

2009-2012 Stormwater Public Education and Outreach ACTION Plan for the City of Pacific



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Prepared for:
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City of Pacific
2009 Stormwater Education ACTION Plan

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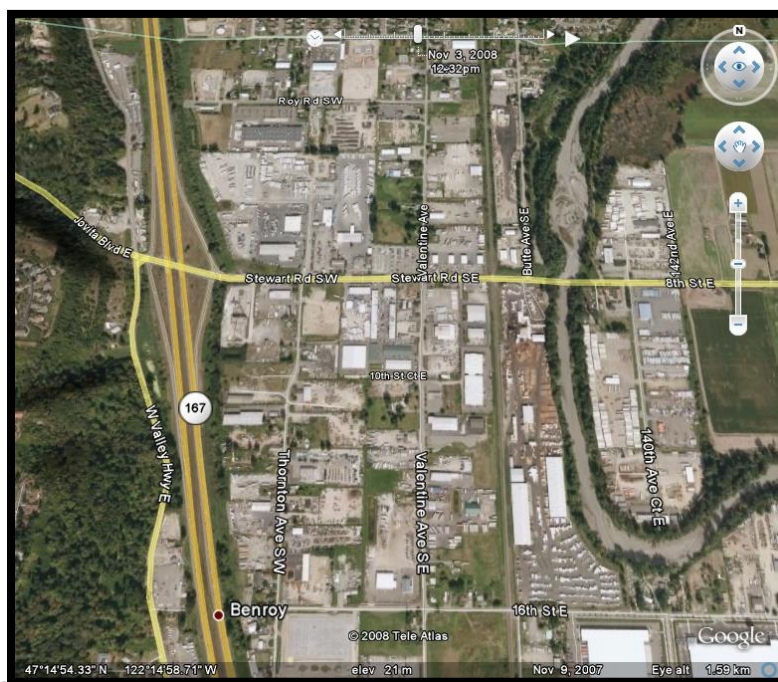
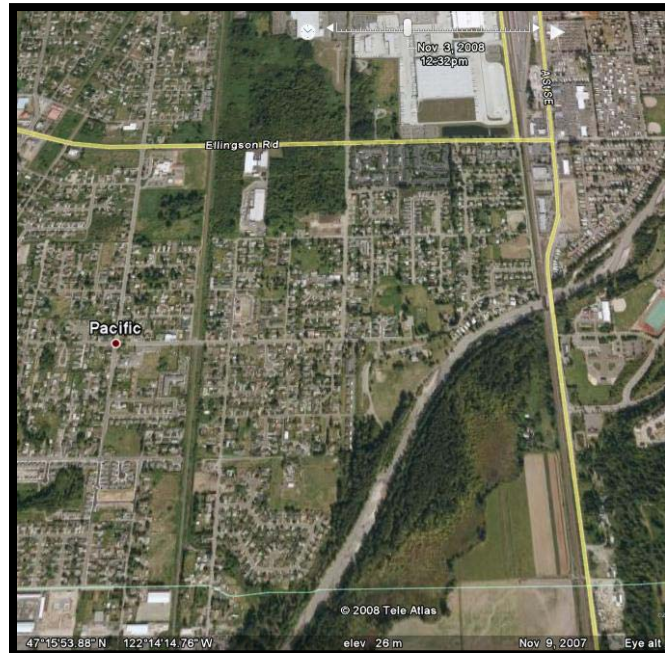
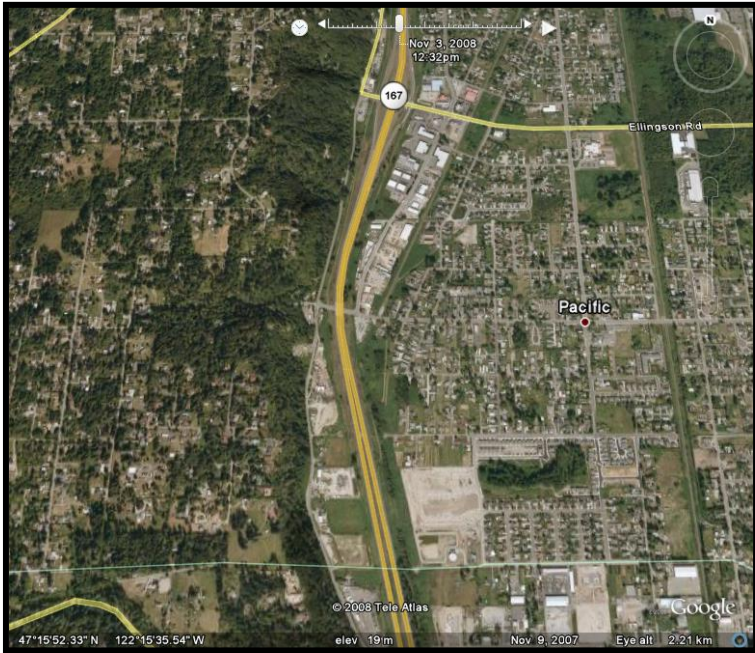
Excell spreadsheet of education contractor’s estimates: a proposed schedule of completion for each item and a cost breakdown, utilizing current quote. A projected labor and materials breakdown is provided to substantiate the overall total cost of each action.

Actual Yearly Education costs are dependent on Actions selected by the Public Works Director, and are shown on pages 21 and 22, Public Education Plan Schedule and Allocated Costs.

A. INTRODUCTION:

City of Pacific Municipal Stormwater System Service Areas

NW and NE Residential Areas, (left and right photos)
Southern Industrial-Commercial Area (bottom photo)



Executive Summary:

The Clean Water Act (CWA) is federal legislation which mandates federal, state and local laws to protect the waters of the United States. This legislation authorizes the Environmental Protection Agency (EPA) to permit discharges of stormwater into the “Waters of the Nation”.

The EPA has delegated the Washington State Department of Ecology (DOE) to administer these stormwater discharge permits, nationally known as National Pollutant Discharge Elimination System (NPDES) permits. The City of Pacific NPDES permit is issued as a Western Washington Phase II Permit. Larger jurisdictions (Pierce County, King County, Seattle, and Tacoma) have Phase I NPDES Permits.

The City’s 2009 Stormwater Management Plan (SWMP) addresses the minimum control measures (MCMs) required by the Western Washington NPDES Phase II Permit. This Education Plan expands on minimum control measure MCM#1: Public Education and Outreach (S5.C.1), of the City of Pacific 2009 SWMP, and is based on the Best Available Science, as follows:

Scientific Grounding:

Watersheds and water quality downstream of human activity becomes compromised due to stormwater quality. Stormwater quality is degraded due to urbanization of the natural landscape, which changes how water flows over and through the landscape and the speed at which it flows. Hydrology is “influenced by geology, climate, vegetation, soils, and humans”, according to Professor Curtis Hinman, WSU. [Appendix A]

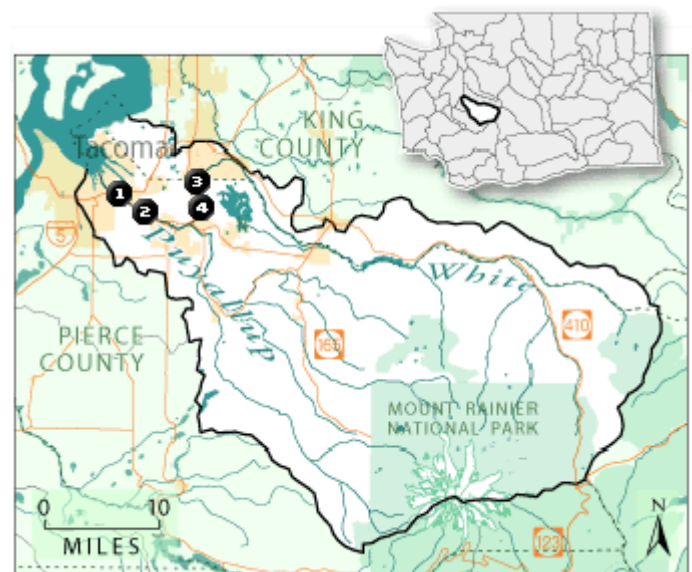
Many human activities generate multiple pollutants which enter the Waters of the Nation from “point source” industrial and sewage treatment outfalls. “Non-point source” pollutants, from sources other than industrial pipes or municipal sewage treatment facilities, also discharge into these waters. Non-point pollutants are picked up by stormwater as it runs over impervious surfaces and into stormwater conveyance systems such as drainage ditches and pipes.

