

Implementation Costs Analysis - Stormwater Ordinance Update

Executive Summary

The draft stormwater ordinance updates the County's standards and project thresholds for stormwater management. New standards and thresholds are required to achieve compliance with the County's current National Pollution Discharge Elimination System NPDES Municipal Stormwater Permit. The revised ordinance is expected to take effect in early 2009 and will require:

- Larger stormwater detention facilities.
- Enhanced water quality treatment in certain situations.
- Low Impact Development options.
- Review and approval of project Stormwater Pollution Prevention Plans (SWPPPs).
- New methods for modeling stormwater runoff.
- New and more complicated thresholds for stormwater quantity and quality control.
- Review of some rural and agriculture projects that would have been exempt under previous code.

The changes result in both one-time expenses and ongoing costs. The significant costs are summarized below. The total cost to implement the revised stormwater ordinance through 2012 is expected to reach approximately \$2.8 million.

One-time Costs

	<i>Non-Salary Cost</i>	<i>Staff Cost</i>	<i>Total</i>
Ordinance Update	505,000	155,000	660,000
Training	34,480	76,800	111,280
Software	34,660	0	34,660
Equipment	531,000	0	531,000
TOTAL	\$1,105,140	\$231,800	\$1,336,940

Ongoing Costs 2009 - 2012

	<i>Non-Salary Cost</i>	<i>Staff Cost</i>	<i>Total</i>
Additional Review Time	0	634,356	634,356
SWPPP Reviews	0	285,156	285,156
Maintenance	56,900	433,000	489,900
TOTAL	\$56,900	\$1,352,512	\$1,409,412

Introduction

The draft stormwater ordinance updates the County's standards and project thresholds for stormwater management. New standards and thresholds are required to achieve compliance with the County's current NPDES Municipal Stormwater Permit. The revised ordinance is expected to take effect in early 2009.

The revised stormwater ordinance requires:

- Larger stormwater detention facilities.
- Enhanced water quality treatment in certain situations.
- Low Impact Development options.
- Review and approval of project Stormwater Pollution Prevention Plans (SWPPPs).
- New methods for modeling stormwater runoff.
- New and more complicated thresholds for stormwater quantity and quality control.
- Review of some rural and agriculture projects that would have been exempt under previous code.

Implementation of the new standards requires one-time expenses as well as ongoing costs. One time expenses include:

- Updating the ordinance
- Training
- Software and reference materials
- Maintenance equipment (truck, mower, miscellaneous power tools)

Significant ongoing expenses include:

- Additional stormwater plan review time
- Reviewing Stormwater Pollution Prevention Plans (SWPPPs)
- Stormwater facility maintenance

Estimated Expenditures

Ordinance Update Process

The cost to update the ordinance includes staff time and consultants to revise the ordinance, develop the supporting documentation, and to provide a meaningful public involvement process. The total cost is expected to reach \$660,000. The costs are itemized on the attached revenue/expenditure form for project number 11424 Stormwater Ordinance Update Project.

Training

Required staff training includes:

- 2005 Stormwater Management Manual for Western Washington (SWMMWW)
- Stormwater modeling software (WWHM, MGS Flood, and HSPF)
- Low Impact Development and other new Best Management Practices (BMPs)
- Clark County code revisions

One-time Training Costs¹

<i>Program</i>	<i>Days</i>	<i>Staff</i>	<i>Class Cost</i>	<i>Travel/ Hotel²</i>	<i>Non- Salary Cost</i>	<i>Staff Cost⁴</i>	<i>Total</i>
2005 SMMWW	3	8	450	650	8,800	23,040	31,840
WWHM	1	8	300	320	4,960	7,680	12,640
HSPF	1	8	300	320	4,960	7,680	12,640
Rain Gardens	2	8	350	485	6,680	15,360	22,040
Pervious Pavement	2	8	350	485	6,680	15,360	22,040
Clark County Code ³	1	8	300	NA	2,400	7,680	10,080
TOTAL					\$34,480	\$76,800	\$111,280

1. Costs are estimated based on available information.

2. Travel costs include hotel stay \$120/night, travel at \$0.58/mile, and per diem of \$45/day. Classes are assumed to take place in the Puget Sound area.

3. Clark County code training will be developed and implemented locally.

4. Staff cost is based on 8 hour training day and \$120/hour salary, benefits, and overhead.

Software

The 2005 SMMWW requires continuous stormwater modeling to calculate stormwater impacts. The programs approved to perform continuous modeling include WWHM Basic and MGS Flood. Both programs are available in limited free versions. To properly review projects, staff should have access to the same software in use by project proponents. Anticipated software costs are listed below.

One-time Software Costs

<i>Program</i>	<i>Licenses</i>	<i>Cost/License</i>	<i>Total</i>
WWHM Pro Basic	8	2,000	16,000
WWHM Pro Complete	1	4,500	4,500
Supporting manuals	8	120	960
MGS Flood Version 3	8	1,650	13,200
TOTAL			\$34,660

Project Reviews

In addition to initial training, development project review times are expected to increase by about 40% during the first year as staff becomes familiar with the changes and spends additional time with development engineers who are not familiar with the revisions. In

addition, Low Impact Development (LID) proposals will require more review time as staff becomes familiar with those BMPs. After the first year, review times should decrease but are not likely to return to current levels. Depending on the extent and complexity of LID proposals, staff time will remain elevated for those projects, as well.

The requirement for the local agency to review Stormwater Pollution Prevention Plans (SWPPPs) for all projects with land-disturbing activity is new. SWPPP review times will vary with the size and complexity of projects. For this fiscal analysis, we assume that a typical review will take four (4) hours.

Review Costs 2009 - 2012¹

	<i>Staff Cost²</i>
Additional Review Time	634,356
SWPPP Reviews	285,156
TOTAL	\$919,512

1. See attached for detailed listing of project types and hours.

2. Staff cost is based on \$120/hour salary, benefits, and overhead.

Maintenance & Operations

Where detentions facilities are required to manage stormwater, the revised regulations will result in facilities that are two or more times larger. In addition, enhanced treatment requirements will result in additional treatment facilities in certain situations. New BMPs such as porous pavement and rain gardens may require different modes of maintenance as well as additional staff training.

We assume that the annual number of new facilities will remain constant at 2007 levels. New facilities after December 2008 are expected to be at least twice as large and take approximately two times longer to maintain. Mobilization time and costs remain constant. The following estimate provides some indication of cost increases, although we understand that some facilities may, in fact, be smaller, while others will be more than twice as large. Some projects may implement LID approaches that may eliminate the typical “end-of-pipe” facility and incorporate several small BMPs throughout the site.

Because stormwater facilities constructed for public road projects already meet the permit standards, we assume no additional maintenance costs for those.

Maintenance & Operations Costs 2009 - 2012

	<i>Cost</i>
Equipment	531,000
Equipment Rental	56,900
Staff	433,000
TOTAL	\$1,020,900

Capital Improvement Projects - Roads

Clark County already designs the majority of road projects to Ecology's current standards in order to meet federal and state agency permit requirements. A review of the Six-Year Transportation Improvement Program reveals that no County road projects will be affected materially by the ordinance revisions.

Estimated Revenues

Clark County has not yet identified revenue sources to fund ordinance implementation costs. The Clean Water Fund (CWF) has provided the funds to update the ordinance and finances general NPDES Municipal Stormwater Permit compliance. The CWF relies solely on an annual stormwater management fee to developed properties for revenue. Additional funds to implement the ordinance could come from the Clean Water Fund, the Road Fund, the General Fund, or from raising permit review fees.