of it in the public service sector. He spent six years at Kent School District working on several projects from encouraging students and families to prepare for post-high school education to crisis communications.

Mike joined Pierce County in 2013 and supports the County's surface water management division with communication related to its capital projects, NPDES, flooding response and Community Rating System. Mike joined the Steering Committee in 2018.

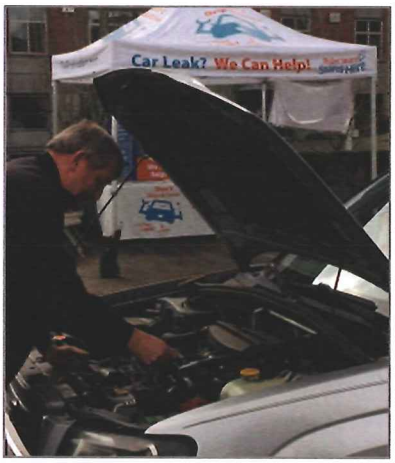
Audience Research Training - May 2018

Effective behavior change campaigns *require* that we understand our target audiences! To increase our capacity on this topic, STORM and ECO Net collaborated on a half-day audience research training that focused on:

- Using existing research to identify, segment, and evaluate audiences, and use that research to prioritize behavior change goals.
- Building strong, authentic relationships with the communities we aim to work with.
- Using behavior change theory to design an effective behavior change program.
- Using qualitative and quantitative research methods to develop and assess behavior change programs.

Speakers at the training included social marketing practitioners from the King County Local Hazardous Waste Program and panelists from Sustainable Seattle, Cascadia Consulting, and the City of Tukwila. Speakers collaborated to produce implementable tools for audience segmentation, behavior selection, and a guide to using qualitative and quantitative research to create surveys, focus groups, and interviews. These tools are available on the Resource Reservoir (search: *audience research*)!

Don't Drip and Drive Program Update



Possible Statewide Expansion of Don't Drip and Drive. In October 2018, the Department of Ecology and the Don't Drip and Drive work group submitted a report to the Legislature, as directed by section 106 of the State's 2018 Transportation Budget (Engrossed Substitute Senate Bill 6106). This bill required Ecology to convene a work group to provide recommendations on possible statewide expansion of the Don't Drip and Drive Program. The work group was comprised of representatives from local governments, state agencies, industry, and non-profit organizations. They examined several options for program expansion, including program principles, identifying a program managing entity, potential partners, scope of an expanded statewide program, funding requirements, and possible funding sources.

The Don't Drip and Drive Bill. A bill has been introduced in the 2019 Washington State Legislative Session to support the statewide expansion of the Don't Drip and Drive program. The bill adopts the 2018 Work Group's recommendations, designates the Washington Stormwater Center as the coordinating entity, and appropriates money to support the work required. Read the bill language and get updates about the status at https://app.leg.wa.gov/billinfo/ (search Bill Number 1853). To learn more contact Justine Asohmbom, Department of Ecology, at juas461@ecy.wa.gov.

Don't Drip and Drive expands to Clark County. Clark County, the Watershed Alliance, and Stormwater Partners of SW Washington are conducting a Don't Drip and Drive campaign based on the Puget Sound model. To learn more, visit www.fixthoseleaks.org or contact Eric Lambert, Clark County, at eric.lambert@clark.wa.gov.

STORM Work Groups

At the 2017 STORM Symposium, STORMers signed up for a variety of work groups. Over the course of 2018, these work groups have met to support each other in program development and implementation, as well as in collaborating to determine what opportunities exist to more effectively address the BMP. Additionally, several non-BMP related groups have formed to address other important issues.

Current work groups:

- Mobile Business
- Pet Waste
- Littering
- Don't Drip and Drive
- Natural Yard Care
- Business Inspections/Local Source Control
- Long-term Funding

If you are interested in joining one of the work groups, contact the STORM Steering Committee to get connected!

Long-term Funding Work Group

In late 2018, a long-term funding work group was formed to develop a sustainable funding strategy for funding a dedicated STORM coordinator and regional education and outreach programs. If you have fresh ideas, capacity and would like to join the committee, please reach out to any of the committee members for upcoming meeting information.

APPENDIX B: WSSOG 2019 WORK PLAN

Appendix B: WSSOG 2019 Work Plan

WSSOG 2019 WORK PLAN

Objectives from Exhibit "A" -
West Sound Stormwater Outreach Group Scope of Work & Budget for 2017-2019

Sustain successful efforts (Objective 2, Task 2.2)

- Continue Pet Waste Outreach
    - Design and implement a new distribution strategy for Backyard Pet Waste stickers
    - Consider outreach to vets on Backyard Pet Waste
    - Continue to implement updated Mutt Mitt E&O Plan
    - Sustain Mutt Mitt Program through an increase in the number of tracked stations
    - Participate in the regional STORM Pet Waste workgroup

New behavior campaign development (Objective 3, 4 and 5)

- ***(Information only - this task to be performed in 2018. See WSSOG 2018 Work Plan – Rev 11-8-18)*** Participate with consultant in the selection of a specific, targeted behavior and priority audience with the goal of reducing stormwater pollution in the participating areas, including:
    - Review of NPDES permit audiences and behaviors
- Participate with consultant in the development of a social marketing strategy to elicit behavior change in the target audience, including:
    - Evaluation of existing data, programs and local information
    - Conducting original formative research
- Participate with consultant in the implementation of a pilot campaign to address the selected target behavior and audience, which could include rebates, coupons or discounts
- Participate with consultant to draft an evaluation plan with specific, measurable and achievable outcomes
- Monitor the progress of other jurisdictions' behavior change campaigns and adapt elements as appropriate

Other opportunities (Objective 6 and 7) – include optional activities with participation varying by jurisdiction

- Continue to implement Hotline outreach
    - Distribution of paint sticks
    - Cinema or other media outlet advertising
    - Consider See Click Fix promotion
- Continue to participate in Puget Sound Starts Here outreach
    - Promote PSSH Month – May
    - Consider participation in regional Orca Health Starts Here campaign
    - Distribution of PSSH-branded merchandise, including but not limited to coffee sleeves, coasters and pet waste bag holders
- Participate in STORM's regional Natural Yard Care and Mobile Business workgroups as appropriate
- School lessons
- Pilot field monitoring programs with High School and Elementary students

Strengthen coalition and represent WSSOG on regional efforts (Objective 8)

- Participate on the STORM Strategic Planning Committee and PSSH Committee
- Provide STORM and PSSH support and attend Quarterly meetings
- Capacity building/training as needed

APPENDIX C: BACKYARD PET WASTE REPORT

Appendix C: Backyard Pet Waste Report

Backyard Pet Waste Campaign Summary

Kitsap County Public Works, Stormwater Division

Cammy Mills
Education and Outreach Coordinator

January, 2019

Introduction

Kitsap Public Works, in partnership with the West Sound Stormwater Outreach Group (WSSOG), implemented a campaign designed to encourage to proper home disposal of pet waste in winter of 2017. (See Appendix A for complete outreach plan.)

Changes of plan

Between the time that the Backyard Pet Waste Plan was developed and implemented, some notable changes were made.

Tear-off mailer eliminated

In the initial plan, residents would be mailed a postcard featuring messaging about the importance of picking pet waste. The postcard would feature a tear off portion which could be returned for a pet waste bag dispenser and/or sticker for their trash can. When we moved forward with implementation, we realized that we no longer had a bulk mailing code we could use and that getting a new one would be expensive and time consuming. We opted instead to have a link on the postcard that people could follow to request the bag dispenser and sticker.

Both mailings sent out in all areas

Initially, Kitsap County planned to send two mailings, but the members of the WSSOG (Bainbridge Island, Bremerton, Gig Harbor, Port Angeles, Port Orchard and Poulsbo) were unsure whether budget would allow them to do two mailings. Ultimately, all participants opted to distribute both mailings as there was sufficient budget and two mailers would be more likely to be effective in terms of message retention.

Mailing conducted in pilot neighborhoods

The target audience was dog owners with quarter acre or smaller lots who were either scooping their yards infrequently, scooping their yard and disposing of the waste improperly or failing to scoop in poor weather or when it's dark. Because there is no cost-effective way to mail to only dog owners, the plan was to send postcards to all properties that met the quarter acre or smaller criterion. However, this would have resulted in a very large mailing. Due to the expense of direct mail, we decided to target dense neighborhoods in a pilot to determine if further mailings in other areas was warranted.

Design

Elements of the campaign were designed to be usable across the region and so that elements could be pulled from the materials to use elsewhere. Specifically, the postcard featured an infographic that could be used on other materials and the sticker had instructions printed on the back so that it could be given away without the accompanying postcard.

Since the initial campaign, the stickers have been given out at outreach events where the "Poop Toss" game has been employed. The infographic has been used in the 2018 Everyday Kitsap magazine.

Figure 1 - The first postcard. Each postcard was folded so that there was a "hook" on the outside to encourage them to open the postcard.

The purpose of the sticker was designed to be placed on recipients' outdoor garbage can and its purpose was threefold: 1) Let recipients and viewers know that the trash is the right place for pet waste to be

disposed, 2) To remind users to scoop their yard each week as they take their garbage can to the curb, and 3) To help establish a social norm regarding scooping at home by making the behavior of the sticker user visible to others in the neighborhood.

Figure 2 - Stickers were included in the first mailing. Postcard and Everyday Kitsap respondents could request an additional sticker. Backing of sticker included instructions for use so that it could be used in outreach without the accompanying postcard.

Mailing and Response

Target neighborhoods were selected in each of the WSSOG members. Kitsap County opted to target a dense neighborhood in north Kitsap (Indianola) and south Kitsap (Manchester) as well as quarter acre lots located near streams. Because part of the purpose of sending stickers was to help created a social norm around home scooping, dense neighborhoods were chosen so that residents were more likely to see that their neighbors had posted their sticker. Residents near streams were chosen because their proximity to the water means they may have an immediate impact on water quality.

Each city provided their own mailing list which was then parsed if needed to remove nonresidential properties.

Table 1 - Mailing costs and response rate for backyard pet waste postcards

Jurisdiction	Number of addresses	Number of responses	Response rate	Cost	Cost per response
Bainbridge Island	1431	25	1.7%	$1282.12	$51.28
Bremerton	2200	119	5.4%	$1948.60	$16.37
Gig Harbor	230	4	1.7%	$241.24	$60.31
Kitsap County	4445	36	0.8%	$3892.77	$111.22
Port Angeles	1652	40	2.4%	$1473.66	$36.84
Port Orchard	819	67	8.2%	$751.71	$11.21
Poulsbo	1532	60	3.9%	$1369.66	$22.83
Total	**12,117***	**351**	**2.9%**		

***In the end, 192 mailings were returned with bad addresses, so the total mailing size was smaller than the total number of addresses provided.

A two percent response rate is commonly accepted as typical for direct mail when using an outside mailing list (that is, a list that is not comprised of existing contacts) (http://www.mccarthyandking.com/direct-marketing-tutorials/learning-direct-mail-response-rates). There was wide variation in response rates from each jurisdiction with the highest response rates for the cities of Port Orchard, Bremerton and Poulsbo. The average response rate across all jurisdictions was better than 2%, however, the response rate for Kitsap County was significantly lower than the rest. When we look at the response rate in only the Cities, we see an average response rate of 4%.

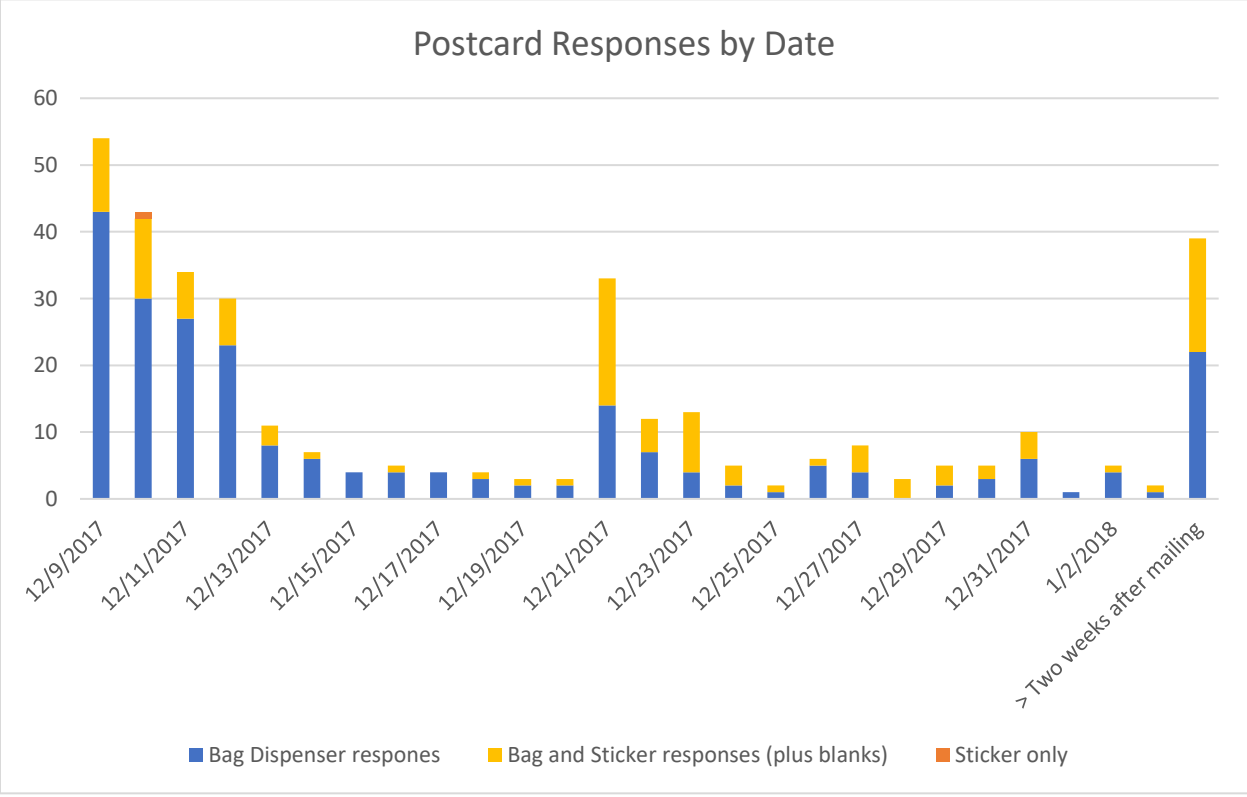


Figure 3 - Types of responses to the postcards

In looking at when people responded to the postcard, the largest response came in the days immediately following the first mailer (12/9/2017), with a smaller increase in responses with the second mailer (12/21/2017). The sticker was included in the first mailer, but respondents had the option of requesting a sticker, and many did. The second mailing did not include the sticker and there were more requests for stickers after the second mailing (46 requests for stickers in the two weeks after the first mailing and 56 requests for stickers in the two weeks after the second mailing).

Everyday Kitsap Response

Backyard Pet Waste campaign materials were included in Everyday Kitsap magazine. Everyday Kitsap was distributed in May 2018 to every residential address in Kitsap County and its cities. A total of 113,444 magazines were distributed. As with the postcard, readers could go to a website a bag dispenser and/or sticker. One hundred forty-six (146) unique requests for promotional materials were received. Of those, 53% request a bag dispenser, 46% requested a bag dispenser and sticker, and 1% requested a sticker only.

The cost to include a one-page ad for the Backyard Pet Waste campaign was $2,576.60. The resulting cost per contact was $17.65. Because Everyday Kitsap is mailed throughout Kitsap County, so while this effort was paid for exclusively by Kitsap County, only 61% (89 households) of the responses came from within unincorporated Kitsap. If the cost is calculated based only on residents of Kitsap County, then the cost increases to $28.95. This is much less than the cost per contact for the postcard mailing in Kitsap ($111.22) but similar to the cost per contact many of the cities who sent the postcard (see Table 1).

Evaluation Results

The BYP Campaign was primarily evaluated using an online survey. All those who responded to the postcard or Everyday Kitsap (EK) ad by requesting a bag dispenser and/or sticker were required to give their email address so that a follow-up survey could be administered. It is worth noting that people who would complete a request for a bag dispenser/sticker are likely to more highly engaged than the general population so survey results may be skewed.

A survey was administered using Survey Monkey to all respondents at approximately six months after exposure to the program. Responses trickled in from both promotional methods, so for some recipients, they received the survey less than six months after exposure to the campaign. The survey timing meant that there was an opportunity to find out whether respondents had made any long-term changes, however, it is possible that people had forgotten about the campaign by the time they received the survey. Images of the postcard and ad were used to help jog people's memory. The online survey was short to encourage completion and it focused on whether the recipients had engaged in three behaviors: increasing home scooping frequency, disposing of waste properly, and placing the reminder sticker on their trash can.

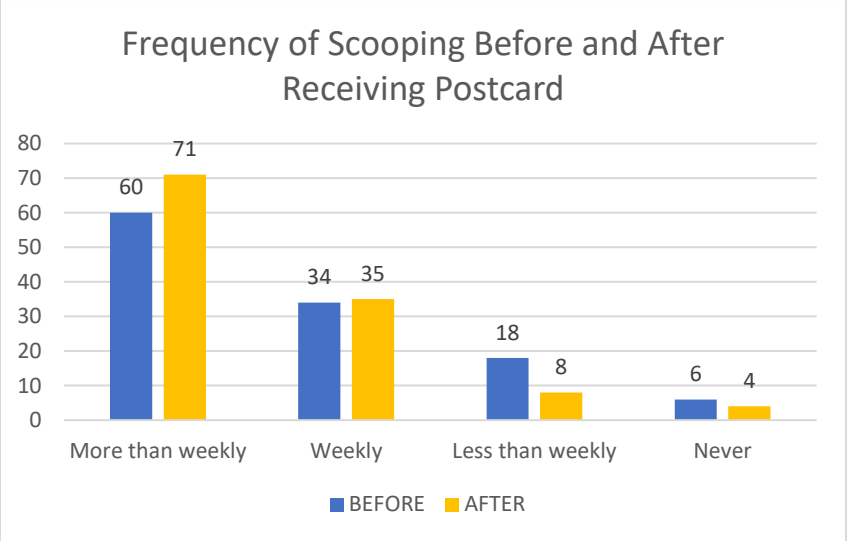
A total of 490 emails were sent to those who requested a bag dispenser and/or sticker, inviting them to take the survey; 347 of those went to people who had responded to the postcard and 143 had responded to EK. One hundred twenty-five (125) people completed postcard survey with an average completion time of three minutes and 31 people completed the EK survey with an average completion time of two and a half minutes. The overall response rate to the survey was 32%. Thirty six percent

(36%) of those invited to take the postcard survey completed one and 22% of those invited to take the EK survey completed one.

The responses to the postcard survey represent 1% of the total households who received a postcard.

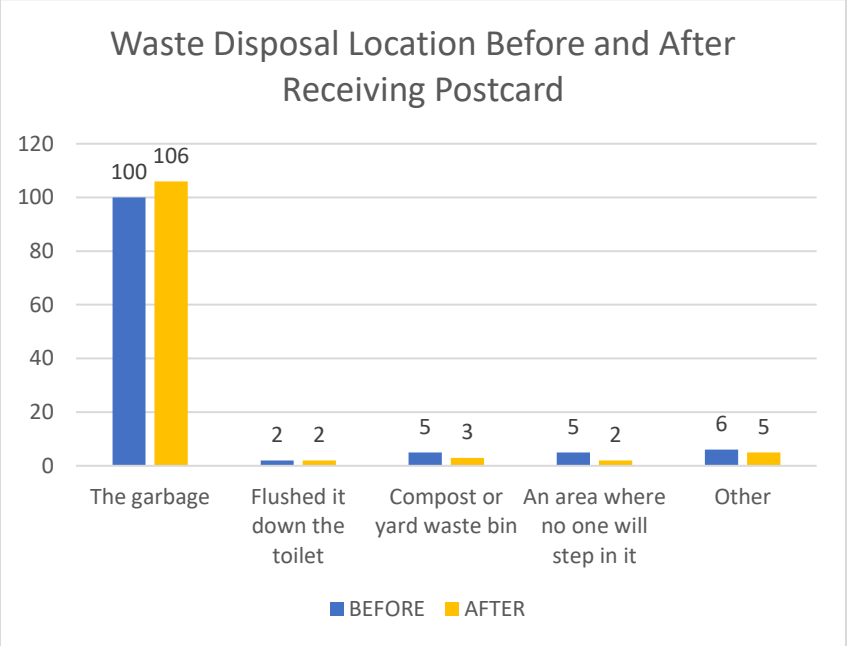
Postcard Survey Results

The majority of postcard survey respondents (69.60%) used their bag dispenser to pick up after their dog at home at least some of the time. Another 22.4% used their bag dispenser only while walking their dog. Of those who used their bags at home at least some of the time, 53.49% had purchased refill bags for their dispenser (n=86) indicating that they had continued scooping after their initial supply of bags had run out.