The Clean Water Act, Section 303(d)(2), requires that states submit and EPA approve or disapprove lists of waters for which existing technology-based pollution controls are not stringent enough to attain or maintain state water quality standards and for which total maximum daily load (TMDL) standards must be prepared. (Source: DOE)

The Washington State Department of Ecology (DOE) has developed a scientific water quality monitoring system, which is used to determine if TMDLs are exceeded. The White River exceeds TMDLs for fecal coliform from human and animal wastes¹; and for temperature. Fecal coliform bacteria damages human health. High water temperature disrupts the aquatic food chain. A pH TMDL listing is pending².

The White River through Pacific is consequently listed as a 303(d) water body, defined as measurably polluted. According to DOE, Pacific’s stormwater discharges may not cause White River TMDLs to increase.

Despite the requirements of the Clean Water Act, stormwater pollution continues to accumulate in wetlands, streams, rivers, and seas, and degrades the finite, natural, well-functioning ecosystem components



¹ <http://www.ecy.wa.gov/biblio/0603115.html>

² <http://www.ecy.wa.gov/biblio/0003001.html>

upon which humans depend. Ecosystems provide a healthy medium for growing clean food. Ecosystems provide important renewable resources such as seafood harvests, or timber for housing and paper. Un-degraded ecosystems minimize floods and store rainwater to recharge ground water supplies, sequester carbon dioxide, and produce oxygen. The spectacular natural features of Puget Sound and Northwest ecosystems provide extensive recreational opportunities. Even “vacant land” has ecological benefits, especially if soils are undisturbed and naturally vegetated. (Source: EPA, DOE, and Puget Sound Partnerships overviews of Best Available Science, and the King County 2009 Stormwater Pollution Prevention Manual; See Appendices A, B, P, & R).

Ecosystems also provide extensive financial benefits to society. A new academic discipline, Ecosystem Economics, researches natural ecosystem services, and has proven the financial benefits of fallow land. Ecosystem services in the Puget Sound region are estimated at between \$7.1 billion and \$61.7 billion annually. This dollar amount is the cost to society, through our government, if we had to build artificial, engineered replacements for these naturally available services. As land is converted by development, the economic value of ecosystems increases as supply diminishes. The value of this natural capital in the Puget Sound basin is estimated in the trillions of dollars (*A New View of the Puget Sound Economy* © 2008 Earth Economics, http://eartheconomics.org/A_New_View_of_the_Puget_Sound_Economy.pdf , See Appendix C).

Conclusion, based on scientific grounding:

Stormwater pollution accumulates downstream and degrades fresh and salt-water ecosystems, and has human health and other environmental consequences. It is the responsibility of the City of Pacific to minimize stormwater pollution generated by residents, businesses, and City activities. Compliance with NPDES Phase II Permit guidelines is expected to improve water quality in stormwater outflows to the White River and its tributaries, thus improving or protecting human and ecosystem health.

EDUCATION ACTION PLAN PURPOSE:

Because the EPA mandates the creation of a public education program to minimize stormwater pollutants; because meaningful education goes beyond brochures and presentations; and because improving water quality improvement benefits the health, environment, and the natural, economic and recreational resources of a community, the following Education Action Plan has been developed.

Therefore the purpose of this Stormwater Public Education and Outreach ACTION Plan is to implement the City of Pacific’s NPDES Phase II Permit Education Requirements for 2008-09, through effective public education and outreach which elicits specific changes in behaviors that benefit water quality.

INTENDED AUDIENCE:

The City of Pacific Mayor and City Council, Public Works Director, Stormwater Management Plan Citizens Advisory Committee, City employees, Pacific residents and Pacific business owners are the intended audiences of the 2009 Education ACTION Plan.

This plan addresses two groups to be educated: the public, which includes residents, businesses, and in some cases, individuals or businesses which pass-through the City, and City staff, which includes all elected officials, administrative, professional, and skilled labor, salaried or hourly staff.

Each citizen and city staffer needs to have knowledge of many aspects of stormwater pollution prevention, and to personally and professionally use Best Management Practices to reduce or eliminate stormwater pollution. Residents, Businesses and City Public Works activities will be the first focus of stormwater pollution prevention education.

Note: A “Schools” Education Plan will be developed for the City in the future. There is one school in the City of Pacific: Alpac Elementary. Pacific valley students attend Auburn School District K-12 schools. West Hill students attend Fife School District K-12 schools. A Fife School District Elementary school in Edgewood serves Pacific West Hill students. Additionally, Auburn stormwater flows into the Pacific system (Government Canal). Edgewood and unincorporated King County stormwater also flows into a Pacific stream (Jovita Creek). Pacific also spans the King-Pierce County line.

This "mismatch" of school districts, County and City limits and stream drainages presents an additional financial burden on the City, requiring the City to develop school programs within the academic requirements of two different school boards. Partnering with the Stormwater educators of the cities of Auburn, Edgewood and Fife, and King and Pierce Counties may be a solution to this problem

PUBLIC INVOLVEMENT IN EDUCATION PLAN DEVELOPMENT:

The City of Pacific Storm Water Management Plan Citizens Advisory Committee (SWMP CAC) reviewed 4 technical memos authored by SWMP contractor, Otak Inc. consultants (Otak). Otak Technical Memos 1-4 analyzed what the City is required to do under its NPDES Permit, what it is doing, what changes need to be made, and how to fund those changes. An additional OTAK report analyzed the West Hill drainage. All Otak documents were incorporated into the SWMP plan. Feedback on the various elements of the SWMP from the SWMP CAC was incorporated as well. The SWMP and Education Plan elements graphics were generated, and then displayed at a Stormwater Open House on November 18, 2008. Copies of these education graphics are included as Appendix AA

Open House visitors participated in a "beta survey", viewed Education Plan displays, then ranked education "strategies" on "Dot Charts" according to "what would motivate" themselves. (See Appendix AA).

Regrettably there were not enough participants to accept the Openhouse Survey data and "Dot" chart results as a *demographically* valid reflection of the community. However, the results of the "beta survey" and the "Dots" exercise have been included in Appendix F "Open House Survey Results".

PLAN COMPLETION DATE: January 15, 2012

This Stormwater Education ACTION Plan covers the remainder of Pacific's 5 year NPDES Phase II Permit, (Feb 16, 2007 to January 15, 2012). It was presented to the Public Works Director for review on January 21, 2009. The Final Draft was reviewed, amended, and/or modified through public Stormwater Management Planning Citizen Advisory Committee (SWMP-CAC) meetings and City Council meetings, as part of the 2009 Stormwater Management Plan Update, with the intent of adoption by Council resolution in March of 2009.

TOTAL PROJECTED COSTS: \$25,000

This cost of \$25,000 was proposed by the Public Works Director, from the Stormwater Utility's projected income, as a portion of new Stormwater fees. A portion of this income was ear-marked to conduct Stormwater Education and Outreach. \$25,000 was also the suggested minimum value given by OTAK Consultants to meet education and outreach requirements of the Phase II NPDES Permit. Much more could be spent for education, but this estimate is conservative based on the resources of the City, and the versatility of the current contractor.

ORGANIZATION:

The Education Plan is organized into 2 sections, separating Public Education from City Staff Education. Goals, Research, Gaps in Knowledge, Plan Objectives, Desired Outcomes, and Barriers preface these two Action Plans.

Public and Staff Action Plan sections may include sub-sections for several individual objectives, actions to meet these objectives, tasks for each action, schedules for actions and costs for actions. Tracking of outcomes is also discussed.

The Education Plan includes Appendices which elaborate on many elements of the plan. The Appendices were too detailed to include in the Plan, but are important for reference and documentation of the recommendations made by the author.

B. METHODS:

The author used a hierarchical and linear process to familiarize herself with EPA and Department of Ecology NPDES permit requirements for Phase II jurisdictions, which are based on the National CWA standards.

The author researched EPA and DOE stormwater pollution prevention goals and educational strategies, sorting out EPA and DOE requirements for local Phase II permittees. Center for Watershed Protection, EPA and DOE publications, and the 2009 King County Stormwater Pollution Prevention Manual were consulted for appropriate Best Management Practices (BMPs) for residential and business practices.

Goals for the City of Pacific were identified by researching gaps in the audience knowledge. These gaps include watershed knowledge, awareness of stormwater pollution, and use of BMPs to prevent generating pollution into the watershed. The author reviewed local and national education programs which use social marketing strategies.

Objectives and Actions were identified to address the gaps.

Additional research and professional observations conducted in late 2008 and early 2009 identified new areas of concern: gaps in knowledge and in communications. The plan was modified to incorporate new objectives. This process was started in September 2007. A more complete description of the Methodology is listed in Appendix D.

Additionally, starting in Permit Year 3 (February 16, 2009- February 15, 2010) the City will conduct a Base-line survey, documenting and evaluating the education/outreach effort, and will revise the education plan from year to year as needed.

