

July 23, 2014

WAC 173-350-325, Soil and Sediment Criteria and Use - Workgroup Conference Call

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## Agenda

Discuss preliminary definitions  
Discuss preliminary test parameters

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### **Preliminary Definitions**

**“Cementitious materials”** means soil mixed with Portland cement, fly ash, cement kiln dust, bottom ash, jet grout, or other cement-like materials, typically used for temporary retaining walls or other structures during construction projects, and includes dewatered slurries from such projects. Cured concrete is not a cementitious material.

**“Clean soil and clean sediment”** means soil and sediment that meets the standards in WAC 173-350-990 Appendix XXX or does not contain contaminants at concentrations which could negatively impact the existing quality of air, waters of the state, soils, or sediments; and does not pose a threat to the health of humans or other living organisms.

[**“Contaminant”** means any chemical, physical, biological, or radiological substance that does not occur naturally in the environment or that occurs at concentrations greater than natural background levels.]

**“Drilling slurry cake”** means dewatered soil resulting from a mixture of water containing polymers or other additives typically used to aid in well construction and other drilling projects.

**“Impacted soil and impacted sediment”** means soil or sediment that contains contaminants at concentrations exceeding standards in WAC 173-350-990 Appendix XXX and which could negatively impact the quality of air, waters of the state, soil or sediment, or pose a threat to the health of humans or other living organisms at the location where it will be placed. Examples may include street waste, petroleum contaminated soil, manufactured topsoil, sediment, cementitious materials, drilling slurry cake, soils with naturally high levels of contaminants, or soils likely to have contaminants from industrial or historical activities.

**“Manufactured topsoil”** means soil or sediment amended with solid wastes (e.g. organic materials) or other materials to improve the quality of the material for use in establishing vegetation. Soil or sediment containing solid wastes that do not improve the quality of the material to establish vegetation or that pose a threat to the health of humans or other living organisms is not manufactured topsoil. If used as fill, material is not manufactured topsoil.

**“Sediment”** means material that is excavated or dredged from surface water.

**“Soil”** means material overlying bedrock consisting of clay, silt, sand, or gravel size particles, or a mixture with other material inseparable by simple mechanical removal processes and made up primarily of soil by volume based on visual inspection.

**“Solid waste”** or **“wastes”** means all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, impacted soil and impacted sediment~~contaminated soils and contaminated dredged material~~, and recyclable materials.

**“Street waste”** means materials collected from stormwater catch basins, detention/retention ponds, ditches, and similar storm water treatment and conveyance structures, and materials collected during street and parking lot sweeping. Street wastes do not include materials from street washing using detergents, cleaning of electrical vaults, vehicle wash sediment traps, restaurant grease traps, industrial processes, sanitary sewer, mixed process or combined

*sewer/stormwater, or oil/water separators at sites that load fuel. Street wastes do not include flood debris, land-slide debris, or chip seal gravel.*

- Cementitious materials – be clear that rule pertains to soils containing cementitious materials.
- Combine cementitious materials and drilling slurries
- Use trade definitions if they exist
- Remove language that references “negatively impact” or “posing a threat to human health or other living organisms”. Too subjective.
- All WSDOT projects have some level of industry associated with them so all soils will be impacted soils subject to this rule by current definition.
- Need to change soil definition to add a “de minimus” standard.
- Need to define “de minimus” in a way that is not subjective, if possible. Allow small amounts of concrete, asphalt, wood pieces, etc.
- Street waste – typically consider ditching materials and soils from detention/retention ponds to be clean. Remove those, as well as potential the second half of definition.
- Petroleum contaminated soils are not something health agencies are involved with much, but they are accepted by some in industry so defining and clarifying standards may be helpful.
- Suggested changing manufactured topsoil to remove reference to solid waste. Not all manufactured topsoil contains solid waste.

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### Preliminary test parameters

<b>Parameter</b>	<b>Street Waste</b>	<b>Petroleum Contaminated Soil<sup>1</sup></b>	<b>Manufactured Topsoil</b>	<b>Cementitious Materials</b>	<b>Drilling Slurry Cake</b>	<b>Sediment</b>
<i>Arsenic, Total</i>	X		X	X	X	
<i>Barium, Total</i>			X	X	X	
<i>Cadmium, Total</i>	X		X	X	X	
<i>Chromium, Total</i>	X		X	X	X	
<i>Copper, Total</i>						
<i>Lead, Total</i>	X	X	X	X	X	
<i>Mercury (Inorganic)</i>	X		X	X	X	
<i>Nickel, Total</i>	X					
<i>Selenium, Total</i>			X	X	X	
<i>Silver, Total</i>			X	X	X	
<i>Zinc, Total</i>	X					
<i>TPH<sup>2</sup>-Gasoline Range Organics</i>	X	X	?			
<i>TPH<sup>2</sup>-Diesel Range Organics</i>	X	X	?			
<i>TPH<sup>2</sup>-Heavy Fuels and Oil</i>	X	X	?			
<i>TPH<sup>2</sup>-Mineral Oil</i>		X	?			
<i>Benzene</i>		X				
<i>Ethyl benzene</i>		X				
<i>Toluene</i>		X				
<i>Xylenes</i>		X				
<i>Methyl Tert-Butyl Ether (MTBE)</i>		X				
<i>Polychlorinated Biphenyls</i>		X				

(PCBs)						
Naphthalenes		X				
Polycyclic Aromatic Hydrocarbons, carcinogenic (cPAHs)	X	X				
pH				X	X	
Odors		X				
Staining		X				
Sheen Test		X				
Other parameters suspected or known to be present in the soil	X	X	X	X	X	
Other parameters suspected or known to be in materials/products added to soil				X	X	
Parameters required for characterization under chapter 173-204 WAC, Sediment Management Standards						X

<sup>1</sup>For TPH, if product release is unknown, test for gasoline range organics. If soil is contaminated from mixture of more than one product, test for both. Use category most closely represent the TPH mixture.

<sup>2</sup>Total Petroleum Hydrocarbon

LOTS MORE NOTES NEEDED HERE TO BE COMPLETE.

- Consensus was that test parameters seem appropriate for soil categories.

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**Close**

- Next call scheduled for September 8, 2 PM