One of the goals of this campaign was to encourage people to scoop their yard at least weekly. Survey respondents indicated that most (79.66%) of them were already scooping their yard weekly or more. After seeing the postcards, the number of people who scooped at least weekly increased to 89.83%.

Figure 4 - Changes in scooping frequency (n=118).



Similarly, most (84.75%, n=118) said that they disposed of pet waste in the garbage prior to receiving the postcard. Other places people disposed of their pet's waste prior to receiving the postcard were compost or yard waste (4.24%), an area where no one will step in it (4.24%), toilet (1.69%) and other (2.08%). The number of people disposing of their pet's waste in the garbage increased modestly to 89.93% (six additional individuals) after seeing the postcard.

Figure 5 - Changes in waste disposal (n=118).

One of the primary goals of this campaign was to build a social norm around scooping by having dog owners place a sticker on their trash can to remind them to pick up weekly, and to signal to others that this was the right thing to do. Therefore, one of more important behaviors surveyed was whether they used their trash can sticker. Of survey respondents, 45.69% (n=116) said they placed their sticker on their garbage can. Some used the sticker in another way (7.76%) and a few placed the sticker on their garbage can only to have it peel off (6.9%).

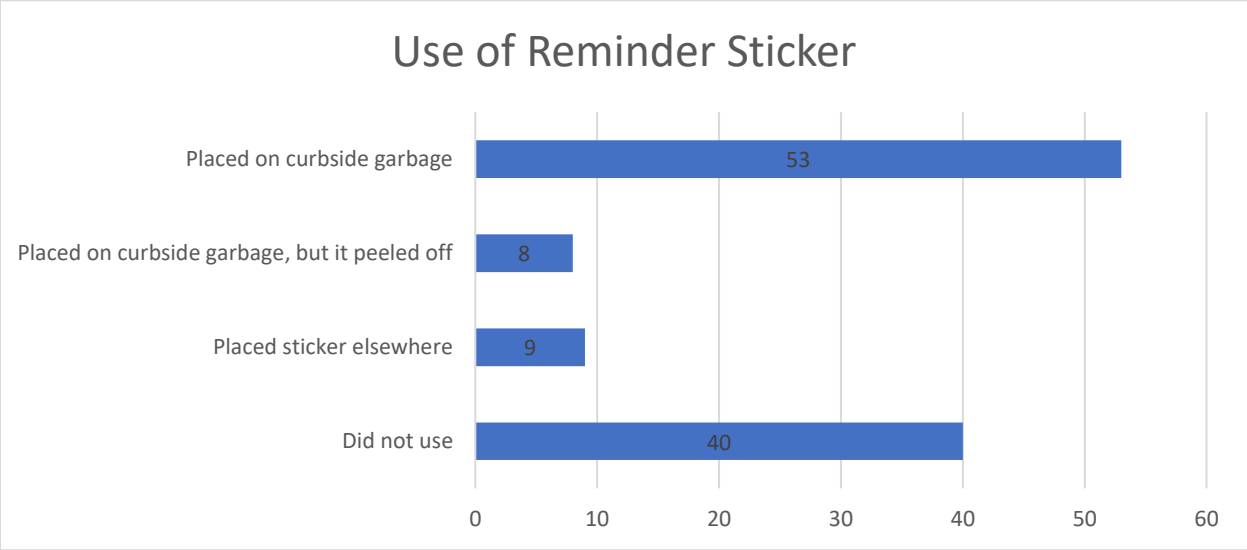


Figure 6 - Use of reminder sticker.

Those who said they did not use the sticker on their trash can were asked why. This question provides insight into barriers that may need to be addressed in future campaigns. This multiple-choice question included an "other, please describe" option. Those responses have been categorized and included in the chart below.

Table 2 - Survey respondents' reasons for not using reminder sticker (n=55).

What was the main reason you did not place the sticker on your garbage can?	Number of Responses	Percent of Responses
Didn't need a reminder to scoop	24	44%
I forgot/lost track of the sticker	10	18%
Other	7	13%
I use a garbage can that I lease from my trash collection service and didn't want to put a sticker on their property	5	9%
Didn't receive a sticker	4	7%
Put it in a better place to remind myself/others	3	5%
Didn't want to encourage others to put their waste in my garbage	1	2%
Smacked of self-aggrandizement	1	2%
Total	55	

Those who responded that they did not receive a sticker may be an indicator of the length of time between receiving the postcard and taking the survey since all postcard recipients received a sticker.

Optional demographic questions revealed that most respondents were female, between the ages of 45 and 74, and had a minimum of a college degree. In comparison to U.S. Census information about Kitsap County, survey respondents tended to be more predominantly female, were older and had more education.

Table 3 - Gender of Survey Respondents (n=110).

Response	Number	Percent
Female	84	76%
Male	26	24%
Non-binary/third gender	0	0%
Prefer to self-describe	0	0%

U.S. Census information indicates that 48.9% of people in Kitsap are female.

Table 4 - Age of survey respondents (n=110).

Response	Number	Percent
18 to 24	1	1%
25 to 34	12	11%
35 to 44	15	14%
45 to 54	24	22%
55 to 64	25	23%
65 to 74	28	25%
75 or older	5	5%

U.S Census information indicates that 17.3% of people in Kitsap are over the age of 65.

Table 5 - Education level of survey respondents (n=102).

Response	Number	Percent
Some schooling, but did not graduate from H.S.	0	0%
Graduated from H.S.	12	12%
1 year of college	8	8%
2 years of college	9	9%
3 years of college	3	3%
Graduated from college	31	30%
Some graduate school	9	9%
Completed graduate school	30	29%

Comparison with U.S. Census education information is somewhat more challenging because of differences in question phrasing. U.S. Census data indicates that 31.2% of people in Kitsap have a Bachelor's Degree or more advanced degrees. Because of the way the question was phrased in this

survey, people with an Associate Degree and Bachelors' Degree would have been lumped in the same category, making a comparison with Census information difficult.

Table 6 - Income range of survey respondents (n=83).

Response	Number	Percent
$0-$24,999	4	5%
$25,000-$49,999	11	13%
$50,000-$74,999	20	24%
$75,000-$99,999	22	27%
$100,000-$124,999	9	11%
$125,000-$149,999	8	10%
$150,000-$174,999	5	6%
$175,000-$199,999	0	0%
$200,000 and up	4	5%

Kitsap Median household income is $64,017. 58% of survey respondents said they had household incomes higher than this.

Everyday Kitsap Results

Everyday Kitsap survey respondents seemed less likely than postcard respondents to use the bag dispenser for home scooping. Of the 31 survey respondents, 61.3% used their dispenser to pick up at home at least some of the time as compared to 69.6% of postcard respondents.

EK respondents may be less likely to change their behavior than postcard respondents. 9.7% of respondents scooped their yard weekly or less prior to seeing the ad in Everyday Kitsap and 9.7% scooped weekly or less after seeing the ad (n=31). The percent of people who disposed of pet waste in the garbage based on seeing the ad increased from 80.7% to 83.9% (a single respondent, n=31).

In terms of the campaign's primary focus, reminder stickers placed on curbside garbage cans, response was not strong. Only 9 of the 31 (29%) survey respondents said they had requested a sticker. This is lower than the actual percentage of sticker requests received through EK (68 requests for stickers, representing 47% of all requests). Of those that said they'd requested a sticker, only three said that they placed in on their garbage can.

Everyday Kitsap survey respondents fit a similar demographic to respondents to the postcard survey. Most (71%) were women between the ages of 45 and 64 (66.7%) and a plurality had a college degree (35.7%) with an additional 17.9% having a graduate degree.

Windshield Survey

Because self-reporting is a somewhat problematic means of evaluation since people frequently over-report their behavior, we wanted to do some direct observations of behavior. To that end, in addition to online surveys, windshield surveys were conducted in two select neighborhoods where postcards were sent. Both neighborhoods were in Kitsap County and were selected for their density to make windshield surveying easier. The windshield surveys were conducted in August of 2018 early in the morning on garbage pickup days to determine if people had used the sticker they received. In total, 883 households

that received mailers were inspected, 486 in Suquamish and 397 in Manchester. Unfortunately, no reminder stickers were observed while conducting windshield surveys. It is noteworthy however, that people's general response to the postcards was much lower in Kitsap County than the other participating jurisdictions. It may be that people's use of the stickers was higher in cities than in the county.

Summary

In order to continue making progress in reducing bacterial contamination in stormwater from pet waste, it may be helpful to look at new methods of engagement. The postcards were effective in encouraging people to increase their home scooping, but they appeared to be less successful in encouraging people to use the trash can sticker. The sticker, while seemingly trivial, is an important element in helping build a social norm related to home scooping. Frequently, people need to be exposed to a campaign many times before they engage in the desired behavior. Continued direct mail efforts may result in an increase in the number of people using the stickers. However, direct mail is costly and the return on investment should be considered if the campaign moves forward.

Including Backyard Pet Waste campaign materials in Everyday Kitsap was done somewhat opportunistically. The Everyday Kitsap publication is produced on an annual basis with content from all divisions of Public Works. The cost of the one-page spread was $2576.60. This means the cost per contact for Everyday Kitsap was much lower than the cost per contact with the postcards. However, the overall number of people who responded to the campaign was lower.

There were barriers identified by survey respondents in using the sticker that may need to be addressed in future campaigns. The majority of those who didn't use the sticker responded that they didn't use it because they didn't need a reminder. Many people who took the survey were already engaged in the desired behavior, so these early adopters may need to be encouraged to use the sticker to set an example for others. Others were concerned about putting a sticker on a trash can that did not belong to them. Future campaigns should clarify that Waste Management and other haulers had given their permission for the stickers to be used. In addition, since 18% of respondents indicated that they had lost or forgotten about the trash can sticker, a future campaign should consider conducting the evaluation closer in time to the outreach effort.

City of Bellingham has an excellent pet waste campaign focused on home scooping. This campaign is another source of strategies that should be considered in any future backyard pet waste campaigns.

Appendix A

Backyard Pet Waste Education and Outreach Plan

Kitsap County Public Works, Stormwater Division

Cammy Mills
Education and Outreach Coordinator
Fall, 2017

1.0 BACKGROUND

The *Western Washington National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit* (Permit) requires Kitsap County to provide stormwater education and outreach programs designed to reduce behaviors that adversely impact stormwater runoff (Section S5.C.1). Additionally, Kitsap County is required to track activities and measure behavior change for prioritized target audiences, using the resulting measurements to direct resources most effectively. Pet waste is one of the specific subject areas called out in the Permit. (1)

Estimates indicate that dogs in Kitsap County produce over 11 tons of waste per day (2). Pet waste is a source of fecal coliform (FC) bacteria contaminating local streams and shorelines. The presence of FC bacteria is also an indicator of animal or human sewage. FC contamination poses a risk to public health by primary contact with water or consumption of shellfish. (3)

The public generally does not make the connection between pet waste and polluted surface waters. Results of the "Stormwater Runoff: Public Attitudes, Awareness, and Behavior" survey conducted by Elway Research, Inc. in November 2008 indicates that only 34% of Kitsap Peninsula residents thought pet waste left on the ground significantly contributed to water pollution. Similarly, only 43% of respondents thought putting pet waste in the garbage was an effective way to protect the environment. (See Appendix A)

The survey shows that Kitsap residents regard pet waste cleanup and disposal at home as a low priority. When asked how pet waste was dealt with at home, 29% of survey respondents said they let dog waste accumulate in their yards for a week, or longer. One in five respondents (20%) stated that they never clean up their yards. The survey indicates that only half of dog owning households clean up their pet waste on a daily basis. Of those pet owners who reported regularly picking up pet waste at home and on walks, only 63% properly disposed of the waste in the trash.

In 2009, Kitsap County Public Works completed a pilot program, focused on encouraging dog owners to pick up at home (See Appendix B) which included a thorough evaluation. During the pilot, residents that received a series of postcard mailers that included a tear-off portion that could be returned for a small incentive (pen, bandana or flashlight) reported better home scooping behavior when compared to residents outside the pilot area.

Recommendations and findings from the evaluation of the 2009 campaign were used to inform the strategy for this campaign (See Appendix C). Those findings include:

- Direct mail was an effective way to reach the desired audience,
- Incentives were more desirable when they had more monetary value,
- Both non-dog owners and dog owners would like to see signs encouraging people to scoop in their neighborhood,
- Humorous mailers were memorable, and,
- Two mailers seemed to be sufficient for people to remember the message.

In addition, the City of Bellingham has run a campaign focused on encouraging people to pick up after their dogs at home. This campaign incorporated incentives, mailers, a pledge and stickers to be placed on garbage cans which acted as a prompt and a way to establish a social norm. Successful elements of this campaign will be incorporated into this plan. (Appendix D)

An effort to gather local audience research was conducted in 2016 through a survey administered to homeowners who received a Pollution Identification and Correction visit from Kitsap Public Health, and dog owners who attended septic workshops in fall of 2016. Because of the survey's small sample size (n=31) it is used as a supplement to the information from the previously campaigns. (Appendix E)

2.0 PROJECT DESCRIPTION

Summary

This Backyard Pet Waste Campaign will be run in collaboration with the West Sound Stormwater Outreach Group (WSSOG). WSSOG includes the Cities of Bainbridge Island, Bremerton, Gig Harbor, Port Angeles, Port Orchard and Poulsbo, the U.S. Navy, and Kitsap County Public Works. This program will result in increased adoption of the correct behavior.

The primary element of this campaign will be direct mail. Kitsap County will send out two mailers, both with a tear-off section. The initial postcard will include a "We Scoop" sticker, described below. Those who return the tear-off section of the first mailing will receive a bag dispenser for their leash. Those who return the second mailer will receive a clip-on leash dispenser and/or "We Scoop" garbage can sticker. Within the Cities, at least one mailer will be sent out, and the second will be sent, if budget allows.

The "We Scoop" sticker will help establish a social norm in neighborhoods that scooping at home is the right thing to do and that placing it in the trash is acceptable. In addition, the sticker will remind dog owners to clean their yard when they're taking their garbage to the curb for pickup. In a previous backyard pet waste campaign, non-dog owners were interested in signs encouraging people to pick up. While the "We Scoop" sticker may not be relevant for non-dog owners, they may choose to put it on their garbage can, thus helping spread the campaign's message.

The program will also be promoted at select events where there is a high proportion of dog owners, or where messaging has been well-received in the past.

We will also explore partnerships with veterinarian offices. Audience research indicates that people see veterinarians as a trusted source of information. However, previous attempts to partner with vet offices has shown that they are frequently asked to promote products (foods, medications, etc.) and that they have limited capacity and/or desire to participate. We will explore whether a small, passive display may be welcome in waiting or exam rooms.

2.1 Target Audience

The target audience for this campaign will be dog owners in suburban areas with quarter acre lots or smaller who engage in one of the following behaviors: scooping at home less than once a week, scooping and improperly disposing of pet waste, or those that fail to scoop because of poor weather or dark. Members of the target audience will live within the city limits of the WSSOG member cities or Kitsap County.

2.2 Benefits, Barriers and Competition

In audience research, the top three benefits of scooping waste at least weekly and disposing of it in the garbage were:

- Reduced risk of family members contracting an infection from pathogens in pet waste
- Reduced risk of pets contracting an infection from pathogens in pet waste
- Reduced chance of stepping in pet waste in the yard

Multiple barriers to the correct behavior exist including:

- Bad weather
- The perception that dog waste decomposes and goes away
- Not enough time
- Not having bags
- The yuck factor – the perception that pet waste is gross so people don't want to pick it up
- People are unbothered by pet waste in their yard and/or the dog has its own area. This barrier is especially challenging because it seems that people scoop in public and see it as something they do as a courtesy to others and expect that others will do the same in return. However, this norm does not work at home.
- The belief that pet waste acts as fertilizer

Several behaviors are preferred by the audience and therefore compete with the correct behavior:

- Putting pet waste in the compost pile or yard waste bin
- Tossing it off the grass
- Putting it in an in-ground digester

- Leaving it on the grass
- Flushing it down the toilet

2.3 Positioning Statement

Audience members will view scooping their dog's poop weekly as an easy way to help keep their family healthy and keep their yard and home clean and will associate pet waste in their home as a consequence of not scooping.

2.4 Marketing Strategy

2.4.1 Product

Core Product: Healthy families, healthy pets, and clean homes.
Actual Product: Dog waste is picked up, bagged and placed in the trash at least weekly.
Augmented Product (in Social Marketing, the Augmented Product describes the product(s) consumers need to attain their core product): Direct mail featuring humorous messaging, focused on the benefits of scooping to the health of families and preventing stepping in pet waste and tracking it inside, pet waste bags, clip on bag dispensers, "We Scoop" stickers for garbage cans (In Kitsap only.)

2.4.2 Price

Monetary incentives: pet waste bags, clip on bag dispensers, "We Scoop" sticker (In Kitsap only.)

Nonmonetary incentive: Recognition for doing the right thing ("We scoop sticker - In Kitsap only), protecting the health of family.

2.4.3 Place

The primary place where the audience will encounter this program is at home, via direct mail. The campaign will also be promoted at select events such as PetsWalk in combination with the Poop Toss Game. In addition, people may encounter the campaign's messaging in their neighborhoods if they see the garbage can stickers displayed by neighbors.

2.4.4 Promotion

Direct mail will be the primary communication channel for this program as it has been proven successful in the past for the audience in this area, and is a method that meets the need for this program to be scalable.

In addition, the program will be promoted at events such as PetsWalk and Kids' Day at the Fairgrounds. At both of these events, we have used the "Poop Toss" game as a way to talk to people about proper disposal of pet waste. We will continue to use this game and include the garbage sticker as a giveaway item for players who live in areas where the trash hauler consents to having stickers placed on their bins.

We will explore other avenues for promotion as well, including promoting home pickup at vet offices. Research shows that veterinarians are a trusted information source (see Appendix F). We will explore whether vet offices would be willing to have a small display in their waiting room with short surveys for customers to take in return for a bag dispensers and/or refills.

2.5 Evaluation

In order to receive the promotional materials associated with the program, we will ask participants to give their email address and let them know they will be asked to take another survey as a follow up later. The focus of the evaluation will be frequency of waste pickup and where participants are disposing of waste and the use of the giveaway items.

In addition, we will do windshield surveys in neighborhoods which received the mailing to determine whether residents used the sticker appropriately.

3.0 IMPLEMENTATION PLAN

3.1 Roles and Responsibilities

Each agency involved will have a role in funding, developing and implementing the program.

Campaign development, implementation and funding for County-specific tasks: Kitsap Public Works Stormwater Division

- Eva Crim, Water Quality Program Manager, oversees timeline, budget and overall design and implementation.
- Cammy Mills, Education and Outreach Coordinator, helps with design of outreach materials, campaign evaluation and coordination with other organizations
- Michelle Perdue, Education and Outreach Coordinator, coordinate production of outreach materials.

Implementation in jurisdictions: members of WSSOG will be responsible for providing funding for the campaign within their city and providing mailing lists.

- Marilyn Guthrie, City of Bainbridge Island
- Teresa Smith, City of Bremerton
- Wayne Matthews, City of Gig Harbor
- Jonathan Boehme, City of Port Angeles
- Zack Holt, City of Port Orchard
- Anja Hart, City of Poulsbo
- Nikki Bennett, US Navy

3.2 Project Tasks

Task 1 – Develop outreach materials

1A - Develop direct mail postcards

1B - Design "We Scoop" sticker – Consider wording and imagery that will be most effective at promoting a social norm and what will be durable for this application. Determine if it is feasible and appropriate to use the design developed by City of Bellingham.