C. PUBLIC EDUCATION PLAN:

The Public Education Plan includes the following sections: Goals, Research, Gaps in Knowledge, Barriers to Action, Objectives, ACTIONS for 2009, 2010, and 2011, Scheduling, Costs and Tracking.

GOALS

The goal of the Public Education Plan is for the City of Pacific to be in compliance with the DOE/EPA NPDES Phase II Permit, which specifically requires an increase in stormwater awareness among citizens. The education section of the Permit also requires the City to document stormwater behavior changes.

The DOE/EPA policy presumes that NPDES Permit Compliance will reduce pollutants entering municipal stormwater conveyance systems.

The Education Plan's corollary Goal is to change human behaviors which generate or disperse water-carried pollutants into the Pacific Stormwater conveyance system, and then into the Waters of the State and Nation.

RESEARCH

Three surveys were undertaken to assess baseline knowledge of the City of Pacific residents. Detailed results can be found in Appendices E and F.

1. **A Spring Utility Survey** was sent April 1, 2008. Of "1900 inserts mailed", 152 were returned for a return rate of 8%. This billing reached property owners. However, residents in most multi-family dwelling units are not reached, as owners/mangers pay utilities for all units. In December of 2009, 2042 (of 2495) residences receive utility bills according to Utilities and Building Department staff. See Appendix K

The survey was designed to determine if residents received information about the City, and how they received that information. Based on survey results, the author has concluded that the city has no effective communication channel to reach all residents.

This communication gap resulted in further research about communication channels in the City. See analysis of Communication Gaps below. Greater coverage of the City Audience can be achieved by using a combination of several communications medias..

See Appendix E for Utility Survey results.

2. **Open House Survey**

Eight (8) respondents took part in the Open House Survey at the Stormwater Surface Management Plan Open House on November 18, 2008. They were asked to answer questions about their location profile, to answer a series of true or false statements about their watershed and other stormwater-related topics, and to answer a series of questions describing the frequency of certain stormwater protection or pollution-related activities they take part in, always, frequently, sometimes, rarely, or never.

Residents, business owners, students, and city employees or elected officials were represented. All averaged between 61% and 68% correct answers for the true or false questions. Though at least half understood some general information about stormwater, more than half of respondents erroneously believed that their watershed included the Green River.

The survey revealed that some best management practices are already in use: 7 of 8 respondents rarely or never change oil at home, 8 respondents do not dispose of oil or antifreeze in the storm drain, and 8 respondents rarely or never use fertilizer on their lawn or garden.

However, best management practices related to driveway maintenance practices and dog poop scooping revealed that residents may have knowledge and behavior gaps about these practices.

While the results are not statistically significant, the survey reveals that residents may be open to changing their behaviors if educated specifically to do so, and that a baseline level of knowledge may already exist in the community about certain best management practices.

See Appendix F for detailed Open House Knowledge Survey Results.

3. Open House “Dot’s” exercise ranked “Top 3” motivators for a small sample group of City residents and employees.

A ‘Dots’ exercise was conducted at the Stormwater SWMP Open House on November 18, 2008. Eight participants were asked to select the top 3 motivators for themselves, for 5 residential practices that can pollute stormwater.. These practices were automotive maintenance, car and vehicle washing, lawn and gardening practices, dog poop pick-up, and cleaning driveways and/or catch basins. (Appendices F & AA)

The survey revealed several potential motivators for 5 stormwater pollution sources.

Respondents indicated a high level of interest in product or service discount coupons, stormwater fee discounts, easy oil recycling, and in web-based information from the city as motivators to change automotive maintenance and vehicle washing behaviors.

Respondents indicated a high level of interest in Natural Yard Care if free classes and/or web-based information was available, as motivators to adopt better lawn and gardening practices.

Respondents also indicated a high level of interest in city-provided leaf disposal as a motivating factor for cleaning driveways and catch basins, and several other motivators had a low to medium interest level.

Respondents expressed a rather even interest for several “scoop the poop” Dog care motivators, such as free poop bags, park and city hall bag dispensers, city displays at Pacific Days, and having neighbors who also responsibly scooped the poop.

Write-in suggestions on the topics of scooping dog poop and cleaning storm drains suggested interest in changing personal behaviors. 2 respondents also indicated that they were interested changing behaviors to advance the good of the community.

Conclusion:

Based on the results of the three surveys, the author concludes that the participants are willing to change behaviors if it is easier for them, and if they know what is expected. While these survey results were encouraging, the results should be confirmed by a larger sampling of residents and business owners.

Statistical Validity:

The Spring Utility Survey and the Fall Stormwater Open House Survey and Dots exercise did not reach a demographically accurate profile of the City. The Spring Utility Billing Insert Survey did not reach renters. The Stormwater Open House survey did not reach a statistically valid number of respondents, nor was it demographically representative of the city population. Further research is needed.

A future Baseline Survey must be more reflective of the City’s demographics before it can be used yearly to measure behavior changes. See Appendix T.

GAPS: The following GAPS in City Communications with Citizens have been identified:

The *Tacoma News Tribune*, which is the City’s “newspaper of record”, serves less than 5 percent of Pacific households in Zip code 98047. 110 of more than 1900 households in zip code 98047 receive the *Tacoma News Tribune* on Sunday. 95 households receive the paper on weekdays, according to the *Tacoma News Tribune* Circulation Department.

The *Auburn Reporter* is received by approximately 195 households on Fridays in zip 98047. Delivery to the 97 households in zip 98001 is sporadic. One Friday a month 2500 Reporters may be delivered to Zip 98047, but only

when an advertizing insert is purchased by the City of Auburn. Auburn had not renewed this advertizing contract when data was collected in December 2008, according to the *Auburn Reporter* Advertising department.

A *Pacific Partnerships* non-profit organization quarterly newsletter *Pacific Pulse* reaches about 2400 mail patrons in Zip Code 98047. This mailing goes to all Postal Patrons, including renters. There is no delivery to 97 residences in the 98001 Zip Code.

There is no City of Pacific newsletter. There is a yearly Water Quality Report inserted in a Utility Billing (sent to 2042 accounts). Local business owners on the SWMP CAC stated they would be interested in sponsoring space (advertise) in a city-wide newsletter.

The City mails Utility Bills to 2042 accounts. Not all residents receive monthly utility bills. Approximately 450 Multi-family dwelling families do not receive utility bills: they pay the owners, who remit to the City.

The City's Utility Telephone Notification System (TNS, aka reverse 911, or Robo-calling) reaches approximately 95% of Utility accounts, or about 1940 households. The system is deployed by selecting streets, or by a bulk call to all numbers in the data base. Apartment dwellers (renters) have not received TNS invitations to send their phone numbers to the City, as they do not receive utility billings. Cell phone numbers have not been asked for. Many families have only cell phones, especially those displaced by the January flood.

The City website is minimally functional and must be upgraded to allow posting of Stormwater education materials and links.

The City cable TV Access Channel 21 content is maintained by the Mayor, and does not have updated content. King County Natural Yard Care episodes are broadcast, but there is no connection between the City website and the City Access Channel. The Content of Channel 21 is not advertised in the utility billing. Therefore, viewership of this communications medium is unknown.

Social networking channels have not been utilized by the City of Pacific. Examples: You.tube.com (video and music sharing), Twitter.com (texting), Flick'r.com (photo-sharing), and other social media have not been utilized by the City.

Appendix K details these Communications media Gaps, and elaborates briefly on social networking.

BARRIERS: “barriers to change” must be resolved to accomplish behavioral changes.

