Measure 3.2.a: Supplemental - Increase the number of projects that provide stormwater treatment or infiltration from 10 to 125 by 2017

MOVING THE NEEDLE

Stormwater Project Implementation

Department of Ecology
Heather Bartlett

April 27, 2016
Why we need to manage our Stormwater.

Current State: Improving

Ecology is on-track to meet the goal of 125 completed projects by 2017
City of Tacoma: UW Hood Street Retrofit
Spokane County: County Homes Boulevard

Whatcom County: Coronado-Fremont Stormwater Improvements
Hazardous Substance Tax Revenue
Reflects February 2016 Forecasts

Millions

$250

$200

$150

$100

$50

$0


Source: HST GAAP revenue sourced from Agency Financial Reporting System (AFRS). Data prior to 1997-99 Biennium extracted from Department of Revenue tax reference manual. HST forecast data sourced from Department of Revenue. Fiscal Year 2016 reflects actual collections through Fiscal Month 07 and forecast for the remainder of the fiscal year.

Stormwater-Generating Land Use and Salmon Recovery

Kyle Grovinko
04/10/2016

0 25 50 100 Miles
Coho salmon spawner mortality in western U.S. urban watersheds: bioinfiltration prevents lethal stormwater impacts

Julann A. Sromberg¹, David H. Baldwin¹, Steven E. Damm², Jennifer K. McIntyre³, Michael Huff⁴, Catherine A. Sloan¹, Bernadita F. Anulacion¹, Jay W. Davis⁴, and Nathaniel L. Scholz¹

¹National Marine Fisheries Service, NOAA, Seattle, WA
²U.S. Fish and Wildlife Service, Lacey, WA
³Washington State University, Puyallup, WA
⁴Suquamish Tribe, Suquamish, WA

Supplemental Video 2:
Second example of a field observation of a symptomatic adult coho in a Seattle-area urban stream, from 2005. Symptoms are representative of the early-onset phase of the mortality syndrome, and include lethargy, loss of orientation, gaping, and surface swimming. This coho subsequently lost equilibrium and died within 1-2 hrs.
Coho salmon spawner mortality in western U.S. urban watersheds: biofiltration prevents lethal stormwater impacts

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Supplemental Video 3.
Adult coho spawners exposed under controlled experimental conditions at the Grovers Creek hatchery facility to either clean well water, unfiltered urban runoff, or runoff treated using biofiltration. Following a 4 hr exposure, the coho were individually transported from treatment tanks to an observation tank, containing clean water for video observation. Control coho in clean well water were asymptomatic, as evidenced by rapid movements, normal equilibrium, and avoidance behavior. By contrast, spawners exposed to untreated stormwater displayed the conventional symptoms of the pre-spawn mortality syndrome, including lethargy and a loss of equilibrium. These overt indicators of lethal toxicity were abolished when the same source of urban runoff was pre-treated using biofiltration; spawners from this treatment group were qualitatively indistinguishable from clean water controls.