

## **Marine Nutrient Criteria Stakeholder Meeting June 9, 2011, ME DEP**

Notes taken and written up by Susanne Meidel

Q/C = question/comment

A = answer

### ***Attendees:***

ME DEP: Teco Brown, Dave Courtemanch, Angie Dubois (meeting leader), Matt Hight, Ken Jones, Brian Kavanah, Rob Mohlar, Sterling Pierce, Gregg Wood

EPA Region 1: Jenny Bridge, Diane Gould, Matt Liebman, Toby Stover

Regulated community, consulting firms: Janet Abrahamson (Maine Rural Water Association), Cintya Bailey (Verso Bucksport), Paul Birkel (Wright Pierce), Curtis Bohlen (CBEP), Pat Cloutier (South Portland Water Pollution Control Commission), Scott Firmin (PWD), Jim Fitch (Woodard & Curran), Scott Libby (Battelle), Joe Payne (FOCB), Paul Rodriguez (Woodard & Curran), Robert Clark (Town of Falmouth)

### ***Action items:***

- create a webpage used for disseminating information, encouraging exchanges between DEP and stakeholders, make presentations available
- form a second stakeholder group for implementation issues

### ***1. Angie Dubois***

- a. Introduction of key ME DEP and EPA staff
- b. Overview of meeting agenda

### ***2. Presentation by Toby Stover (10:15 - 10:25 am)***

**Q/C (Jim Fitch):** we will try to pluck low-hanging fruit before doing more expensive upgrades but how can we use limited public assets now in the best possible way knowing that in the future we may need to take additional/different/conflicting measures to meet criteria? Need to justify use of funds to public.

**A (Toby Stover):** key is collaboration, i.e. bring in as many groups as possible to help solve problems; goal is to broaden circle of participants and thus maximize resource availability; recognize that everybody has to help out, not just point-source (PS) dischargers

**Q/C (Joe Payne):** there is the EPA directive but in ME we also have the 2007 Resolve (LD 1297) that will drive things forward so criteria development will not drag on for a long time, thus reducing conflict between immediate vs long-term measures

**Q/C (Dave Courtemanch):** Will we need to prioritize watersheds as stipulated in EPA framework as one of 8 steps? Will this show up as an item in the PPA<sup>1</sup>?

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<sup>1</sup> Performance Partnership Agreement between EPA and DEP

**A (Toby Stover):** No need to prioritize watersheds, will not show up in PPA as requirement (as far as I know); if you follow EPA 8-step framework, it will help you fend off law suits should any be filed.

**Q/C (Dave Courtemanch):** If we, do item #8 (develop workplan and schedule for numeric criteria development) which we have started on, can we forgo the other items?

**A (Toby Stover):** no concrete answer regarding whether ME can omit steps 1-7 of framework but acknowledgement that ME is quite far along process

**Q/C (Joe Payne):** EPA does not want states to be tied to framework and slow things down, right?

**A (Toby Stover):** no

**Q/C (Dave Courtemanch):** could other states (ab)use the framework to slow criteria development down?

**A (Toby Stover):** overall goal of framework is to achieve near-term load reductions while criteria development proceeds

**Q/C (Ken Jones):** is there any guidance on **K4 sources**?

**A (Toby Stover):** not as far as I know

**Q/C (Paul Rodriguez):** there are no non-point source (NPS) reduction programs in place, correct?

**A (Paul Birkel):** there are good programs for point sources (PS) but NPS pollution needs to be addressed in concert with PS otherwise will need to keep lowering PS discharges

**Q/C (Jim Fitch):** it is good to set protective criteria but it has been difficult to control pollution sources; need to consider ALL sources and quantify their contributions (e.g. Great Bay, have eliminated all PS but criteria are still not met)

**A (Toby Stover):** Great Bay plan has NPS component; yes, NPS is important and needs to be limited

**Q/C (Paul Rodriguez):** there is good understanding of point vs non-point sources in Chesapeake Bay – will the model used there be used by us/other states?

