Point Source Innovations Workgroup meeting minutes, March 3, 2005

Berkeley Co. PSSD Headquarters, Martinsburg, WV 9:00 a.m. -2:30 p.m.

Remember, www.wvnet.org is your website for resource documents and agendas/minutes for this group.

Present: Clifton Browning (Berkeley Co. PSSD), Kristin Edwards (Dominion), John Gangwer (Pilgrims Pride), Joe Hankins (The Conservation Fund's Freshwater Institute), Tom Jageman (Consol Energy), Margaret Janes (Appalachian Center for the Economy and the Environment), Steve Knipe (City of Martinsburg), Kenny Michael (City of Martinsburg), Lee Snyder (Snyder Environmental Services, Inc.), Eddy Tenant (Harpers Ferry PSD), Frank Welch (Shepherdstown), Bob Williams (Dominion), Jim Williams (Harpers Ferry PSD)
Guests: Armando Benincasa (Steptoe and Johnson), Dan Nees (University of MD Environmental Finance Center), Mark Place (John P. Place, Inc.), Dan Tobocman (View Engineering), John Tuggle (Pentree Inc. Consulting Engineers)
WV DEP: Bill Brannon, Alana Hartman, Randy Sovic

Alana Hartman welcomed everyone and conducted introductions.
Clifton Browning welcomed everyone and reminded us about the features of the facility.
Joe Hankins Reviewed Jan. 13 meeting minutes and received group approval. Reviewed today's agenda with this in mind: within next meeting or two, try to develop white paper/working document by giving assignments to small sub-groups, perhaps.

Point Source Innovation Toolbox:

1. Develop pretreatment standards for nutrients – something the state would then approve
   - Need a scientific baseline for an average standard, but we don't have nutrient criteria, yet.
   - Related to Item #3 on agenda, sewer ordinance
   - We can look for another state's model
   - Build in a choice to pre-treat or pay $$, but the $ penalty idea is problematic because it would have to reflect the cost to the facility to treat the water.
   - Change requirement for a facility (package plant) to connect to POTW, give the POTW the power to turn customer away. Industrial and commercial customers only?
   - If including this idea in a credit trading scheme, need to be equitable to customer and facility. Need to build in incentive to help environment, because if denied the connection, is that a license to pollute?
   - Can the state make a limited-area pre-treatment standard? It depends on Maryland's Water Quality standards, legally.
   - **Maybe something like a Sewer Use Ordinance would be safer ground? (Municipalities) Assuming WV standards in permits will drive it. Can do this efficiently. Based on new permit limit.**

Concern: One customer who inputs 200 ppm of P. In this case it can be dealt with because he is "impacting the system" so the facility operator has the authority to limit his inputs

Discussion about WV's current "pre-treatment law" and "pre-treatment programs" – there are only about 10 of these in WV and none in the Potomac Basin
-under current situation, a new laundromat would have to apply for modification, then P monitoring would start, then you'd have the option to deny them hooking up.
-confounding issues – what if there was insufficient carbon to feed the microbes?
-set up a group to capture the issues, like what is workable with an ordinance?, what about permit modification?, where do we have a wrench and where a hole. A one-page or extended paragraph that captures what we need to be able to do.

2. What about a phosphorus ban for WV?

- Source-prevention idea
- Automatic dishwasher detergents have high P-levels, on the order of 8% phosphates
- One value of a P-ban is that it prioritizes P-use
- Fall back would be a targeted public education campaign
- But would be good to have WV law "ratify the obvious," now that other states' laws have caused laundry detergent manufacturers to cut back on phosphates
- We could say "issues we're concerned about relate to wastewater"
    - But areas with Combined Sewer Overflows complicates the issue because now lawn and garden products are an issue. It's a bigger set of products than we originally thought – car wash detergent, fertilizers, etc.

-Randy mentioned that Scott's has a majority of the industry, and is working on education, developing/marketing non-P-based fertilizer
-maybe Chesapeake Bay Foundation or Ches. Bay Program has done research on the tradeoffs of P and alternatives
-Armando Benincasa volunteered to write a paragraph for the group's review. (Done, and printed in your 4/8/05 meeting agenda).

3. see #1 above

4. land application

- Point source idea maybe combined with litter transport program?
- Need a review of current practice and restrictions, then locate alternate destinations (locations)
- More comfortable with the idea of alternative uses. (E.g. see Randy's e-mail about designer composts, reprinted in your 4/8/05 meeting agenda)
- Re-thinking use of alum because product not good for land-application
- Need help from technical engineers – should we ask or pay an engineering firm to analyze this?
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5. tabled until another time…

6. How to deal with septics?

- They represent potential customers = more nutrient load
- In the Bay Program model, septic N load is greater than POTW customer's N load, but septic P load is zero, so when one becomes a POTW customer, a new P load is taken on.
- One option is to charge a fee to septic owner, then have a septic management program

Concerns/comments:
-Heath Departments seem to be not enforcing the rule that septics must hook up if failing.
-Is pumping the system definitely a help? If everyone did it, there would be a lot more septage, and no place for that, either!
-Apparently we need more facts before taking a position on this.
-In Berkeley County, there are approx. 30-40,000 septic tanks, which is more than sewer customers!
-There is a town (in WV?) that charges everyone, then manages their septic tanks.
-Do we charge septage haulers for some services already?
-Unlike the WWTP technology, there is little new science regarding septics, just what has been done for decades.
-This issue needs more facts/discussion.