Barriers to each OBJECTIVE (or BMP change) limit adoption by the audience, even among early adopters. Barriers or objections to adopting new behaviors often include difficulty, expense, lack of time, and lack of knowledge, among other factors. Using guidelines in EPA's *Getting in Step*, including developing a baseline audience survey, barriers to change for various objectives and preferred positive behaviors (or BMPs) will be identified, and strategies or incentives to lower those barriers will be explored and implemented, as financially feasible. (Appendix G: *Getting in Step*)

OBJECTIVES of Public Education Action Plan

1. Independently document a (statistically valid) “baseline” of public understanding and awareness about how the city's stormwater system works. Document public's level knowledge of non-point pollution issues and of preferred stormwater pollution prevention behaviors.
2. Identify and adopt a Paper of Records “news” communication channel (media) which reaches a larger percentage of City residents and businesses than the Tacoma News Tribune.
3. Create a comprehensive Communications Plan, to bridge the identified communications Gaps. The plan will show how to reach 95% to 99% of City Residences and Businesses with stormwater messages.
4. Use the City website, and other supporting media, to increase public knowledge of watersheds, stormwater issues, and pollution prevention. (If the City relies on a website for public outreach, the city should use a

variety of other media and communications, such as mailings, inserts, posters, and/or “robo calls” to bridge the communications GAPS listed above. The objective of these other communications will be to “drive” residents and business owners to the City website for stormwater information)

5. Increase understanding of how the City of Pacific stormwater conveyance system works, communicating the responsibilities of “the public”, and of the City of Pacific (administrative, professional and public works staff) to keep the stormwater conveyance systems working efficiently
6. Communicate Best Management Practices to business owners or their service contractors and employees, at least 4 time per year, via a combination of accessible media.
7. Develop 6 seasonal stormwater pollution messages, aimed at general stormwater awareness, storm drain and street debris awareness, lawn and garden care, pet care, septic system care, motor vehicle care, and proper household chemicals and solid wastes disposal).
8. Improve stormwater infiltration. Minimize or mitigate the effects of new “urbanization” on natural hydrologic functions by promoting Low Impact Development homeowner actions, or by adopting Low Impact Development codes for appropriate zones of the City, particularly the West Hill Residential R-11 Zone.
9. Work cooperatively with local and regional partners in “higher level” Stormwater outreach and education, such as the regional Stormwater Outreach for Regional Municipalities (STORM) “best practices” media campaign, and the state Puget Sound Partnerships “Save Puget Sound” media campaign. See Appendix BB, STORM Summary.

ACTIONS 1-8

Actions for Objectives 1-8

Actions which are developed to achieve an Objective and its outcome “should be specific, measurable, Action oriented, relevant, and time-focused. Actions 1-8 are designed to meet, respectively, Objectives 1-8. There may be several Actions for each objective.

Administrative Summary:

Starting in February of 2009 the City of Pacific will implement Public Education Actions # 1, 2, and 4 of this Education Plan, as required by its NPDES Phase II Permit for years 2007-2011, inclusive.

In Permit Year 3, (2009-2010) 95% of City households and 95% of City businesses, and 100% of City Staff will be reached with a minimum of 5 Stormwater messages. See Appendix J, Non-point Pollution sources.

ACTION 1,

ACTION 1 will meet Objective 1: Independently document a statistically valid baseline of public understanding and awareness about how the city’s stormwater system works. Document knowledge of non-point pollution issues and BMPs.

Actions 1.1:

Measure public awareness in the City of Pacific about watersheds and non-point pollution using a Telephone Notification System (robo-call) Survey. Conduct a statistically valid automated telephone Spring Survey by May 1, 2009 . The Administrator has recommended this option as a cost effective alternate to hiring a consulting firm to conduct in-person telephone interviews.

Barrier: Not every household has a land line. Not every household is in the Utility Department telephone number data base. Only “property owners” receive Utility Bills (2042 Billing accounts). Many renters do not get messages delivered in Utility Bills. Some residents do not speak English. Census statistics reveal

11.36% of the City of Pacific population speaks languages other than English at home. For some families, cell phones are used as primary phone services.

Task 1.1.1: The Educator, Administrator, and Survey Company will write Baseline Survey questions which determine the level of awareness or knowledge of City residents, businesses/owners, and/or their employees. The Survey will reach a demographic representation of the City residents. The survey will be repeated yearly.

Task 1.1.2: The Educator will utilize EPA's *Getting in Step*, which has extensive information about identifying and getting around "barriers", and crafting surveys, to guide the Team's work. The Team will also utilize the STORM regional partners' survey models, available online. Beta testing of the survey in a small group will precede the telephone survey. Appendix O

Task 1.1.3: The Survey Company will conduct a survey which utilizes the "robo-call" automated telephone survey service. See Appendix AA.

Outcome 1.1: A statistically valid baseline survey will be developed, completed and conducted by May 1, 2009.

Task 1.2 The Educator will analyze the survey results to complete Objective 1 then refine Objectives 3, 4, 5, 6, and 7. Updated content for the City website will be recommended, and future reprioritized Actions for 2010 and 2011 will be recommended. These Actions should be chosen to further resolve barriers to change, and to motivate city residents, and businesses or visitors to the city to adopt preferred stormwater pollution prevention behaviors.

Outcome 1.2: The Public Works Director will have an updated menu of prioritized Objectives and Actions to pursue.

He/she may wish to choose Objectives supported by a variety of Actions. In any case, these Budget considerations may affect the choices of the Administrator. Any Action should have measurable results. More specific objectives should be addressed after the more general objectives are satisfied.

Task 1.3: The City's Public Works Director will choose several Actions which can be financially supported by Stormwater Utility income, and assign those Actions to the Stormwater educator.

Outcome 1.1 The stormwater educator will use the Survey results to recommend Education Plan Objectives and Actions for Year 4, 2010.

Action 2, Adopt a more effective "Paper of Record."

Action 2 will meet Objective 2, *Identify and adopt a Paper of Records/news communication media which reaches a larger percentage of City residents and businesses than the Tacoma News Tribune.*

Action 2.1: Replace the *Tacoma News Tribune* as "paper of record" with a local paper which reaches more than 5% of households in the City of Pacific. See Appendices K and T.

Barriers:

1. Time and availability of City Staff to write and advertise a Request for services, and
2. City code requiring the least expensive service provider.

Solution: Stormwater educator offers to help City staff research a more effective Paper of Record, with higher readership in the City.

Task 2.1.1: Educator researches local newspapers, to find the newspaper with the highest readership in the City.

Task 2.1.2 Public Works Director facilitates Council resolution allowing selection of a new Paper of Record

Outcome 2.1: City council adopts a resolution allowing City Clerk to contract for a new “paper of record”.

Action 2.2: Place stormwater stories in the local, *new*, paper of record by cultivate contacts with editorial writers and news reporters at paper of record publication

Task 2.2.1: Stormwater educator meets with reporters; finds out about deadlines; suggests seasonal stormwater topics and picture opportunities.

Outcome 2.2: Reporters are comfortable contacting City utility staff (engineer, cross-connection manager) or the stormwater educator, will have a positive working relationship with city officials, and are willing to place stormwater stories in the paper.

Actions 3- 8, Prioritization

Actions 3 through 8 should be re-examined and re-prioritized after a yearly baseline survey is conducted. This survey should confirm or refute earlier survey findings.

Quantifying *behaviors* is highly recommended.

Research on audience knowledge and behaviors will drive future City Stormwater Education Actions.

Time and money will be wasted if media are used which do not reach the target audiences.

Citizen and business stormwater management behaviors are to be measured annually to determine if education plan Actions implementation was successful.

Action 3, Develop a comprehensive Communications Plan. The plan will outline how to reach a higher percentage of City audiences with Stormwater Messages. This plan will address the Communications “Gaps” identified earlier. The Plan will include website development, and language translations of outreach materials

Action 3 will meet Objective 3, *Develop a communication plan which outlines how to reach 95 to 99% of City Residences and Businesses with stormwater messages.*

Action 3.1: Outline a Public Outreach Communications Plan (strategy). This Plan will be used to publicize the existence of the City website and stormwater web pages. This plan will identify a variety of resources and media which may be used to “drive” viewers to the website.

Task 3.1.1: Outline all of the available ways the City can market stormwater and other messages to 99% of city residents and businesses. Typical “communications” are radio, TV, newspapers, magazines, mailings, websites, posters, displays, public notices, and community events. The outline will include how to utilize other communications channels, such as social networking sites and messaging, “buzz” and word-of-mouth. See Appendices G and K.

Task 3.1.2 Provide translations of materials for major languages. (Appendix T: City Demographics)

Outcome 3.1: Communications barriers, identified as “city communications gaps”, will be lowered by the Communications Plan. The Plan will show how to reach 99% of city residences and businesses.

Action 3.2: The City will activate an effective and attractive website.

The website will have well identified and accessible Stormwater pages which utilize the Stormwater Utility “brand”. The website will link to local, regional, state and national resources.

Tasks 3.2.1: Assist in Website research, design, and development. Co-ordinate with City Staff and web designer to format site so that staff can update pages with ms.doc, pdf, jpeg and/or media files. (see Action 4: Prepare web pages on stormwater which informs residents and businesses of general watershed and stormwater issues.) Upload web pages. Do google searches to verify web pages are found by web “crawler” programs. Appendix P: Educational Web Resources.

Task 3.2.2: Contact all volunteer groups in city and acquire commitments to send announcements of City website to their email lists. Get pledges from mayor and council to forward City website announcements to constituents. Use Info box on Utility bill to publicize newly updated website. Contact news reporters with press releases and follow up calls or emails. Use Utility Bill inserts if info box does not generate site visits.

Create and distribute to renters (apartment occupants) emails, postcards, posters, videos, and/or other “products” to drive citizens to web pages. Partner with local community groups to “advertise” in their publications. Appendix W.