**A (Angie Dubois):** will look at their model during criteria development

### **3. Presentation by Dave Courtemanch (10:40 – 10:45 am)**

- a. Quick history of ME marine nutrient criteria work: 2007 ME resolve, Cadmus/Saquish work, draft report
- b. Note on freshwater nutrient criteria for phosphorus: currently held up by administration following EPA-delay because of need to have clearer language regarding ‘protect downstream uses’
- c. New role of ME Board of Environmental Protection (BEP) due to recent legislation: in the past, all rules had to go before BEP, now only ‘substantive’ ones will, rest will be dealt with by DEP Office of the Commissioner; nutrient criteria is non-substantive rule so will

be handled by DEP; DEP has only acting commissioner right now, so it's unclear right now how (marine) nutrient criteria will be handled

**Q/C (Jim Fitch):** if freshwater criteria are for P and marine criteria for N, how will low-salinity areas be dealt with? Where is cut-off freshwater vs estuarine?

**A (Dave Courtemanch):** cut-off is 0.5 ppt/PSU; 'protect downstream uses' language in criteria will help with this issue

**Q/C (Joe Payne):** Battelle report outlined 4 approaches for criteria development but strongly recommended data distribution method – is that still being pursued?

**A (Dave Courtemanch):** yes

#### **4. Presentation by Angie Dubois (10:50 - 11:10 am w/ questions)**

**Q/C (Joe Payne):** why look into dividing coast into segments if there will be one marine nutrient criterion for the state?

**A (Angie Dubois, Dave Courtemanch):** not the case, we will have 'coastwide standard' but that does not mean one number

**Q/C (Jim Fitch):** so far looked at e.g. statutory class, salinity, geology, depth gradients, etc to determine appropriate segments along coast; will you also consider developed vs agriculturally-influenced vs other?

**A (Angie Dubois):** yes, watershed loading is important and will be considered

**Q/C (Curtis Bohlen):** even though few if any statistically significant relationships (e.g. statutory class vs nitrogen results) were found in preliminary report based on preliminary analyses run on limited dataset, it does not mean that there are no relationships; with more advanced and detailed analyses and more data, significant relationships will likely be found

**A (Angie Dubois):** totally agree

**Q/C (Jennie Bridge):** what is the utility of the USGS SPARROW model (<http://water.usgs.gov/nawqa/sparrow/>) in ME as a loading model?

**A (Angie Dubois, Joe Payne):** not enough river flow data to make it useful

**A (Curtis Bohlen):** also other problems; is similarly good/bad as 4 or 5 other models but is a reasonable one to consider; it is being considered for Casco Bay work

**Q/C (Jim Fitch):** have you considered a website for marine nutrient criteria development? With interactive component?

**A (Angie Dubois):** will look into it

**Q/C (Joe Payne):** much other marine nutrient criteria work has been done over last few years, e.g. NH and FL, will that be considered?

**A (Angie Dubois):** absolutely

**Q/C (Joe Payne):** you seem to have an open mind regarding eventual criteria numbers but is

it possible that numbers will differ wildly between systems in the end? Other places don't seem to have widely differing numbers (generally between 0.3 and 0.5 mg/L)

**A (Angie Dubois):** not wildly different but will likely have different numbers, e.g. naturally enriched systems vs human-influenced

**Q/C (Gregg Wood):** are there currently real nutrient problems in ME estuaries?

**A (Angie Dubois):** from limited experience/data it seems that problems are localized and limited to low-flush areas; estuaries/coast are generally in good shape but we want to be protective

**A (Joe Payne):** Angie is correct but we can anticipate what is coming; want to be proactive and fix things before they get bad.

**Q/C (Jim Fitch):** will you study problem areas to learn from them?

**A (Angie Dubois):** yes

**Q/C (Matt Liebman):** are there narrative marine nutrient criteria, e.g. 'shall not exhibit effects of eutrophication'? If there were narrative criteria, which are subjective, you could look at impaired vs non-impaired areas, compare the nutrient concentrations, estimate threshold values and use e.g. 10<sup>th</sup> percentile for highest protection (2<sup>nd</sup> sentence content noted after meeting, but follow-up to this question).

**A (Angie Dubois, Dave Courtemanch):** no, there aren't but ME has such criteria for lakes; have indirect standards via 'protection of uses and aquatic life'

**5. Discussion of proposed development and implementation schedule by Angie Dubois, Brian Kavanah (11:40 – 12:30)**

**Q/C (Jim Fitch):** if a watershed approach is used, will loadings be allocated throughout watershed to both PS and NPS?

