PA 12-155 Nonpoint Source Phosphorus Workgroup

Meeting notes from March 24, 2014, 1 p.m. meeting, DEEP

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Attending: Chris Malik, Mike Jastremski, Joe Wetteman, Chuck Lee, Nelson Malwitz, Cindy Bauman, Margo Ward

Soil Erosion discussion was led by Mike Jastremski; Draft submission is on Skydrive. Please send comments on it to Mike J and copy Malik, focus so far is on stream channel erosion. Stream channel instability related to: 1)high flow events/instability, and 2) downcutting. Much work has been done in VT and Catskills, NY. CT has less vertical relief in CT, but Midwest data is similar. No quantification exists for CT sources, VT and NY areas are still responding to widespread forest clearing which occurred many years ago, and also recent changes in land cover. Watershed upland disturbance - vegetation clearing, stream corridor disturbance - riparian buffer degradation, floodplain encroachment – levees floodwalls, more intense storms, all yield higher peak flows.

Streams reach stable state, dynamic equilibrium is a goal. It is recommended if channels are reconstructed after floods that geometry is close to prior stable conditions. Trapezoidal channels tend to fail. Model after “Reference Reaches”, using regional curves to design channel dimensions. Training for people working in streams is useful.

Soil Erosion categories: Agricultural soils, topsoils, alluvium, soil parent material.

Bedload in depositional areas and stream turbidity correlate with higher overall P.

Some recommendations: wetland and riparian zone protection, stormwater infrastructure,

Effects of dams and loss of dams, and sediment deposits associated with impoundments...

We will work on agricultural land erosion, and erosion associated with construction activities, there will be common areas with the urban stormwater writeup.

CT Association of State Floodplain Managers could provide a forum for potential cooperative efforts.

Reconnecting incised floodplains can benefit P loads through sequestration into flood plain sediments deposited.

Morrison, USGS questioned whether Lilinonah being more clear in 2013 was related to large storm events, which could cap and sequester P?

DEEP is working with locals in coastal Holly and Gorham's Ponds, with watershed approaches to reduce peak flows and reduce sediment transport.

Agricultural management: NRCS incentives for soil health programs, no-till, cover crops, mulches, NRCS data may exist for no-till agricultural areas: see: Ray Covino

Table of Contents presented for Urban Stormwater submission by Cindy Bauman; text to be released next meeting. Some of the relevant studies will apply to all three workgroups: Charles River MA residual designation, Lake Champlain: TMDL being rewritten & 2012 State of the Lake report, Wisconsin P summary

Stormwater MS4 pemits: NH has P parameters, draft for N. Central MA ?,

Fertilizers: Greg Bugbee presented revisions on submission, discussion and reviewed followed.

Potential Revisions to 12-155: Currently regarding use of compost for lawns, cannot use unless it is < 0.67% phosphate, but there are no limits on quantities, potential exists for over-application. Tom Morris will be consulted, who worked with the legislation's authors.

Could composts with higher P concentrations be used in safer areas, away from slopes and watercourses without causing pollution?

There is a goal to redistribute surplus animal manure from farm fields where over-application potential exists. The small number of farms with nutrient management plans must track P produced.

Lake P internal loading recommendations have low overall potential practicability. Recommendations specific to individual lakes could be more useful. There are unanswered nutrient cycling questions, regarding aquatic vegetation, from water column or rooted aquatic vegetation. Dredging is very costly and generally limited to shallower areas in lakes.

Reducing N can actually potentially increase competitive advantage of Blue-green algae, as cyanobacteria can fix N. It is a better strategy to reduce both P and N.

Onsite wastewater system discussions have been continuing in subcommittee; it is likely that any mandated strategies will be best implemented statewide. Recommendations for time of sale inspections and upgrades have been discussed. Coastal areas and lake communities have drawn the most attention in the past.

Modeled Watershed Loadings will be published, DEEP report: “Interim Phosphorus Reduction Strategy for Connecticut Freshwater Non-
Tidal Waste-Receiving Rivers and Streams Technical Support Document” at www.ct.gov/deep/phosphorus , USGS also has some presentations.

Next meeting will be May 6, 2014