

Clark County Clean Water Program **2007 SUMMARY**



Protecting water through stormwater management

Clark County Public Works administers the Clean Water Program to safeguard the quality of our water and comply with the federal Clean Water Act.

As the county's population continues to increase, Clark County is committed to responsible planning to keep our waterways clean for people, fish, and wildlife.

In 2007, Clean Water Program staff worked to ensure program activities meet requirements of a new stormwater permit issued by the Washington State Department of Ecology. Primary program responsibilities include stormwater construction projects, water quality monitoring, public education and outreach, regulations and enforcement, and stormwater system maintenance.

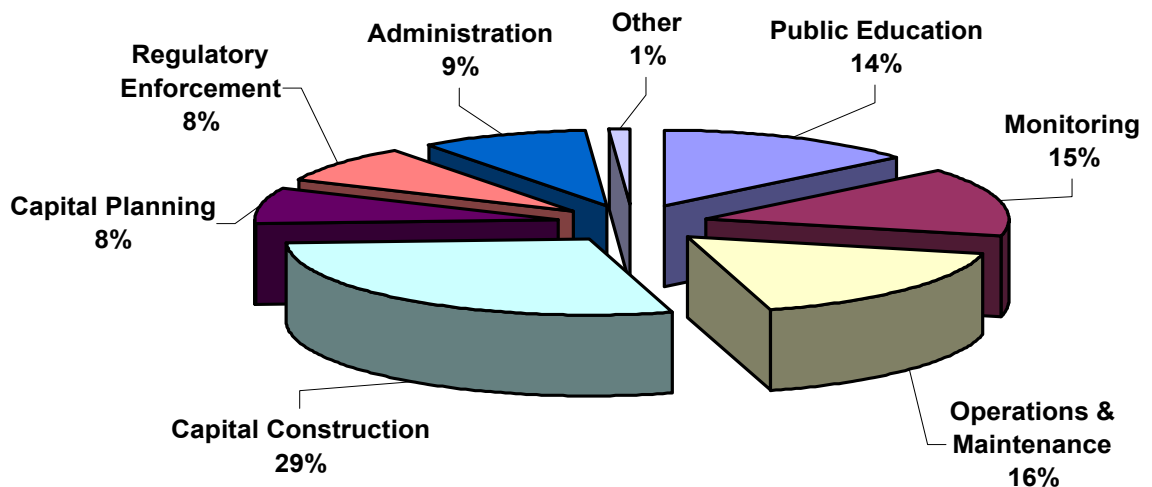
Funding & Budget

The Clean Water Program is funded by annual stormwater utility fees charged to developed parcels in the unincorporated area of the county. Clark County collects approximately \$4.9 million annually from fee payers.

Fee revenues are the sole source of funding for expanding the public stormwater infrastructure (capital projects) and the primary source of funding for maintaining catch basins, detention ponds, bioswales and other public storm sewer infrastructure. In addition, the fee pays for code enforcement and development regulations related to water quality, educating the public and businesses on ways to reduce pollution in runoff, and assessment of surface water conditions.

In 2007, the Clean Water Program sent approximately 55,000 bills to customers. Annual billings are mailed in June and due July 31. Beginning in 2009, the Clean Water fee will be included on property tax bills and will no longer be billed separately.

2007 Clean Water Budget Distribution



Monitoring and Assessment



The monitoring program designs and implements environmental monitoring projects to meet the needs of Clark County's NPDES municipal stormwater permit and other environmental programs.

Data is collected using standardized monitoring methods and detailed quality assurance plans. Whenever possible, data collection and monitoring efforts are coordinated with other local and state agencies.

Stormwater Needs Assessment (SNAP)

In 2007, Clean Water Program staff began the Stormwater Needs Assessment Program (SNAP), a systematic, subwatershed-oriented approach to assessing stream basins, identifying problems and opportunities, and recommending specific actions to help meet the Clean Water Program mission of protecting water quality through stormwater management.

The first set of assessments included Gee Creek, Mill Creek, Allen Canyon Creek, Lockwood Creek, Mason Creek, Mill Creek in the East Fork Lewis River basin, Curtin Creek, Gibbons Creek and Steigerwald Lake sub-watersheds. Reports describing conditions and listing several potential projects for each subwatershed will be complete in early summer of 2008.

Water quality data and information

The Clean Water Program maintains a database to manage water quality data collected by the program. Reports are distributed to other departments and local agencies and published on the Web at www.clark.wa.gov/water-resources. Clean Water Program staff also respond to numerous data requests each year. In 2007, Clean Water Program staff answered approximately 38 requests for monitoring data from local and regional students, groups, government agencies, and consultants.

Ongoing Monitoring

The Clean Water Program continually maintains several long-term monitoring sites. Monthly water quality, summer water temperatures, and annual biological data are collected at 10 stations county-wide to characterize overall stream health and identify potential trends. The program also monitors five sites in Salmon Creek under an agreement with Clark Public Utilities. Stream flow and rainfall data are collected from a network of 14 stream gauges and eight rainfall gauges. Stream gauge and rainfall data are posted on the Web site. Real-time data is available for seven of the stream gauges and all of the rain gauges.