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short break
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Reviewed several scenarios that illustrate how facilities are impacted in the face of growth – "Boomtown". See Joe Hankins' presentation "_____" on www.wvnet.org? for illustrations and more details?

* 1st scenario, there is a 1 MGD facility (significant), operating at 60% of capacity. Load limits for N and P are set by DEP, using the current design flow.
* 2nd scenario, this same facility is now at 90% of capacity. Since design flow was used to calculate load limits, there is no incentive to upgrade yet.

Some points made by Joe and others:

- These concentration standards are a translator – but the permit would give you a load, probably annual. DEP won't care if you go over the concentration limit, as long as your annual load is within the permitted limit, and of course as long as it doesn't create a localized water quality problem (hot spot).
- The day on which the "average" annual load is calculated is still unknown, but the permit office would be watching your DMRs and intervene before there is an unsolvable problem. This group might want to recommend "we'd like to have a 12 month running average."
- The "year" would likely begin at permit reissuance.
- Which design flow or other value for flow would be used to do the calculation? Existing capacity in October 05? This is very critical and is something DEP has to work out. The plant operator would want "flow" to take into account expansion they've already been planning.
- In VA, you apply for a permit, then engineer designs the plant, then you get a permit for construction…in WV, you get a Waste Load Allocation, design a plant, then apply for a permit based on the flow from the design.
- Maybe the 5 and 0.5 ppm numbers we've been working with for WV are unworkable now that it is 2 years later and there is more load. About 3 MGD in capacity was applied for in last year.
- Is there a date after which DEP will cut this off, beyond which Nutrient Load Allocations are all given out? Bill said we are still waiting for the water quality standards before we can answer that.
- Joe: bringing home the reality here, that once we reach the cap, we have to stay there, too!

* 3rd scenario, population is growing, so you want to upgrade to 1.5 MGD and operate at 1.2 MGD. The original load is still the multiplier in the calculation. You are discharging more water but not more N or P. Now you have to perform at 4.1 ppm of N and 0.41 ppm of P. Your design flow is dictating your cap.

* 4th scenario, growing even more, so you upgrade plant to 2 MGD and operate at 1.6 MGD, or 80% of capacity. The cost really increases at this point, because TN concentration must be <3.1 and TP <0.31.

- NOW WE SEE THE PRESSURE TO FIND ALTERNATIVES.
- One thing proposed in other areas is to buy Nutrient Load Allocations. This $$ goes into a "Water Quality Improvement Fund," (WQIF) which uses the $$ to improve pollution elsewhere. This is not really trading – it's more of a pressure valve but expensive.
- This hasn't been proposed for WV but this group could propose it.

- What kind of solutions would this fund pay for? If NONPOINT, could they be monitor-able or efficient/effective enough?
- 3 ppm is about the Limit of Technology for N. Many of the MD plants are headed there. In VA on Feb. 10, the DEQ seemed to say not to ask about buying your way out at 5 ppm. But if it acts like a free market, the market will determine that.

* 5th scenario, (Forget the WQIF idea for now), Boomtown is growing and producing unworkable concentrations of N and P. WWTP pays for buffers in Valley Farm. Monitors a net improvement in the environment. Could Boomtown add that to their credit? On a 1:1 basis? If so, then there is no improvement in the environment. This is a trade because the load moves from one source to another. Is that going to be acceptable? To the Bay Program, yes.

- But Valley Farm's baseline is debatable. Tributary Strategies are themselves like a watershed permit. They are already assuming 100% compliance with BMP levels beyond what we've ever seen. Maybe 60-80% of farmers have already been committed to do the buffer anyway. There goes the assumption that nonpoint trades would give less cost per pound reduction.
- Now a 3rd party partly controls the POTW's ability to meet permit requirements. This could be solved as it was in wetlands mitigation by "mitigation bank", or by going back to "WQIF" idea.
- It is so impossible to adequately monitor a P-trade that the ratio would have to be 20:1!
- These issues send us back to the concept of point-to-point trades.
- Can't the facility get credit for the acres being developed in its area? An impossible situation is being created over which the facility has no control.
- What about bringing the smaller point sources into the fold? Does that eliminate another source or present another source of trades? See scenarios below for some answers.

