

Portland Wet Weather Screening Facility Ecoroof **5001 N Columbia Boulevard, Portland, Oregon**



Project Summary

The Portland Wet Weather Screening Facility is a 150 million gallon per day wet weather screening facility at the City of Portland's Columbia Boulevard Wastewater Treatment Plant. The facility was expanded and re-roofed to accommodate the increased influent flows associated with the Willamette River Combined Sewer Overflow program.

The focus for the design of this 6,200 square foot ecoroof has been the development of a system that is self-sustaining without the need for irrigation. It was constructed in spring 2011 and is the second ecoroof to test Portland's simple ecoroof specification, which uses cuttings in red cinder mulch over soil, without an irrigation system.

Materials, Construction and Details

The ecoroof was constructed in line with the City's Green Building Policy which requires a minimum of 70% ecoroof coverage on all new and re-roofed City-owned facilities when practical. The ecoroof was designed by landscape architects within the Bureau of Environmental Services.

The roof layers begin with an EPDM membrane, rigid insulation, a drainage mat and 4" of engineered soil media, consisting of approximately 70% pumice and 30% organics.

Cuttings of two sedum species were broadcast at a rate of 70 pounds per 1,000 square feet, and a third species was planted sporadically from 4” pots.



A one inch layer of red cinder was placed over the cuttings as a mulch to retain summer moisture, eliminating soil erosion and the need for an irrigation system. The photo above right shows the ecoroof in fall after the first summer with no irrigation. River rock paths facilitate maintenance access to the skylights and add diversity.

The green components of the ecoroof cost \$4.15 per square foot. The membrane and insulation are not included in this.

Website

<http://www.portlandonline.com/bes>

Designers/Manufacturers of Records

CH2MHill

Michael Willis Architects
City of Portland Bureau of
Environmental Services



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