— CITY OF PORTLAND —
ENVIRONMENTAL SERVICES

Materials Testing Laboratory

1405 North River Street, Bldg 117, Portland, Oregon 97227 ▪ Dan Saltzman, Commissioner ▪ Dean Marriott, Director

DATE: August 29, 2011

TO: Mary Bushman

FROM: Ericka Koss

SUBJECT: Riverview Property Erosion Control Recommendations

At your request we have conducted a preliminary reconnaissance of the recently purchased property designated the Riverview Property located in southwest Portland. In addition, we performed preliminary research including review of published geologic and natural hazards mapping. Our reconnaissance was conducted with you on August 17, 2011.

Our observations and research indicate that a significant portion of the existing trail system has undergone erosion due to lack of vegetation, bike rutting, and steep grades. However, only limited areas were observed that have had excessive erosion leading to collapsing slopes and loss of soil. Geologic mapping indicates that the majority of the property is underlain by Waverly Heights Basalt residual soil which has a low potential for erosion. Above an elevation of about 300 feet, the residual soil may be overlain by Portland Hills Silt which has a moderate potential for erosion. Landslide deposits, near surface colluvium, and topsoil is expected to have a moderate to high erosion potential.

Erosion is a function of, among other things, the energy of the water flow. The primary way to reduce erosion is to slow the velocity of the overland water flow. This can be accomplished by rerouting trails and reducing trail grades, providing water stops and water diversions along trails, surfacing the trails with crushed rock, and revegetating unused portions of trails. Care should be taken not to divert water to areas of slope instability.

Future trail construction should be conducted as to minimize erosion. Erosion can be minimized by reducing trail gradients, allowing for a vegetated buffer between trail and creek, locating trails on topographic highs such as ridgelines, and following good trail construction practices. Where crossing topographic lows which tend to have increased moisture content, the trails should be provided with a crushed rock gravel surface in order to avoid soil softening and disturbance during the wet weather season. New trails should avoid wetland areas. In order to avoid unnecessary future trail maintenance, new trails should not be located near or on existing landslides.