**A (Brian Kavanah):** will look at all dischargers and work first with whoever is up for license renewal; DEP Division of Environmental Assessment (Dave Courtemanch director) will work with NPS groups, write TMDLs? At any rate, we will look at all groups. Acknowledges that unresolved issue is that marine criteria will affect upriver discharges, need to determine how far upriver.

**Q/C (Jim Fitch):** yes, DEP should also look at ag sources

**A (Curtis Bohlen):** few marine areas in ME where ag sources have significant input

**Q/C (Joe Payne):** couple of years ago we requested effluent modeling for discharges – does DEP know now what effects (POTW) discharges have on nutrients? I.e., would any dischargers be immediately affected because of nutrient criteria violations? Models would help to estimate financial impact on facilities.

**A (Brian Kavanah):** have legislative report on loading to Casco Bay but didn't have nitrogen data for report; have data now but no modeling done yet, i.e. don't know yet how this issue will affect/be affected by nutrient criteria

**Q/C (Joe Payne, Jim Fitch, Pat Cloutier, Angie Dubois, et al):** regarding issue of

estimating criteria, running models based on literature values for N), taking mixing zones into consideration, effluent dilution effects, continued need to work on low-hanging fruit

**Q/C (Matt Hight):** need to set criteria based on attainment goals, need to see what makes the most sense to achieve attainment

**Q/C (Rob Mohlar):** have done phosphorus modeling in Penobscot River but is easier in freshwater than marine; could get initial, general info on situation, then refine models and try out different scenarios

**Q/C (Dave Courtemanch):** we're dealing with resource limitation, i.e. need more than just Angie to work on this, i.e. don't get expectations up too high; maybe we need 2 stakeholder groups, one for criteria development and one for implementation?

**A (Angie Dubois):** will pursue second stakeholder group; I will also have a scientific advisory board that I will work with

**A (Jennie Bridge):** very good idea as NPS people don't come to criteria development meetings

**A (Joe Payne):** NPS groups will have to oppose any criteria as they will have unknown impact on finances

**Q/C (Brian Kavanah):** but how can we estimate impact w/o criteria in place?

**A (Joe Payne):** use literature values, e.g. 0.4 – 0.6 mg/L N as a starting point for modeling (I want 0.38, cannot end up with >0.5), need transparency for all involved

**Q/C (Pat Cloutier):** there are different sources that can be controlled; which one is (ones are) the best to focus on to get biggest bang for buck?

**Q/C (Matt Hight):** do permits/licenses include mixing zones and dilution factors?

**A (Brian Kavanah):** yes, modelers determine those

**A (Rob Mohlar):** have used dilution factors for toxics for marine dischargers, determine mixing zones (initial dilution only); don't have nutrient numbers for criteria development (N is not toxic); would need orders of magnitude greater dilution for nutrient criteria

**Q/C (Dave Courtemanch):** also need to account for NP sources

**Q/C (group):** permits, PS discharges, criteria, models, NP sources (stressed importance of including them in criteria development and implementation phase), urban runoff, where will funds come from, policy perspective, how to develop and implement criteria effectively

**Q/C (Scott Firmin):** our long-range plans won't change until 2017-2020; we don't have enough funds now but still need to meet our obligations; need pretty good numbers before taking concrete action; facilities know they will need some upgrades to deal with nutrients but what/when/how?

**Q/C (Matt Liebman):** can somebody elaborate on options POTW have for upgrades?

**A (Jim Fitch):** depends on facility and current load, i.e. what their flexibility is; e.g. can increase bacterial load (for nutrient conversion) and biomass for treatment which gives you more advanced conversion (ammonia towards nitrate); or can manage aeration; overall, facilities can make tweaks here and there but everything they do affects something

**Q/C (Brian Kavanah):** will it be a seasonal criterion/criteria?

**A (Angie Dubois):** good question, will definitely consider that

**Q/C (Jim Fitch):** hope it will be seasonal

**Q/C (Matt Liebman):** spring will be most difficult ...

**Q/C (Jim Fitch):** ...although there will also be highest flushing rate

**Q/C (Angie Dubois):** when do we want to have next meeting, 6 or 9 months perhaps?

**A (Joe Payne):** how about 2 months? Would like to know what rate of progress is