Stormwater Facility Inspection

During 2007, the monitoring program began conducting maintenance inspections on public stormwater facilities in SNAP subwatersheds and for facilities that are about to be transferred to county ownership. This effort led to an ongoing process to



Monitoring staff check the condition of a stormwater facility

Monitoring & Assessment

continued



Top: Checking for potential illicit discharges.
Bottom: Staff sample a suspected illicit discharge.

improve Public Works maintenance procedures and enhance inter-departmental coordination between Public Works and Community Development during the development and inspection of stormwater facilities.

Identifying and eliminating sources of water pollution

The Illicit Discharge Detection and Elimination (IDDE) Project detects, isolates, and eliminates illicit discharges to Clark County's stormwater drainage system of pipes and ditches. Illicit discharges are broadly defined as polluted, non-stormwater discharges entering the stormwater system. Examples include improper sewer connections, leaking sewer lines or septic systems, and illegal dumping of materials such as waste water, automotive products, oil or paint.

IDDE screening was completed in most of the SNAP subwatersheds during 2007. The project checked for illicit discharges at 636 pipe and roadside ditch outfalls, and collected samples at 23 flowing outfalls. Sampling results prompted follow-up investigations at five outfalls. In two cases, illicit connections were found and removed. Three potential sources are under investigation using bacteria biomarkers to test for human sources.

Monitoring Resource Center

Volunteers and local agency staff can receive training on data collection and equipment, check out monitoring equipment, and report their findings to Clean Water Program monitoring staff. The training helps ensure proper use of borrowed equipment and good quality data.

Fast fact: In 2007, equipment was checked out 107 times to 33 residents, community groups, and agencies.

Volunteer monitoring program

Trained volunteers work in teams to support Clean Water Program monitoring projects. During 2007, projects included bacteria monitoring in the Gee Creek watershed, assisting staff in collecting macroinvertebrates, and monitoring Lacamas and Vancouver Lakes. Volunteer work complements the work of staff by helping to identify problems, long-term trends and opportunities for improvement or source control.

Fast fact: In 2007, 33 volunteers contributed 155 hours participating in 36 monitoring opportunities.

Partnerships

The monitoring program develops, supports, and participates in partnerships with other agencies whenever possible. During 2007, the program provided technical assistance to the Vancouver Lake Watershed Partnership, the Lower Columbia Fish Recovery Board, and Department of Ecology TMDL implementations in Salmon Creek and Gibbons Creek.

Stormwater Construction Projects



The Clean Water Program engineering team is responsible for the technical aspects of managing the county's stormwater facilities:

- Selects, designs, and constructs, with the assistance of other Public Works divisions, stormwater facilities to manage stormwater and improve water quality.
- Identifies and retrofits existing infrastructure, such as county storm drains and stormwater facilities.
- Maps and updates the county's stormwater system database (inlets, pipes, ditches and ponds) providing for an effective maintenance program as well as monitoring the system performance.
- Provides engineering support activities including drainage issues, answering citizen inquiries and requests for engineering data from outside agencies and firms, coordination with Development Review, engineering elements of fee appeals, and support for the county in legal cases and damage claims.

Prioritizing Stormwater Projects

The Stormwater Capital Improvement Program Involvement Team (SCIPIT) is an advisory group composed of public agency staff, community representatives, and county staff that helps guide the Stormwater Capital Improvement Program.

The SCIPIT meets every two years to discuss identified stormwater projects and develop or revise evaluation criteria used to prioritize them.

2008 Construction Projects

- NE 152nd Street and NE 20th Avenue Facility - final design in 2008, construction in 2009
- Three Low Impact Development (LID) pilot projects - Construction of two curb extensions and retrofit of one stormwater facility at the Clark County Public Service Center as a rain garden.

Projects under development

- SR 503 / Fred Meyer drainage project
- NE Hazel Dell Ave Water Quality Project
- NE Minnehaha Street Water Quality Project
- NE 76th Street Water Quality Project
- NE 149th Street (Quail Park Project) - Phase I
- Whipple Creek Meadows stormwater facility retrofit

2007 Construction - Curtin Creek Enhancement Area

When complete, this two-phase project will provide water quality treatment and additional storage to reduce peak discharges and downstream channel erosion.

Watershed: Salmon Creek

Budget: Approximately \$3.2 million

Area treated: new impervious areas of NE 72nd Avenue and St. Johns Road.

Status: Under construction



Development Inspection



Inspectors check stormwater facilities and work with the owners to correct problems.

Engineering inspectors with the Department of Community Development monitor the construction of projects built by private developers, such as subdivisions and commercial centers. Inspectors ensure that the permanent stormwater drainage and treatment facilities are built according to county code requirements.

Inspectors also monitor erosion control measures throughout the construction process. They ensure that no sediment leaves the project site. When construction is complete, inspectors make a final visit to make certain all bare soils are covered and that storm inlets and ponds are protected from debris and sediment.

