
Prepared for: City of Fife
Project Title: Stormwater System Plan Update
Project No: 143193.200

Technical Memorandum

Subject: Regulatory Compliance Analysis
Date: February 19, 2013
To: Ken Gill, PE, City of Fife
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Limitations:

This document was prepared solely for the City of Fife in accordance with professional standards at the time the services were performed and in accordance with the contract between the City of Fife and Brown and Caldwell dated August 14, 2012. This document is governed by the specific scope of work authorized by the City of Fife ; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by the City of Fife and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

1. Introduction

This memorandum describes the activities performed by Brown and Caldwell (BC) to help the City of Fife (City) develop planning-level estimates of City costs for complying with the Western Washington Phase II Municipal Stormwater Permit (Permit) issued by the Washington State Department of Ecology (Ecology) August 1, 2012. This permit covers municipal stormwater discharges for 2013-2018. The estimates are intended to encompass the City costs related to activities in addition to the existing stormwater program. The City will use the results of this regulatory compliance analysis to support a stormwater utility rate study that is being performed as part of an effort to update the *City Stormwater System Plan*.

2. Regulatory Compliance Analysis

The City's Annual Reports document compliance with the 2007 Permit, which expired in 2012. BC evaluated the new (2013-2018) Permit to identify areas where additional stormwater activities would be required to maintain compliance. Additional (2013-2018) stormwater permit requirements are summarized in the attached spreadsheet and include the following:

- Develop a written Public Education and Outreach Plan, including new material for illicit discharges, Low Impact Development (LID) principles, vehicle/equipment maintenance, pet waste, and dumpster/compactor maintenance.
- Update existing City Municipal Code language to be consistent with the new Permit with respect to illicit discharge detection and elimination (IDDE), LID, and Ecology's 2012 *Stormwater Management Manual for Western Washington*.
- Implement IDDE activities including IDDE training for City staff, IDDE screening of the stormwater system, and coordination with City of Tacoma Utilities Department and Tacoma/Pierce County Health Department regarding current IDDE inspection activities.
- Develop a written Stormwater Utility Operation and Maintenance Manual based upon existing Standard Operating Procedures.
- Pay into Ecology's collective fund for monitoring activities.

BC staff met with City staff to discuss the new Permit requirements and develop cost estimates for each additional stormwater activity identified. As shown in the spreadsheet, some of the new requirements will entail "one-time" costs while others will entail new ongoing costs. The City plans to include the one-time costs either as individual items or a single combined item in the Capital Improvement Program (CIP) presented in the *Stormwater System Plan Update*. Ongoing costs must be accounted for in the stormwater program budget and as an input value to the stormwater utility rate study. BC recommended (and the City agreed) that the City pay into Ecology's collective fund for monitoring activities as a more cost effective approach to achieving Permit compliance than City development of approved Quality Assurance Project Plans and performing necessary sampling/analysis.

The most significant ongoing costs identified in the attached spreadsheet are related to IDDE inspection and asset management of stormwater infrastructure. The City plans to contract consultant services which would include development of an IDDE training program as well as development of a proactive asset management program based upon mapping and CCTV recording of the stormwater system piping. Initial (one-time) costs are approximately \$12,000 to document the program methodology. Subsequent annual costs would be approximately \$50,000 based upon the following assumptions:

- 280,000 LF of stormwater system piping
- Annual CCTV inspection of 12 percent of the stormwater system piping

- CCTV inspection of 1,500 LF of piping per 8-hour day at \$182 per hour.
- Additional costs equal to 50 percent of the CCTV inspection cost for any associated field work, inspections, and/or interpretation of data.

Only a portion of the identified asset management costs are directly related to NPDES permit compliance (IDDE). The attached spreadsheet includes 30 percent of the initial costs (\$3,600 of \$12,000) and annual costs (\$15,000 of \$50,000).

The City plans to purchase a replacement vactor truck to help City stay in compliance with Permit requirements for catch basin cleaning. The cost of the vactor truck will be 100 percent budgeted through the sewer utility in 2013/14 and is not included in the attached spreadsheet.

3. Assumptions

Based on discussion with City staff, we understand that the new Permit requirements for ongoing catch basin inspection are already being met and do not result in additional labor costs. Inspection requirements in the 2013-2017 Permit are as follows:

- Inspection of all system catch basins by August 1, 2017. Ongoing inspection of every catch basin to continue bi-annually thereafter.

4. Conclusions

The City appears to be in good position to maintain compliance with the 2013-2017 Permit based upon their existing stormwater program efforts to date. The City plans to initiate a proactive asset management program for stormwater infrastructure that will be a significant annual cost, but only a portion of this cost is directly related to NPDES Permit compliance. Most costs are related to the labor required for one-time stormwater program efforts such as Fife Municipal Code revisions and development of stormwater program manuals. The attached spreadsheet provides a summary of the Permit requirements, existing City efforts, and the cost of additional effort required for compliance.

