

THE ROLE OF THE WASHINGTON STATE CONSERVATION COMMISSION IN STORMWATER MANAGEMENT



The Washington State Conservation Commission (SCC) contributes to state stormwater efforts in two main ways: 1) developing effective stormwater monitoring and management systems, and 2) assisting conservation districts with on-the-ground project implementation.

STORMWATER MONITORING AND MANAGEMENT

SCC staff chair the Agricultural Stormwater Work Group, a subgroup of the Stormwater Work Group for Puget Sound. In this capacity, the SCC is working to quantify the stormwater problem so it can be effectively dealt with to prevent damage. The Agricultural Stormwater Work Group is creating an Agricultural Monitoring Strategy that will measure quantities of pollution, pollution components, and identify primary sources of pollution. This strategy will inform efforts to prioritize stormwater management projects.

PROJECT IMPLEMENTATION

The SCC offers a suite of financial and technical assistance programs that conservation districts use to implement stormwater management projects. Examples of these assistance programs include:

- **Capital Cost-Share Investment:** Provides conservation districts with funding for brick-and-mortar conservation projects. Conservation districts often use this funding to implement best management practices (BMPs) for land use that prevent stormwater pollution, such as constructing manure storage facilities or LID infrastructure.
- **Conservation Reserve Enhancement Program (CREP):** Offers incentives to landowners who are willing to remove riparian (streamside) areas from production and implement conservation practices, such as planting riparian buffers. CREP buffers—which average 142 feet in width—filter pollutants from nearby agricultural lands and clean water before it reaches streams and shellfish beds.
- **Livestock Technical Assistance:** Provides funding for conservation districts to help livestock owners develop nutrient management plans and install practices that protect water quality. Through this program, livestock owners receive on-site assistance to help them better control soil, water, and animals at their facility while still maintaining viable livestock operations.



MANAGING STORMWATER ON PRIVATE LANDS



Between the Puget Sound, Pacific Coast, Columbia River, and all our inland lakes and streams, Washington State is rich in water resources. This wealth creates opportunity, exhibited by our thriving port cities and reputation as a major agricultural state. But, urban and agricultural development combined with heavy rain and snowfall also causes stormwater runoff that can pollute water quality.



WORKING WITH LANDOWNERS

As part of our mission to protect natural resources, the Washington State Conservation Commission (SCC) and 45 conservation districts are working together to manage stormwater runoff on private lands (RCW 89.08.220). Stormwater projects range from helping city residents build permeable sidewalks and rain gardens, to working with farmers to reduce surface contaminants, such as nitrates from fertilizers.

SCC staff serve on the state Stormwater Work Group that is identifying and prioritizing effective stormwater management strategies.

WHY INVEST IN STORMWATER MANAGEMENT?

Stormwater management requires investment, but studies conducted in the Puget Sound region suggest that damages caused by untreated stormwater are far more costly.¹ Conservation districts implement agricultural practices that are known to reduce pollution and proven-effective urban strategies, such as Low Impact Development (LID) and Green Infrastructure.²



We're also building awareness about stormwater issues. Many conservation districts offer free stormwater education trainings and workshops. And,

1. Visitation B.J., Booth D.B., and Steinemann A.C. 2009. "Costs and benefits of storm-water management: Case study of the puget sound region". Journal of Urban Planning and Development. 135 (4): 150-158.
2. Case Studies Analyzing the Economic Benefits of Low Impact Development and Green Infrastructure Programs (2013). US Environmental Protection Agency, EPA 833-R-001.

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WHAT IS STORMWATER RUNOFF?

Stormwater runoff occurs during periods of heavy rain and snow melt. Sometimes there is too much water than can be evaporated or soaked into the ground; or, in urban areas, water builds up on pavement where it cannot be absorbed. This stormwater flows over surfaces—from parking lots to pastures—and into streams and storm drains. Stormwater runoff is a primary transporter of toxic, nutrient, and pathogen pollutants to streams, which can degrade water quality and fish habitat.

WASHINGTON STATE'S CONSERVATION DISTRICTS: HELPING LANDOWNERS MANAGE AGRICULTURAL AND URBAN STORMWATER



What is Low Impact Development (LID)?
 LID refers to land development practices that incorporate and/or recreate functions of a natural landscape allowing stormwater to be used as a resource. Examples of LID practices include rain gardens, permeable pavement, and vegetated roof cover.

1. CLALLAM CONSERVATION DISTRICT

Established a one-acre LID demonstration site at Carrie Blake Park in Sequim. The site includes over 50 species of drought-tolerant trees, shrubs, and groundcovers; sustainable turf; a rain garden; porous asphalt; and interpretive signs.