Outcome 3.2: 25% of City residents will know about and use the website to receive stormwater information

Action 3.3: Tracking Website Use

Task 3.3: Set up website visitor tracking with “site meter” or another free visitor tracking services.

Outcome 3.3 Website :tracking will document site visits with hourly, daily, and weekly statistics tracking, and by tracking user’s location

Action 3.4: Outreach Materials “Branding”. The City will adopt a unique branding ***Stormwater Logo and Tagline*** on all educational materials. The City Stormwater Brand should reinforce a “stormwater ethic” which mirrors the values of the community, and which capitalizes on the pride the City of Pacific residents have about their friendly, family oriented “small-town”. The Logo and Tagline should be developed to play off the City Logo (which is based on Mt Rainier and the White River). A Stormwater mascot can also be developed to tie into the developing School Stormwater Education Plan. See Appendix Y.

Branding images can be used on:

- 1) City Website, Stormwater education pages, Inserts w/ Utility Bills, Posters, Direct mailings,
- 2) Public Works and Utility brochures, flyers, school program materials (water carries everything)
- 3) Scoop the Poop signage and doggie bags at parks,
- 4) BMP Posters at businesses (such as automotive shops, “Cardboard under cars catch drips”) and public locations (Libraries, city hall, schools)
- 5) Storm drain stenciling, outreach to volunteers
- 6) Car wash kits, posters, and publicity
- 7) City calendar or Newsletter
- 8) Press releases
- 9) Social networking sites (photo, video and texting sites)

Task 3.4.1: Work with City staff, and use input from citizens, to develop guidelines for a Stormwater Logo and Tagline.

Task 3.4.2: Contact local High School “Skill USA” career clubs, University or Community College marketing programs to recruit students to develop branding for the city.

Task 3.4.3: Design and produce Logo and Tagline materials.

Task 3.4.4: Insert Logo and taglines in all Stormwater communications.

Outcome 3.4: City residents will recognize communications from the Stormwater Utility, and be receptive to messages.

Action 3.5: Develop a City stormwater education mascot, like “Pacific Pete”, to communicate stormwater messages to children, or to help “brand” Public Works stormwater management messages and missions. See Attachment Z.

Task 3.5.1: Work with City staff, and use input from citizens, to develop a mascot.

Task 3.5.2: insert PP in web pages, use in stormwater Utility publications, and provide digital graphic and text files to Utility Clerk.

Outcome 3.5: City residents will recognize communications from the Stormwater Utility Mascot, and will be receptive to messages.

Action 3.6: Newspaper editorial contacts, Place stormwater stories in local News of Record

Task 3.6.1: The educator will cultivate contacts with editorial writers and news reporters at this POR publication.

Task 3.6.2: The educator will generate Press releases for Stormwater Utility, regarding other Actions

Task 3.6.3: The educator will meet with reporters, find out about deadlines, seasonal topics, picture opportunities.

Outcome 3.6: News coverage of city Stormwater Activities, classes, programs or events will increase.

Action 3.7: City Coordination with Regional Stormwater Pollution Prevention Campaigns

City of Pacific Stormwater Educator will collect materials which help the City “tie-in” its Storm water topics with regional stormwater communication campaigns.

The regional campaigns are: Storm’s Regional Media Campaign (Yard Care, Vehicle Care, Pet Care, Rainwater Infiltration) Ecology’s “Washington Waters, Ours to Protect” Campaign ((Healthy People, Healthy Watersheds) and the Puget Sound Partnerships’ “Save Puget Sound” Campaign.

City Topics include general watershed knowledge and stormwater awareness (tie-in: healthy people, healthy watersheds), auto maintenance, soaps and vehicle washing (tie-in: car care) , pet wastes pick-up (tie-in: pet care), pesticides and fertilizers (tie in yard care), septic systems upkeep, impervious surfaces (tie-in: rainwater infiltration) and LID for West Hill, driveway washing/sweeping, construction BMPs, Illicit Discharge Detection and Elimination, catch basin cleaning and stenciling (tie-in: healthy people, healthy watersheds). See Appendices H, P and X.

Tasks 3.7.1 The Stormwater educator or Public Works Director will continue participation in STORM planning and training meetings,

Tasks 3.7.2 The City will incorporate STORM provided “branding” and media-tie-ins in city communications, such as website, utility bills, mailings, city cable TV channel, and /or on materials distributed at public events, ...

Task 3.7.3 The educator will research incorporating STORM seminar strategies into City website and communications, One strategy is for the City to provide on-line coupons or utility bill insert coupons for products or services which reward “Good Behaviors” (carwash discount coupons, organic fertilizers coupons, poop-scoop bags). Coupons can be redeemed with local vendors.

Outcome 3.7: The City and its Stormwater messages will gain “credibility” with the stormwater messages audience as the City’s messages are “linked” in the “public mind” with STORM, Ecology, and PSP.

Action 4, Website content

Action 4 will meet Objective 4, *Use this website, and other media, such as regular city publications, social networking, print news media, advertising, community and city newsletters or direct mailings, to increase public knowledge of watersheds, stormwater issues, and pollution prevention. Include links to relevant public and private websites.*

Guidelines: Web Pages will illustrate how stormwater becomes polluted, and how pollution affects people, such as degradation of health, increase of medical costs, and diminished quality of life; how pollution affects the environment, such as contamination of food, fish and shell fish, diminished biodiversity and diminished ability of ecosystem and species to rebound from threats, stresses, disasters.

Use the Outcomes of Action 1 to inform Objective 4, and to shape Action 4.

Barriers: City staff may lack time to develop standards for web pages.

Action 4: The City will activate an effective and attractive website.

The website will have well identified and accessible Stormwater pages.. The website will link to local, regional, state and national resources.

Task 4.1 Stormwater educator will assist the Public Works Director by researching website development guidelines for the City’s responsible employee.

Tasks 4.2.1 The educator will use EPA’s *Getting in Steps* guidelines to develop a website communications strategy, See Appendix G.

Tasks 4.2.2 The educator will assist in Website research, design, and development: co-ordinate with City Staff and web designer to format site so that staff can easily update pages with ms.doc, pdf, jpeg and/or media files.

Task 4.2.3 The educator will prepare web pages which inform residents and businesses of general watershed and stormwater issues, upload web pages, and do on-line searches to verify the City Stormwater web pages are found by web “crawler” programs. See Appendix P: Educational Web Resources.

Task 4.3.1 The Stormwater educator will: contact all volunteer groups in the City and acquire commitments to send announcements of City website to their email lists. The Public Works

Director will ask the Mayor and Council to forward City website announcements to their constituents, or to their email lists.

Task 4.3.2 The City Utility Clerk will insert notices in the Information Box on the Utility Bill to publicize newly updated website. The City will use Utility Bill inserts if information box notifications do not generate web-site visits.

Task 4.4 The educator will contact news reporters with press releases and follow up calls or emails.

Tasks 4.5 The Stormwater educator will create, and the City will distribute messages to those not reached by the utility bill inserts. The messages may be as emails, postcards, posters, videos, and/or other “products” to drive citizens to web pages. The educator will produce and arrange for the city to utilize local community “public service groups” publications to “advertize” or publicize the website.. Appendix W.

Outcome 4.1: 25% of City residents will visit the website to access stormwater pollution prevention information.

Action 5, City Stormwater Conveyance system

Action 5 will meet Objective 5, *Increase understanding of how the City of Pacific stormwater conveyance system works, and what are the responsibilities of “the public”, and of the City of Pacific (administrative, professional and public works staff) to keep the stormwater conveyance systems working efficiently.*

Action 5.1: Develop 5 Watershed and Stormwater Topics for the City Website, filling a minimum of 5 stormwater web pages, based on the identified gaps in stormwater knowledge identified in Objective 1 and ACTION 1, and by the Washington Department of Ecology in its Washington Waters campaign. (See Appendix H)

Task 5.1. The Stormwater educator will design, write and illustrate Web page content for these 5 pages.

Outcome 5.1: 5 Stormwater conveyance system messages will be added to the website in 2009 .

Action 5.2:1 Use Washington Waters web-campaign materials on the City website (see Appendix H).

Task 5.2.2: The educator will edit Washington Waters materials to fit the City website and to match City issues.

Outcome 5.2: This objective shall be accomplished by June 30, 2009.

Action 6, Seasonal Stormwater BMP Messages

Action 6 will meet Objective 6, *Communicate seasonal Best Management Practices (BMPs) for residents and business owners or their service contractors and employees. These preferred BMPs are expected to be adopted, improving runoff water quality, which in turn protects the biological functions of the community’s streams, rivers, ditches, wetlands, and lakes, and which in turn contributes to protecting or restoring endangered species and the Puget Sound ecosystem.*

Action 6.1: Develop 4 Quarterly stormwater messages to fill knowledge gaps about the City’s stormwater system. Concentrate on seasonal messages about behaviors associated with the system.

