



North Carolina Pretreatment Consortium, Inc.

North Carolina Pretreatment Consortium Minutes
Durham, NC April 20, 2006

Members Present: Nicole Johnston, Martie Groome, Cheryl Tilley, Ralph Potter, Stephen Haller, Scott Pickard, Leon Holt, Monica Hayes, Chris Bortnick, Debra Collins, Angela Boswell, Amy Varinoski, Burrell Brock, Aaron Otten, Cheryl Douglas, Beverly Metcalf, Mae Lofton, Crystal Shotwell, Misty Conder, Randy Smith, Dale Deaton, Brian Gay, Dolores Bradshaw, Glenn McGirt, Freddie Martin, Jo Ellen Gay, Mike Hite, Reggie Hicks, Sharon Miller, Jeff Camp, Sherry Bagwell

The meeting was called to order by Martie Groome and everyone in attendance introduced themselves. We quickly began talking about today's topic, "Design Criteria Headworks Analysis: What This Means to You". Four separate municipal scenarios were presented, together with an update of the meeting with NCPC members, DWQ and Design Engineers and finishing with a look at what potential steps we could/should take with respect to this matter. It was mentioned how quietly, without fanfare, this idea has been introduced into our pretreatment world and is now attempting to take shape.

Greensboro POTW: Martie reviewed her position, current status of the plant and shared implications of the proposed changes. Here's an excerpt of the e-mail she sent prior to the April 20th NCPC meeting detailing what might happen.

Sharon Miller reminded me that not all Pretreatment Coordinators may be aware of (or had time to calculate) the potential impacts that the "Design Criteria" Headworks Analysis proposed by the DWQ Raleigh PT folks will have on individual Pretreatment Programs. I put together a few numbers from Greensboro's North Buffalo POTW [Design Flow = 16 MGD] to let you know how dramatically this proposed new requirement may change your POTW's Maximum Allowable Headworks Loadings for BOD and TSS.

North Buffalo BOD MAHL (calculated the "old" way and approved by DWQ in 2003) = **78,873 pounds**
(The "old calculation" used the NPDES Permit limit divided by 1.0 minus the % removal [decimal] to get the allowable influent concentration and then that concentration was put into the pounds formula. NPDES limit is 8.0 mg/l, Removal Rate is 98.8%, current flow = 14.2 MGD)

$$\frac{8.0 \text{ mg/l}}{1.0 - .988} = \frac{8.0}{0.012} = 666 \text{ mg/l allowable influent concentration} = 666 * 8.34 * 14.2 = 78,873 \text{ pounds}$$

North Buffalo BOD MAHL (calculated the proposed "new DWQ Design Criteria" way = **26,154 pounds**
(The North Buffalo O and M manual says the "Design BOD" is 196 mg/l, so that number must now be used in the pounds formula to get the MAHL.) Please note that the design flow, not the actual flow is used in the "new calculation":

$$196 * 8.34 * 16 \text{ MGD} = 26,154 \text{ pounds}$$

By the way, North Buffalo's current "Domestic" BOD loading is 27,615 pounds so we will be instantly over-allocated for BOD if the "new calculation method" is enforced as currently described. North Buffalo's average effluent BOD is <2 mg/l, so this is not a plant that is overloaded, not meeting limits or not operated properly.

We lost 52,719 pounds of BOD in the calculation! *Granted the old way of calculating MAHL overestimated the capacity of the POTW, but the new way dramatically underestimates the POTW capacities.* In 20 of the last 24 months North Buffalo's monthly average influent CBOD was greater than the 196 mg/l in the O and M manual and yet over that period the effluent CBOD averaged less than 2 mg/l.

Martie has suggested looking at a number of options that allow for a mid-range allocation and not favoring "excess" or "stringency". Ideas include (1) using a maximum monthly average for influent over 2 calendar years; plugging into the pounds formula with design flow. (2) Use of the pass-thru formula with highest influent and effluent numbers and (3) pass-thru formula with a "cap" maximum removal rate.

The implications are great because:

- Underestimate the capacity & capabilities of the POTW
- Loss of new industry / development due to over-allocation
- Potential moratorium
- BOD & TSS limits for all

Rocky Mount POTW: Angela Boswell told of a letter she received from DWQ stating that future TSS and NH3 loadings must have an engineering study completed in order to validate their allocations. Rocky Mount is currently not over-allocated or having treatment concerns at their facility and if they were to use the new calculations, there would be roughly 4% left to allocate for ammonia.