2. MASON CONSERVATION DISTRICT

Worked with county public utility district to incorporate LID practices into the design of a new operations center. Installed 1.8 acres of rain gardens and over 22,000 plants.



3. KITSAP CONSERVATION DISTRICT

Developing an LID retrofit program that has assisted homeowners with more than 100 rain gardens, cisterns, and other infiltration practices. The District is finishing a stormwater retrofit of the county fairgrounds designed to capture and infiltrate all the rain water from fairground road surfaces, large livestock barns, and other buildings. They also are a partner in the county stormwater management program.

4. THURSTON CONSERVATION DISTRICT

Working with landowners to prevent pollution and protect shellfish. Their *Clear Choices for Clean Water Program* offers rewards for adopting wise land use practices, such as using natural fertilizers instead of chemical. So far, 246 residents have implemented over 2,000 practices!

5. LEWIS COUNTY CONSERVATION DISTRICT

Working with private landowners in the Upper Chehalis River Basin to install streamside buffers that protect rivers from nutrient runoff. In the first year of this project, the District planted nearly two miles of stream banks.

6. CLARK CONSERVATION DISTRICT

Helping farmers manage runoff and conserve resources. At Arwana Farms, the District installed a solids separator and storage shed for manure. This dries the manure for reuse as bedding materials and decreases runoff and nutrient load on fields.



7. WHIDBEY ISLAND CONSERVATION DISTRICT

Helping farmers manage manure to protect shellfish. At Penn Cove Farm, the District installed a manure tunnel and solids separator to reduce liquid waste on this 500 acre dairy.

8. SNOHOMISH CONSERVATION DISTRICT

Worked with the City of Everett to solve frequent flooding and sewer overflows during large storm events. The District constructed rain gardens for homeowners who had experienced flooded basements. Today, basements are dry and neighborhood tours are inspiring others to create more rain gardens.



9. PIERCE CONSERVATION DISTRICT

Worked with the City of Puyallup to install their first Green Stormwater Infrastructure street. The District planted rain gardens and hosted a volunteer event to install over 2,500 plants. The road and sidewalk are now designed to infiltrate 100 percent of rainfall on the site.

10. KITTITAS CONSERVATION DISTRICT

Working with the City of Cle Elum to assess stormwater sources, inventory existing facilities, educate landowners, and install streamside re-vegetation projects.

11. CENTRAL AND EASTERN KLICKITAT CONSERVATION DISTRICTS

Working with livestock owners to alleviate mud and manure that can pollute nearby streams accessed by steelhead and salmon. The Districts are installing fencing, rerouting water from barns, and redesigning water troughs to prevent spillage.

12. OKANOGAN CONSERVATION DISTRICT

Partnered with a landowner to restore Bona parte Creek (a tributary of the Okanogan River) to its natural stream channel. The creek had been reengineered to run parallel to Highway 20 and was subject to stormwater runoff from the pavement. The restored, meandering stretch of stream has been planted with native vegetation.



13. FERRY CONSERVATION DISTRICT

Conducting a study of Curlew Lake to assess concentrations of phosphorus, nitrogen, and fecal coliform, all of which can be caused by runoff. The District also is offering a cost-share program to landowners in the Curlew Lake watershed to fund projects that benefit water quality, such as septic tank testing.

14. ADAMS CONSERVATION DISTRICT

Conducting water quality monitoring of Cow Creek to assess impacts from installed streamside vegetation and other practices the District has implemented to eliminate agricultural runoff.

15. WALLA WALLA COUNTY CONSERVATION DISTRICT

Creating Urban Riparian Buffers (CURB) in Walla Walla County. The District's CURB program educates urban residents about proper lawn care, disposal of pet waste, water conservation, and runoff control. Accomplishments so far include 41 urban riparian (streamside) buffers installed; 11,928 feet of stream bank cover restored; and over 7,200 trees, shrubs, and perennials planted. These projects will improve both water quality and wildlife habitat.

16. SPOKANE CONSERVATION DISTRICT



Running the Livestock and Land Program for Spokane County residents. Through this program, the District offers free site assessments, cost-share opportunities, and an upcoming grant and loan program to help livestock owners better manage mud and manure. Over 80 landowners have participated in the program so far resulting in over 40 on-the-ground improvements that will help manage runoff.

17. PALOUSE CONSERVATION DISTRICT

Helping livestock owners install streamside buffers that reduce excess sediment, fecal matter, organic material, nutrients, and pesticides in surface runoff. The District also administers a volunteer storm drain marking program to remind residents to keep streets clean of pollutants and litter.