Task 6.1: The stormwater educator will develop 4 seasonal messages for the Utility bill inserts and the website

- Spring: “Did you know Yard; garden and roof run-off goes to storm drains?” Using less toxic products, installing rain gardens, using rain barrels reduces pollution

- Summer: Car washing pollutes streams, run-off is not treated, and oil leaks accumulate on streets, sweep your driveway, and fix leaks. The city can provide incentives, such as car wash discount coupons to motivate people to use commercial car washes...or the Puget Sound Car Wash Association can provide coupons to Charities, as an alternative to charities holding car wash fund-raiser events..
- Fall: Sweep leaves, recycle or compost, prepare for winter by using non-toxic moss killers.
- Winter: Trash and debris collect in catch basins, keep the streets clean, help keep your catch basin open, sweep sand, don't use chemical deicers. Partner with Washington Toxics Coalition to distribute Mr. Yuk Stickers or with retailers to offer coupons for less-toxic alternatives

Outcome 6.1: 95 % of City residents will receive 4 seasonal messages per year

Action 6.2: Provide coupons for services or products which can be printed or redeemed for discounts or services such as car washes, oil changes, and BMP garden products, to be included in a quarterly, community-organization-published newsletter, going by direct mailing to 80% of city households.

This insert will be a 2-sided letter-sized insert, and will cover a minimum of the 3 top knowledge gaps revealed by the Spring survey.

Task 6.2.1: Contact Pacific Partnerships regarding mailing schedule.

Task 6.2.2: Contact providers (Puget Sound Car Wash Assoc, local charities).

Task 6.2.3: Design and write insert. Arrange for printing, deliver product to Partnerships.

Outcome 6.2: 2000 mail patrons will be reached 4 times per year with a stormwater message.

Action 7

Action 7 will meet Objective 7: *Develop 2 or more stormwater pollution messages, aimed at general stormwater and storm drain awareness, lawn and garden care, pet care, septic system care (West Hill), motor vehicle care, and/or household chemicals and waste. The Washington Waters's campaign "toolbox" media materials and/or other free resources may be utilized.*

Action 7.1: Identify, compose and publish 2 Utility Billing Inserts which address the top behavioral Gaps revealed by a survey, or by direct polling at community events or public meetings

Task 7.1.1: Modify Washington Water materials, or other "open", non-copyrighted materials, to fit Pacific Community values and knowledge gaps.

These Inserts will reach 95% of City households. The City may supplement these inserts with direct mailings to 350-450 city households which do not receive utility bills.

Task 7.1.2: Post these messages on the City website; email them to community groups and leaders

Task 7.1.3: Write a press release for each message, feeding it to the local paper of record to be determined in ACTION 2.

Outcome 7.1: Increase awareness of top behavioral gaps revealed by first spring survey; a significant increase in "good behaviors" will be reported by respondents at time of next survey.

Action 8

Action 8 will meet Objective 8: *Improve stormwater infiltration.*

Action: Promote reducing stormwater on impervious surfaces by promoting Rain Barrels, Rain Gardens, Pervious paving, and LID strategies in the City; providing free training in Rain Garden design and construction, and Natural Yard Car lawn and garden BMPs..

Action 8.1: Yard Care. Partner with the Tacoma Pierce County Health Department and King County DNR Natural Yard Care to offer Natural Yard Care Workshops in Pacific to selected blocks, or neighborhoods.

Task 8.1.1: Work with Pierce and King Counties representatives to set-up classes.

Task 8.1.2: Solicit gardening sponsors or partners to provide coupons or samples of natural or organic products.

Task 8.1.3: Design media announcements; write and distribute press releases; use logos from city, TPCHD, King Co, and sponsors.

Task 8.1.4: Publicize Yard Care classes in news, with posters, at local stores, at post office, by direct and email mailings and on city websites.

Task 8.1.5: Direct Yard Care class inquiries to TPCHD registrar.

Task 8.1.6: Co-ordinate classes with TPCHD and King County Natural Yard Care.

Outcome 8.1: Class will be 75% full, 75% of attendees will pledge to adopt new behaviors and redeem coupons or post Natural Yard Care signs outside of houses.

Action 8.2: Rain Gardens. Partner with the Puyallup River Watershed Council and Stewardship Partners to offer Free Rain Garden training in Pacific, targeting the Upper Pacific neighborhoods.

Task 8.2.1: Work with David Hymel from Stewardship Partners to set-up free classes.

Task 8.2.2: Solicit gardening sponsors or partners to provide native plants or coupons.

Task 8.2.3: Design media announcements; write and distribute press releases; use logos from city, PRWC, SS, and other sponsors.

Task 8.2.4: Publicize Free Rain Garden classes in news, with posters, at local stores, at Post office by direct and email mailings and on city websites.

Task 8.2.5: Direct Rain Garden class inquiries to PRWC coordinator, and to Registrar at Pierce Conservation District.

Task 8.2.6: Design and produce Plaques for participants to post IF they build Rain Gardens.

Task 8.2.7: Co-ordinate classes with partners, other jurisdictions.

Outcome 8.2: Class will be 90% full; 75% of attendees will build Rain Gardens, and will Post Rain Garden plaques in the Rain Garden.

Additional Objectives and Actions for Consideration:

Objective 9: Link city and local stormwater education with its regional STORM coalition (NPDES education) partner and the STORM [Care-4 H2O] Campaign. (Communications plan corollary or a stand-alone)

Action 9: action 9 will meet objective 9, The City will tie-in to the 2009 Regional STORM coalitions' mass media social marketing campaign by including logos or tag-lines provided by the Campaign on Pacific-generated stormwater education messages and materials.

The regional campaigns are: STORM's Regional Media Campaign (Yard Care, Vehicle Care, Pet Care, Rainwater Infiltration) Ecology's "Washington Waters, Ours to Protect" Campaign ((Healthy People, Healthy Watersheds) and the Puget Sound Partnerships' "Save Puget Sound" Campaign.

City Topics include general watershed knowledge and stormwater awareness (tie-in: healthy people, healthy watersheds), auto maintenance, soaps and vehicle washing (tie-in: car care) , pet wastes pick-up (tie-in: pet care), pesticides and fertilizers (tie in yard care), septic systems upkeep, impervious surfaces (tie-in: rainwater infiltration)

and LID for West Hill, driveway washing/sweeping, construction BMPs, Illicit Discharge Detection and Elimination, catch basin cleaning and stenciling (tie-in: healthy people, healthy watersheds). See Appendices H, P and X.

Task 9.1.1: Acquire logos from STORM advertizing consultant, link to STORM websites.

Outcome 9.1: City residents will identify with the larger effort, and be motivated to adopt small changes which *collectively* add up to big differences in Water Quality. See Appendix W.

Task 9.1.2: City Coordination with Regional Stormwater Pollution Prevention Campaigns
City of Pacific Stormwater Educator will collect materials which help the City “tie-in” its Stormwater messages with regional stormwater communication campaigns.

Outcome 9.1 City website and other communications will evince the regional partnerships

Tasks 9.2.1 The Stormwater educator or Public Works Director will continue participation in STORM planning and training meetings,

Tasks 9.2.2 The City will incorporate STORM provided “branding” and media-tie-ins in city communications, such as website, utility bills, mailings, city cable TV channel, and /or on materials distributed at public events, ...

Task 9.2.3 The educator will research incorporating STORM social-marketing seminar strategies into City website and communications. One strategy is for the City to provide on-line coupons or utility bill insert coupons for products or services which reward “Good Behaviors” (carwash discount coupons, , organic fertilizers coupons, poop-scoop bags).Coupons can be redeemed with local vendors.

Outcome 9.2: The City and its Stormwater messages will gain “credibility” with the stormwater messages audience as the City’s messages are “linked” in the “public mind” with STORM, Ecology, and PSP.

Objective 10: Put a face on Stormwater BMPs. (Communications Plan corollary, or a stand-alone)

Citizens take advice from a non-threatening mascot. Children take messages home to parents.

Action 10: Develop a City stormwater education Logo, or “mascot”, like Pacific Pete, to communicate stormwater messages to children, or to help brand Public Works stormwater management messages and missions. Appendix Y.

Task 10.1.1: Educator will work with staff input to refine Pacific Pete image.

Task 10.1.2: Public Works director will authorize the Utility clerk to insert Pacific Pete in Utility bills, or will use in stormwater Utility publications. The educator will provide digital files to Utility Clerk.