Winston-Salem POTW: Sherry Bagwell has a very unique situation. A tobacco plant discharges into their facility, with a very high BOD and (if I recall, this plant was built with the tobacco company in mind). The POTW plant design BOD is 600 – 645 mg/l BOD. By calculating the old way; BOD – over and TSS – OK with the plant in compliance. New method calculations would leave the plant over-allocated for both. W-S was allowed by DWQ to look at their blower capacity using O2 transfer efficiency, which showed that the plant was capable of handling the BOD loading. This gave them a little more elbow room to operate.

Graham POTW: (NH3): They had a plant upgrade and were collecting 12 months of data for new HWA. During that time, one aeration basin went down and was out of service for 6 months. They continued to run the facility through the one basin, meeting compliance with a 94.4% RR. They felt that RR would be better once the second basin was back on-line and asked DWQ if they could re-submit data when the time came. DWQ said fine and they submitted data with a 98.3% RR. Through the 2 HWA's, with one basin in operation, the POTW had ~ 1200 lbs. of NH3 for allocation; with 2 basins going ~ 4,000 lbs. When DWQ saw this, they said that ammonia was greatly over-allocated for the plant, by "design" numbers. After several conversations, DWQ decided to allow the before numbers (one Basin) and the latest set would be disregarded (didn't like the increased available NH3 allocation potential).

NCPC / DWQ / Engineer Meeting:

- DWQ selectively informed Towns that "design" numbers would be used, or they would accept an engineering study (major cost).
- This push has come from within PERCS only. There's no outside, driving force.
- Those attending the meeting (3-DWQ, 5- municipal PT directors, engineers) agreed that...
 1. The use of RR by old methods are not appropriate
 2. Use of " design" numbers are too restrictive
 3. BOD/TSS were the only pollutants talked about
 4. Engineers mentioned that designing numbers is not exact. Each may use different approaches and modeling; typically looking at worst case scenarios.

DWQ's Position:

- Protect the waters
- Afraid that some PT coordinators may not realize the numbers they have and inadvertently over-allocate their plant.
- Don't want to explain to public "enviros".
- Dept. of Commerce looks at the municipal allocations and based upon what they see, may try to locate a large user based upon potential available capacity of a respective program. Just because they have a large capacity.
- Poorly operated POTW's with many NOV's.

NCPC / PT Coordinators:

- Performance is the best indicator of plant capacity and capability.
- PT programs and MAHL should not shoulder the responsibility.
- Old/New calculation methods are not appropriate- need a happy medium. Need to explore viable options.
- Potential to cost jobs in NC
- Potential to cost POTW revenue

WHERE TO FROM HERE:

- Study options (refer to Martie's talk) regarding respective POTW's. Include different climates, areas, processes and see what works; keeping in mind that there are unique situations already present. We don't want to compromise those municipalities by virtue of what works for the majority.
- Flat out refuse to accept what DWQ is telling us.
- EPA has not changed its' stance in 20 years. Why is DWQ singling out NC pretreatment?

A motion was made to meet with DWQ again (May 24th ?). There, those attending would first see what new ideas DWQ has for us and then move on. An MAHL by "design numbers" alone is not acceptable. Asking for reasonable alternatives to make both sides amicable. Also asking for specific data from DWQ, specific instances where POTW's have NOV's because of the proposed change **and the number of events**. DWQ has yet to provide that information despite stating that this is already taking place. Continue to examine your own municipal situation, think about the ramifications and be prepared for the next NCPC meeting June 8, 2006.

OLD/NEW NCPC BUSINESS:

- Conference dates are set
- Certification Program Update: (begins April 24, 2006 / 20 people – Grade 1 and 15 for Grade 2)
- Tax Records for Consortium – not discussed
- Next Meeting: June 8, 2006
- Other meetings this year include an Emerging Pollutants Conference and possibly holding at meeting at Leon Holts' cabin in Virginia.

Meeting adjourned at 12:45 pm to begin lunch.

Respectfully Submitted,

Chris Bortnick
Secretary