1B.1 Work with Waste Management and the Public Works Solid Waste Department to ensure stickers can be placed on garbage cans.

1C - Order postcards and promotional materials.

Deliverables: Two postcards, each designed to be sent with and without a tear-off mailer, "We Scoop" sticker.

Task 2 – Distribute Outreach materials and measure response

2A - Distribute direct mail in Kitsap County to properties a half acre or smaller.

2B - Obtain mailing lists from Cities, targeting properties a half acre or smaller, or other target areas, as identified by the jurisdiction.

2C - Send out two mailings, one month apart.

2D - Distribute giveaway items to those that send back the tear-off.

2E - Track response to giveaway items.

Deliverables: Postcard is mailed, spreadsheet to track giveaway items and response times

Task 3 – Explore partnership with veterinarians

3A - Generate a list of vet offices in Kitsap County. If WSSOG is interested in participating in this portion of the effort, obtain lists from participating jurisdictions.

3B - Visit vets offices and inquire about placing a small display in their waiting and/or exam rooms. Track whether they'd be willing to participate, and what would make the display feasible for them.

3C - Based on feedback from offices, assess whether it is worth designing outreach targeted at this location using existing materials.

3D - If warranted, develop materials, borrowing from messaging and branding developed for postcards.

3E - Distribute materials

Deliverables: Assessment of feasibility of working with vets to distribute outreach materials. If warranted, outreach materials and distribution of materials.

Task 4 – Evaluate

4A - Develop detailed evaluation plan, prior to design of outreach materials so that information about the evaluation can be included in outreach materials if necessary.

4B - Evaluate effectiveness of campaign materials in raising awareness of proper pet waste disposal in Cities and adoption of said behavior in Kitsap County. If possible, measure effectiveness of outreach in participating vet clinics as compared to direct mail.

Deliverables: Evaluation plan, summary of program evaluation.

3.3 Schedule – Project will be completed by 12/31/2017

July 10 – Solicit feedback from WSSOG on wording and imagery to be used in postcard mailer.

July 14 – Finalize number of postcards to be sent to each jurisdiction (one mailer or two).

July - Start graphics design process for postcard mailers and trash can stickers, based on feedback from WSSOG.

August – Identify priority areas for mailing in Kitsap and Cities. Cities will supply a list of addresses to Kitsap County. To be complete by 7/15/17.

August – Complete an evaluation plan.

August – Solicit feedback from veterinarian offices to see if they would be willing and able to display pet waste materials.

September – Postcard design and trash can stickers are sent out for print and mailing.

September – Develop pet waste display/materials for veterinarians (if warranted based on feedback from offices).

September 29 – First postcard is delivered.

October 13 – Second postcard is delivered.

October – Distribute materials to veterinarian offices.

September – December – Incentives are mailed to those who return postcards.

October – November – Collect and analyze evaluation metrics.

December – Develop final report.

4.0 REFERENCES

1. **State of Washington Department of Ecology.** *Western Washington Phase II Municipal Stormwater Permit.* [Online] January 16, 2014. http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/5YR/2014mod/WWAPhaseII-Permit-2014Final.pdf.

2. **Snohomish County Surface Water Management-derived calculation: V = fqhR, where:**

f = percentage of dog owning households in Washington (AVMA 2007): **39.9%**
q = mean number of dogs per dog owning household in Washington (AVMA 2007): **1.6**
h = number of households in Kitsap County (OFM 2008): **104,145**
R = estimated rate of daily waste production per dog: **0.33 lb/dog/day**
V = total daily volume of waste produced: **21,940 pounds = 11 tons per day**.

3. **Kitsap Public Health District.** *2014-2015 Priority Area Worklist: Fecal Pollution Identification and Correction.* [Online] https://www.kitsappublichealth.org/environment/files/reports/pic_priority_list.pdf.

KC-378-16

INTERLOCAL AGREEMENT BETWEEN KITSAP COUNTY AND THE CITY OF PORT ANGELES FOR THE WEST SOUND STORMWATER OUTREACH GROUP

I. PREAMBLE

This Interlocal Agreement (hereafter "AGREEMENT") is by and between Kitsap County (hereafter "COUNTY") whose principal offices are located at 614 Division Street, Port Orchard, Washington 98366 and the City of Port Angeles (hereafter "CITY") whose principal offices are located at 321 East 5th Street, Port Angeles, Washington 98362.

II. RECITALS

Whereas, the Washington State Department of Ecology requires owners or operators of a municipal separate storm sewer system to obtain coverage under a Western Washington NPDES Phase II Municipal Stormwater Permit; and

Whereas, mutual benefits will accrue to the parties hereto and the people which each serves in the cooperative implementation of the West Sound Stormwater Outreach Group. The Interlocal Cooperation Act, chapter 39.34 RCW, further authorizes the parties hereto to enter into this AGREEMENT; and

Whereas, Permittees are required by Permit Section S5.C.1 to provide stormwater education and outreach programs designed to achieve measurable reductions in behaviors that cause or contribute to adverse stormwater impacts; and

Whereas, coordination among Permittees with adjoining or shared geographic areas is encouraged by Washington State Department of Ecology and enhances access to federal, state, and other financial and technical support, and

Whereas, West Sound residents share media sources and would benefit from consistent messaging across city and county boundaries; and

Whereas, municipal resource efficiency is increased and cost savings are realized through sharing expertise, expenses, and staff time to gain economies of scale and avoid duplication; and

Whereas, Kitsap County and the cities of Poulsbo, Bremerton, Port Orchard, Gig Harbor, Bainbridge Island, and Port Angeles desire to continue to work together as the West Sound Stormwater Outreach Group to coordinate joint development and implementation of stormwater education and outreach programs.

NOW THEREFORE, the parties mutually agree as follows:

III. AGREEMENT

A. The Recitals set forth above are expressly incorporated into the AGREEMENT by this reference.

B. This AGREEMENT consists of the following documents:
   1. Interlocal Agreement
   1. Exhibit A: West Sound Stormwater Outreach Group Scope of Work and Budget

C. **Purpose:** The purpose of the AGREEMENT is to provide a mechanism through which COUNTY and CITY voluntarily collaborate in the development, implementation, and funding of stormwater education and outreach messages, materials, activities, and program assessment tools for the general public, businesses, and other target audiences as required by the NPDES Phase II Permit.

D. **Payment and Funding:** CITY will provide COUNTY funds in an amount not to exceed a total of $11,474 per year, totaling $34,422 for the years 2017 through 2019. In accordance with Section I below, COUNTY agrees to send invoices to CITY representative for reimbursement of allowable expenses incurred as defined in Exhibit A.

E. **Scope of Work:** COUNTY and CITY shall perform duties and services as are listed in Exhibit A, attached hereto and incorporated herein by this reference. Said services shall be performed in accordance with the approved Scope of Work and budget specified in Exhibit A, and as provided for in Section I of this AGREEMENT.

F. **COUNTY and CITY Administrators:**

The "West Sound Stormwater Outreach Group" is a collective of local jurisdictions and is not a separate legal entity. Accordingly, Michelle Perdue, Education & Outreach Coordinator, 614 Division Street, MS-26A, Port Orchard, Washington 98366 shall represent COUNTY in all matters pertaining to the services rendered under this AGREEMENT. All requirements of the CITY pertaining to the services and materials to be rendered under this AGREEMENT shall be coordinated through the COUNTY representative.

Jonathan Boehme, Port Angeles Stormwater Engineer, 321 5th Street, Port Angeles, Washington 98362, shall represent the CITY in all matters pertaining to the services and materials to be rendered under this AGREEMENT. All requirements of the COUNTY pertaining to the services or materials to be rendered under this AGREEMENT shall be coordinated through the CITY representative.

Following a change of representative, COUNTY and CITY will inform the other party in writing within ten (10) working days.

G. **Reporting:** By January 31st of each year this AGREEMENT is in effect, COUNTY and CITY will jointly report the results of work conducted under this AGREEMENT in a manner that is mutually useful in the fulfillment of NPDES Permit reporting requirements for public education activities, as specified in Permit Section S9.E.2.c.

H. **Responsibilities of the Parties:** It is mutually understood that CITY will provide COUNTY with the following:

Up to $34,422 over the duration of this AGREEMENT for development of educational materials, professional service fees, partial reimbursement of COUNTY administrative costs, and other expenses related to tasks as described in Exhibit A. CITY will also contribute staff time to attend meetings, provide input, conduct pertinent research, and participate in program development.

It is mutually understood that COUNTY will provide CITY with the following:

COUNTY will provide administrative services and act as financial manager for this AGREEMENT and associated professional service contracts. COUNTY will also contribute staff time to facilitate meetings, provide input, conduct pertinent research, and participate in program development.

I. **Reimbursement:** CITY shall reimburse COUNTY for actual incurred costs upon presentation of a properly executed invoice. Costs shall be charged and funding reimbursed based upon appropriate program elements as defined in Exhibit A. COUNTY may exceed line item amounts within individual program element budgets, but shall not exceed the total budget for each individual program element without written approval of CITY. Reimbursement requests shall not be made to CITY more frequently than once a month. CITY shall reimburse COUNTY within thirty (30) days of receipt of a properly executed COUNTY invoice.

J. **Property:** Title to property purchased by COUNTY, the cost of which COUNTY has been reimbursed as a direct item of cost under this AGREEMENT, shall pass to and vest to COUNTY. Property purchased with funds delivered pursuant to this AGREEMENT may be used only for the performance of this AGREEMENT and shall be purchased in accordance with applicable state law and COUNTY purchasing policies.

K. **Assignment:** COUNTY may assign or subcontract any portion of the services provided within the terms of the AGREEMENT. All terms and conditions of the AGREEMENT shall apply to any approved subcontract or assignment related to this AGREEMENT.

L. **Indemnity:** Both COUNTY and CITY shall accept responsibility for any and all liability arising from acts of its own officers, employees, agents, and contractors to the extent provided by law. Additionally, each party agrees to indemnify, defend, and hold harmless the other party, and its officers, agents, and employees for all claims (including demands, suits, penalties, losses, damages, or costs of any kind whatsoever) including costs, expenses, and reasonable attorney's fees, to the

extent such a claim arises or is caused by the indemnifying party's own negligence or that of its officers, agents, or employees in performance of this AGREEMENT.

Nothing contained in this section of this AGREEMENT shall be construed to create a liability or a right of indemnification in any third party.

This section shall survive the expiration of this AGREEMENT.

M. **Amendments:** The parties hereby further agree that this AGREEMENT cannot be amended or modified without the written concurrence of both parties.

N. **Termination:** Either party to this AGREEMENT may elect to terminate this AGREEMENT for any reason by delivering a sixty (60) day written notice of intent to terminate to the other party. In the event of such termination, COUNTY shall be compensated for the actual costs incurred prior to the time of written notification of contract termination.

O. **Duration:** This AGREEMENT shall commence on the date of execution, and shall remain in effect through December 31, 2019.

P. **Recording:** Pursuant to RCW 39.34.040, this AGREEMENT shall be filed with the Kitsap County Auditor.

Q. **Waiver:** A failure by either party to exercise its rights under this agreement shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this AGREEMENT unless stated to be such in a writing signed by an authorized representative of the party and attached to the original AGREEMENT.

R. **Governing Law:** This AGREEMENT shall be governed by and construed in accordance with the laws of the State of Washington.

S. **Venue:** The venue for any action to enforce or interpret this AGREEMENT shall lie in the Superior Court of Washington for Kitsap County, Washington.

T. **Multiple Originals:** This AGREEMENT may be executed in multiple copies, each of which shall be deemed an original.

U. **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 the AGREEMENT which can be given effect without the invalid provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of this agreement, and to this end the provisions of this AGREEMENT are declared to be severable.

IN WITNESS WHEREOF, this AGREEMENT was executed by the parites on the dates hereinafter indicated.

DATED this 2 day of DEC, 2016

CITY OF PORT ANGELES

Dan K. McKeen, City Manager

ATTEST:

City Clerk

Approved as to Form:

City Attorney

DATED this 9 day of JAN, 2017.

BOARD OF COUNTY COMMISSIONERS
KITSAP COUNTY, WASHINGTON

Charlotte Garrido, Chair

Robert Gelder, Commissioner

Edward E. Wolfe, Commissioner

ATTEST:

Dana Daniels, Clerk of the Board

BOARD OF COMMISSIONERS STATE OF WASHINGTON KITSAP COUNTY

EXHIBIT A:

WEST SOUND STORMWATER OUTREACH GROUP

Scope of Work & Budget for 2017–2019

Kitsap County and the Cities of Poulsbo, Bremerton, Port Orchard, and Gig Harbor have been working to jointly develop, implement, and fund NPDES Municipal Stormwater Permit-required outreach via interlocal agreements since 2008. With the additions of Bainbridge Island and Port Angeles in 2012, the group assumed the name of West Sound Stormwater Outreach Group (WSSOG), to represent the regional scope and to align with other similar groups across Puget Sound under the Stormwater Outreach for Regional Municipalities (STORM) umbrella.

A. GOALS, OBJECTIVES, AND TASKS

Goals:

1. Work cooperatively to help meet the requirements for compliance with NPDES Phase II Municipal Stormwater Permit Section S5.C.1, Public Education and Outreach, through the implementation of "education and outreach program[s] designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities."[1]
2. Realize cost savings and increase municipal resource efficiency by sharing expertise, expenses, and staff time to gain economies of scale and avoid duplication.
3. Jointly work to help fulfill education and outreach requirements of local Total Maximum Daily Loads (TMDLs), also known as Water Pollution Cleanup Plans.
4. Benefit citizens of the West Sound region by providing consistent outreach and messaging.
5. Gain enhanced access to federal, state, and other financial and technical support through coordination among Permittees with adjoining or shared geographic areas.

Objectives & Tasks:

Objective 1 Develop and adhere to an annual work plan for each year of this interlocal agreement.

Task 1.1 Jointly develop a work plan for each year by January 31 of 2017, 2018, and 2019.

Objective 2 Build on existing successful efforts by maintaining elevated awareness levels and environmentally positive behavior trends for one audience and behavior selected during the previous Permit term.

Task 2.1 Review available survey results to determine impact of existing outreach efforts.

Task 2.2 Continue to achieve sustained awareness and practice of proper pet waste management.

- Implement the updated Education & Outreach Plan for Pet Waste in Backyards, including a strategy for sustained awareness for the current Permit term, using adaptive management as necessary.

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[1] Washington State Department of Ecology, *Western Washington Phase II Municipal Stormwater Permit* (2013) p.16.

- Continue to implement the Pet Waste in Public Places campaign, including a strategy for continued awareness and behavior adoption for the current Permit term using adaptive management as necessary, promoting maintenance of the Mutt Mitt Program and supporting growth where indicated.

Objective 3 Select one new behavior and target audience. Review and prioritize the list of NPDES Permit audiences and practices to be addressed by a behavior change campaign. Revise as necessary based on emerging issues, opportunities, and evaluation results.

Task 3.1 Assess practices that are most likely contributing to adverse stormwater impacts based on regional reports, studies, and knowledge of local pollution problems. Consider the scope of the problems as identified by reports, water quality data, and inspection/investigation results.

Task 3.2 Evaluate behaviors targeted for social marketing campaigns using factors such as:

- Attitude and behavior survey data, such as the Puget Sound Partnership's General Opinion Survey and Sound Behavior Index results;
- Applicability of the issue across the West Sound region;
- Availability of existing, effective programs that can be modeled;
- Opportunities to collaborate with others involved in stormwater outreach programs;
- Degree to which behaviors are single, simple, doable, and measurable; and
- Findings from Task 3.1.

Objective 4 Design or adopt a social marketing campaign with built-in evaluation protocols for the highest priority behavior from Objective 3.

Task 4.1 Conduct formative research, which may include:

- Reviewing other program designs, management approaches, and evaluation strategies;
- Adopting a campaign approach that has been thoroughly evaluated and proven successful in a similar community; and/or
- Utilize focus groups or other survey tools to garner in-depth information on attitudes and practices relative to the behavior, and identify barriers and benefits of the target audience adopting the behavior.

Task 4.2 Develop a campaign strategy based on research from Task 4.1 that includes an evaluation plan with specific, measurable, and achievable outcomes.

Objective 5 Implement a social marketing campaign for the highest priority behavior.

Task 5.1 Test the campaign strategy on a small segment of the population, using focus groups and/or pilot studies to refine and reevaluate the strategy.

Task 5.2 Implement the campaign across the community, assessing effectiveness at proper intervals, documenting progress, and changing the campaign strategy as necessary to achieve defined outcomes.

Task 5.3 Continue the program at an appropriate level once measurements indicate increased adoption of the behavior in the target audience.

Objective 6 As resources and consensus of the group are available, implement additional campaigns using a phased approach for each prioritized behavior and associated target audience.

Task 6.1 Pursue grants and other funding opportunities as available and appropriate.

Objective 7 Use adaptive management to refine programs and direct education and outreach resources most effectively.

Task 7.1 Take advantage of mutually beneficial outreach opportunities that fall within the NPDES Permit-required scope of audiences and behaviors, regardless of prioritization ranking.

Task 7.2 Seek opportunities to share among member jurisdictions the existing outreach efforts to audiences not prioritized within the WSSOG activities, such that these efforts are beneficial to all members.

Objective 8 Represent the WSSOG on larger regional stormwater outreach efforts through participation as a contributing member of STORM and the Puget Sound Starts Here (PSSH) campaign development team.

Task 8.1 Help implement the STORM Strategic Plan and annual Work Plan to achieve results of use and benefit to the WSSOG.

Task 8.2 Promote capacity building among STORM and WSSOG members to raise the caliber of collective outreach in the region.

Task 8.3 Support development and implementation of the PSSH awareness campaign in conjunction with on the ground local behavior change programs.

Objective 9 Track and maintain records of education and outreach activities. Publish an annual summary of activities that is suitable for use in NPDES reporting.

B. BUDGET

Table 1 shows the annual budget for years 2017 through 2019. The annual Staff Time budget of $50,932 is for 0.5 FTE of a Kitsap County Education & Outreach Coordinator's time to administer the Interlocal Agreement and manage outreach programs identified in the annual work plan on behalf of the WSSOG. This funding also includes coordination with STORM, the Puget Sound Starts Here campaign development team, ECO Nets, and all associated travel expenses; as well as administrative duties such as financial tracking and management. The annual staff time budget will be shared by all WSSOG jurisdictions in proportion to their relative population size, as shown in Table 1.

The annual Outreach Base Programs budget of $80,371 will be used to implement joint programs prioritized by the group and agreed upon for inclusion in the WSSOG annual work plan. This may include activities such as the Mutt Mitt Program, backyard pet waste outreach, reporting hotline promotion, advertising, business outreach, local implementation of the Puget Sound Starts Here campaign, newsletters and literature development, priority behavior change programs, and evaluation/surveys. The WSSOG will make every effort to minimize actual costs by selecting competitive bids for professional services, and by pursuing grants and other funding sources as available and appropriate.

The annual Supplemental Programs Budget was added to accommodate several jurisdictions that expressed a desire for additional outreach support. This allows flexibility for jurisdictions to customize a suite of outreach options to meet the needs of their communities. Rates for elementary classroom lessons were based on County staff time for lesson preparation, teaching time, and travel. Cinema ad rates were based on real charges incurred for similar advertising in 2016. To meet the needs of jurisdictions who utilize biennial budget cycles, year 2017 and years 2018-19 were calculated on separate charts.

Table 1. Annual budget for all program elements - 2017.

Jurisdiction	Population Est 2015 (OFM)	Relative Population	Staff Time	Base Programs Budget	PSSH & Mutt Mitt Programs*	Supplemental Programs Budget	Annual Cost per Jurisdiction
Unincorporated KC	171,940	60.1%	$30,631	$41,450			$72,081
Bremerton	39,410	13.8%	$7,021	$11,151	$1,650	$0	$18,171
Bainbridge Island	23,390	8.2%	$4,167	$8,139	$2,500	$0	$12,306
Port Angeles	19,140	6.7%	$3,410	$6,364	$1,750	$1,700[1]	$11,474
Port Orchard	13,510	4.7%	$2,407	$5,807	$2,550	$860[2]	$9,074
Poulsbo	9,950	3.5%	$1,773	$4,899	$2,500	$2,750[3]	$9,421
Gig Harbor	8,555	3.0%	$1,524	$2,562	$500	$3,900[4]	$7,986
TOTAL	**285,895**	**100.0%**	**$50,932**	**$80,371**	**$11,450**	**$9,210**	**$140,513**

This column is **included in the total Base Programs Budget, and represents a cap, or 'not to exceed' total for these two items per jurisdiction.*

[1] Includes funding for 3 months of cinema ads in Port Angeles.
[2] Includes funding for 4 elementary school classroom lessons at $215 each in Port Orchard.
[3] Includes funding for 6 elementary school classroom lessons at $275 each, and 3 weeks of cinema ads in Poulsbo.
[4] Includes funding for 3 months of cinema ads in Gig Harbor.