Attachment: Fife Gap Analysis Spreadsheet

2012 Permit Section	New or Modified Permit Requirement	What File is doing now to meet requirement	Recommendations	Impact to Stormwater Utility	Cost Estimate	
					Labor	Non-Labor
Special Condition 55.C.1 - Public Education and Outreach	Add education/outreach for illicit discharges, LID principles, stewardship, vehicle/equipment maintenance, pet waste, and dumpster/compactor maintenance	File performs Public Outreach/Education activities on a regular basis, but does not have a written Public Education and Outreach Plan.	Complete Plan that includes added education/outreach topics.	1-time labor cost to collect/develop new material and prepare Plan	\$10,000	-
	Create stewardship opportunities or partner with existing organization	File participates (as a member) in the Pierce County Surface Advisory Board (SWAB), a partnership of agencies addressing surface water management issues in Pierce County.	Continue actively participating in SWAB to identify stewardship opportunities.	No new impact	-	-
Special Condition 55.C.3 - Illicit Discharge Detection and Elimination	Develop compliance strategy and enforcement provisions for source control BMPs and IDDE, and include in City Code	Current File Municipal Code includes an Enforcement section, but needs revision to more accurately achieve the requirements of the Permit.	Update File Municipal Code language to conform with 2012 Permit	1-time labor cost for File Municipal Code changes	\$2,000	-
	Develop/update ongoing IDDE training program	File last held training session in 2008 and has plans for next session in 2013.	Complete training session for applicable employees	1-time labor cost for staff IDDE training	\$10,000	-
	Provide hotline for public reporting of illicit discharge	File currently provides a hotline on City website	None	None	-	-
	Implement an ongoing program to detect and identify IDDE. Field screening for 40% of system by 12/31/2017, and 12% annually thereafter	Tacoma Utilities and Tacoma/Pierce County Health Department currently inspect all commercial connections and look for evidence of IDDE.	The City plans to contract consulting services to develop a proactive asset management program, including IDDE screening, for stormwater infrastructure. Asset management costs include an initial \$12,000 to develop the program and annual costs of approximately \$50,000. IDDE costs are 30% of the overall asset management program.	Include \$15,000 per year for annual IDDE inspection services performed as part of overall asset management program.	\$15,000 (Annual)	-
Special Condition 55.C.4 - Controlling Runoff from New Development, Redevelopment, and Construction Sites (See also Appendix 1)	Update LID requirements in File Municipal Code to conform to Appendix 1 requirements by 12/31/2016. Conduct LID adoption process consistent with "Interpreting LID" Guidebook.	File proactively developed a LID program and implemented in File Municipal Code in 2010, but revisions consistent with 2012 Permit are required.	Update File Municipal Code language to conform with 2012 Permit. Recommend using same consultant (SVR Design Company) that originally developed LID code.	1-time labor cost for File Municipal Code changes	\$10,000	-
	By March 2017, include supplement to Annual Report that documents review and revision process for LID code changes.		Supplement Annual Report with documentation of File Municipal Code changes.	None	-	-
Special Condition 55.C.5 - Municipal Operations and Maintenance	Update maintenance program to meet the requirements of the Permit, including IPM, roads, and/or Facility Plans as applicable.	File currently has individual Standard Operating Procedures (SOPs), but not a consolidated O&M Manual or training program. Uncertain if these would be considered to be in compliance with this section	Evaluate City of File thresholds, design standards, or BMPs for revision consistent with updates to Appendix 1. Current File Municipal Code references Ecology 2007 Stormwater Manual rather than 2012 Manual referenced in the Permit.	1-time labor cost for File Municipal Code changes	\$5,000	-
	By August 2017, inspect all system catch basins and every 2 years thereafter (or inspect on 25% circuit basis)	File currently inspects approximately 50% of catch basins annually. A new vector truck is required within the next two years to replace aging equipment.	Uncertain whether SOPs meet the intent of the Permit. Recommended that File prepare O&M Manual from existing SOP documentation and/or other available stormwater utility manuals (Lakewood).	1-time labor cost for development of O&M Manual.	\$10,000	-
	Provide in the Annual Report a description of any stormwater monitoring or storm-water related studies conducted during the reporting period	File does not currently perform routine monitoring.	Continue existing inspection program and document in Annual Report.	None. Vector Truck to be included in sewer utility budget.	-	-
Special Condition 58 - Monitoring and Assessment	Monitoring or storm-water related studies conducted during the reporting period	File does not currently perform routine monitoring.	Use Permit Option 1 and pay into collective fund for Status and Trends Monitoring, Stormwater Management Program fund, Effectiveness Studies, and Source Identification and Diagnostic Monitoring.	Ongoing (annual) cost for Ecology collective and Source Identification and Diagnostic Monitoring.	\$5,700 (Annual)	-