Outcome 10.1: Stormwater communications will be personalized by the logo or ”mascot”. Messages will be more fun and palatable. Mascot “Premiums” with contact numbers for Illicit Discharges reports (IDDE Program) will be retained by recipients, and will be more likely to be used to contact Public Works about Illicit discharges.

Objective 11: Provide Visibility of the Stormwater Utility to community.

Action 11: Sponsor one City of Pacific Stormwater Utility Booth at Pacific Days in July of each year.

Task 11.1: The stormwater educator will design and the City will purchase outreach materials or “premiums” such as a refrigerator magnet with Stormwater Crew mascot Pacific Pete, a City directory or Public Works Crew Calendar, with local Emergency numbers to report Illicit Discharges.

Task 11.2: The educator will also develop a customer survey to informally poll Pacific Days attendees about 2 months after the spring survey.

Outcome 11. The Pacific Community will recognize Public Works as responsible for “stormwater”. The community will know how to contact the City if they notice Illicit Discharges.

Objective 12: Reinforce messages through regional branding and media contacts

Action 12.1: Use local news media to publicize stormwater-related programs, classes and/or events.

Action 12.2: Cultivate relationships with news reporters, providing stories to the paper of record.

Action 12.3: Tie-in with the STORM and PSP regional campaigns, or other campaigns which promote public transit or carpooling, which reduces automotive pollutant, or which encourage planting shade trees along local streams and ditches to absorb water or shade habitat.

Outcome 12: City messages are linked to regional campaigns, City messages are “legitimized” by being reported by local press. Visibility and repetition reinforce messages.

**Public Education Plan Schedule and Allocated Costs:
Permit Years 3, 4, and 5,
beginning February 16th of 2009, 2010 and 2011 respectively.**

Year 3, 2009-2010 EDUCATION PLAN ACTION	Schedule	Media Product	City Staff
1. Independently document a (statistically valid) “baseline” of public understanding and awareness about stormwater systems. Document knowledge of non-point pollution issues and BMPs. (Objective 1)	By April 30	Survey	Public Works Director
2. Identify and adopt a Paper of Records/“news” communication media which reaches a larger percentage of City residents and businesses than the Tacoma News Tribune.(Objective 2)	By July 15	Change Newspaper	City Clerk
3. Use the City website, and other media, to increase public knowledge of watersheds, stormwater issues, and pollution prevention. (Objective 4)	Bi-monthly	Website Content, direct mail, posters,	Storm Manager/IT Staff
4. Continue residential storm drains labeling. Document the number of storm drains labeled. (On-going, from 2008 SWMP)	Annual	Community	PW Lead

**Year 4,
2010-2011 EDUCATION PLAN ACTIONS**

1. Independently document a (statistically valid) “baseline” of public understanding and awareness about the City’s stormwater program. Document (Objective 1)
2. Develop 2 stormwater pollution messages, aimed at general stormwater and storm drain awareness, lawn and garden care, pet care, septic system care, motor vehicle care, and/or household chemicals and waste). (Objectives 5, 6 and/ or 7)
3. Use the City website, and other media, to increase public knowledge of watersheds, stormwater issues, and pollution prevention. (Objective 4)
4. Work cooperatively with local and regional partners in “higher level” media communications, such as the STORM BMPs campaign. (objective 9)

Schedule	Media Product	City Staff
By April 30	Survey	Public Works Director
April & September 2010	Newsletter/Billing Inserts, Flyers	Storm Manager
Bi-monthly	Web Material	Storm Manager/IT Staff
On-going 2010	Print	Public Works Director

**Year 5,
2011-2012 EDUCATION PLAN ACTIONS**

1. Independently document a (statistically valid) “baseline” of public understanding and awareness about how the city’s stormwater system works. Document knowledge of non-point pollution issues and BMPs.
2. Develop 2 stormwater pollution messages that communicate Best Management Practices (preferred behaviors, BMPs) for residents and business owners or their service contractors and employees.
3. Use the City website, and other media, to increase public knowledge of current issues involving City Stormwater efforts and issues.
4. Introduce an Elementary School Program and Stormwater materials

Schedule	Media Product	City Staff
April 30, 2011	Survey	Public Works Director
April/September 2011	News Print	Storm Manger
Bi-Monthly	Website Content, direct mail, posters,	Storm Manager/IT Staff
September 2011	Posters, age appropriate materials	Storm Manager

Additional Potential Outreach Activities for 2010-2011

The following are potential outreach activities (Actions) for 2010 -2011:

Home owners Natural yard care and landscaping workshops, Earth Day Annual Pacific Parks Pickup event; semi annual Web Site format update, Elementary school water-science program

Additional Potential Outreach Activities for 2011-2012

The following are potential outreach activities (Actions) for 2011-2012:

Semi Annual Car clinics, Middle school World water monitoring day, Senior High School Community Service Projects.

Yearly Evaluation of Outreach Materials:

The Education Plan's effectiveness will be indicated by measuring behavior change as mandated by the EPA requirements for outreach strategies. This is to be accomplished by repeating the yearly Baseline Survey, and noting percentage change. A Target of 25% adoption rate of new behaviors is considered good progress by EPA.

Each Objective has a measurable outcome built into the Objective. Using the Yearly Baseline Survey of city residents and business owners, changes in stormwater pollution prevention behaviors can be measured, and the next Permit Year's Education Actions can be re-prioritized accordingly.

Other BMP "measurable" which can be tracked are:

1. Tangibles used, dog poop bags bought for park, purchase of composting bins, number of rain barrels, additions of rain gardens, number of "recycling" subscribers
2. Participants in programs, such as "pesticide free" yard care or "natural" yard care workshops, participants in Rain Garden Classes and installations of Rain Gardens, number of times Charity car wash kit or Car Wash coupons are used and redeemed (i.e., changes in car-washing location from streets/drives),
3. Requests for Stormwater pollution prevention information, Stormwater Information Office speakers, or for demonstrations (of car wash kits), or school programs on stormwater.
4. Requests to Community Development, Building Department, or City Planner for Low Impact Design/Build pre-permit planning meetings, or increases in square feet of Low/Zero Impact Development type construction projects.
5. Staff O& M tasks: equipment washing, dust control, catch basin cleaning, street sweeping and waste disposal, invasive species removal, Native plants landscaping installation and maintenance, and Illicit Discharge Detection reports.

Track Activities which the City conducted to change behaviors.

Activities will be tracked based on the Actions adopted for each of the planning years, from February 16th, to February 15th of each year. For the purposes of reporting, December 31st may be used as the end date of each yearly reporting period.

The dates and measurable goals in each section of the Education Plan are based on the dates of the City's NPDES Phase II Permit, which was effective February 16, 2007, and expires February 15, 2012. The permit years are referenced in this document as follows:

Year 3 = February 16, 2009-February 15, 2010

Year 4 = February 16, 2010-February 15, 2011

Year 5 = February 16, 2011-February 15, 2012

D. STAFF EDUCATION PLAN:



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GOALS

The Goal of the Staff Education Plan is for City Public Works employees to successfully adopt effective Operations and Maintenance (O&M) Stormwater Best Management Practices (BMPs)

Additionally, all elected officials; and professional, clerical & technical staff should be conversant in stormwater pollution prevention, and should model Best Management Practices appropriate to their duties or responsibilities. All City representatives are expected to understand how their work behaviors can prevent job-generated pollutants from entering the stormwater system

OBJECTIVES:

1) Develop and Adopt an Operations and Maintenance BMP manual appropriate to the City of Pacific to guide Public Works personnel. The Public Works Department will be the focal point of the City's Employee Education program. An in-house training program will be implemented to teach employees about stormwater management, potential sources of contaminants, Illicit Discharge Detection, and to train staff in O & M Best Management Practices (BMPs).

The Public Works personnel will be knowledgeable of BMPs, managing hazardous processes and materials they perform or work with, anticipating safety hazards, best practices for preventing discharges, and procedures for responding quickly and properly to toxic and hazardous material incidents.

2) Public Works personnel will be instilled with a thorough understanding of the Stormwater Pollution Prevention Plan (SWPPP). The Public Works staff will be instrumental in observing "illicit" pollutants (IDDS), reporting them, and preventing their discharge into the City stormwater conveyance system, or to streams and rivers in the City of Pacific.

ACTIONS

ACTION 1 will meet Objective 1: Develop and Adopt an Operations and Maintenance BMP manual appropriate to the City of Pacific to guide Public Works employees.

Action 1.1 The City Engineer and the Public Works Crew Forman will identify Operations and Maintenance Job Practices performed by Public Works Crew

The following City of Pacific Public Works O & M Practices have been suggested as potential sources of stormwater pollution.