Table 2. Annual budget for all program elements – 2018 & 2019.

Jurisdiction	Population Est 2015 (OFM)	Relative Population	Staff Time	Base Programs Budget	PSSH & Mutt Mitt Programs*	Supplemental Programs Budget	Annual Cost per Jurisdiction
Unincorporated KC	171,940	60.1%	$30,631	$41,450			$72,081
Bremerton	39,410	13.8%	$7,021	$11,151	$1,650	$0	$18,171
Bainbridge Island	23,390	8.2%	$4,167	$8,139	$2,500	$2,500[1]	$14,806
Port Angeles	19,140	6.7%	$3,410	$6,364	$1,750	$1,700[2]	$11,474
Port Orchard	13,510	4.7%	$2,407	$5,807	$2,550	$0	$8,214
Poulsbo	9,950	3.5%	$1,773	$4,899	$2,500	$2,750[3]	$9,421
Gig Harbor	8,555	3.0%	$1,524	$2,562	$500	$3,900[4]	$7,986
TOTAL	**285,895**	**100.0%**	**$50,932**	**$80,371**	**$11,450**	**$10,850**	**$142,153**

This column is **included in the total Base Programs Budget, and represents a cap, or 'not to exceed' total for these two items per jurisdiction.*

[1] Includes funding for 2 months of cinema ads in Bainbridge Island.
[2] Includes funding for 3 months of cinema ads in Port Angeles.
[3] Includes funding for 6 elementary school classroom lessons at $275 each, and 3 weeks of cinema ads in Poulsbo.
[4] Includes funding for 3 months of cinema ads in Gig Harbor.

IDDE Screening Strategy:

In order for the City to comply with its NPDES phase II permit, which dictates that all permittees shall complete field screening for at least 40% of the MS4 system no later than December 31, 2017. The City of Port Angeles elected to screen on average 12% of its MS4 system beginning in 2014. Screening basins were divided up by number of catch basins within the right of way; the summation of catch basins in the first five screening areas resulted in 70% of the cities total catch basins, meeting the 40% minimum screening goal set for phase II NPDES permittee.

In order to use the cities resources as efficiently as possible a mix of residential and commercial zoning in each year's screening area was preferred; to take advantage of an existing business inspection program. The City's Pollution Prevention Specialist inspects businesses within the screening basin boundary for potential illicit connections or discharges, and provides education to the business owners and staff on pollution prevention. Streams and creeks within the yearly screening area are inspected for the purpose of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges. All catch basins within the screening area are inspected for odor, color, and floatables that are indicative of illicit discharges. Results of the catch basin inspection and in office basin investigation are used to select monitoring nodes, typically manholes. During dry weather primary indicator testing is performed at these manhole locations, and at the basins primary outfalls. If Primary indicator thresholds are exceeded, the area upstream from the monitoring site is flagged for further investigation; if no indicators are found then areas of the screening basin can quickly be eliminated from further screening. When a discharge has been detected and traced back to a specific branch of the MS4 network, methods such as die testing, smoke testing, or video inspections are employed to trace the discharge to its source.

2018 – Field Screening Francis/Ennis Basin, Basin 3:

An office basin investigation of basin 3 was performed in order to determine the most effective way to screen the area. The basin has two distinct areas, the commercial corridors of First, Front, and Race Street, and a residential neighborhood. The western portion of the basin is serviced by one primary stormwater network and outfall draining to Port Angeles Harbor at the base of Francis St. Park. A smaller stormwater network services the eastern portion of the basin, with an outfall to Ennis Creek. City staff inspected and performed sampling at outfalls where flow was present. Since the majority of basin 3 is serviced by a single stormwater network drain to Port Angeles harbor, the city elected to inspect and perform sampling at select monitoring manholes though out the basin. All Stormwater catch basins within basin 3 were also be inspected for visual and olfactory indicators, suspected illicit discharges were then flagged for further investigation. A creek walk was performed on Ennis and White Creek to verify outfall locations, identifying previously unknown outfalls, and to detect illicit discharges. The Pollution Prevention Specialist increased focus on business inspections in the commercial corridor portion of Basin 3.

Year Inspected:	Basin #:	Description:	Catch Basins (%):
2014	1	Urbanized Peabody Basin	15
2015	7	Lauridsen Blvd. Basin	9
2016	2	Tumwater/Valley Basin	12
2017	8	West/Airport Basin	19
2018	3	Francis/Ennis Basin	15
		Total:	70

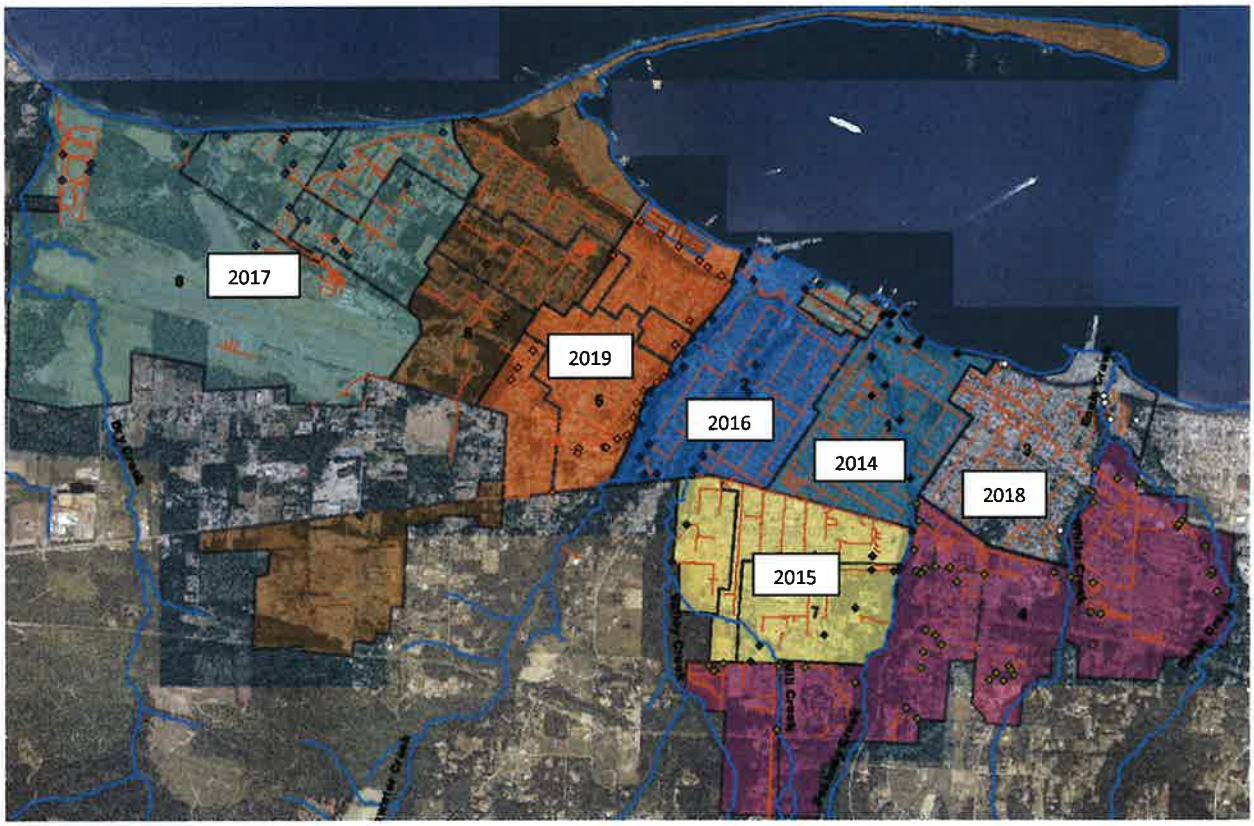

Figure 1 Basin Boundaries

Basin #3 Outfall Inspections	
Outfall:	**Location Description:**
18	18" Stormdrain Outfall to Harbor, Western Outfall in Francis Street Park
33	24" Stormdrain Outfall to Harbor, Eastern Outfall in Francis Street Park
50	Outfall to White Creek, East of the 5th and Alder St. intersection
17	24" Outfall to Ennis Creek, 250' South of the Ennis Creek Bridge Adjacent to the Rayonier Access Rd.
81	Outfall to Ennis Creek, drains 2 CBs off Harborcrest Place, 60' off edge of road on the property of 1836 Harborcrest Place
125	Outfall to White Creek 12" CMP
124	Outfall to White Creek 12" CMP
123	Outfall to White Creek 12" CMP

Basin #3 Priority Manhole Sampling	
Manhole:	**Location Description**
212	Francis Street Park, near parking lot, west side in a landscaping area, Last MH before Outfall
766	Francis Street Park, near parking lot, east side in a landscaping area, Last MH before Outfall
762	Francis / Georgiana, MH located on NW corner
725	Francis / Georgiana, MH located on SE corner
219	Race / Georgiana, has a flow splitter baffle
29	Race Street, across from Civic Field
759	Georgiana / Washington
27	3rd / Washington
656	Georgiana / Jones, MH located on SE corner
652	Chambers / Georgiana, MH located on SW corner
617	3rd / Chambers St.
427	3rd / Jones St.
211	5th / Liberty, MH located on NW corner
208	2nd & Ennis
734	Northern end of Ennis St, on the way down to the Rayonier Parking lot, Last MH before Outfall
448	5th / Alders, Last MH before Outfall

IDDE EVENT INSPECTION LISTING

Unique Identifier:	Actual Start:	Actual Finish:	How did you learn about the problem?	Threat Determination:	G3:	On Average Investigated Within 7 Days:	Pollutant(s) Identified:	Correction/Elimination Method:	Location:	Address:	Comments:
2102018	2/10/2018	2/13/2018	Pollution Hotline	No	No	Yes	Soap Detergents	Education Technical Assistance	Samara Drive ROW, east of Samara and O St. intersection.	in ROW near 2427 Samara Dr.	2/12/2018 City resident reported sudsy discharge on city street originating from a mobile pet grooming business. Discharged several gallons of water. Pollution Prevention Specialist provided stormwater education and technical assistance to business owner.
2142018	2/14/2018	2/16/2018	Staff Referral	No	No	Yes	Soap Detergents/Moss killer	Education Technical Assistance	Olympic Laundry and Cleaners	418 Lincoln St.	2/14/2018 City staff noticed that a significant amount of white foam was discharging from the downspouts of Olympic Laundry and Cleaners. The foam was visibly making its way into the MS4 Catch Basin down the alley. The foam was from moss killer placed on the roof. Stormwater education and technical assistance was provided to the business manager.
3152018	3/15/2018	3/16/2018	Pollution Hotline	No	No	Yes	NA	NA	Peabody Creek culvert under Lincoln Street	NA	3/15/2018 Streamkeepers sampling crew noted a chronic smell of some kind of petroleum product both upstream and downstream of the final downstream culvert on Peabody Creek. 3/16/2018 City staff attempted to trace the odor to its source, but were unsuccessful in determining the source. Odalogger equipment failed to detect any perceptible concentration of hazardous gas at the entrance or exit of the culvert.
3242018	3/24/2018	3/27/2018	Staff Referral	No	No	Yes	Trash from camp sites	Volunteers Cleaned sites and removed garbage	Valley Creek South of 12th Street ROW	NA	3/24/2018 Streamkeepers sampling crew notified the City of a large homeless camp with significant quantities of garbage in the riparian zone of Valley creek. There was also some evidence of open defecation. 3/27/2018 A group of volunteers cleaned up the site 3240 Lbs. of trash was removed.
4162018	4/16/2018	4/17/2018	National Response Center Call Out	Yes	Yes	Yes	Sediment	Education Technical Assistance	Mt. Angeles View construction site	NA	4/16/2018 Caller reported a turbid discharge that occurred 4/16/17 from Mt. Angeles View construction site due to heavy rainfall. The turbid water flowed off site onto S Eunice St and into a catch basin. They are adding new silt fencing, placing down straw, and creating a new berm at the entrance to prevent this from occurring again. Stormwater education and technical assistance was provided to the construction foreman.
4182018	4/18/2018	4/18/2018	Pollution Hotline	No	No	Yes	Sediment	Education Technical Assistance	Merrill & Ring Log Yard on Airport Road	1339 Airport Road	4/18/2018 City resident reported track out from the M&R log yard on to Lauridsen Blvd. The facilities track out control plan had failed to prevent track out, M&R was directed to address the issue. M&R staff took prompt action to clean up the track out.
5162018	5/16/2018	5/23/2018	Staff Referral	No	No	Yes	Vehicle Fluids	Education Technical Assistance	18th between Delores and N St	NA	5/16/2018 City Stormwater staff reported several abandoned vehicles in the ROW along 18th Street. Vehicles had observable vehicle fluid stain beneath. The vehicle locations were forwarded to City staff who handle delinquent vehicles. The vehicle owners were contacted and instructed to remove the vehicles from the ROW, stormwater education was provided.
682018	6/8/2018	6/12/2018	Staff Referral	No	No	Yes	Sediment	Education Technical Assistance	308 S Race St. Port Angeles, Civic field North East parking lot	308 S Race St.	6/8/2018 City Parks department failed to install erosion control measures during a renovation of Civil field, a rainfall event caused the transport of construction sediments into the catch basin in the Civic field parking lot. 6/12/2018 Street sweepers was utilized to sweep area of runoff. The catch basin sump was vactored out, and erosion control measures where installed to prevent future discharges. Stormwater education was provided to Parks Department staff.
7182018	7/18/2018	7/18/2018	Drive by Screening	No	No	Yes	Pressure washing water	Education Technical Assistance	Country Aire Port Angeles Downtown	200 W. 1st Street	7/18/2018 Pollution Prevention Specialist drove past Country Aire as one of their employees was in the process of power washing the building. She talked with manager of store to let them know of the permit process that is required by the city next time they perform pressure washing. They were only using water to pressure wash. Stormwater education was provided.
8232018	8/23/2018	9/28/2018	Drive by Screening	No	No	Yes	Sediment	Education Technical Assistance	Crestwood Health and Rehab	1116 E. Lauridsen Blvd Port Angeles	8/23/2018 Pollution Prevention Specialist drove past Crestwood and noticed a substantial amount of water from a sprinkler system going into a storm drain. There was brown algae growth and a bacterial sheen on the sidewalk where the leak was originating, signaling that it has been ongoing for a while. Stormwater education was provided to the facility maintenance director, he indicated that a plumber had been hired to resolve the issue. 9/28/2018 A drive by screening revealed that the issue had been corrected by a plumber and the discharge was terminated.
8312018	8/31/2018	9/5/2018	Drive by Screening	No	No	Yes	Soap Detergents	Education Technical Assistance	Wash and Go Carwash	105 N. Liberty Street	8/31/2018 Pollution Prevention Specialist drove past Wash and Go Carwash and noted a discharge from one of the car wash bays. She contacted the business owner and instructed him to check the status of the wash bay filters, perhaps they are clogged. Owner inspected the filters and determined they were in good working order. Owner thinks that the discharge was a result of someone washing a vehicle outside of the car wash bays, rather than due to clogged filters. Stormwater education was provided to the owner.
992018	9/9/2018	9/12/2018	Staff Referral	No	No	Yes	Soap Detergents	Education Technical Assistance	Domino's Pizza Parking Lot	1210 E Front St.	9/9/2018 City staff noticed a charity carwash on a Sunday afternoon in the Dominos Parking lot, the parking lots drains to stormwater and is not an approved charity car wash location. Forwarded report to Pollution Prevention Specialist for follow-up. 9/12/2018 She spoke with manager of Dominos. He said that they rarely do car washes at this location. She let him know of stormwater ordinances not allowing for charity car washes at unapproved locations and that discharge from the car wash made it to the Stormwater system. I left him my business cards and told him to forward future requests to me to get a car wash kit or direct them to an approved location.
9132018	9/13/2018	9/13/2018	Staff Referral	No	No	Yes	Soap Detergents	Education Technical Assistance	Veterans Memorial Park	217 S Lincoln St.	9/13/2018 City staff noted that the fountain in Veterans Memorial Park was being drained into the street, the soapy discharge was flowing into a stormwater catchbasin. Due to an act of vandalism the fountain at Veterans Memorial Park had to be drained. Someone soaped the fountain resulting in excessing foam and bubbles. Stormwater education was provided to parks department staff, who were responsible for draining the fountain. Parks department staff were directed to utilize a different method of draining the fountain in the event of future vandalism. A sump pump discharging to grass or landscaping will be their future method of drainage.
9192018.1	9/19/2018	9/20/2018	Pollution Hotline	No	No	Yes	Sewer odor	NA	Vicinity of McDonalds	1706 E, W Front St, Port Angeles	9/19/2018 Pollution hotline email complained of a sewer oder in the vicinity of McDonalds. Stormwater operation staff inspected and dip tested all the catch basins within the 1 block radius of McDonalds looking for possible sewage smell or visual indicator, and nothing was detected other than normal stormwater. City staff think the wind maybe directing odors from the WWTP up the valley toward Front and First street. City staff are working to resolve the odor issues from the WWTP. This was not an illicit discharge.
9192018.2	9/19/2018	9/27/2018	Staff Referral	No	No	Yes	Soap Detergents	Education Technical Assistance	Peninsula Bottle Co	311 S. Valley Street	9/19/2018 City staff noted a car washing operations where runoff was running into Valley Street and into storm drains. 9/27/2018 Pollution Prevention Specialist met with Peninsula Bottling Company (source of the discharge) manager provided stormwater education. A mobile car washing unit comes every other week to wash the transport trucks there. An alternative car washing location was selected, where wash water could be directed to a vegetated area rather than draining the stormwater convayance.
1032018	10/3/2018	10/16/2018	Staff Referral	No	No	Yes	FOG	Education Technical Assistance	Saars Grocery	1114 E Lauridsen Blvd	10/3/2018 City staff noted that the trash compactor out at Saars Grocery had been getting progressively more disheveled, and was actively leaking fluid (there is a stormwater catch basin directly under the unit). Pollution Prevention Specialist provided stormwater education to the staff at Saars, upon follow-up she was informed that the trash compactor has been repaired on 10/13/2018. 12/21/2018 Pollution Prevention Specialist confirmed that the trash compactor was no longer leaking.
11132018	11/13/2018	11/13/2018	Staff Referral	No	No	Yes	Roof water	Education Technical Assistance	Laurel Lanes	108 W 8th St, Port Angeles, WA	11/13/2018 City staff received a report from a city resident about an "ongoing" illicit discharge from the roof of Laurel lanes bowling alley. The resident reportedly saw the discharge several months prior. City staff reported the location, and determine the discharge was not "ongoing". City staff spoke to the management of Laurel lanes and explained the issue, and provided stormwater education. Laurel lanes staff indicated that the discharge was from a sump pump in a low spot on the roof which didn't properly drain. The low spot had to be periodically pumped out to prevent damage to the building. It was determine that this was a permitted discharge to the stormwater system as the discharge consisted only of rainwater.
11162018	11/16/2018	11/17/2018	Staff Referral	No	No	Yes	Track out debris	Education Technical Assistance	Merrill & Ring Log Yard on Airport Road	1339 Airport Road	11/16/2018 City Operations Staff observed a water truck washing the tracked out material off of the roadway and into storm drains along Lauridsen Blvd near the intersection with Fairchild Airport Rd. Stormwater education was provided to M&R staff, M&R staff were instructed to clean out the effected stormwater catch basins along Lauridsen Blvd. in an effort to mitigate the effects of the illicit discharge.
1262018	12/6/2018	12/13/2018	Pollution Hotline	No	No	Yes	Non polluted municipal water	Education Technical Assistance	Olympic Marine	1421 E. 1st Street	12/6/2018 Pollution Hotline call reported an illicit discharge originating from Olympic Marine. The discharge resulted from municipal water being run through a boat's cooling system. There is no contact with any potential pollutants and so I determine the discharge to be unpolluted. Pollution Prevention Specialist provided stormwater education, and let him now that the discharge is still not allowed by city ordinances. Pollution Prevention Specialist let him know that he needs to perform these operations where the water will run to a nearby sewer drain or be infiltrated through the ground.