*6th scenario, Mr. Venture Green's new development and WWTP. Where is he going to find the right to discharge nutrients? He has no Nutrient Load Allocation because no design flow basis. Whatever he has to generate needs an offset from day one. Options: 1. trade with a facility that is under capacity. 2. go to "zero discharge" using land application system 3. broaden the scope of the bubble to include maybe PA facilities that have load allocation to trade.

- Regarding that 2nd option, this is happening in Jefferson Co. Around here the N in the water will show up in groundwater because here, 80% of stream flow is groundwater. Maybe office of groundwater should think about permitting them?
- Maybe a new development could do stormwater improvements elsewhere as an offset. If the area has a CSO so it's all coming out at the same place, maybe Venture Green CAN gain credits by improving stormwater elsewhere. However, MS4 or stormwater permits are mostly for sedimentation at this point, so nutrients aren't tracked through that system. We don't have a baseline for urban stormwater BMPs to document any progress.

* 7th scenario, Onsite Hollow is a 1970 development with aging septics. WWTP extends sewer lines and get an N credit but gains a P load.

- Jefferson Co. has 2000 sewage customers but around 20,000 septics, so this is realistic.
- Consider another development, Willow Creek, that has a 20 year old package plant. They're too small to be regulated under current scenario. So the big plant would get no credit for picking up the package plant's flow. Now we're back to a previous discussion about getting everyone involved and assigning everyone a load so they will be at the table to trade. Otherwise we'll end up with a lot of new plants and the failing ones won't be picked up.

- MAYBE THE GROWTH ITSELF WILL PAY FOR IT. Venture Green could pay for Willow Creek to build a new plant. Very attractive load to go and get a credit for. Places like Hardy County and Wardensville aren't growing so they could be your "Willow Creek."
- Some people are advocating for the entire Ches. Bay watershed to be the "bubble," so there would be opportunities to trade.

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(lunch break)**********
Talked about Dan Nees' affiliation, the Environmental Finance Center. It is EPA funded, and does finance analysis for local communities. One staffer, Jean Halloway, is a Wastewater expert, so maybe we should contact her. Joe Hankins and Alana Hartman are working with Dan to bring a workshop to the area that would look into financing the WWTP upgrades that would be needed. We'll let you know when a date is set.
-see agenda for website and background info.
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Comments arising from Boomtown scenarios:

- If WV accounts for the smaller point sources, they may very well be the source for the offsets we'll need.
- The length of the contract for offsets is an uncertainty problem. If 20-30% of your discharge capacity is subject to market fluctuations, then you'll have to cover yourself.
- The idea of a Network or Association handling the actual trading is appealing. It was discussed at one of the sessions in Virginia Feb. 10.

1:00 p.m. Held-over issues:
-Point Source sector data verification for cap load development –

- Joe wants to keep it transparent – use the DMRs?
- New sources have "sneaked in" in last 2 years
- Point source load estimates have to be trusted if we do point to point trades.
- Randy mentioned that the Bay Program is going to be requiring even more details in the reporting, like different species of N and P. So expect DEP to ask for this.

-Limit of Technology discussion: there was an old Ohio Supreme Court decision that revealed some levels of "Best available demonstrable technology achievable" for certain nutrients, and this group might wish to to review this decision for its potential to affect any recommendations to the Agency.

-Nutrient Removal Technology: What is possible at what cost? Do we want to have a technology refresher? Include BASF technology, timeswitch technology, good for plants with activated sludge. Also, April VMI meeting on technology.

-Joe could come up with a scenario of places where this intersects with the Public Service Com. (this started a discussion about concerns for the PSC…one person thinks it's a good idea to educate the PSC now so they'll stop "nix"-ing the hardware in the design. Another person thinks they shouldn't be micromanaging. Another thinks the offsets idea will be the hardest thing for them to accept.)

-Joe said there are things we can't control, like growth, so we NEED another tool

-What about putting a face on the idea of a general permit/watershed permit, perhaps Bob Koroncai? Chair of Bay Program's permitting work group. Tetra Tech is developing a model watershed permit with EPA, probably a 6 month project.

-Can modelers look at flux as a variable, i.e. do low flows with high concentrations have the same result as high flow with low concentration? Randy – the annual amount is determined to be the value of interest.

Next meeting:
Friday, April 8, 2005 9:00 a.m. Berkeley County PSSD building, Martinsburg
Directions: Take exit 16 East to Edwin Miller Blvd. Go to second stop light and turn left (Sheetz). Take immediate right and continue to follow road around. Park out front for better access to lobby or park in side lot.

Goal: (determined after this meeting) to learn about biological nutrient reduction and some options in the marketplace

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Note: **Significant** Point Sources are considered to be those that have >400,000 gpd flow, **Non-Significant** Point Sources have 50,000-400,000 gpd flow. These two categories are dealt with in the WV Potomac Tributary Strategy (see current draft at www.wvnet.org, on the Tributary Strategy stakeholders portion of the website). "**Minor**" facilities have <50,000 gpd flow, but there are quite a few of these. See breakdown in materials from the first meeting of this group (October 2004).