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Section 4 – Sediment Control

When storm events cause sediment and contaminant laden waters to begin to migrate off-site, these temporary BMPs help keep contaminants on-site, preventing them from entering the stormwater system and moving into local streams and lakes.

Section 5 – Site Stabilization

These BMPs focus on getting the land disturbance area stabilized as quickly and efficiently as possible.

Section 6 – Improved Practices (Site Management)

These are improved site management practices, especially for larger land disturbance sites where there is greater potential for higher volumes of contaminated runoff.

Section 7 – Permanent Basins

Well-maintained basins keep large volumes of sediment and other pollutants out of receiving water bodies. They are often used to meet 1st Flush Requirements.

Section 8 – Filters

These BMPs give specific water quality treatment and are often used to compliment other BMPs.

8.1 Floatables Skimmer (aka. Oil/Water Separator) (FS)
8.2 Media-Sand Filter (MeF)

Section 9 – Low Impact Designs

To ensure long-term higher quality stormwater runoff after the project is complete, these BMPs can be esthetically pleasing and improve property value.

9.1 Bio-retention Basin/Rain Garden (RaG)
9.2 Buffer Zone (BuZ)
9.3 Conservation Easement (CoE)
9.4 Constructed Wetland (CW)
9.5 Filter Strips and Swale (FSS)
9.6 Green Roofs (GR)
9.7 Level Spreader (LeS)
9.8 Porous Pavement (PoP)
9.9 Steep Slope Management (SSM)

Section 10 – Limited Space Devices (and other Proprietary Devices)

These permanent devices function in limited space. However, based on pollutants of concern, expected runoff flow rates and maintenance access, careful consideration must be given to selection of the appropriate device. **Note: Inclusion of these proprietary units in this manual does NOT constitute an endorsement of the manufactured device, its performance or efficiency.**

10.1 Proprietary Devices
- 10.1.1 AquaShield
  http://www.aquashieldinc.com/
- 10.1.2 BaySaver
  http://www.baysaver.com/
- 10.1.3 Crystalstream Water Quality Vault
  http://www.crystalstream.com/
- 10.1.4 CSPi Design of Underground Detention Systems for Stormwater Management:
  http://www.cspi.ca/english/documents/CSPIDetManual.pdf
- 10.1.5 CULTEC chambers
  http://cultec.com/stormwater_systems.html
- 10.1.6 Downstream Defender
  http://www.hydro-international.biz/stormwater/downstream.php
- 10.1.7 Filterra Stormwater Bioretention Filtration System:
  http://filterra.com/
- 10.1.8 Flo-Gard Dual-Vortex Hydrodynamic Separator
  http://www.wateronline.com/content/productshowcase/product.asp?docid=48650a6e-7d40-44a8-bdcd-994beead5927&VNETCOOKIE=NO
- 10.1.9 Proprietary Stormwater Quality Units Selection Guide (City of Nashville)
  ftp://ftp.nashville.gov/web/stormwater/2006SWMM/WQUnits_2006.pdf
- 10.1.10 Stormceptor
  http://www.stormceptor.com/
- 10.1.11 Suntree Baffle Box
  http://www.suntreetech.com/baffle_box/

Section 11 – Landscaping References

Establishing permanent ground cover and other vegetation is often the very effective erosion and sediment control.

Section 12 - Maintenance Checklists

The checklists are invaluable tools. Checklists used by the local programs for land disturbance permit inspections are included. Using checklists will enhance efforts to maintain compliance with the local, state and federal stormwater rules and regulations.

Section 13 – "How-to" Photos (for Highly Recommended BMPS)

Clear examples of what to do and what not to do.

Section 14 – References

References used throughout the manual are listed in the acknowledgements and/or below. Many other references were used to develop specific sections of the manual and are referenced within those sections.

ASTM. 2007. ASTM Standards on Erosion and Sediment Control Technology: 2nd Edition (Print).

Gordon England and Stuart Stein. July 2007. Selection, Maintenance, and Monitoring of Stormwater BMPs. ISBN# 978-0-9707687-7-3.
http://www.foresterpress.com/fps swbmps.html

Knoxville (City of). October 2007. Knoxville Stormwater Engineering Division. City of Knoxville BMP Manual. http://www.ci.knoxville.tn.us/engineering/bmp manual/

Minton, Gary, Ph.D., P.E. 2005. Stormwater Treatment: Biological, Chemical & Engineering Principles.