IDDE EVENT INSPECTION LISTING

Unique Identifier:	Actual Start:	Actual Finish:	How did you learn about the problem?	Threat Determination:	G3:	On Average Investigated Within 7 Days:	Pollutant(s) Identified:	Correction/Elimination Method:	Location:	Address:	Comments:
1262018	3/5/2018	3/5/2018	Pollution Hotline	Yes	Yes	Yes	Sanitary Sewer Overlow	Site Clean up	near Christman Place	NA	3/5/2018 City Resident notified City staff of a sanitary sewer overflow near Christman Place. Sanitary Sewer operation staff promptly responded to the spill location. Within a half hour of reporting the discharge was terminated. Receiving stormwater system catch basin and main were cleaned. It is estimated that 4,800 gallons were discharged.
4912	1/2/2018	1/2/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	5' east of valve at G St.	606 S G St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
4913	1/2/2018	1/2/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	125' west of the property corner at Front and Liberty.	1225 E Front St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
4915	1/4/2018	1/4/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	10' west of valve at Peabody St.	338 E 10th St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5021	2/21/2018	2/21/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	68' east of main valve on 4th street.	405 S Pine St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5033	2/7/2018	2/26/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	50' west of valve at Oak street.	209 W 3rd St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5050	3/7/2018	3/7/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	27' west of valve at the NE corner of 18th and E street.	1822 S E St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5058	3/14/2018	3/14/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	392' east of valve at Vine street.	530 E 10th St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5059	3/14/2018	3/14/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	Valve at the NE corner of 7th and Albert street.	619 S Albert St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5060	3/15/2018	3/15/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	175' west of valve at Race street.	825 Caroline St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5063	3/26/2018	3/26/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	East of storm water filtera and sidewalk.	725 E W 4TH ST	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5065	3/27/2018	3/27/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	East side of main 2" main valve.	536 W 16th St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5234	7/13/2018	7/13/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	1' north of cross tie valve.	1414 Georgiana St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5236	7/20/2018	7/20/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	5 ' east of 2" main valve.	1803 W 6th St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.
5332	10/2/2018	10/2/2018	Staff Referral	No	No	Yes	Sediment	Water Main Repair	50' south of the 6" valve at the NE corner of 10th and Seamour	2114 W 10th St	Water main break resulting in discharge of municipal water and sediment to MS4. Once notified, City water operations staff quickly responded to the issue, isolated the damaged water main to prevent further discharge, and made repairs.

Total # of Events: 33 33 Eliminated during reporting period.	**# of Reports on Pollution Hotline: 6**	**Total # of G3: 2**

2018 Stormwater Development Review Tracking Sheet

Count	Public or Private?	Permit Type	Permit # or Project #	Address, Area, or Parcel Number	Project Name	MR Triggered	Plan Review Date(s)	Initials	Appendix 7 (Risk / Site Visit Date)	Initials	Pre-Con ESC Insp. Date(s)	Initials	Const. Started?	During Construction ESC Insp. Date(s)	Initials	Current ESC Status	Final Completion Inspection Date	Initials	Number of Structural BMPs Inspected	Maintenance Agreement Recorded?	As-buits recieved?	Inspection Notes:
EX.	Private	BP	18-001	123 W. Fake St. or Edgewood Rd. btwn Dry Creek & Airport Rds. or 07000063520	Lake Angeles Parking Lot Improvements	MR 1-5	1/1/2018 1/29/2018	JD JD	Low / NA	JD	2/4/2018 2/5/2018	JD JD	Yes	2/6, 2/19, 3/1	JD	In Compliance	4/1/2018	JD	4	NA	NA	Concrete washout in ditchline (2/19). Appendix 8.1 filed. Education provided to sub-contractor and contractor - JD
1	Private	SHORELINE	PZ #18-02	615 Marine Dr.	POPA Cargo Surge Area SW Improv.	MR 1-9	2/1/2018	VM	High / 2.2.2018	VM				See below								
2	Private	C&G	18-05	615 Marine Dr.	POPA Cargo Surge Area SW Improv. Renamed: Marine Terminal SW Treatment	MR 1-9	4/6/2018 5/7/2018	VM	High / 2.2.2018	VM	7/19/2018 7/24/2018	VM VM	Yes	**2018:** 9/10	VM	In Compliance	10/25/2018	RV	5	No	Yes	O&M Status: Final Draft Accepted. Routed for Signature.
3	Private	SHORELINE	PZ #17-98	202 N. Cedar St.	POPA Boat Wash-down Facility	MR 1-9	1/22/2018	VM	High / 2.2.2018	VM				See Below								
4	Private	C&G	18-02	202 N. Cedar St.	POPA Boat Wash-down Facility	MR 1-9	3/29/2018 4/6/2018	VM	High / 2.2.2019	VM	7/23/2018	VM	Yes	**2018:** 9/10, 10/8	VM	In Compliance	12/18/2018 2/25/2019	VM, RV	13	NA	Yes	O&M for Treatment under C&G 18-05
5	Private	BP	BP #17-1874	814 Madeline St.	Ace Michaels Spec., SFR	MR 1-5	1/3/2018	VM	Low / NA	VM	1/23/2018	VM	Yes	**2018:** 1/22, 2/2	RV, JL	In Compliance	6/14/2018	RV	1	NA	NA	
6	Private	BP	18-185	1138 E. Park Ave.	CHI Group Living, Phase 2 Blg. A	MR 1-9	2/15/2018	VM	High / 12.15.2017	VM	3/2/2018	RV	Yes	**2018:** 5/9, 6/27, 7/30, 7/31, 8/31, 9/10, 9/13, 9/17, 10/5, 11/28,	VM, RV	In Compliance	9/13/2018 -/--/2019	VM, RV, TRJ	12	No	No	Temp. occupancy awarded by planning dept. Project not finalized, however, site is fully stabilized.
7	Private	C&G	18-01	Wabash & Campbell Ave.	L. Rasmussen Tree Removal	MR 1-5	2/26/2018	VM	High / 12.15.2017	VM	12/19/2017	VM	Yes	2019: 3/6	VM	In Compliance	on-going		-	NA	NA	Permit Expiration Date: 4/16/2019
8	Private	C&G	18-01	Wabash & Campbell Ave.	L. Rasmussen Tree Removal, AMEND. 01	MR 1-5	5/2/2018	VM														
9	Private	BP	18-273	2512 W. 16th St.	MILLER Garage | See also BP 17-1468	MR 1-5	3/5/2018	VM	Low / NA	VM	12/12/2017	RV	Yes	**2017:** 11/28, 12/7, **2018:** 4/30, 5/9	JL	In Compliance	3/6/2019	VM	-	NA	NA	No PW inspection. Bldg. Final 7/11/2018
10	Private	BP	18-212	322 N. Ennis St.	BURKE SFR & ARU	MR 1-5	3/12/2018	VM	Low / NA	VM	6/21/2018	RV	Yes	**2018:** 9/26, 10/10, 10/15	VM, RV	In Compliance	on-going		-	NA	NA	
11	Private	BP	18-254	1008 O St.	ACE MICHAELS Spec., SFR	MR 1-5	3/14/2018	VM	Low / NA	VM	4/5/2018	RV	Yes	**2018:** 4/5, 11/29, 12/10	JL	In Compliance	12/13/2018	RV	1	NA	NA	
12	Private	BP	18-251	2506 W. 10th St.	ACE MICHAELS Spec., SFR	MR 1-5	3/14/2018	VM	Low / NA	VM	3/30/2018	RV	Yes	**2018:** 4/2, 4/16	JL	In Compliance	10/19/2018	RV	-	NA	NA	
13	Private	BP	18-282	1014 O St.	ACE MICHAELS Spec., SFR	MR 1-5	3/22/2018	VM	Low / NA	VM	5/25/2018 5/28/2018	JB RV	Yes	**2018:** 11/30, 12/10,	RV	In Compliance	2/14/2019	RV	-	NA	NA	
14	Private	BP	18-337	3933 Solar Ln.	NAPIONTEK SFR	MR 1-5	3/22/2018 3/26/2018	VM	High / 3.26.2018	VM	5/10/2018	RV	Yes	**2018:** 7/3, 7/10 **2019:** 2/6,	VM, RV	In Compliance	on-going		-	NA	NA	Infiltration Trench not built to City Standards. Homeowners to sign acknowleding as such.
15	Private	BP	18-369	1304 Forest Trail	Green Crow SFR Spec.	MR 1-5	4/2/2018	VM	Low / NA	VM	5/4/2018	RV	Yes	**2018:** 5/22, 7/3	JL, VM	In Compliance	10/12/2018	RV	-	NA	NA	Downspout outfall to ditchline inspected 7/3.
16	Private	BP	18-364 18-362 18-363 18-365 18-366 18-361	1810 W. 11th St. (MR #2 ONLY) 1806 W. 11th St. 1822 W. 11th St. 1814 W. 11th St. 1818 W. 11th St. 1802 W. 11th St.	PHA 6 SFRs on W. 11th St.	MR 1-5	4/18/2018 4/19/2018 4/23/2018	VM	Low / NA	VM	8/10/2018 8/14/2018	VM	Yes	**2018:** 9/20, 11/27, 11/29,	RV, JL	In Compliance	on-going			NA	NA	
17	Private	BP	18-496	2704 Porter St.	ELLIOT SFR	MR 1-5	4/23/2018	VM	Low / NA	VM	5/10/2018	RV	Yes	**2018:** 5/21, 5/30, 6/01	JL, RV	In Compliance	2/5/2019	RV	-	NA	NA	No PW inspection, Bldg final on 8/29/18
18	Private	C&G	18-04	111 E. 2nd St.	PA Inn Parking Lot Repave	MR 1-5	4/26/2018	VM	Low / NA	VM	-		Yes	-	-	In Compliance	3/5/2019	RV	-	NA	NA	2 day project over the weekend. No call for Insp.
19	Private	BP	18-519	1313 Morning Ct	BOTERO SFR	MR 1-5	5/2/2018	VM	Low / NA	VM	6/4/2018	RV	Yes	**2018:** 6/8, 8/8, 9/5, 9/28	VM, JL	In Compliance	3/6/2019	VM		NA	NA	No PW inspection, Bldg final on 1/11/2019
20	Private	BP	18-635	615 Milwaukee Dr.	BARSZCZ SFR	MR 1-5	5/10/2018	VM	Low / NA	VM	1/8/2019	RV	Yes	**2019:** 1/8	JL	In Compliance	on-going			NA	NA	
21	Private	BP	18-970	844 Willow Ave.	Cook-Ainscough SFR, Estes Builders	MR 1-9	7/20/2018 8/14/2018	VM	High / 7.20.2018	VM	9/19/2018	VM	Yes	**2018:** 9/25,10/18, 11/29 **2019:** 1/17, 2/20	JL	In Compliance	on-going			NA	NA	
22	Private	C&G	18-06	301 E. Lopez Ave.	NOLS/Holy Trinity Parking lot Repave	MR 1-5	5/29/2018	VM	Low / NA	VM	8/7/2018	RV	Yes	**2018:** 8/8, 8/14	VM	In Compliance	8/22/2018	RV	N/A	NA	NA	
23	Private	C&G	18-07	Milwaukee & 14th St.	Material Stockpile	MR 1-5	7/27/2018	VM	Low / NA	VM	8/10/2018	VM, RV	Yes	**2019:** 3/6	VM	In Compliance	on-going					
24	Private	BP	18-1103	116 E. 13th St.	St. Mathews Lutheran Church Parking	MR 1-5	8/10/2018	VM	Low / NA	VM			Yes	**2018:** 10/12	JL	In Compliance	3/6/2018	VM				Stop Work - no permit. Blg. Final 10/12/2018
25	Public	NA	CON-2017-61	Craig Ave, section east of Porter St.	Craig Ave. Road Reconstruction	MR 1-5	8/21/2018	VM	Low / NA	VM	9/20/2018	VM	Yes	**2018:** 9/26	VM	In Compliance	10/5/2018	VM	1	NA	NA	
26	Private	BP	18-1168	From: 205 E. 5th St. To: 223 E 8th St	Horizon House Relocation Project	MR 1-5	8/21/2018 _/_/_	VM					No	NA								
27	Private	BP	18-1629	1433 Rook Dr.	Green Crow SFR Spec.	MR 1-5	11/29/2018 12/24/2018	VM	Low / NA	VM	1/22/2019	RV	Yes	**2019:** 2/28, 3/5	VM	In Compliance	on-going			NA	NA	
28	Private	PRE DEV	18-75	Willaim Shore Pool	Pre-App Review	MR 1-9	12/7/2018	VM	NA	VM	-	-	No	NA								
29	Private	BP	18-1901	1431 Rook Dr.	Green Crow SFR Spec.	MR 1-5	12/26/2018	VM	Low / NA	VM	1/22/2019	RV	Yes	**2019:** 2/28, 3/5	VM	In Compliance	on-going			NA	NA	
30	Private	BP	18-1818	829 E. 8th St.	Volunteer Hospice of Clallam Co. Addition	MR 1-5	12/27/2018 2/11/2019	VM	High / 2.11.2019	VM			No							NA	NA	
31	Private	SHORELINE	18-78	826 Boathaven Dr.	POPA Fabric Structure at Boat Yard	MR 1-5	12/27/2018	VM	Low / NA	VM			No							NA	NA	
32	Private	BP	18-1740	1702 Lambert Ln.	Yakovich Spec. SFR	MR 1-5	11/20/2018 1/7/2019	VM	Low / NA	VM	2/1/2019	RV	Yes	**2019:** 2/26	JL	In Compliance	on-going			NA	NA	
33	Private	BP	18-1615	102 N. Cedar St.	Platypus Marine, Office Addition	MR 1-5	10/25/2018 11/14/2018 _/_/_	VM					No									
34	Private	BP	18-1929	1015 O St.	Ace Michaels Spec. SFR	MR 1-5	1/16/2019	VM	Low / NA	VM			No							NA	NA	
35	Private	BP	18-1930	1021 O St.	Ace Michaels Spec. SFR	MR 1-5	1/16/2019	VM	Low / NA	VM			No							NA	NA	
MR #2 ONLY PROJECTS																						
1	Private	BP	17-1809	1409 E 1st St	Taylor/Willy Deck Addition	MR 2 ONLY	2/21/2018	VM	Low / NA	VM												
2	Private	COND. USE	PZ #18-05	111 E. 8th St.	Heckman 8th & Lincoln Improvments	MR 2 ONLY	2/2/2018	VM	-													
3	Public	NA	WW0118	48.133640, -123.465688	Marine Dr. Sewer Repair Phase 2, J. Bender	MR 2 ONLY	2/5/2018	VM	Low / NA	VM												SWPPP required b/c greater than 100CY cut&fill
4	Private	COND. USE	PZ #18-04	1114 W. 8th St.	R. Chaummalang AUR	MR 2 ONLY	2/6/2018	VM	*To be determined when BP is submitted													
5	Private	BP	18-22	605 Del Guzzi Dr.	LINDBERG Detached Double Garage	MR 2 ONLY	2/15/2018	VM	Low / NA	VM												
6	Private	BP	18-24	826 E 1st St	TAFY Greenhouse	MR 2 ONLY	2/21/2018	VM	Low / NA	VM												
7	Private	BP	18-31	1419 E. 4th St.	Clawson Const., New Garage	MR 2 ONLY	1/23/2018	VM	Low / NA	VM												
8	Private	BP	18-133	211 Vine St.	D. Blood Nursery & Interior remodel	MR 2 ONLY	3/5/2018	VM	Low / NA	VM												
9	Private	BP	18-47	503 ½ E 7th St	Richardson addition to ADU	MR 2 ONLY	2/15/2018	VM	Low / NA	VM												
10	Private	BP	18-203	1943 W Lauridsen Blvd	Delikat BMX	MR 2 ONLY	2/21/2018	VM	Low / NA	VM												
11	Private	BP	18-240	1129 W 12th St	Elstrom SFR	MR 2 ONLY	3/16/2018	VM	Low / NA	VM												
12	Private	BP	18-241	1003 Homestead Ave.	TETREAU Detatched Garage Addition	MR 2 ONLY	3/13/2018	VM	Low / NA	VM												
13	Private	BP	18-319	413 W. 2nd St.	POPA - Building Demo	MR 2 ONLY	3/22/2018	VM	Low / NA	VM												
14	Private	BP	18-318	826 Boathaven Dr.	POPA Demo of Jig & Lure Building	MR 2 ONLY	3/22/2018 3/23/2018	VM	Low / NA	VM												
15	Private	BP	18-326	709 E. Lauridsen Blvd.	J. Negrete SFR	MR 2 ONLY	4/2/2018	VM	Low / NA	VM												
16	Private	BP	18-348	1835 W 6th St	Suggs Addition	MR 2 ONLY	2/26/2018	VM	Low / NA	VM												
17	Private	BP	18-370	1613 E. 5th St.	Zimmle Addition	MR 2 ONLY	4/2/2018	VM	Low / NA	VM												
18	Private	BP	18-447	114.5 W. 8th St.	Chaummalung ARU / Sums Const.	MR 2 ONLY	4/3/2018	VM	Low / NA	VM												
19	Private	BP	18-497	2710 Porter St.	Elliot SFR	MR 2 ONLY	4/23/2018	VM	Low / NA	VM							2/5/2019	RV				
20	Private	BP	18-463	323 E. 13th St.	Chapman SFR w/ ARU	MR 2 ONLY	4/23/2018	VM	Low / NA	VM												
21	Private	BP	18-442	1003 W. 6th St.	Brown Carport	MR 2 ONLY	4/23/2018	VM	Low / NA	VM												
22	Private	C&G	18-03	1714 S. N St.	Jehovah's Witness Parking Lot Repair	SWPPP	4/25/2018	VM	Low / NA	VM			Yes	6/12/2018	JB							
23	Private	COND. USE	PZ #18-21	1325 E. 4th St.	TSCHIMPERLE ARU	MR 2 ONLY	4/20/2018	RV	Low / NA	VM												
24	Private	BP	18-503	315 E. 1st St.	Little Devil's Lunchbox Interior Remodel	MR 2 ONLY	5/1/2018	VM	Low / NA	VM												
25	Private	BP	18-547	2121 W. 14th St.	Nicpon/Ahrndt Addition	MR 2 ONLY	5/1/2018	VM	Low / NA	VM												
26	Private	BP	18-544	1104 E. 8th St.	Lenthall Remodel	MR 2 ONLY	5/1/2018	VM	Low / NA	VM												
27	Private	BP	18-577	2332 W. 12th St.	Trople Addition/New Garage	MR 2 ONLY	5/1/2018	VM	Low / NA	VM												
28	Private	BP	18-642	1014 Marine Drive	V. Delguzzi Trust - Bldg. Removal	MR 2 ONLY	5/1/2018	VM	Low / NA	VM												
29	Private	BP	18-656	838 W 9th St	Hoffman/R&N Builders Addition	MR 2 ONLY	5/10/2018	VM	Low / NA	VM												
30	Private	BP	18-713	121 W. 12th St.	Elstrom - Replace shed with bigger shed.	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												
31	Private	BP	18-696	932 W. 6th St.	Annable - Deck addition	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												

