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MASTEP Technology Review

Technology Name: Large regional wet detention ponds

Studies Reviewed: Borden, Robert C. 2001. Performance Evaluation of Regional Wet Detention Ponds and a Wetland for Urban Nonpoint Source Control

Date: December 11, 2009

Reviewer: Jerry Schoen

Rating: 3

Brief rationale for rating:

Study was conducted prior to development of TARP protocol, and does not contain documentation of several TARP criteria.

Tarp Requirements Not Met

- No documentation of Quality Assurance Project Plan, quality control data, laboratory certification, analysis methods.
- Insufficient documentation of amount of rainfall sampled, number and frequency of events sampled, sediment particle size distribution.

Other comments:

- Study evaluated sediment, nutrients and metals removal efficiency.
- Systems evaluated included two large wet detention ponds and one detention pond/wetland combined system.
- Study evaluated seasonal as well as annual removal efficiencies.
- Cost analysis was performed, generating estimated pounds of sediment and nutrients per dollar of estimated capital construction costs.