Tennessee, Department of Transportation (TDOT). 03-15-07(Updated). Design Division Drainage Manual.
http://www.tdot.state.tn.us/Chief Engineer/assistant engineer design/design/DrainManChap%201-10.htm.

USEPA. (United States Environmental Protection Agency). March 5, 2007. “Green infrastructure Memo”.

USEPA, Office of Wastewater Management (OWM). “National Menu of Stormwater Best Management Practices”.

USEPA, Stormwater Best Management Practice Design Guide, Volume 1, General Considerations.
http://www.epa.gov/nrmrl/pubs/600r04121/600r04121.pdf.

Section 15 - Website Links

Center for Watershed Protection: http://www.cwp.org/stormwater_mgt.htm (includes National Pollutant Removal Performance Database, Version 3, September 2007.
http://www.cwp.org/Downloads/bmpwriteup_092007_v3.pdf)

EPA BMP Guidance.
http://cfpub1.epa.gov/npdes/stormwater/menuofbmps/index.cfmHelpful

EPA, Office of Wastewater, National Menu of Stormwater Best Management Practices.
http://cfpub1.epa.gov/npdes/stormwater/menuofbmps/index.cfm

EPA SWPPP Guidance.

http://www.epa.gov/npdes/pubs/sw swppp guide.pdf

EPA Urban BMP Performance Tool

http://cfpub.epa.gov/npdes/stormwater/urbanbmp/bmpeffectiveness.cfm

Engineering News-Record Article, Green Roof Study.
http://enr.construction.com/news/buildings/archives/070416.asp

International Stormwater Best Management Practices (BMP) Database.
http://www.bmpdatabase.org/

NOAA Weather Observations for the Past Three Days – Chattanooga, Lovell Field.
http://www.srh.noaa.gov/data/obhistory/KCHA.html

NOAA National Weather Service Enhanced Radar Image – Storm Total Precipitation and other maps, Huntsville Radar (shows Chattanooga).
http://radar.weather.gov/radar.php?rid=htx&product=N0R&overlay=11101111&loop=no

TDEC Erosion and Sediment Control Handbook.
http://www.state.tn.us/environment/wpc/sed ero controlhandbook/

TDEC’s EPA-Approved TMDLs Arranged by Watershed.
http://tennessee.gov/environment/wpc/tmdl/approved .shtml

TDOT Design Division Drainage Manual.
http://www.tdot.state.tn.us/ChiefEngineer/assistantengineerdesign/design/DrainManChap%201-10.htm

Section 16 – Local Requirements Links

Chattanooga (City of)

Land Disturbing Activities:

- Land Development Office-Land Disturbing
  http://www.chattanooga.gov/Public_Works/70_LandDisturbing.htm
- Land Disturbing Permit (LDP)
  http://www.chattanooga.gov/Files/Land_Disturbing_permit.pdf
- Land Disturbing Permit (LDP) Application Guideline
  http://www.chattanooga.gov/Public_Works/70 GuidelinesTurndowns.htm
- Land Disturbing "Dos and Don'ts"
  http://www.chattanooga.gov/Files/CD-construction_site_do.htm

Stormwater City Code Article VIII:
%20Chapter%2031%20SEWERS,%20MAINS%20AND%20DRAINAGE.pdf

Stormwater Construction Inspection
http://www.chattanooga.gov/Public_Works/70_DevelopmentInspectionServices.htm

Stormwater Hydrology and Treatment-Summary Sheet
http://www.chattanooga.gov/Files/SW_City_FORM.xls

Stormwater Monthly Inspection Report and Certification Form
http://www.chattanooga.gov/Files/CD-MONTHLYInspection2.pdf

Stormwater Requirements for Single and/or Two-Family Residence Construction
http://www.chattanooga.gov/Files/CD-RequirementsSingle-TwoFamilyConstruction.doc

Hamilton County Water Quality Program

Stormwater Requirements for Single and/or Two-Family Residence Construction
http://www.hamiltontn.gov/stormwater/

Water Quality Homepage
http://www.hamiltontn.gov/stormwater/

Signal Mountain (Town of)

Signal Mountain Homepage
http://www.signalmtntown.org/