

NE Highway 99 (78th street to 86th Street) Water Quality Retrofit

Purpose:

Clean Water Division is applying for a grant assistance from the Department of Ecology under Stormwater Financial Assistance Program (SFAP) for the construction of the above-mentioned project. If approved, the grant will cover 85% of the project construction cost and the remaining 15% of the cost will be covered by Clark County clean water fee.

Project Goal:

The project goal is to improve water quality treatment along NE Highway 99, which is a prime arterial roadway with over 20,000 average daily traffic volume. This project will help to protect and restore water quality in Washington State by reducing stormwater impacts from existing infrastructure and development.

Project Description:

This project will improve water quality in Cougar Creek, a tributary of Salmon Creek, through installation of Technical Assessment Protocol-Ecology (TAPE) General Use Level Designation (GULD) basic treatment at NE Highway 99 between NE 78th Street and NE 86th Street in Clark County. This project will provide treatment for total suspended solids (TSS) and total Phosphorus along with other pollutants including toxic metals. The project proposes to retrofit seven existing catch basins/curb inlets with media filter cartridge units along NE Highway 99 and a large water quality filter vault to treat runoff captured by twelve individual catch basins/curb inlets at one single location. The water quality vault will also treat some additional offsite runoffs.

Project Basis:

Cougar basin is heavily urbanized and lags behind observed water quality improvements in other areas of Salmon Creek watershed. Cougar Creek is inaccessible to migratory fish but contributes significant flow to Salmon Creek and impacts water quality in the salmon-bearing mainstem. Highway 99 is a high traffic roadway that contributes stormwater carrying oils, metals, and other pollutants to Cougar Creek with no water quality treatment. Salmon Creek is subjected to multiple active TMDLs for turbidity, bacteria, and temperature. Cougar Creek is also 303(d) Category 5 listed (TMDL required) for dissolved oxygen and bioassessment.

Project Benefits:

The project treats stormwater from nearly 0.5 miles of high-traffic roadway (4.4 acres of Pollution Generating Impervious Surface) on NE Highway 99 that is discharged directly to Cougar Creek with no water quality treatment. Through installation of TAPE GULD Basic Treatment Facilities and by providing treatment for total suspended solids (TSS), turbidity and nutrient loadings will be reduced and that will subsequently reduce dissolved oxygen demand within the Salmon Creek watershed.

It is expected that the project will remove thousands of pounds of total suspended solids and significant number of other pollutants. A calculation using WSDOT's "Pollutant Loading Spreadsheet" gives the following result for pollutant removal from the project drainage catchment on an annual basis:

Total Suspended Solids (TSS); 2288 lbs.

Total Zinc; 3.61 lbs.

Dissolved Zinc; 0.88 lbs.

Total Copper; 0.59 lbs.

Dissolved Copper; 0.08 lbs.

