

Stormwater Management and Redevelopment Projects

Jennifer Orr
NPDES Construction and E&S Control Section Chief,
PA DEP

Common Challenges with Redevelopment Sites


- Existing impervious areas
- Possible environmental contamination
- Proximity to special protection or impaired waters

Special Regulatory Conditions

- Modeling of Post Construction Stormwater (PCSM) runoff (volume control)
- Riparian Buffer Waivers

PCSM Modeling Conditions


- General assumption
 - Model whole site as meadow in good condition
- Assumes conservative curve number for entire site
- Includes an exception for repair, reconstruction of existing impervious areas



Impervious Areas Existing on Site

20% of site area should be modeled as meadow in good condition

Includes an exception for repair, reconstruction of existing impervious areas



Public Health or Safety or Environmental Limitations


- Model to best condition attainable (start with 15% meadow, etc.)
- MUST maximize stormwater control for the site
- Public health or safety = contaminated sites, etc.
- Environmental Limitations = sinkhole prone, etc.

Effect of modeling conditions

- Decreases modeled volume of runoff from the site that BMPs must be installed to control


Additional Option

- Alternative modelling methods can be used IF water quality and designated uses will be shown to be protected and maintained



What if you can't control volume with your modelled condition?

- Use worksheets 11-13 that deal with water quality



What is the bottom line?

- Demonstration MUST be made that there will not be degradation in water quality and designated uses in the receiving water
- If receiving stream impaired for stormwater runoff, volume MUST be controlled

Riparian Buffer Waivers

- Needed when receiving water (or wetland) is HQ or EV designated use
- Applies only to intermittent and perennial streams, not wetlands, ephemeral streams
- Two Types Depending on the Status of the Receiving Water
 - Attaining designated use – 150 foot setback buffer
 - Impaired, TMDL – 150 foot forested buffer



Waiver Allowed to Address

- Existing footprint of site
- Existing buildings, structures
- Areas where may be difficultly in growing vegetation due to contamination



What do you need for a waiver request?

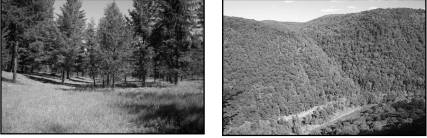
- 3 Items (regulatory)
 - Alternatives analysis (do nothing, do 150 feet, preferred alternative)
 - Demonstration that existing buffers will be preserved to extent possible
 - Demonstration that all other 102 requirements will be met (PCSM plan)
- Additional items
 - Designated use of water (eMAPPA)
 - <http://www.emappa.dep.state.pa.us/emappa/viewer.htm>
 - Attainment/impairment/IMDL
 - If impaired or TMDL, must have a riparian forest buffer management plan
 - Guidance available to help with putting this together
 - <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-82308/394-5600-001.pdf>

How do you submit waiver request?

- Submitted as part of application
- DEP and Conservation District jointly evaluate

Always take credit for all that you can

- Worksheets 2 & 3 contain credits for sensitive natural resource preservation and non-structural BMPs



Contact Information

- Bud McCutcheon, KU Resources, Inc.
 - 22 S. Linden St., Duquesne, PA 15110
 - hmccutcheon@kuresources.com
 - (412) 469-9331 ext. 18
- Jennifer Orr, Pennsylvania DEP
 - 400 Market St., 10th Floor RCSOB, Harrisburg, PA 17101
 - jeorr@state.pa.us
 - (717)772-5961