- a. Equipment washing practices
- b. Dust control
- c. Catch basin cleaning and debris disposal
- d. Street sweeping and Sweeper-Vac operations
- e. Waste disposal
- f. Vehicle fueling, repair and maintenance
- g. Use of solvents and chemicals, weed killers, pesticides
- h. Water or sewer connections, construction, or maintenance
- i) Small gasoline engines fueling, repair and maintenance

Action 1.2: Use the Center for Watershed Protection Manual 9 Municipal Pollution Prevention/Good Housekeeping Practices to identify areas of concern, and to outline a Staff Education Plan. See Appendix S: Manual 9, Municipal Pollution Prevention.

Educational topics will be prioritized according to the prevalence of work activities in the public works schedule.

Note: The Public Works Director suggested the City use “off the shelf” educational materials to save money. The author has reviewed 3 documents.

- 1) An EPA funded *Municipal Pollution Prevention Manual* from the Center for Watershed Protection can be used to develop a very comprehensive O & M Program. This manual is extensive, and can be used by small cities like Pacific, or by larger jurisdictions. Manual #9 does not provide immediate training regimes, but does provide BMPs.
- 2) A second document from the State of Tennessee, Stormwater “*Good Housekeeping*” can be used as a temporary training “text” for Operations and Maintenance Best Management Practices. See Appendix W
- 3) The new 2009 King County Surface Water Manual is also available as O&M BMP source material.

Reference Document:

CWP Manual 9: *Municipal Pollution Prevention/Good Housekeeping Practices*

“The ninth manual, published in 2008.... contains a municipal operations analysis to help local stormwater manager’s target the municipal operations and activities that can improve water quality. The 10 areas include municipal hotspots, municipal construction, road maintenance, street sweeping, storm drain cleanouts, stormwater hotlines, landscaping and park maintenance, residential stewardship, stormwater maintenance, and employee training. The manual presents guidance on how municipalities can modify these 10 programs to promote sub-watershed restoration goals. It presents a series of profile sheets that recommends specific techniques to implement effective municipal programs.

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See Appendix S: Manual 9, Municipal Pollution Prevention, Urban Subwatershed Restoration Series
Center for Watershed Protection, CWP website link <http://www.cwp.org>
Resource Download Forms http://www.cwp.org/formmaker/Download-Form_RedirectFormPage.html

An electronic copy of CWP Manual #9 is in the Reference Documents file on the Stormwater Education CD

included with this Education Plan and delivered to the Public Works Director

Action 1.3: An O & M Best Management Practices Manual shall be adopted

Task 1.3.1 The Public Works Director, with input from the City Engineer and PW Forman, shall identify areas where staff training is most needed, approve appropriate Public Works BMPs Training Methods, and set a Budget for training and materials.

Task 1.3.2

The stormwater information officer (SIO) will work with this framework, with the advice of the City Engineer and the PW Crew Forman, and will compile appropriate training reference materials for the Crew and Shop. The BMPs and these materials will constitute the City's Public Works O&M BMP Manual

Action 1.4 The City will implement a quarterly training program using the O&M BPM Manual.

Tasks 1.4 The Public Works Director will conduct training sessions for the Public Works Crew in April, June, September and December , 2009.

The Public Works employee will learn how he/she can change or modify any daily work activities or habitual practices which have the potential to pollute stormwater, while performing the following:

- a. Equipment washing
- b. Dust control
- c. Catch basin cleaning and debris disposal
- d. Street sweeping and Sweeper-Vac operations
- e. Solid and liquid waste disposal
- f. Vehicle fueling, repair and maintenance
- g. Use of solvents and chemicals, weed killers, pesticides
- h. Water or sewer connections, construction, or maintenance
- i) Small gasoline engines fueling, repair and maintenance

After quarterly training, Public Works crew activities will better protect water quality, as negative behaviors are replaced by more positive behaviors

Outcome 1

The Public Works employee will learn how he/she can change or modify any daily work activities or habitual practices which have the potential to pollute stormwater, and will adopt appropriate BMPs for his or her task and job discription.

ACTION 2 will meet Objective 2.

The Public Works Staff Education program will instill all public works personnel with a thorough understanding of the City's Stormwater Pollution Prevention program (SWPP), and its Illicit Discharge Detection and Elimination (IDDE) program.

Action 1.2.1 The Public Works Staff will participate in Quarterly training on point and non-point pollution issues and BMPs. Included will be an overview of the requirements of the City's NPDES PHASE II Stormwater Permit

Task 2.1: The Public Works Director shall conduct quarterly trainings on non-point pollution issues and BMPs.

Outcome 2.1 Public Works staff will understand the City SWPP program. The City Public Works staff will adopt appropriate work behaviors which follow SWPP guidelines.

Action 2.2: Semi annual training on IDDE topics and reporting. Training shall include information regarding the hazards associated with illicit connections and details of the program including investigation techniques, physical observations, field sampling, and mapping procedures.

Task 2.1: The City Engineer will conduct semi-annual training sessions in IDDE. The Engineer will provide appropriate technical materials.

Task 2.2: The SIO will provide electronic files of Graphics and Shop posters as requested

Outcome 2.1 City Public Works personnel will recognize Illicit Discharges, and will respond appropriately to eliminate such discharges, and to further prevent Illicit Discharges from entering the City's stormwater conveyance system.

TRACKING:

There are several tangibles which can be tracked to measure behavior changes, or communications effectiveness. The staff can track

- A) Changes in the amount of time spent in various Public Works Operation and Maintenance duties and tasks: equipment washing, dust control, catch basin cleaning, street sweeping and waste disposal, invasive species removal, Native plants landscaping installation and maintenance,
- B) Illicit Discharge Detection reports,
- C) Developer and contractors LID pre-permit meetings,
- D) Outreach to building groups,
- E) Postings of BMP signage at Construction sites,
- F) Requests for Contractor employee Training,
Building inspector site "red tags".

Scheduling: In House Training:

1.1 The Public Works director shall schedule the Quarterly and Semi-annual Public Works staff training sessions, coordinating the City Engineer, and the Public Works Forman.

1.2 The PW Forman shall require Public Works Crew attendance at these training classes

1.3 The Stormwater educator shall participate in a "support" mode, as requested by the Public Works Director, or City Engineer,, to take training photos, produce graphics, acquire shop BMP "posters", or locate free on-line training materials.

**City Employee Education Plan Implementation Schedule,
Permit Years 3, 4, 5, beginning February 16th of 2009, 2010 and 2011.**

2009 CITY EMPLOYEE EDUCATION PLAN ACTION	Schedule	Media Product	City Staff
1. Quarterly training on point and non-point pollution issues and BMPs. Overview of the requirements of the City's NPDES PHASE II Stormwater Permit	April, June, September and December 2009		Public Works Director
2. Semi annual training on IDDE topics and reporting. Training shall include information regarding the hazards associated with illicit connections and details of the program including investigation techniques, physical observations, field sampling, and mapping procedures.	July/December 2009		City Engineer
3. Post-Construction Stormwater Management in New Development and Redevelopment – Training shall include information regarding the requirements	September 2009		City Engineer

2010 CITY EMPLOYEE EDUCATION PLAN ACTION	Schedule	Media Product	City Staff
1. Quarterly training on point and non-point pollution issues and BMPs, Street Sweeping and Catch basin cleaning schedules and documentations	April, June, September and December 2010		Public Works Director
2. Stormwater Public Relations Education – Training will include how to respond to inquires regarding storm water questions from the general public.	July 2010		Public Works Director
3. Municipal Ordinances –Training will include an overview of the various Ordinances, their requirements, enforcement policy, and hazards associated with improper applications.	October 2010		Public Works Director

2011 CITY EMPLOYEE EDUCATION PLAN ACTION	Schedule	Media Product	City Staff
1. Quarterly training on various point and non-point pollution issues and BMPs.	April, June, September and December 2011		Public Works Director
2. Off Site Training. The City staff should schedule appropriate number of crew members and office staff to routinely attend regional trainings held in the Puget Sound area.	TBA		PW Director & Crew Leader

3. Semi annual training in stormwater monitoring techniques

June/December 2011

City Engineer

BUDGET

Staff Education Plan Implementation Costs: Approximately \$2,000

Projected 2009-10 budget, as of March, 2009:

The Public Works Director and Public Works Crew Leader will schedule one 2 hour training per quarter that is related to Stormwater pollution prevention, Best Management Practices for Pollution Prevention.. Approximately \$2,000 is estimated for materials, depending on the Objectives, messages, and message delivery options chosen by the Public Works Director, Engineer and Public Works Crew Leader. .

City Staff Education Plan Budget Summary:

Outreach materials ~ \$2,000

Total Projected Costs: ~\$2,000



City of Pacific Education Plan was submitted to the Public Works Director on February 17, 2009

Submitted by Jeanne Fancher

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