



Soil Best Management Practices

New Construction

- Retain and protect native topsoil & vegetation (esp. trees!)
- Minimize construction footprint
- Store and reuse topsoil from site
- Retain "buffer" vegetation along waterways
- Restore disturbed soils by tilling 2-4" of compost into upper 8-12" of soil.
- Rip to loosen compacted layers.

Existing Landscapes

- Retrofit soils with tilled-in compost when re-landscaping
- Mulch beds with organic mulches, and topdress turf with compost
- Avoid overuse of chemicals, which may damage soil life

Background Science

University of Washington's WaterCenter <http://depts.washington.edu/cwws/>

At their Publications index <http://depts.washington.edu/cwws/Outreach/Publications/articles.html>

- Proceedings of 1998 *Salmon in the City* conference – reports on a number of studies by University of WA and other scientists, includes source references for stormwater & water quality data.
- *The Relationship Between Soil and Water: How Soil Amendments and Compost Can Aid in Salmon Recovery*, a 1999 report by King and Snohomish Counties, City of Seattle, Washington Dept. of Ecology, and Washington State University
- *Guidelines for Landscaping with Compost-Amended Soils*, a 1998 report prepared for the City of Redmond which details trials, stormwater benefits, and 3-7 year paybacks on compost amendment based on landscape water savings

Soil Biology and Soil Functions: Why Soil Life Matters, and How it Works

US Dept. of Agriculture, NRCS Soil Quality Institute <http://soils.usda.gov/sqi/>

Download the excellent *Soil Biology Primer* at http://soils.usda.gov/sqi/concepts/soil_biology/biology.html and other soil quality and erosion prevention resources, or order print copies from 1-800-THE SOIL

Washington State University's Soil Management research site <http://www.puyallup.wsu.edu/soilmgmt/>

Of particular interest are the sections on Compost, Current Research, and Soils and Soil Testing, including the slideshows from the 2001 Soil Biology conference, at <http://www.puyallup.wsu.edu/soilmgmt/SoilBiology.htm>

Soil Restoration, Compost Quality and Compost Use

Washington Organic Recycling Council www.compostwashington.org and Soils for Salmon www.SoilsforSalmon.org

Background and up to date information on Soils for Salmon initiative, this Soil BMP Guide online including calculations spreadsheet, and useful links on compost use and soil restoration.

Washington State Department of Ecology's Solid Waste/Compost Program <http://www.ecy.wa.gov/programs/swfa/compost/> includes links to Washington State's Compost Facility Standards – WAC 173-350 section 220 – referred to in this Guide, as well as a current list of Permitted Composting Facilities, and other useful compost resources

U.S. Composting Council <http://compostingcouncil.org/> The most authoritative source for information on compost specifications. Particularly useful to landscape professionals is the recently updated *Field Guide to Compost Use*.

USCC's "Seal of Testing Assurance" (STA) program is the state-of-the-art for verifying compost quality and specifications for a variety of uses. See <http://tmecc.org/tmecc/> and follow the "STA" link for complete information.

Penn State Turfgrass Extension <http://turfgrassmanagement.psu.edu/proturf.cfm>

Download Dr. Peter Landschoot's practical guide, *Using Composts to Improve Turfgrass Performance*

Compost Use in Forest Land Restoration US EPA, <http://www.epa.gov/epaoswer/non-hw/green/pubs/compost-uw.pdf>

Ecologically Sound Lawn Care for the Pacific Northwest Seattle Public Utilities

<http://www.seattle.gov/util/lawncare/LawnReport.htm> see soil preparation for turf, and turf topdressing with compost

Stormwater Management with Soil and Low Impact Development BMPs

Seattle Public Utilities' "Stormwater Design Seminar" series. Slideshows and resource links from the basic and advanced professional seminars, winter 2006, are available at <http://depts.washington.edu/urbhort/html/education/stormwater.htm>

Washington State Department of Ecology *Stormwater Management Manual for Western Washington*, (2001, revised 2005) used by local jurisdictions for stormwater design, contains soil improvement as a Best Management Practice (Volume V, Chapter 5, BMP T5.13) at www.ecy.wa.gov/programs/wq/stormwater/manual.html See implementation guide at www.SoilsforSalmon.org

Puget Sound Action Team's Low Impact Development website <http://www.psat.wa.gov/Programs/LID.htm> contains a wide array of useful site planning tools, incorporating soil BMPs, including:

Low Impact Development Technical Manual http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm

Natural Approaches to Stormwater Management http://www.psat.wa.gov/Publications/LID_studies/LID_approaches.htm

See also the national Low Impact Development Center <http://www.lowimpactdevelopment.org/>

Master Builders Association's "Built Green" sustainable building program, developed with King and Snohomish Counties, includes soil strategies for home building. www.builtgreen.net

Soil and Compost Use Specifications and Design Guidelines

Guidelines for Implementing the Soil BMP in the Stormwater Manual for Western WA, guide at www.SoilsforSalmon.org

King County's *Post-Construction Soil Standard* guide <http://www.metrokc.gov/DDES/forms/ls-inf-SoilPost-ConStd.pdf>

WA Dept. of Transportation, soil bio-engineering page <http://www.wsdot.wa.gov/eesc/design/roadside/sb.htm>

- Standard specifications <http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/2006SS/2006SS.pdf>

Information on compost blankets, berms, and socks is in 8-01, and compost soil amendment in 8-02.

- WsDOT specs for compost, <http://www.wsdot.wa.gov/eesc/design/projectdev/gspgs/gspgspdf/14ap9.pdf>

- Application guidelines for erosion control and stormwater BMPs are in the WsDOT Highway Runoff Manual, Chapters 5 and 6 <http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/HighwayRunoffManual.pdf>

See also the EPA's "Model Compost Spec for Highways" <http://www.epa.gov/epaoswer/non-hw/compost/highway/>

Seattle Public Utilities, SEA Street project soil specifications and other Natural Drainage design information at <http://www.seattle.gov/util/NaturalSystems/default.htm>

and best landscape practices (including soil) information at <http://www.seattle.gov/util/services/yard/>

Texas DOT specs <http://www.dot.state.tx.us/DES/landscape/> (search under "compost")

Iowa State University www.eng.iastate.edu/compost/ & Iowa DNR specs www.iowadnr.com/waste/pubs/files/compostbrochure.pdf

Compost Berms and Blankets for Erosion Control

Compost Berm, Blanket and Sock specifications on US EPA NPDES menu (look down this page to select) http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4

See also the WA Dept. of Transportation erosion and sediment control BMPs, above

BioCycle Journal www.biocycle.net/ Search the index for various articles, especially "Compost Filter Berms and Blankets Take on the Silt Fence" by Rod Tyler, *BioCycle*: Vol. 42; No. 1, January 2001

Search the internet for "compost berms" and "compost blankets" for current information. Good online articles include:

- "Compost Utilization for Erosion Control" from University of Georgia Cooperative Extension, <http://pubs.caes.uga.edu/caespubs/pubcd/B1200.htm>
- "Erosion Control and Environmental Uses for Compost" by Rod Tyler et al <http://www.p2pays.org/ref/11/10295.pdf>
- "Compost Coverage" in *Erosion Control Journal*, May/June 2001 http://www.forester.net/ec_0105_compost.html
- "Restoring Soil Health To Urbanized Lands" Oregon DEQ, esp. pp14-19 on compost berm and blanket trials, and p. 26 for specifications <http://www.deq.state.or.us/wmc/pubs/docs/sw/compost/RestoringSoilHealth.pdf>

For More Information Contact:

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