2018 Stormwater Development Review Tracking Sheet

Count	Public or Private?	Permit Type	Permit # or Project #	Address, Area, or Parcel Number	Project Name	MR Triggered	Plan Review Date(s)	Initials	Appendix 7 (Risk / Site Visit Date)	Initials	Pre-Con ESC Insp. Date(s)	Initials	Const. Started?	During Construction ESC Insp. Date(s)	Initials	Current ESC Status	Final Completion Inspection Date	Initials	Number of Structural BMPs Inspected	Maintenance Agreement Recorded?	As-buits recieved?	Inspection Notes:
32	Private	BP	18-719	1905 W. 7th St.	Pardons - 2nd Story Addition	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												
33	Private	BP	18-700	1026 W. 5th St.	Usha Reddi - Detached Garage	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												
34	Private	BP	18-742	208 E. Ahlvers Rd.	Swenson - Sunroom & Deck	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												
35	Private	BP	18-747	333 Eclipse Industrial Pkwy	PA Hardwood/Jeff Berry, Office Space Add.	MR 2 ONLY	6/13/2018	VM	Low / NA	VM												
36	Private	BP	18-753	111 E. 8th St.	Heckman - Mech. Room addition	MR 2 ONLY	6/1/2018	VM	Low / NA	VM												
37	Private	BP	18-500	135 E. 1st St	Num Num Doughnuts - interior re-model	MR 2 ONLY	6/4/2018	VM	Low / NA	VM												
38	Private	BP	18-762	1417 W 5th St	Fleischfresser Deck	MR 2 ONLY	6/13/2018	VM	Low / NA	VM												
39	Private	BP	18-786	524 ½ W 10th St	Luxton ARU	MR 2 ONLY	6/13/2018	VM	Low / NA	VM												
40	Private	BP	18-807	112 E 8th St	PBH - Revised to Interior Only	MR 2 ONLY	8/27/2018	VM	Low / NA	VM												
41	Private	BP	18-871	1607 Lower Elwha Rd.	Mobile Home Demo	MR 2 ONLY	6/19/2018	VM	Low / NA	VM												
42	Private	BP	18-873	1607 Lower Elwha Rd.	Gillespie Replaced Mobile Home	MR 2 ONLY	6/19/2018	VM	Low / NA	VM												
43	Public	ESA		Terminal 3 Dredging	POPA Terminal 3 Dredging	MR 2 ONLY	6/26/2018	VM	Low / NA	VM												
44	Private	ESA	PZ #18-30	Btwn 5th & I St. intersection and Hill St.	All Pro Arborists - Restore Hill St. View	MR 2 ONLY	6/26/2018	VM	Low / NA	VM												
45	Private	BP	18-918	605 E. 9th St.	Cassel - Bathroom Addition	MR 2 ONLY	7/6/2018	VM	Low / NA	VM												
46	Private	BLA	18-28	063000109710, 063000109820, 063000106715, 0	Boundary Line Adjustment	MR 2 ONLY	7/6/2018	VM	Low / NA	VM												
47	Private	BP	18-909	124 W. Railroad Ave.	Barhop | Exterior Improvements	MR 2 ONLY	7/6/2018	VM	Low / NA	VM												
48	Private	BLA	18-32	840 E. 8th St.	Volunteer Hospice of Clallam Co.	MR 2 ONLY	7/13/2018	VM	Low / NA	VM												
49	Private	ESA	PZ #18-31	1112 W. 4th St.	PNW Tree Service | Tree Trimming on Bluff	MR 2 ONLY	7/16/2018	VM	Low / NA	VM												
50	Private	NA	-	Lang Property, 063000870130	Proposed pressure sewer across 10th St.	TBD	7/16/2018	VM	TBD	VM												
51	Private	BP	18-1050	124 Eclipse West Dr.	Lakeside Natural Gas Tank Install	MR 2 ONLY	7/20/2018	VM	Low / NA	VM												
52	Private	BP	18-999	835 W. 5th St.	Collins - 2 story addition	MR 2 ONLY	7/23/2018	VM	Low / NA	VM												
53	Private	BP	18-1102	118 E. 13th St.	St Matthews Lutheran Church - parking	MR 2 ONLY	8/10/2018	VM	Low / NA	VM												
54	Private	BP	18-1114	423 Hillcrest Dr.	Bell/James ARU	MR 2 ONLY	10/12/2018	VM	Low / NA	VM												
55	Private	C&G	18-11	1936 W 18th St	Clallam County PUD Washrack	MR 2 ONLY	8/8/2018 11/7/2018 12/27/2018	VM, JB	Low / NA	VM			Yes	2019: 2/22, 2/27	VM, RV							
56	Private	BP	18-1227	109 W. Orcas Ave.	Sawyer - Addition	MR 2 ONLY	8/14/2018	VM	Low / NA	VM												
57	Private				"L" St. Sanitary Sewer Extension	MR 2 ONLY	8/14/2018	VM	Low / NA	VM												
58	Private	BLA	18-39	118 E. 8th St.	PBH Boundary Line Adj.	MR 2 ONLY	8/14/2018	VM	Low / NA	VM												
59	Private	COND. USE	LUV 18-29	832 Marine Dr.	RV Parking/camping at Boat Haven	TBD	7/31/2018	JB	Low / NA	VM												
60	Private	BP	18-1266	1126 E. 7th St.	Curry | kitchen, entry, dining remodel	MR 2 ONLY	8/22/2018	VM	Low / NA	VM												
61	Private	BP	18-1251	1042 Olympus Ave.	McKosky | shed demo	MR 2 ONLY	8/22/2018	VM	Low / NA	VM												
62	Private	C&G	18-08	4003 Old Mill Rd.	Haguewood Access Rd.	MR 2 ONLY	9/18/2018	VM	Low / NA	VM												
63	Private	BP	18-1397	1130 E Front St	Van Cleave Addition	MR 2 ONLY	10/2/2018	VM	Low / NA	VM												
64	Private	C&G	18-10	1702 Lambert Ln.	Yakovich | Prep for Building Permit	MR 2 ONLY	10/11/2018	VM	Low / NA	VM												
65	Private	C&G	18-12	404 E. Ahlvers Rd.	MORRISON | Ditch Cleaning	MR 2 ONLY	10/25/2018	VM	Low / NA	VM												
66	Private	BP	18-1440	4509 Old Mill Road	Gray Addition	MR 2 ONLY	10/22/2018	VM	Low / NA	VM												
67	Private	BP	18-1442	1126 Water St.	RICHEY Portch Addition	MR 2 ONLY	10/22/2018	VM	Low / NA	VM												
68	Private	BP	18-1518	1003 Grant Ave.	STREETER Deck	MR 2 ONLY	10/22/2018	VM	Low / NA	VM												
69	Private	BP	18-1470	1502 E. Lauridsen Blvd.	PC Perimeter Lighting Improvements on Bonnaville Land	MR 2 ONLY	10/12/2018 10/16/2018 3/4/2019	VM	Low / NA	VM												
70	Private	BP	18-1560	106 W. Front St.	K.Q. Lam, Remodel	MR 2 ONLY	10/17/2018	VM	Low / NA	VM												
71	Private	ESA	18-65	226 W. 2nd St.	Peninsula Urban Forestry | Tree Trim	MR 2 ONLY	11/2/2018	VM	Low / NA	VM												
72	Private	BP	18-1585	1042 Olympus Ave.	Mskosky Spec. SFR	MR 2 ONLY	11/20/2018	VM	Low / NA	VM			Yes	2019: 1/8	JL							SWPPP Req'd
73	Private	BP	18-1586	1046 Olympus Ave.	Mskosky Spec. SFR	MR 2 ONLY	11/20/2018	VM	Low / NA	VM			Yes	2019: 1/8	JL							SWPPP Req'd
74	Private	BP	18-1647	403 Scribner Rd.	Truckenmiller Garage	MR 2 ONLY	11/19/2018	VM	Low / NA	VM												
75	Private	BP	18-1669	903 K St.	Williamson Shed	MR 2 ONLY	11/19/2018	VM	Low / NA	VM												
76	Private	BP	18-1693	932 W. 6th St.	Savchenko/Annable Deck	MR 2 ONLY	11/23/2018	VM	Low / NA	VM												
77	Private	BP	18-1734	115 E. 7th St.	Haire Remodel/Adding Back Deck	MR 2 ONLY	11/19/2018	VM	Low / NA	VM												
78	Private	BP	18-1735	121 W. Front Street	Temp. DT Ice Rink	MR 2 ONLY	11/27/2018	VM	Low / NA	VM												
79	Private	BP	18-1736	933 E. 1st Street	NOHN Interior Remodel	MR 2 ONLY	11/19/2018	VM	Low / NA	VM												
80	Private	BP	18-1759	716 S. Chase Street	Badaroux Commercial Remodel	MR 2 ONLY	11/27/2018 1/8/2019	VM	Low / NA	VM												
81	Private	BLA	18-76	Lots 6-9 & Lot 10 at 10th & L Sts.	Ralston BLA - Eliminate encroachment	MR 2 ONLY	12/12/2018	VM	Low / NA	VM												
82	Private	COND. USE	18-61	601 E. Park Ave.	Jamison B&B Remodel	MR 2 ONLY	12/12/2018	VM	Low / NA	VM												
83	Private	SW DIS.	18-1898	208 & 212 E. 7th St.	RJ Services | Perforated Stub-out to Curb	MR 2 ONLY	12/18/2018	JB	Low / NA	JB												
84	Private	ROW	18-1925	934 Benjamin Ave.	Telecom Service	MR 2 ONLY	12/26/2018	JB	Low / NA	JB												
85	Private	ROW	18-1926	811 S. Liberty St.	Catv Service	MR 2 ONLY	12/26/2018	JB	Low / NA	JB												
86	Private	BP	18-1859	112 E. 8th St.	Peninsula Behavior Health - Entryway Cover	MR 2 ONLY	12/27/2018	VM	Low / NA	VM												
87	Private	BP	18-1853	2315 W. 16th St.	Habitat for Humanity, SFR	MR 2 ONLY	12/24/2018	VM	Low / NA	VM				2019: 2/25,								
88	Private	BP	18-1822	515 W. 16th St.	Pole Building Garage, Ellefson	MR 2 ONLY	12/24/2018	VM	Low / NA	VM												
89	Private	BP	18-1852	2311 W. 16th St.	Habitat for Humanity, SFR	MR 2 ONLY	12/24/2018	VM	Low / NA	VM				2019: 2/25,								

End of Year Statistics | Phase II Municiple SW Permit, WAR045028

Category	Count	Percent	S5.C.4
Total plans reviewed for SW Review	124	100%	b.i.
Appendix 7 inspections	7	100%	b.ii.
Pre-Const. Insp. (# of sites)	25	100%	b.iii.
During Const. Insp. (# of sites)	24	96%	b.iii.
During Const. Insp. (# of insp.)	68	-	-
Enforcement (# of insp.)	4	100%	b.ii., iii.
Final Inspections Performed	12	80%	b.iv.
Projects on-going	10	-	-
Total SW Inspections	112	-	-
Total Inspections Required	76	-	-
Total Inspections Achieved	72	95%	b.v.

City of Port Angeles | Private Stormwater Annual Inspections - **2018**

Count	Development Title	Inspection Due Date	Inspection Date(s)	Initials	Maintenance Plan? Yes or No	Number of Structural BMPs Inspected?	Private Facility Submited Check List Complete? Yes or No	Deficiencies found? Yes or No	Enforcement	Enforcement Resolution	Site Address	Contact Person responsible for maintenance	Contact Infromation	Notes:
1	Maloney Heights	Aug-18			Yes	13					Between N and O and 16th and 18th Streets			
	Habitat for Humanity	Aug-18	8/30/2018	VM	Yes	7	No	Yes	Email, 8/30/2018	On-going: Establish annual rain garden maint. program	Off 16th St.	Ben Pacheco (360) 477-9550	construction@habitatclallam.org	0 lots under construction
	Serenity House	Aug-18	8/29/2018	VM	Yes	6	No	Yes	Email, 8/29/2018	On-going: Replace riser sealent	Off 18th St.	Kevin Brooks	Kevin Brooks, (360) 215-0476	Site fully established, Yearly Inspections
2	Port of Port Angeles - ACTI Site	Oct-18	10/23/2018	VM	Yes	36	Yes	No	NA	NA	2200 W 18th ST	Jesse Waknitz	jessew@portofpa.com	Site stabilized, no new construction. Yearly inspections
3	Family Medicine	Aug-18	8/22/2018	VM	Yes	12	Yes	No	NA	NA	240 E Front St	Stan Garlick	garlick@olypen.com	Site fully established, Yearly Inspections
4	Peninsula College Parking Lot and Soccer Fields	Dec-18	12/5/2018	VM	Yes	Parking 28 Soccer 9	Yes	No	NA	NA	1502 E Lauridsen Blvd	Rick Croot / Kevin Size	360-460-1373 RCroot@pencol.edu	Site fully established, Yearly Inspections
5	Peninsula College Alied Health Building	Dec-18	12/5/2018	VM	Yes	10	Yes	No	NA	NA	1503 E Lauridsen Blvd	Rick Croot / Kevin Size	360-460-1373 RCroot@pencol.edu	Site fully established, Yearly Inspections
6	Pendley Estates	Oct-18	10/16/2018	VM	Yes	15	No	Yes	Email, 10/16/2018	On-going: At Legal	Southside of West 14th Street, across from Samara Drive	Peninsula Housing Authority	aorourke@peninsulapha.org	Site fully established, Yearly Inspections
7	Olympic Medical Center Parking Lots Columbia St, Medical Expansion	Sep-18	9/12/2018	VM	Yes	10	Yes	Yes	Email, 9/12/2018	On-going: clean out drain-down tube to eliminate backwatering	Columbia St and Caroline St	Rockie Lee	Phone: 360-417-7235 rlee@olympicmedical.org	Site fully established, Yearly Inspections
8	Olympic Medical Center -Medical Office Building, 3 parking lots	Apr-18, Oct-18	5/1/2018 10/19/2018	VM	Yes	25	No	No	NA	NA	907 Georgiana St.	Rockie Lee	rlee@olympicmedical.org	6 Month Inspection Interval Final'd 10/25/2017
9	Around Again (POPA)	Jul-18	8/20/2018	VM	Yes	3	No	No	NA	NA	2604 W. 18th St.	POPA - Jesse Waknitz	jessew@portofpa.com	Site fully established, Yearly Inspections
10	Blackball Ferry Terminal West Pier Replacement	Jul-18	7/27/2018	VM	No	6	Yes	No	NA	NA	101 Railroad Ave.	Rian Anderson	randerson@cohoferry.com	Site fully established, Yearly Inspections
11	Peninsula Behavioral Health 2016 Parking Lot	Aug-18	8/21/2018	VM	Yes	12	Yes	No	NA	NA	118 E. 8th St.	Wes Zimmer	(360) 461-7386 wesz@peninsulabehavioral.org	Site fully established, Yearly Inspections
12	North Olympic Library System	Dec-18	12/18/2018	VM	Yes	2	Yes	No	NA	NA	401 Orcus Ave	Brian Phillips	bphillips@nols.org	Site fully established, Yearly Inspections
13	1001 E Front Street- Fors Parking Lot	Apr-18	4/27/2018	VM	Yes	1	No	No	NA	NA	1001 E Front St	Donald and Casi Fors Fors	(360) 457-6116	Site fully established, Yearly Inspections
14	Clallam County Courthouse Raingarden Retrofit	Dec-18	12/18/2018	VM	Yes	10	Yes	Yes	Email, 12/18/2018	Resolved: Perm. pavement cleaned 3/7/2019.	223 E. 4th St.	Joel Winborn	jwinborn@co.clallam.wa.us	Site fully established, Yearly Inspections
15	McDonalds	May-18	5/31/2018	VM & RV	Yes	12	No	Yes	Yes	Resolved: Repaired BayFilter system, 11/2018. Updated Inspection schedule.	1706 E. Front St.	Scott Pearson	scott@peninsulamcdonalds.com	Site fully established, Yearly Inspections

Year end Stats:	Scheduled	Achieved	Passed 1st time	Deficient Sites	Resolved	In-progress	Compliant sites
	15	15	9/15	6/15	2/6	4/6	15/15
	100%		60%	40%	33%	67%	100%

CITY OF PORT ANGELES | Stormwater Operations Tracking Sheet

Stormwater Facilities- 2018	Asset ID #	Date of Inspection(s)	Cityworks WO#	Maint. Required?	Date(s) of Maintenance	Cityworks WO#(s)
2018						
Ponds and bioswales						
Airport Corners - East of Access Rd	51	3/5/2018	5046	yes	3/24/2018	5110
Airport Corners - West of Access Rd - South Pond	50	3/5/2018	5045	no	3/24/2018	5109
Airport Corners - West of Access Rd - North Pond	481	3/5/2018	5044	yes	3/24/2018	5109
Red Lion Motel - East of Parking Area	18	3/5/2018	5047	yes	6/7/2018	5448
101 Bioswale - West of Eclipse Parkway, North Side	881	3/5/2018	5048	yes	5/9/2018	5441
				4		
CAVFS						
C St. Ext.	6759	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6760	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6761	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6762	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6763	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6764	5/9/2018	5190	yes	3/27/2018	5108
C St. Ext.	6751	5/9/2018	5190	yes	3/27/2018	5108
				7		
Swirl Concentrator						
Crown Park Aquaswirl	9	1/31/2018, 9/10/18	5027	yes	10/4/2018	5336
1100 Walker St. Vortech (by Contech)	22	1/31/2018	5025	no		
Blackball Ferry Vortech (by Contech)	12	1/31/2018	5026	yes	3/16/2018	5106
				2		
ConTech Filters						
8th and A St.	20	1/29/2018 and 8/1/2018	5031 / 5248	no / yes	9/13/2018	5248
8th and Cedar	17	1/29/2018 and 8/1/2018	5028 / 5245	no / no		
8th and Pine	15	1/29/2018 and 8/1/2018	5029 / 5250	no / no		
8th and Cherry	13	1/29/2018 and 8/1/2018	5030 / 5246	no / no		
16th and Maloney	26	1/29/2018 and 8/1/2018	5032	no / no		
				1		
EcoStorm Block Media Filter						
Eco Storm Plus (Front and Valley)	25	2/9/2018	5019	yes	2/9/2018 (clean) and 6/27/2018 (repair)	5023 (clean) and 5211 (repair)
*Inspection and cleaning needed after 6" of rain	25	6/27/2018	5212	yes	6/27/2018	5214
Eco Storm Plus (old PS#4)	2433	2/9/2018	5020	yes	2/9/2018	5022
*Inspection and cleaning needed after 6" of rain	2433	6/27/2018	5215	no	6/27/2018	5216
				3		
Filterra Units (2x's per year INSPECT)						
Lauridsen Blvd Bridge - 817 E Blvd	1234	1/18/2018 and 7/5/2018	5009 and 5228	yes	1/18/2018 and 7/5/2018	5010 and 5253
10th and Race St.(north)	1235	1/18/2018 and 7/5/2018	5013 and 5231	yes	1/18/2018 and 7/5/2018	5014 and 5253
10th and Race St.(south)	1236	1/18/2018 and 7/5/2018	5011 and 5229	yes	1/18/2018 and 7/5/2018	5012 and 5253
SW Corner of 6th and Francis	840	1/18/2018 and 7/5/2018	4993 and 5224	yes	1/18/2018 and 7/5/2018	4996 and 5253
SW Corner of 4th and Francis	838	1/18/2018 and 7/5/2018	4997 and 5221	yes	1/18/2018 and 7/5/2018	4998 and 5253
NE Corner of 4th and Francis	837	1/18/2018 and 7/5/2018	4999 and 5222	yes	1/18/2018 and 7/5/2018	5000 and 5253
NW Corner of 4th and Francis	839	1/18/2018 and 7/5/2018	5001 and 5223	yes	1/18/2018 and 7/5/2018	5002 and 5253
SW corner of 2nd and Francis	836	1/18/2018 and 7/5/2018	4994 and 5220	yes	1/18/2018 and 7/5/2018	4995 and 5253
NE Corner of 4th and Albert	835	1/18/2018 and 7/5/2018	5003 and 5225	yes	1/18/2018 and 7/5/2018	5004 and 5253
SW Corner of 3rd and Albert	833	1/18/2018 and 7/5/2018	5005 and 5226	yes	1/18/2018 and 7/5/2018	5006 and 5253
SE Corner of 2nd and Albert	834	1/18/2018 and 7/5/2018	5007 and 5227	yes	1/18/2018 and 7/5/2018	5008 and 5253
				11		
Pump Stations						
Stevens School Pumpstation	2	10/8/2018	5337	no		
Raingardens (Bioretention cells)						
Oak St. Park (west raingarden)	5707	12/28/2018	5489	yes		
Oak St. Park (east raingarden)	5708	12/28/2018	5490	yes		
5th and H, NW Corner	928, 929, 930	3/13/2018	5054	yes	4/10/18 and additional days	5285
5th and H, NE Corner	921, 922	3/13/2018	5054	yes	4/10/18 and additional days	5285
5th and H, SE Corner	923, 924	3/13/2018	5054	yes	4/10/18 and additional days	5285
5th and H, SW Corner	925, 926, 927	3/13/2018	5054	yes	4/10/18 and additional days	5285
5th and K, NW Corner	897, 898	3/13/2018	5055	yes	4/10/18 and additional days	5285
5th and K, NE Corner	904	3/13/2018	5055	yes	4/10/18 and additional days	5285
5th and K, SE Corner	901, 902, 903	3/13/2018	5055	yes	4/10/18 and additional days	5285
5th and K, SW Corner	899, 900	3/13/2018	5055	yes	4/10/18 and additional days	5285
5th and L, NW Corner	889	3/13/2018	5057	yes	4/10/18 and additional days	5285
5th and L, NE Corner	896, 895	3/13/2018	5057	yes	4/10/18 and additional days	5285
5th and L, SE Corner	892, 893, 894	3/13/2018	5057	yes	4/10/18 and additional days	5285
5th and L, SW Corner	890, 891	3/13/2018	5057	yes	4/10/18 and additional days	5285
6th and H, NW Corner	936, 937, 938	3/13/2018	5083	yes	4/10/18 and additional days	5397

