



**TO:** Environmental Services Managers, Surface Water Management Staff and  
City of Tacoma Website

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**SUBJECT:** Bituminous Surface Treatment Definition

**DATE:** June 19, 2013

### **Background**

The City of Tacoma (City) Environmental Services Department has developed this guidance document to clarify the requirements of the City's 2012 Stormwater Management Manual (SWMM).

In the City SWMM, Volume 1, Section 3.3.4, (see also the New Impervious Surface Policy memo, dated June 19, 2013), when upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete, the surface is considered a new impervious surface and subject to the Minimum Requirements of the SWMM.

The City's SWMM does not have a definition for bituminous surface treatment ("chip seal"). In developing the City's SWMM, the City largely relied upon the Washington State Department of Ecology's (Ecology) 2005 Surface Water Management Manual and NPDES Phase I Municipal Stormwater Permit, which also do not provide definitions for bituminous surface treatment.

### **Definition**

In order to clarify the minimum requirements of the SWMM, the following definitions will apply to new and redevelopment projects.

#### *Bituminous surface treatment ("chip seal")*

*A temporary surface treatment provided to control dust and assist in the control of erosion.*

*An unimproved roadway that receives this treatment does not meet the City of Tacoma Standard Roadway Design.*

When upgrading from bituminous surface treatment ("chip seal"), as defined above, to asphalt or concrete, the surface is considered a new impervious surface and subject to the minimum requirements of the SWMM.

### **Chip Seal and Oil Mat**

In practice, the terms bituminous surface treatment, chip seal, and oil mat are often used interchangeably though technically they are different processes.

- "Chip Sealing"

In the City, "chip sealing" is a maintenance practice currently used to extend the life of existing asphalt or concrete roadways. This practice involves applying one application of asphalt emulsion and one application of 3/8" to 1/2" chip rock to the existing asphalt or concrete section.

When overlaying a roadway that has received a "chip seal" maintenance application in the City with asphalt or concrete, the overlain sections of roadway will not be considered new or replaced impervious surfaces and will not be counted toward the project thresholds.

- **Oil Mat**  
In the City, oil mat is a surface treatment that creates a permanent unyielding non-skid roadway similar to asphalt or concrete and is considered a City of Tacoma Standard Roadway Design. Oil mat is considered a bituminous surface treatment but unlike the SWMM definition for bituminous surface treatment, the treatment creates a permanent surface with similar runoff characteristics to an asphalt or concrete surface. When overlaying an oil mat surface with asphalt or concrete, the surface will not be considered a new or replaced surface and will not be counted toward the project thresholds.

When existing oil mat, asphalt, or concrete roadways are reconstructed, the proposed reconstructed roadways may be considered a replaced impervious surface and may require compliance with the Minimum Requirements in the SWMM (see the definition of replaced impervious surfaces in the SWMM glossary).

Based upon project scope and location, the City may require a capacity analysis of the downstream system at their discretion, regardless of project thresholds.