



PermaMatrix® Stormwater Project

Soil Biological Restoration
Fall 2010



Project Info: Large industrial steel manufacturer needed a cost effective solution for unfiltered stormwater that was being flushed straight into the city sewer system. This stormwater discharge would lead to flooding, discharge of metals, phosphorus, turbidity and many other pollutants into the nearby river. Total area for disturbance was 8000 square feet and included 2400 cubic yards of soil movement.

Challenges: Excavation for the stormwater swale showed a wide variation of soils, rocky, heavy clay and gravel was exposed, screened and reused to make grade. Using PermaMatrix the client saved over \$10,000.00 and increased the viability and the diversity of specialized phyto remediating native plants.

Sunmark Environmental Services PO Box 1210, Fairview OR 97024
503-241-7333 PH 503-491-0279 FX
www.permamatrix.com



**Engineer
Architect
Contractor
Landscape**

The City of Portland Environmental Services permitted this job and required that vegetation needed to be established to reduce the turbidity discharge levels. BioMimicry Design provided the design drawings, while CSI Geosynthetics provided all the liners and fabrics. Sunmark Seeds designed the native seed mix and Northwest Hydromulchers installed the PermaMatrix along with the native seed.

**Environmental
Follow Up**

Native plants are thriving on this site with hard to establish Carex spp., Juncus spp. along with grasses and wildflowers. PermaMatrix contributed to the overall health and development of a diverse community of native plants that provide the filtration needed to comply with the new 1200 C permits.

**Cost
Advantage**

PermaMatrix was installed on this site with an 68% cost savings over a typical topsoil and compost application. With superior results and no infiltration of undesirable weed species, PermaMatrix reduced the time, cost and ultimately the risk of failure on a challenging site.



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