CITY OF PORT ANGELES | Stormwater Operations Tracking Sheet

Stormwater Facilities- 2018	Asset ID #	Date of Inspection(s)	Cityworks WO#	Maint. Required?	Date(s) of Maintenance	Cityworks WO#(s)				
6th and H, NE Corner	931, 932	3/13/2018	5083	yes	4/10/18 and additional days	5397				
6th and H, SE Corner	933	3/13/2018	5083	yes	4/10/18 and additional days	5397				
6th and H, SW Corner	934, 935	3/13/2018	5083	yes	4/10/18 and additional days	5397				
6th and K, NW Corner	910, 911	3/13/2018	5085	yes	4/10/18 and additional days	5398				
6th and K, NE Corner	905, 906	3/13/2018	5085	yes	4/10/18 and additional days	5398				
6th and K, SE Corner	907, 908	3/13/2018	5085	yes	4/10/18 and additional days	5398				
6th and K, SW Corner	909	3/13/2018	5085	yes	4/10/18 and additional days	5398				
6th and M, NE Corner	883, 884	3/13/2018	5086	yes	4/10/18 and additional days	5399				
6th and M, SW Corner	887	3/13/2018	5086	yes	4/10/18 and additional days	5399				
6th and M, SE Corner	885, 886	3/13/2018	5086	yes	4/10/18 and additional days	5399				
6th and M, NW Corner	888	3/13/2018	5086	yes	4/10/18 and additional days	5399				
7th and H, NW Corner	943, 944	3/13/2018	5087	yes	4/10/18 and additional days	5400				
7th and H, NE Corner	939, 940	3/13/2018	5087	yes	4/10/18 and additional days	5400				
7th and H, SE Corner	941	3/13/2018	5087	yes	4/10/18 and additional days	5400				
7th and H, SW Corner	942	3/13/2018	5087	yes	4/10/18 and additional days	5400				
7th and K, NW Corner	912	3/13/2018	5088	yes	4/10/18 and additional days	5402				
7th and K, NE Corner	919, 920	3/13/2018	5088	yes	4/10/18 and additional days	5402				
7th and K, SE Corner	915, 917, 918	3/13/2018	5088	yes	4/10/18 and additional days	5402				
7th and K, SW Corner	913, 914	3/13/2018	5088	yes	4/10/18 and additional days	5402				
Oak St. and Railroad Ave.	70	3/14/2018	5099	yes	4/6/18 and additional days	5111				
Oak St. and Railroad Ave.	71	3/14/2018	5100	yes	4/6/18 and additional days	5112				
Oak St. and Railroad Ave.	72	3/14/2018	5101	yes	4/6/18 and additional days	5113				
Oak St. and Railroad Ave.	73	3/14/2018	5102	yes	4/6/18 and additional days	5114				
Oak St. and Railroad Ave.	74	3/14/2018	5103	yes	4/6/18 and additional days	5115				
Oak St. and Railroad Ave.	75	3/14/2018	5104	yes	4/6/18 and additional days	5116				
Oak St. and Railroad Ave.	76	3/14/2018	5105	yes	4/6/18 and additional days	5117				
Oak St. and Railroad Ave.	77	3/14/2018	5094	yes	4/6/18 and additional days	5118				
Oak St. and Railroad Ave.	78	3/14/2018	5096	yes	4/6/18 and additional days	5119				
Oak St. and Railroad Ave.	79	3/14/2018	5098	yes	4/6/18 and additional days	5120				
Oak St. and Railroad Ave.	80	3/14/2018	5095	yes	4/6/18 and additional days	5121				
				43						
Permeable Surfaces										
5th and H St. (sidewalks)	1309, 1310, 1311, 1312	1/17/2018	5199	yes	9/6/2018	5298				
5th and K St. (sidewalks)	1700, 1701, 1702	1/17/2018	5197	yes	9/6/2018	5409				
5th and L St. (sidewalks)	1703, 1704, 1705	1/17/2018	5198	yes	9/6/2018	5410				
6th and H St. (sidewalks)	1313, 1314, 1315	1/17/2018	5203	no	9/6/2018	5299				
6th and K St. (sidewalks)	1697, 1698, 1699	1/17/2018	5204	yes	9/6/2018	5300				
6th and M St. (sidewalks)	1706, 1707, 1708	1/17/2018	5200	yes	9/6/2018	5301				
7th and H St. (sidewalks)	1316, 1317	1/17/2018	5202	no	9/6/2018	5302				
7th and K St. (sidewalks)	1318, 1319, 1320	1/17/2018	5201	yes	9/6/2018	5303				
				8						
Solar Lane	2097	1/17/2018	5208	no	once a month by vacuum sweeper					
18th St. sidewalk, west of N ST.	5704	1/17/2018	5195	no	9/6/2018					
Dunker Dr. sidewalk on west side of road	5697-5702	1/17/2018	5196	yes	9/7/2018	5411				
1st and Race St.	1299, 1300 ,1301, 1302	1/17/2018	5206	no						
1st and Race St.	1304, 1305, 1306, 1307	1/17/2018	5206	no						
1st and Race St.	1308	1/17/2018	5206	no						
4/5 Alley Chambers-Washington	2897	1/17/2018	5205	no						
Front-Georgiana, Francis-Eunice	2898	1/17/2018	5207	no	once a month by vacuum sweeper					
Race St. between 1st and 2nd St.	1297, 1298	1/17/2018	5206	no	once a month by vacuum sweeper					
				5						
Major Culverts										
Whites Creek	721, 2673, 2847, 4344	7/24/2018	5237	no						
6th and Valley	337, 338	8/23/2018	5442	no						
Marine Dr. and Tumwater St.	4340	7/24/2018	5443	no						
Peabody RV Park to Harbor	4346, 3380, 4345, 4025	7/24/2018	5238	no						
5th and Peabody	1909	7/24/2018	5444	no						
3rd and Peabody	1911	7/24/2018	5445	no						
8th and Francis	1930, 1910	7/24/2018	5446	no						
Detention Pipes (Dgravity or DInline Storage) & Flow Control	**pipe#/flow control#**	**Date of Inspection(s)**	**Cityworks WO#**	**Maint. Required?**	**Date(s) of Maintenance**	**Cityworks WO#(s)**				
8th and A	6136/18409	8/1/2018	5249	yes	9/3/2018	5331				
8th and Cedar	6130/na	8/1/2018	5244	no						
8th and Cherry	6116/na	8/1/2018	5247	no						
8th and Pine	6124/na	8/1/2018	5251	no						
O St. on W. side, just S. of 10th (adjacent to house # 1002)	266/18223	8/15/2018	5319	yes- flow control device missing	spring 2019					
O St. on W. side, S. of 10th (south of #266)	267/18223	8/15/2018	5319	yes- flow control device missing	spring 2019					

**several hours were spent at EACH intersection's bioretention cells weeding, adding medium fir bark dust, planting additional plants, removing garbage, water trees, trimming vegetation, power sweeping and blowing the permeable sidewalks, and blowing the curblines.

CITY OF PORT ANGELES | Stormwater Operations Tracking Sheet

Stormwater Facilities- 2018	Asset ID #	Date of Inspection(s)	Cityworks WO#	Maint. Required?	Date(s) of Maintenance	Cityworks WO#(s)
Heritage Ct. (~100' west of Heritage Ct on priv. prop.)	1987/846	8/15/2018	5327	no		
14th on S. side, just E. of N St.	1363/504	8/16/2018	5343	no		
14th on S. side, just W. of Aurora Ct.	1064/17937	8/16/2018	5320	no		
Aurora Ct on W. side	299/17937	8/16/2018	5323	no		
Aurora Ct on E. side	300/17937	8/16/2018	5323	no		
15th on N. side, between H St. and I St.	4528/18062	8/16/2018	5321	no		
16th on N. side, bordering W. side of house #2239	1058/17905	8/16/2018	5322	no		
16th on N. side, bordering S. side of house #2239	1057/17905	8/16/2018	5322	no		
16th on N. side across from Maloney Ct.	6343/18482	10/11/2018	5344	no		
16th on N. side across from Maloney Ct.	6342/18482	10/11/2018	5344	no		
16th on N. side across from Maloney Ct.	6341/18482	10/11/2018	5344	no		
Blvd Bridge	15205/25898	8/20/2018	5324	no		
Cathleen St. on westside, just S. of 10th St.	4660/18093	8/16/2018	5325	no		
Cathleen St. on eastside, just S. of 10th St.	2803/18093	8/16/2018	5325	no		
Jeri Lynn St., near Joshua	1067/818	8/8/2018	5270	yes- flow control device missing	spring 2019	
Milwaukee Dr. (between 10th and Renee Ln.)	2099/18041	8/8/2018	5269	no		
Milwaukee Dr. (between Renee and Joshua)	46/18041	8/8/2018	5268	no		
Pendley Ct	6804/18704	8/20/2018	5328	no		
Pendley Ct	6805/18704	8/20/2018	5328	no		
Pendley Ct	6806/18704	8/20/2018	5328	no		
Rolling Hills Ct.	303/16728	9/25/2018	5329	yes	9/25/2018	5330
Rolling Hills Dr., W. side	304/16728	9/25/2018	5329	yes	9/25/2018	5330
Rolling Hills Dr., E. side	247/16728	9/25/2018	5329	yes	9/25/2018	5330
Eckard on N. side, just west of Porter	1942/na	8/16/2018	5326	no		
Eckard on S. side, just west of Porter	1943/na	8/16/2018	5326	no		
Porter on E. side, just S. of Campbell	115/18082	8/16/2018	5326	no		
Juniper Ln, N. side from 201 to 217	224/18111	8/17/2018	5345	no		
				4		
Catch Basins Inspected	1496	SUM of Facilities Maintained =		88		
Catch Basins Cleaned	1496					

Catch Basins: EASTSIDE of LAUREL, NIGHT SHIFT, and PRIORITY	**MAINTENANCE GRID**	**Inspect WO#**	**Amount Inspected:**	**Clean WO#**	**Amount Cleaned**	**notes:**
	5	5372	1	5373	1	
	7	5372	1	5373	1	
	12	5372	3	5373	3	
	13	5372	9	5373	9	
	16	5372	15	5373	15	(2) could not be located, (1) Rebuilt
	17	5372	11	5373	11	
	18	5372	35	5373	35	
	19	5374	123	5375	123	(4) sewer lids, (5) landscape plaza yard drains, (12) could not locate
	20	5376	84	5376	84	(9) could not locate, (1) offline sewer connected, (1) inside Marine Science building
	21	5376	157	5376	157	(5) could not locate
	22	5380	103	5381	103	(1) could not locate, (1) manhole
	23	5385	45	5386	45	
	26	5383	34	5384	34	
	27	5383	28	5384	28	
	28	5383	22	5384	22	(2) Contech Filter Vaults, (1) could not locate
	29	5383	61	5384	61	(2) Contech Filter Vaults, (1) could not locate
	30	5385	154	5386	154	(1) could not locate
	31	5385	117	5386	117	(1) could not locate
	32	5387	61	5388	61	
	37	5389	26	5390	26	(1) drain, not a CB
	38	5389	20	5390	20	
	40	5389	2	5390	2	
	41	5387	37	5388	37	
	47	5389	3	5390	3	
	57	5389	56	5390	56	
	58	5387	66	5388	66	(1) could not locate
	59	5387	16	5388	16	(1) could not locate, (6) inside active construction area of Peninsula Housing Authority

CITY OF PORT ANGELES | Stormwater Operations Tracking Sheet

Stormwater Facilities- 2018	Asset ID #	Date of Inspection(s)	Cityworks WO#	Maint. Required?	Date(s) of Maintenance	Cityworks WO#(s)
	60	5387	25	5388	25	(1) could not locate
	61	5389	16	5390	16	
	62	5392	45	5393	45	(1) Rebuilt
	63	5392	2	5393	2	(1) overflow inside reservior not a CB
	64	5392	27	5393	27	(4) could not locate
	65	5392	22	5393	22	
	67	5392	20	5393	20	(1) manhole
	68	5392	13	5393	13	(2)could not locate
	69	5392	4	5393	4	(1) could not locate
	90	5392	26	5393	26	(1) could not locate
	91	5392	6	5393	6	
				TOTAL Cleaned:	1496	
Energy Dissapators (Ddischargepoint- 'Storm Vortech, … misc.)						
Under the 8th St Bridge over Valley St.	14 (west)	10/24/2018	5405	no		
Under the 8th St Bridge over Valley St.	16 (east)	10/24/2018	5405	no		
Under the 8th St Bridge over Tumwater Truck Rt.	19 (west)	10/24/2018	5405	no		
Under the 8th St Bridge over Tumwater Truck Rt.	18 (east)	10/24/2018	5405	no		
Bottom of ravine at Cemetary	100	10/24/2018	5408	no		
Under Lauridsen Blvd. Bridge	3418	10/24/2018	5404	no		
Crown Park Aquaswirl	21	10/24/2018	5407	no		
Lincoln Park Ponds to Big Boy Pond to Stevens Pump Station to CB						
Lincoln Park Pond concrete draw box (Dinlet)	83	10/12/2018	5337	no		
Manhole in backyard of 1606 W. 15th	259	easement access, private property	na	no		
Manhole on 15th in front of 1606	123	10/12/2018	5337	no		
Manhole at 15th and I St. in the intersection	260	10/12/2018	5337	no		
Manhole at 14th and I St. in the intersection	671	10/12/2018	5337	no		
Culvert in 14th St. wetland easement, behind 1509 W. 14th	4484	10/12/2018	5337	no		
Catchbasin in 14th St. wetland easement, behind 1509 W. 14th	18239	10/12/2018	5337	no		
Manhole in 14th St. wetland easement, SE 60'of 1501 W. 14th	620	10/12/2018	5337	no		
Culvert with outlet into Big Boys Pond from MH 620	1378	10/12/2018	5337	no		
Overflow (intake) from Big Boys Pond to Stevens Pump Station (PS)	7	10/22/2018	5337	no		
Pump Stations						
Stevens School Pump Station	2	10/8/2018	5337	no		
Catchbasin on D St. near 13th that receives water from Stevens PS	17328	10/8/2018	5337	no		
Storm Event Inlet and Flood Prevention Inspection			5035 (parent)			
Storm Inlets Annual Storm Prep Liability Inspection (September)	several, see work order	9/26/2018	5309			
10 Year Storm Event (if occurs)		na	na			
Corp Yard- SWPPP inspections	wet weather 1st quarter	4/4/2018	na	yes	1/1/18 to 3/31/18	
	wet weather 2nd quarter	6/26/2018	na	yes	4/1/18 to 6/31/18	
	dry weather 3rd quarter	9/7/2018	na	yes	7/1/18 to 9/30/18	
	wet weather 4th quarter	12/27/2018	na	yes	10/1/18 to 12/31/18	

2018 Stormwater Treatment Facilities - TOTAL AMOUNT: based on individual asset ##'s			
		###	
	Ponds and bioswales	**5**	
	CAVFS	**7**	
	Swirl Concentrator	**3**	
	ConTech Filters Chambers	**5**	
Eco Storm Plus Block Media Filter Chambers		**2**	
	Filterra Units	**11**	
	Biofiltration Cells	**72**	
	Permeable Surfaces	**40**	
	Detention Pipes (DGravity)	**15**	
	Flow Conotrol BMP's		
	sumation =	160	

An S4F1 notification was made to Department of Ecology on January 4, 2011. Sampling activities for bacteria continue through an Inter Local Agreement with Streamkeepers of Clallam County. Sampling for fecal coliform is conducted monthly in Peabody and Tumwater Creeks. A larger sampling of sites in Port Angeles is conducted quarterly for both dry and wet weather conditions. Sample results are analyzed monthly and compared against the City IDDE Response Policy. This work has resulted in the identification (2016) and disconnection (2017) of a broken subsurface side sewer line leaking into a Storm main which was discharging into Peabody Creek. Attached is the 2018 sampling plan.

City of Port Angeles project: Streamkeepers Grab-Sample Plan, *revised 4/30/18*

****Include Precip (24 hr) readings or multi-day retrospectives of preceding wet and dry periods, based on a reliable local weather station****

--Organize sampling tours around volunteer/lab availability; min. 2 volunteers needed, and lab is generally available M-Th before 2 PM.
--Try for 50% monthly wet-weather tours during the year, where "wet" is defined as ≥ 0.15" of rain-equivalent within the prior 24 hours.
--If 50% wet-weather tours have not been taken as the year progresses, conduct a wet-weather tour if volunteers are available even if a dry-weather tour has already been conducted that month.
--Conduct two "storm" (defined as ≥ 1" of rain-equivalent within the prior 24 hours) tours per year, preferably in different seasons, with or without volunteers, even if a sample has already been taken that month.
--If volunteers are available, precede "storm" sampling tours with pre-storm tours, preferably the day prior to the storm.
--If a "storm" tour has been conducted during a month, no further tours will be conducted that month.
--If two "storm" tours have not been conducted by the end of November, consider relaxing the 1" criterion in December.
--For "wet-weather" or "storm" sampling, use best judgment to label each visit as Baseflow; First-Flush; Rising-Curve; Peak; or Post-Peak, considering storm intensity, turbidity, flow velocity, and stream stage relative to what it was pre-storm. The storm may iterate back and forth through multiple stages during a sampling tour.

