

## **PA 12-155 Nonpoint Source Phosphorus Subcommittee**

### **Meeting notes from October 28, 2013 meeting:**

Co-Chairpersons:

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Updated information will be posted as it becomes available at [www.ct.gov/deep/phosphorus](http://www.ct.gov/deep/phosphorus)

There were no comments on the 9/30 meeting notes

NPS Plan meeting announcement

Review of Scope

Many suggestions were made to beef up specifics, but the scope covers all the necessary items.

The first three items in scope, the purpose statement, sums up our priority activities well:

- Identify the relevant components and sources of nonpoint source (NPS) phosphorus pollution.
- Identify reasonable reduction goals that support designated uses of aquatic life and recreation.
- Identify and assess methods and strategies to achieve those goals.

Comment: some stormwater infiltration systems almost fit definition of underground injection wells. DEEP promotes LID / Green Infrastructure to distribute infiltration and shallow structures with more soil contact. We should continue to encourage more LID / wider spread of water, in preference to deeper. More treatment occurs close to soil surface horizons and above zone of saturation.

We will confer with stormwater permitting section technology workgroup to advise permitting process and potential revisions, regarding Federal UIC definition class 5 = stormwater structures

It would be helpful to develop a chart to identify nonpoint sources and modeling percentages prioritize and clarify the need for public education and outreach efforts.

We will do our best to try to name out those sources, to the extent possible we will attempt to quantify loadings and relative rates of loading that they provide, with

the understanding that there is a great deal of variability statewide or within a watershed temporally.

There is no easily available information on the internet, or specific model that accurately quantifies all the various nps phosphorus loads on a statewide basis. We will discuss with EPA and USGS / developing SPARROW model. SPARROW will be used for future modeling.

Generalized land use/land cover categories are determined and export coefficients applied for different types of land cover in existing models used by DEEP.

It's likely that our goal will focus on source control and pollution prevention. Is it feasible to quantify specific sources by watershed? We will discuss with TMDL section. We also have MS4 permits, tmdls, watershed based plans.

Products containing phosphorus have beneficial uses and are necessary for many functions, including agricultural and nutritional. It may not be feasible to regulate, but education so that consumers can select alternatives may be of value.

Funding does not currently exist to provide education; a goal will be to make recommendations, regarding and scope cost and evaluate whether reasonable assurance might exist that those measures might provide load reductions.

We will discuss the Water Dept.'s anti-corrosion additives, alternatives recommendations with the other workgroups.

Show cost differentials for alternatives for expenditures like anti corrosion, CWWA CT Water works Association is the association that provides scientific recommendations

Source controls for agriculture and urban stormwater pollution can be diffuse and difficult to address relative to wastewater.

Comment: Food industry/soda: Reduce sources ie replace phosphoric acid with citric acid.

Identify specific top 10 sources, can 10% reduction be attained, through source reduction? / low hanging fruit.

Chesapeake models employ add-ons to quantify fertilizers and their effect on loading, see: November 2011 powerpoints, and other slides developed.

Defining costs and effectiveness assurance for NPS measures, needs more research.

A list of informational websites should be compiled.

Find a way to assess how many septic systems are in need of improvement, or noncompliant with health codes.

Source control should be the primary mechanism NPS Phosphorus control, these are the areas to start and prioritize.

Identify variability in P in wastewater streams, why do some homes generate much larger 7-8 mg/l up to 12, down to 4. Dilution: Loading vs. concentrations, source reductions like removing garbage disposals. This question should go to other workgroups.

Fertilizers: regulations are in place for points of sale, not a lot of resources exist for education and monitoring applications by homeowners. Recommendations are sought for partners to assist: CT Ag Expt. Station, UConn Cooperative Extension Service, Connecticut Conservation Districts. PA 12-155 requires outreach and enforcement, if it's not being accomplished, what would it take to get to a point where we see results desired? We need estimated costs to make recommendations.

How do we get to a point where we reach homeowners and others who apply P fertilizers inappropriately? There is a need to get the word out that there are reasons to not use fertilizers inappropriately. Enforcement is problematic, some control exists at point of sale.

<http://www.cag.uconn.edu/plsc/soiltest/documents/PhosphorusLegislationinConnecticutupdateforwebsitetm.pdf>

CT D.oAg. has Website and newsletter, but these don't reach homeowners.

There are many factors involved with the fact that animals generate more manure than we have fields to spread it on. Relative cost of fertilizers vs. animal manures, cost of hauling,

Phosphorus from soil erosion and turbidity, stormwater: ag and construction general permit.

Flat healthy lawn exports less P than unhealthy slopes. Where turf problems exist, attempts to remedy problems with fertilizer, result in greater export from problem areas...

How to achieve reduced phosphorus runoff from by golf courses and other expansive turf areas, discuss options including legislation with industry association.

Background: TMDLs and other studies and strategies Lake Champlain, Chesapeake Bay: James River, Mass: Charles River, City of New York DEP water supply watersheds.

Monitoring data – DEEP maintains a database of ambient water quality monitoring data from our rotating basin monitoring, and other QAPPED sources. There is no existing mechanism to publish all this data online at this time. Inquiries may be made for specific watercourses to [christopher.bellucci@ct.gov](mailto:christopher.bellucci@ct.gov) . Specify watercourses and parameters desired.

CT's Integrated Water Quality Report lists impaired waters in the 303(d) list.

TMDL staff identifies watersheds that are most vulnerable or most likely to exceed aquatic life use support standards.

There are some soils variables relative to adsorption of phosphorus, specifically in high carbonate soils in the Canaan area where low soils are also low in oxides of iron and aluminum.

Maps and powerpoints depicting loading, point or nonpoint, and relative loading by basin exist on DEEP website.

Deep phosphorus background documents at [www.ct.gov/deep/phosphorus](http://www.ct.gov/deep/phosphorus)

Education and outreach with pollution prevention to public and commercial.

Center for Watershed Protection James River study indicate IDDE and petwaste programs are cost effective for nutrients and pathogens. <http://www.cwp.org/cost-effective-stormwater-management-in-the-james-river-watershed>

Change MS4 to stormwater staff

We should utilize strategies, similar to 9 element process, load reduction estimates, milestones.

6 minimum measures for MS4 stormwater permits

Evaluation of outcome and discussion of next steps

Recommendations to coordinating committee by the end of March 2014

Discuss with science group loadings, monitoring data

Website with P loadings

Not necessary to recreate wheel, look at Charles River and Champlain, etc, bmps load reductions,

Variable loadings in waste streams why?

Food waste, Bone, personal care products, Environmental Working Group

Committee Members in attendance:

Chris Malik DEEP

Erik Mas F&O

Lynn McHale Waterbury

Virgil Lloyd Municipal Rep.

Justin Milardo DPH

Cindy Baumann CDM Smith

Rob Hust DEEP

Wayne Nelson DoAg

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