Design Manual Updates
August, 2010

New Sizing Criteria

- Runoff Reduction Volume (RRv)
- Objective - replicate pre-development hydrology conditions using Green Infrastructure (GI) techniques
- Achieved by maintaining pre-construction infiltration, controlling peak runoff flow and discharge volume and minimizing concentrated flow

Green Infrastructure Techniques

- Involves both site planning and design
- Site Planning
  - Preservation of natural resources
  - Reduction of impervious cover
- Design (application of GI practices)
  - Runoff reduction by area
  - Runoff reduction by volume
  - Standard SMP with RRv capacity

Planning - Preservation of Natural Resources

- Preservation of undisturbed areas
- Preservation of buffers
- Reduction of Clearing and Grading
- Locating development in less sensitive areas
- Open space design
- Soil restoration

Planning - Reduction of Impervious Cover

- Roadway reduction
- Sidewalk reduction
- Driveway reduction
- Cul-de-sac reduction
- Building footprint reduction
- Parking reduction

GI Practices – Runoff Reduction by Area

- Conservation of Natural Areas
- Sheetflow to riparian buffers or filter strips
- Vegetated open swale
- Tree planting/tree box
- Disconnection of rooftop runoff
- Stream daylighting

  (result in reduction of contributing area)

GI Practices – Runoff Reduction by Volume

- Rain garden
- Green roof
- Stormwater planter
- Stormwater planter
- Rain tank/cisterns
- Porous pavement

(result in reduction of contributing volume)

GI Practices – Standard SMPs with RRv Capacity

- Infiltration practices
- Bioretention
- Dry swale (open channel)

Five Step Process for SWPPP Development

- 1. Site Planning
- 2. WQv determination
- 3. Apply GI practices and standard SMPs with RRv capacity
- 4. Apply standard SMPs to address remaining WQv, if required
- 5. Apply volume and peak rate control

See Figure 3.1 – Flow Chart

Exceptions to Meeting RRv Criteria

- Not required for “Redevelopment” project that meets Chapter 9 criteria (Section 9.3.1)
- Required for projects over karst geology, provided large infiltration basins are avoided
- Required for “hotspot” projects, provided non-infiltration practices are used

Compliance Deadline – Updated Design Manual

- GP-0-10-001 (Part III.B.2.) requires an owner to begin using revised version of Design Manual no later than 6 months from final revision date
- February 28, 2011 deadline

Questions

- Contact Information

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