Inspectors also respond to citizen erosion control complaints related to construction projects, issue correction notices and stop work orders as necessary, and refer serious code violation complaints to Clark County Code Enforcement for action.

2007 Inspections:

- 1,246 stormwater facility inspections
- 1,856 erosion control inspections
- 50 erosion control complaints
- 18 erosion control correction notices issued
- Seven erosion control stop work orders issued
- Two referrals to Clark County Code Enforcement

Code Enforcement



Turbid runoff into Mud Lake stopped through the joint efforts of Clark County, Washington State Department of Ecology, and the business operator.

Clark County's Code Enforcement Division enforces building, development, and environmental regulations. One Code Enforcement officer works full time on erosion control, the Water Quality Ordinance, and other environmental regulations.

Complaints and violations may be resolved by personal contact and education, letters, correction notices and stop work orders, and citations. Close to 79 percent of code enforcement actions involve education and personal contact by a Code Enforcement officer.

Nature of Complaint	Number of Complaints and Inspections	Number of Violations
Grading	138	59
Erosion Control	134	35
Water Quality	84	27
Surface Water	40	21
Wetland Habitat	114	51
Other	6	6
Total	516	199

Public Outreach & Education



Education Partnerships

Whenever possible, the Clean Water program partners with other local agencies and programs to provide public education and outreach. These partnerships help maximize resources and avoid duplication as well as provide a common “clean water” message.

2006 Watershed Stewards Highlights	
Volunteers	33 new / 103 total
Workshops & presentations	15 with 629 participants
Storm drains stenciled	361 by 155 volunteers
Outreach at community events	5,386 contacts
School outreach activities	1,150 students
Volunteer hours contributed	4,684
Value of volunteer hours*	\$91,385

*Estimate based on \$19.51/hour for volunteer service by the US Bureau of Labor and Statistics

The Watershed Stewards and Small Acreage Programs are offered in partnership with WSU Clark County Extension, with funding from the Clean Water Program.

Watershed Stewards receive training on a variety of topics from watershed protection to water quality monitoring. In return for their training, the Stewards perform outreach and education in the community, expanding and enhancing Clean Water Program outreach efforts.

WATERSHED STEWARD PROGRAM



In 2007, the Watershed Stewards program provided workshops and presentations on stream side property management, rain gardens and rain barrels, and non-toxic household cleaners. Volunteer Stewards contributed 4,684 hours and made over 6,500 contacts. Volunteers distributed information at 20 public events and presented or assisted with 17 school-based activities including the Columbia River Watershed Festival and River Rangers presentations.

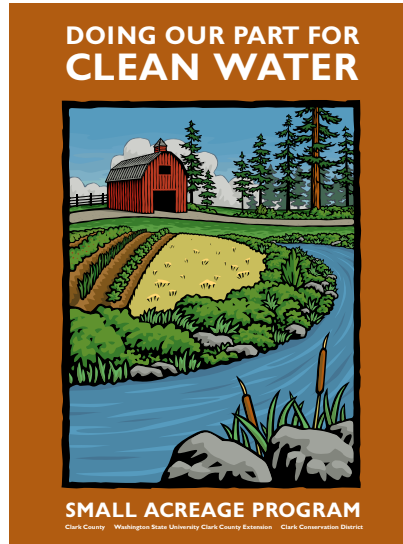


Watershed Stewards Program volunteer David Page leads a workshop on rain barrel construction. By volunteering in our community, Watershed Stewards enhance the ability of the Clean Water Program to educate residents how to protect our water resources.

Public Outreach & Education

continued

The *Small Acreage Program* provides educational workshops and other outreach to residents on how to manage issues such as mud and manure, fencing and pasture, and other water quality topics unique to rural properties.



The goal of the Small Acreage program is to reduce pollution entering storm and surface water from residential and agricultural properties by giving property owners the knowledge and skills necessary to manage their land and animals in a way that will help keep water clean.

Since inception in 2003 of an annual 12-week *Living on the Land* training series, 193 rural landowners representing 1,748 acres have graduated from the course. In 2007 alone, 33 participants representing 24 rural properties and 235 acres completed the training. The program also hosted a Small Farm Expo at a local farm, four public tours of model farms, seven workshops on well and septic maintenance and mud management, and distributed recognition signage for merit and model farms.

2007 Small Acreage Program Highlights	
Living on the Land 12-week training (2007)	33 participants 24 properties/236 acres
Living on the Land total acreage impacted since 2003	1,748
Workshops - Wells and Septics & Mud Management	11 workshops 220 participants
Farm Tours	2 tours 76 participants
Small Acreage Expo	112 participants
Recognition signage	2 in 2007 / 26 total

Technical Assistance

Clean Water Program staff provide stormwater technical assistance and outreach to both residents and businesses. Staff provide routine education and respond to stormwater complaints and incidents, often working with county code enforcement staff and the Department of Ecology to facilitate a resolution. In 2007, staff performed 56 site visits and made 19 additional contacts to provide maintenance and educational information. Seven incidents were referred to Code Enforcement for follow-up.



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Clean Water Program**

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