Missouri Department of Natural Resources

MEETING SUMMARY
Stream Nutrient Criteria Stakeholder Group
Lewis & Clark State Office Building
March 10, 2009
10:00 am

Attendees:
Doris Bender, City of Independence; Paul Blanchard, MDC; Robert Brundage, Newman, Comley & Ruth; Frank Dolan, Gredell Engineering Resources Inc; Suzanne Femmer, USGS; Peter Goode, WASHU/Missouri Coalition for the Environment; Amy Jungclaus, MDC; Emily Lyon, MDNR; Rachel Mobley, Department of Agriculture; Mark Osborn, MDNR; Chris Riggert, MDC; Buffy Santel, St Louis MSD; John Schumacher, USGS; Phil Walsack, MPUA ; Emily Wineland, Home Builders Association of St. Louis;

Overview of Other States Nutrient Criteria for streams (Mark Osborn, MDNR):

- 5 states and 3 territories have approved criteria
- 10 states have some site-specific approved criteria
- American Samoa
  - TP (total phosphorus) – 150 µg/L; TN (total nitrogen) – 300 µg/L; Turbidity – 5 NTU
- Hawaii
  - Divides their criteria by seasons (wet season and dry season)
  - Has criteria based on water classifications and each has a geometric mean value, a 10% exceedance limit, and a 2% exceedance limit for each season
- New Jersey
  - Has criteria based on water classifications
- Vermont
  - Has criteria based on water classifications at low flow conditions and then divided by altitudes
- Oregon
  - Focused on chlorophyll and turbidity
  - TP at low flow conditions, site specific
- North Carolina
  - Criteria is based on water classifications and then divided by streams that do or don't have trout
- Oklahoma
  - Site-specific criteria
- Montana
  - Has site-specific criteria due to a TMDL
- Puerto Rico
  - Turbidity criteria for all surface waters
  - TP criteria (1 mg/L) for waters upstream from reservoirs and drinking water supplies
- Florida
  - Has Everglade specific criteria
    - Very stringent
  - Has spent over $20M in data collection
  - See EPA letter
    - EPA will propose nutrient criteria for streams and lakes in FL by the end of 2009
    - EPA will propose nutrient criteria for coastal waters in FL by the end of 2010
    - EPA will work with FL in the development, but it is not a situation that we want
- Also see EPA document

USGS and MDC Stream Flow Analysis (Paul Blanchard, MDC):

- A stream flow study has been conducted in MO
- 5 ecosystem components to address:
  - Hydrology
  - Geomorphology
  - Connectivity
  - Biology
  - Water Quality
- Natural flow regime (Poff et al 1997)
- Developed a framework to analyze the data
- http://www.nature.org/initiatives/freshwater/
- Different flow conditions: low flow or base flow, high flow, and flooding
- MO HIP → Hydroecological Integrity Assessment Process
  - http://www.fort.usgs.gov/Resources/Research_Briefs/HIP.asp
  - New Jersey Development
- Needed to characterize the "least flow regime" since the natural flow regime cannot be determined with limited data
  - 10 + years of data from USGS gages
  - No dams
  - No major water withdrawals
  - Resulting in 154 gages, some interstate streams, and no MO or MS River data
- HIT → Hydrologic Index Tool
- MO SCT → Stream Classification Tool
  - Has nothing to do with DNR stream classifications
  - http://www.fort.usgs.gov/Research/research_tasks.asp?TaskID=2051
- MO HAT → Hydrologic Assessment Tool
  - http://www.fort.usgs.gov/products/Software/NATHAT/
- End results → 140 gages used with 53 indices

Questions for Paul, MDC:

- Osborn
  - Exploring how to incorporate hydrologic considerations into the nutrient criteria
- Schumacher
  - Hard to classify streams with no gage data, could use geographic distribution
- Blanchard
  - Will look at past 25-years of data instead of all available data to determine if the precipitation pattern has changed
- USGS
  - Only looked at flow data, didn't use other gage data
- Walsack
  - USGS is looking at HIP groups on the Missouri River Basin to find a correlation between flow regimes and aquatic life
- Brundage
  - No policy decisions based on this data has been made by MDC
- Schumacher
  - These groupings of classifications came out very similar to Missouri's EDU (ecological draining units), which is reassuring
    - The groupings and EDUs did not match up in New Jersey
- Blanchard

- Just because the hydrology is the same doesn't mean that the ecology is the same, due to different reaches and biota

- Walsack
  - Concerned that these classifications are different than DNR classifications and how it will affect utilities
- Schumacher
  - This data will be available for comment starting September 2009

Conclusions (Mark Osborn, MDNR):

- Technical sub-committee has a lot of work ahead
- Next stakeholder's meeting is on hold till the sub-committee has a schedule for the rule making process
- Will place Paul's, MDC, presentation on-line
  - Look for it here

Open Discussion:

- Walsack asked what EPA's thoughts were
  - Osborn answered that Gary Welker, EPA Region 7, could not be here today, but he was up-to-date
- Brundage asked what the other neighboring states were doing
  - Osborn said the following:
    - IA is about to present their criteria to EPA
    - KS will not have criteria, but will develop nutrient loading – EPA's reaction unknown
    - IL is working on their criteria
    - NE has lake criteria approved
- Walsack asked what is driving DNR to meet the 2011 deadline for approved criteria
  - Osborn said that EPA is closely watching us and we may get a letter like FL
- Brundage remarked that MO has little stream data and FL spent $20M…how can MO move forward without sufficient data?
  - Osborn answered that we do have more data than initially anticipated, plus we have USGS data
    - We do have holes in the data and if we find that we need to collect data, we could ask EPA for an extension
    - We will work with what we have for now
- Walsack states that there should be incremental steps to implementation of this criteria and to stop unloading all these requirements on utilities and rate payers all at once
- Mark Osborn states that the US AGO's office requested all the states to report how much money we have spent on data collection for the development of nutrient criteria
  - Missouri has spent $7M total for lakes and streams
  - IA has spent about $3 to $4M
  - AGO wanted to know because EPA is pushing the states to develop criteria without providing financial support
- Schumacher stated that they are currently updating their regression equations
- Dorris Bender announced that City of Independence is looking into moving their outfall location to the Missouri River and would like a copy of the EPA suggested benchmark limits for the MO River
  - Mark Osborn will email her a copy