

What is Stormwater?

Stormwater is rain and snowmelt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As the water runs off these surfaces, it picks up pollution such as oil, fertilizers, pesticides, soil, trash, and animal waste. The water might flow directly into a local stream, bay, or lake. Or, it may go into a storm drain and continue through storm pipes until it is released, untreated, into a local waterway.

Why is stormwater a problem in Washington?

Stormwater transports pollution into Washington waters

Stormwater is the number one water pollution problem in urban areas of our state. Polluted stormwater runoff harms our urban creeks, streams, and rivers. As rain and snowmelt runs off hardened surfaces such as our roofs, driveways, and streets, it becomes polluted with the everyday debris of our daily lives. As gravity pulls the runoff downhill into low spots, ditches, and storm drains, the water picks up the fertilizers, herbicides, and pesticides we use in our yards. It picks up the dog poop in our backyards or the oil leaking from our cars. This now-polluted water runs untreated toward our rivers, lakes, streams. It can even make its way into the groundwater that many of us rely on to drink.

Stormwater can alter stream flows

Stormwater moves rapidly through areas that have a lot of roads, houses, yards, and parking lots. Water that was absorbed by trees and the ground before development now runs off these hard surfaces. The runoff goes quickly into streams and other surface waters instead of seeping into the ground to recharge groundwater and slowly feeding those streams year-round. This can cause much higher stream flows and sometimes flooding when it rains. During the dry season, the stream flows can be much lower. These extreme high and low flows can harm salmon, trout and other fish as well as people and our communities. The faster, high-energy flows erode stream channels and scour streambeds, churning up silt and damaging spawning areas. The energy from high flows also flushes away tiny aquatic life that trout and salmon eat. It stirs up muddy water that clogs fish gills. Some urban streams that used to run year-round may dry up in the summer; others have too little water flow to allow salmon to swim up to spawn.



Programs to control pollution from stormwater

Phase I and II Municipal Stormwater Permits

In 1987, Congress changed the Clean Water Act to require municipalities to have National Pollutant Discharge Elimination System (NPDES) permits for stormwater discharges into surface waters. The Environmental Protection Agency (EPA) developed rules to implement the new stormwater requirements for the state's most populated areas in two phases, and EPA deferred administration of the permits to the state Department of Ecology (Ecology). Ecology administers the permits while providing technical assistance, training, and funding to municipal permit holders.

Phase I —These permits regulate the discharges from municipal separate storm sewers owned or operated by the state's most populous areas: Clark, King, Pierce, and Snohomish Counties, and the cities of Seattle and Tacoma. Department of Ecology (Ecology) issued the original Phase I Municipal Stormwater permits in July 1995. In 2007, Ecology re-issued the Phase I permits and then modified the permits in 2009 to implement the outcome of appeals.

Phase II —Ecology issued the Phase II Municipal General Stormwater Permits for eastern and western Washington in 2007, covering the next highest populated areas of the state. To address Pollution Control Hearing Board (PCHB) appeal decisions, Ecology modified and reissued both permits in June 2009. About 110 jurisdictions are covered under the Phase II Eastern and Phase II Western Municipal General Stormwater Permit.

Washington State Department of Transportation

Ecology permitted municipal separate storm sewer systems owned or operated by the Washington State Department of Transportation (WSDOT) located in Phase I counties and cities under the 1995 Phase I permits. In February 2009, Ecology issued a stormwater permit for WSDOT. This permit was appealed. A modified draft permit addressing the recent settlement agreement went out for public comment in February 2010. Ecology expects to issue a final modified WSDOT permit in April 2010.

Construction Stormwater General Permit

In 2005, in response to the EPA's stormwater rule, Ecology expanded construction stormwater permitting requirements to cover sites that have between one and five acres of disturbed land. This expansion of the Construction Stormwater General Permit increased the number of permitted sites. Ecology issued a new Construction Stormwater General Permit in November 2005. Ecology anticipates drafting a new permit sometime in 2010. There are currently about 2,700 permittees covered by the state's Construction Stormwater General Permit.

Industrial Stormwater General Permit

The Industrial Stormwater General Permit (ISWGP) implements state and federal regulations that require industrial facilities to control stormwater using Best Management Practices to prevent water pollution. The statewide permit currently covers more than 1,200 facilities that discharge stormwater associated with industrial activity into surface waters and storm drains. Ecology receives more than 100 new ISWGP applications a year.

Stormwater management manual

Ecology issued an updated Stormwater Management Manual for Western Washington in 2005 and plans another update in 2012. The final Stormwater Management Manual for Eastern Washington was published in October 2004. The objective of the manuals is to provide commonly accepted standards and guidance for stormwater control measures. These measures are to be used by local governments, state agencies, and private businesses to control runoff from new development and redevelopment activities. It is generally expected that when these management measures are applied to new development and redevelopment activities, the stormwater runoff produced will comply with water quality standards.

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