	Monthly Samples--Organize around volunteer availability; Aim for 6 dry-weather and 6 wet-weather samples
	Peabody 0.0 (when possible)
	Peabody 0.2 (just u/s of final culvert; include stage reading)
	Peabody 0.2 rep
	Peabody 0.2a (pipe d/s of trailer park office)
	Peabody 0.2b (u/s of pipe)
	Peabody 0.4b (u/s of trailers, d/s of plunge pool below culvert)
	Peabody 0.4 (u/s of Peabody St.)
W	Peabody 0.4a (storm input under Peabody St.)
	Peabody 0.9 (beneath water pipe, d/s of kids' play area)
	Peabody 1.2 (beneath Lauridsen, u/s of stormwater flume)
	Peabody 1.2c (beneath Lauridsen, stormwater flume)
C	Peabody 1.4 (National Park loop trail, u/s of u/s crossing)
	Tumwater 0.0 (across from Westport side door)
	Tumwater 0.0 rep
	Tumwater 0.8 (d/s of storm input below Tumwater Truck Rt)
	Tumwater 0.8d (storm pipe below Tumwater Truck Route)
	Tumwater 0.8e (u/s of storm input below Tumwater Truck Rt)
	Tumwater 1.5 (u/s of Hwy 101, d/s of storm input from west)

	Additional sites for storm sampling (see above)--aim for 1 pre-storm and 1 during-storm or just-after-storm sample (preferably on consecutive days) 2x/yr if possible (preferably in different seasons)
C	Peabody 2.9 (Coyote Run Lane off Scrivner Rd)
	Tumwater 0.1 (d/s of storm pipe)
W	Tumwater 0.1b (LB storm drain input @ 3rd St.)
	Tumwater 0.1a (@ 3rd St. u/s of LB storm drain input)
	Tumwater 1.5a (u/s of Hwy 101, u/s of storm input from west)
	Tumwater 1.5b (u/s of Hwy 101, storm channel from west)
	Tumwater 4.4 (3142 Black Diamond Rd)
	Valley 0.0 (when possible)
	Valley 0.4 (u/s of final culvert @ 6th St)
	Valley 0.4 rep
	Valley 0.7 (@ 12th St., near end of Valley Street)
	Valley 1.0 (u/s of "flatbed" bridge @ 14th St)
	Valley 1.2 (d/s of Hwy 101)
	Valley 1.4 (Vern Samuelson Trail ~0.1 mile u/s of Hwy 101)
	Semi- Annual Marine Samples--fecal + entero (big 500 mL bottles)
	PA Harbor @Hollywood west
	PA Harbor @Hollywood central
	PA Harbor @Hollywood east
	PA Harbor @Peabody mouth
	PA Harbor @Peabody mouth rep

Selected Water-Quality Parameters From: 1/1/18 To: 12/31/18
Project: City of Port Angeles
Watershed: All

SITE Visit_ID	Date	Start Time	Air Temp (°C)	Water Temp (°C)	pH	DO Concentration (mg/L)	Specific (25°C) Conductivity (uS)	Salinity (pss)	Turbidity (NTU)	type	Precip24 (in)	Fecal Coliform (Colonies/100ml)		Entero-cocci (Colonies/100ml)		Flow (cfs)	Stage
PA Harbor @Hollywood central				PA Harbor @Hollywood Beach central													
49419	11/27/2018	9:12		14								188		780			
49458	12/6/2018	10:45		8				31.8				2		10	U		
49494	12/11/2018	11:26		8							0.22	58		228			
PA Harbor @Hollywood east				PA Harbor @Hollywood Beach east end by Red Lion rooms													
49420	11/27/2018	9:10		14								110		435			
49459	12/6/2018	10:35		8								2	U	10	U		
49495	12/11/2018	11:20		8							0.22	52		336			
PA Harbor @Hollywood west				PA Harbor @Hollywood Beach west end by City Pier													
49418	11/27/2018	9:16		14								24		203			
49457	12/6/2018	10:50		8								2		10	U		
49493	12/11/2018	11:28		8							0.22	22		143			
PA Harbor @Peabody				PA Harbor @ Peabody mouth													
40116	1/17/2018	8:54		7								3					
49421	11/27/2018	9:21		9								15		98			
49456	12/6/2018	11:01		8.8				31.8				2		10			
49496	12/11/2018	11:34		8							0.23	79		255			

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12/17/2018

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Peabody 0.0				Peabody @ mouth											
40438	2/27/2018	8:40		4								14			
40421	3/15/2018	8:36		4								6			
40476	4/10/2018	9:26		8							0.05	104			
40649	5/31/2018	10:11		11								14			
40753	6/20/2018	11:18		14								244			
40793	7/30/2018	12:06		15				0 EST				90			
40823	8/16/2018	11:58		15								82			
40920	9/26/2018	11:35		12								26			
40993	10/25/2018	9:35		10								18			
49365	11/19/2018														
49422	11/27/2018														
49455	12/6/2018														
49497	12/11/2018														

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Peabody 0.2				Peabody @ 2nd St, above final culvert											
40117	1/17/2018	9:08		7								4			0.75
40439	2/27/2018	8:49		4								2			0.7
40422	3/15/2018	11:39		6								5			0.65
40477	4/10/2018	8:40		8							0.04	11			0.7
40650	5/31/2018	10:39		11								7			0.5
40754	6/20/2018	11:34		14								316			0.45
40794	7/30/2018	11:01		15								167			0.42
40824	8/16/2018	9:02		15								130			0.38
40921	9/26/2018	11:57		13								25			0.4
40994	10/25/2018	13:15		10								5			0.46
49366	11/19/2018	10:01		6								2			0.46
49411	11/27/2018	7:00													0.87
49414	11/27/2018	8:30		8.8					13	ProDSS		180			8.1
49479	12/6/2018	9:58		8								7			0.55
49450	12/7/2018	13:30													0.54
49489	12/11/2018	10:41		6							0.19	647			0.79
49492	12/11/2018	16:10		7							0.88	392			1.16
49498	12/11/2018	15:12		8							0.76	368			1.17
49506	12/11/2018	9:40									0.12				0.6

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Peabody 0.2a				Peabody input - storm pipe d/s of RV park office												
40118	1/17/2018	9:15		10								2	U			
40440	2/27/2018	9:00		10								2	U			
40423	3/15/2018	11:35		12								2	U			
40478	4/10/2018	8:47		12							0.04	6				
40651	5/31/2018	10:38		13								2	U			
40755	6/20/2018	11:45		14								2				
40795	7/30/2018	11:20		14								8				
40825	8/16/2018	9:15		15								2	U			
40922	9/26/2018	12:30		15								2				
40995	10/25/2018	13:06		13								4				
49367	11/19/2018	10:14		12								2				
49415	11/27/2018	8:40		12.6								72				
49480	12/6/2018	10:05		6								14				
49500	12/11/2018	10:44		10							0.2	480				

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Peabody 0.2b				Peabody u/s of storm pipe d/s of RV Park office											
40119	1/17/2018	9:13		6								6			
40441	2/27/2018	8:58		4								8			
40424	3/15/2018	11:30		6								4			
40479	4/10/2018	8:54		8							0.05	14			
40652	5/31/2018	10:37		12								28			
40756	6/20/2018	11:42		14								262			
40796	7/30/2018	11:29		16								172			
40826	8/16/2018	9:18		15								186			
40923	9/26/2018	12:35		14								26			
40996	10/25/2018	13:10		10								4			
49368	11/19/2018	10:13		6								10			
49416	11/27/2018	8:41		8.8					13	ProDSS		130			
49481	12/6/2018	10:07		8								4			
49501	12/11/2018	10:42		6							0.2	584			
Peabody 0.2d				Peabody storm pipe from gas station u/s of final culvert on LB											
49432	11/27/2018	8:34										186			
49505	12/11/2018	10:37		8							0.19	970			

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Peabody 0.4				Peabody @u/s end of Peabody St culvert											
40122	1/17/2018	9:28		6								2			
40443	2/27/2018	9:17		4								4			
40426	3/15/2018	11:17		6								2			
40481	4/10/2018	9:08		8							0.05	102			
40654	5/31/2018	10:26		10								20			
40758	6/20/2018	12:02		14								1130			0.12
40798	7/30/2018	12:27		16								62			0.1
40828	8/16/2018	9:35		14								96			0.08
40925	9/26/2018	12:59		12								28			0.08
40998	10/25/2018	12:30		10								4			0.13
49370	11/19/2018	10:31		6								6			0.12
49423	11/27/2018	9:48		8.7					13	ProDSS		174			0.48
49484	12/6/2018	10:20		8								18			0.27
49451	12/7/2018	14:00													0.25
49504	12/11/2018	11:08		6							0.22	596			0.52

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Peabody 0.4a				Peabody input - storm pipe inside culvert @ Peabody St.											
40121	1/17/2018	9:32		9								46			
40444	2/27/2018	9:20		8								2			
40427	3/15/2018	11:20		10								18			
40482	4/10/2018	9:14		10							0.05	144			
40655	5/31/2018	10:28		12								12			
40759	6/20/2018	12:05		14								450			
40799	7/30/2018	12:35		15								16			
40829	8/16/2018	9:40		16								258			
40926	9/26/2018	13:05		14								38			
40999	10/25/2018	12:40		14								424			
49371	11/19/2018	10:35		12								28			
49424	11/27/2018	9:44		10								690			
49483	12/6/2018	10:17		10								60			
49503	12/11/2018	11:03		8							0.21	752			

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Peabody 0.4b				Peabody ~80' d/s of	Peabody St. culvert										
40120	1/17/2018	9:24		6								6			
40442	2/27/2018	9:15		4								12			
40425	3/15/2018	11:24		6								4			
40480	4/10/2018	9:04		8							0.05	154			
40653	5/31/2018	10:22		10								86			
40757	6/20/2018	11:53		14								384			
40797	7/30/2018	11:39		14								56			
40827	8/16/2018	9:26		15								78			
40924	9/26/2018	12:51		12								28			
40997	10/25/2018	13:00		10								22			
49369	11/19/2018	10:24		6								8			
49417	11/27/2018	8:57		8.7					14	ProDSS		102			
49482	12/6/2018	10:14		8								8			
49502	12/11/2018	10:58		6							0.21	636			

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Peabody 0.9				Peabody u/s of 8 St.												
40113	1/17/2018	9:47		6								4				
40445	2/27/2018	9:39		4								4				
40428	3/15/2018	11:00		5								2				
40486	4/10/2018	11:36		9							0.17	244				
40656	5/31/2018	8:28		10								2	U			
40760	6/20/2018	9:09		13								96				
40800	7/30/2018	12:47		16								46				
40830	8/16/2018	10:13		15								50				
40927	9/26/2018	13:23		12								16				
41000	10/25/2018	12:18		10								30				
49372	11/19/2018	10:51		6								4				
49425	11/27/2018	10:04		8.6					18	ProDSS		100				
49478	12/6/2018	11:34		8								6				
49499	12/11/2018	12:15		6							0.3	240				

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Peabody 1.2				Peabody u/s of storm pipe outfall @Lauridsen Blvd												
40114	1/17/2018	9:59		6								14				
40446	2/27/2018	9:50		4								2	U			
40429	3/15/2018	10:47		4								2				
40483	4/10/2018	11:20		8							0.17	146				
40657	5/31/2018	8:37		9								2	U			
40761	6/20/2018	9:20		12								44				
40801	7/30/2018	13:03		15								188				
40831	8/16/2018	10:04		15								84				
40928	9/26/2018	13:38		12								2				
41001	10/25/2018	11:55		9								2	U			
49373	11/19/2018	11:04		5								1	J			
49426	11/27/2018	10:20		8.4					19	ProDSS		94				
49476	12/6/2018	11:50		8								6				
49490	12/11/2018	12:24		6							0.32	448				

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Peabody 1.2c				Peabody storm flume d/s of Lauridsen Blvd installed 2014												
40115	1/17/2018	10:01		8								2	U			
40447	2/27/2018	9:52		7								2				
40430	3/15/2018	10:48		8								16				
40484	4/10/2018	11:22		11							0.17	620				
40658	5/31/2018	8:39		12								2	U			
40762	6/20/2018	9:25		13								2				
40802	7/30/2018	13:07		14								128				
40832	8/16/2018	10:07		15								4				
40929	9/26/2018	13:44		15								8				
41002	10/25/2018	12:00		9								2				
49374	11/19/2018	11:09		13								2	U			
49427	11/27/2018	10:25		10.7					10	ProDSS		80				
49477	12/6/2018	11:53		11								6				
49491	12/11/2018	12:26		8							0.32	680				

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Peabody 1.4				Peabody @ ONP Visitor Ctr												
40123	1/17/2018	10:15		6								4				
40448	2/27/2018	10:12		4								46				
40431	3/15/2018	10:30		4								2				
40485	4/10/2018	10:59		8							0.17	2	U			
40659	5/31/2018	8:53		9								2	U			
40763	6/20/2018	9:35		12								36				
40803	7/30/2018	13:19		14								52				
40833	8/16/2018	10:32		14								90				
40930	9/26/2018	14:01		12								4				
41003	10/25/2018	11:20		9								2	U			
49375	11/19/2018	11:28		5								2	U			
49428	11/27/2018	10:51		8.2					23	EST ProDSS		64				
49475	12/6/2018	12:07		8								2				
49507	12/11/2018	12:40		6							0.34	16				
Peabody 2.9				Peabody 10' u/s of Coyote Run Ln												
49429	11/27/2018	11:20		8					8	ProDSS		2				
49474	12/6/2018	12:30		8								2	U			
49508	12/11/2018	13:06		6							0.4	24				

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Tumwater 0.0				Tumwater d/s of Marine Dr											
40128	1/17/2018	11:21		7								13			
40449	2/27/2018	11:29		5								2			
40432	3/15/2018	9:15		5								10			
40487	4/10/2018	9:40		8							0.05	7			
40660	5/31/2018	9:56		10								65			
40764	6/20/2018	11:01		13								60			
40804	7/30/2018	14:32		15								25			
40834	8/16/2018	11:38		15								57			
40931	9/26/2018	14:52		12								2			
41004	10/25/2018	9:56		9								2			
49376	11/19/2018	13:02		5								2			
49442	11/27/2018	14:00		8.6					13	ProDSS		127			
49462	12/6/2018	14:47		2								8			
49520	12/11/2018	14:34		7							0.69	278			
Tumwater 0.1				Tumwater u/s of Marine Dr, d/s of LB stormwater drain input											
40809	7/30/2018	14:44													0.3
40839	8/16/2018	11:48													0.3
40936	9/26/2018	15:00													0.3
41009	10/25/2018	10:02													0.34
49381	11/19/2018	13:15													0.36
49439	11/27/2018	13:50		8.5					14	ProDSS		76			0.75
49463	12/6/2018	14:34		2								4			0.47
49453	12/7/2018	12:30													0.45
49517	12/11/2018	15:20		6							0.8	488			1.34

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Tumwater 0.1a				Tumwater @ 3rd St. u/s of LB storm drain input												
49441	11/27/2018	13:51		8.5					14	ProDSS		102				
49465	12/6/2018	14:38		2								6				
49519	12/11/2018	15:28		6							0.84	508				
Tumwater 0.1b				Tumwater LB storm drain input @ 3rd St.												
49440	11/27/2018	13:48		12								36				
49464	12/6/2018	14:40		8								10				
49518	12/11/2018	15:25		8							0.82	186				
Tumwater 0.7a				Storm pipe into Tumwater nr 10 St. 250' d/s of 0.8												
40437	3/15/2018	9:46		10								2	U			
Tumwater 0.8				Tumwater nr. 11 St., d/s of storm outflow channel												
40125	1/17/2018	11:08		6								6				
40450	2/27/2018	11:07		5								2	U			
40433	3/15/2018	9:37		4								8				
40488	4/10/2018	9:59		8							0.07	2	U			
40661	5/31/2018	9:42		9								2				
40767	6/20/2018	10:22		13								20				
40805	7/30/2018	14:09		16								6				
40835	8/16/2018	11:21		14								30				
40932	9/26/2018	15:01		11								2	U			
41005	10/25/2018	10:15		8								2				
49377	11/19/2018	12:30		5								2	U			
49436	11/27/2018	13:20		8.4					15	ProDSS		134				
49466	12/6/2018	14:04		2								2				
49514	12/11/2018	14:18		8							0.65	396				

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Tumwater 0.8d				Tumwater input - storm outfall pipe into Tumwater @ 11 St.												
40126	1/17/2018	11:02		6								2				
40451	2/27/2018	11:02		7								2	U			
40434	3/15/2018	9:33		7								2	U			
40490	4/10/2018	10:04		10							0.07	34				
40662	5/31/2018	9:34		10								2	U			
40766	6/20/2018	10:28		12								4				
40806	7/30/2018	14:13		13								2	U			
40836	8/16/2018	11:15		14								2	U			
40933	9/26/2018	14:56		12								2				
41006	10/25/2018	10:20		11								2	U			
49378	11/19/2018	12:22		4								2	U			
49437	11/27/2018	13:25		12								298				
49467	12/6/2018	14:09		8								2				
49515	12/11/2018	14:21		8							0.66	454				

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Tumwater 0.8e				Tumwater u/s of 11 St. storm outfall												
40127	1/17/2018	10:56		6								4				
40452	2/27/2018	10:55		4								2				
40435	3/15/2018	9:27		4								10				
40491	4/10/2018	10:13		8							0.09	6				
40663	5/31/2018	9:38		9								2				
40765	6/20/2018	10:38		13								30				
40807	7/30/2018	14:19		16								4				
40837	8/16/2018	11:28		14								46				
40934	9/26/2018	15:09		11								2				
41007	10/25/2018	10:25		8								2	U			
49379	11/19/2018	12:16		9								4				
49438	11/27/2018	13:26		8.4					14	ProDSS		132				
49468	12/6/2018	14:14		2								4				
49516	12/11/2018	14:24		6							0.67	260				

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Tumwater 1.5				Tumwater d/s of runoff ditch from SW side of Hwy 101											
40124	1/17/2018	10:39		6								20			
40453	2/27/2018	10:37		4								2 U			
40436	3/15/2018	10:02		4								8			
40492	4/10/2018	10:30		8							0.15	14			
40664	5/31/2018	9:16		9								4			
40768	6/20/2018	10:06		12								8			
40808	7/30/2018	13:47		16								7			
40838	8/16/2018	10:58		14								16			
40935	9/26/2018	14:30		11								8			
41008	10/25/2018	10:50		8								2			
49380	11/19/2018	11:54		4								2			
49433	11/27/2018	12:55		8.3					15	ProDSS		120			
49469	12/6/2018	13:38		2								8			
49511	12/11/2018	14:05		6							0.63	540			
Tumwater 1.5a				Tumwater u/s of runoff ditch from SW side of Hwy 101											
49435	11/27/2018	12:40		8.2					15	ProDSS		144			
49471	12/6/2018	13:43		2								4			
49512	12/11/2018	14:00		6							0.62	512			
Tumwater 1.5b				Runoff ditch to Tumwater Cr. from SW side of Hwy 101											
49434	11/27/2018	12:32		8.9					17	ProDSS		48			
49470	12/6/2018	13:40		3								4			
49513	12/11/2018	13:55		7							0.6	140			

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Tumwater 4.4				Tumwater u/s of 3142 Black Diamond Rd											
49431	11/27/2018	12:04		8.1					10	ProDSS		28			
49473	12/6/2018	13:12		3								2 U			
49510	12/11/2018	13:25		6							0.49	192			
Valley 0.0				Valley @ estuary pedestrian bridge											
40112	1/17/2018	11:32		7								4			
49443	11/27/2018														
49460	12/6/2018	8:04		6								4			
49461	12/6/2018	14:58		2								1			0.48
49488	12/11/2018	14:45		7							0.7	196			
Valley 0.4				Valley @ 6th St, u/s of final culvert 220ft											
49444	11/27/2018	14:16		8.5					13	ProDSS		17			0.96
49452	12/7/2018	13:15													0.42
49521	12/11/2018	14:50		6							0.7	119			1.15
49522	12/11/2018	16:00													1.48
Valley 0.7				Valley @ 12th St. near end of Valley Street											
40457	3/27/2018	13:55										2 U			
49445	11/27/2018	14:25		8.4					12	ProDSS		18			
49523	12/11/2018	15:40		6							0.85	112			
Valley 1.0				Valley u/s of "flatbed" bridge @ 14th St											
40456	3/27/2018	13:41										3			
49446	11/27/2018	14:33		8.4					13	ProDSS		18			
49524	12/11/2018	15:45		6							0.85	136			

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Valley 1.2				Valley d/s of Hwy 101											
40455	3/27/2018	13:12		7 EST								2			
49447	11/27/2018	14:43		8.4					13	ProDSS		20			
49525	12/11/2018	15:50		6							0.85	164			
Valley 1.4				Valley ~600' u/s of Hwy 101 where trail nears stream											
40454	3/27/2018	12:04		6 EST								2 U			
49430	11/27/2018	11:40		8.2					17	ProDSS		22			
49472	12/6/2018	12:54	0	2								2 U			
49509	12/11/2018	13:42		6							0.57	88			
WS-1136 Olympus St PA				Weather Station - 1136 Olympus St PA											
49448	11/27/2018	7:20	through	11/28/2018	7:20	: precip = 0.02 in.; Qualifier: None									
WS-KCLM				Weather Station - PA - Fairchild International Airport											
40493	4/10/2018	5:53									0.17				
40992	10/25/2018	9:53	through		10:53	: precip = 0.02 in.; Qualifier: None									
49454	12/2/2018	13:53	through	12/6/2018	15:00	: precip = 0 in.; Qualifier: EST									
49526	12/10/2018	10:00	through	12/11/2018	2:43	: precip = 0 in.; Qualifier: EST									

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