

# DEQ Nutrient Work Group 12th Meeting Summary November 18, 2010

## Introductions

A list of the members of the Nutrient Work Group (NWG) and others in attendance is attached below as Appendix 1.

## Agenda

- Review of the September 16, 2010 Meeting Summary
- Temporary Criteria for Public Sector Affordability
- Public Sector Case Study
- EPA Update on Private Sector Affordability Options
- NWG Work Plan
- Public Comment
- Next Meeting

## Review of the September 16, 2010 Meeting Summary

NWG members present at this meeting had no comments on the September 16 meeting summary.

## Temporary Criteria for Public Sector Affordability

Dr. Jeff Blend discussed this topic using a PowerPoint presentation entitled, “[Public WWTP Affordability Process](#).” This presentation is available on the NWG web page at the following web address.

[http://deq.mt.gov/wqinfo/nutrientworkgroup/AgendasMinutes/2010/November18/PublicAffordabilityProcess\\_2010\\_4.pdf](http://deq.mt.gov/wqinfo/nutrientworkgroup/AgendasMinutes/2010/November18/PublicAffordabilityProcess_2010_4.pdf)

*Comment - The widespread test should take into account impacts that push people to live outside of city boundaries into the county. This is particularly significant for large cities. It is a problem now in Helena. Our current nutrient water quality problem is due more to septic systems than the municipal waste water treatment plant discharges. Studies indicate that 25% of the problem is due to septics and only 13% to the municipal waste water treatment plant.*

*Response - It is not a foregone conclusion that large cities will fail to meet the widespread test. I appreciate this comment.*

*Comment - The previous nutrient group, the Nutrient Criteria Affordability Advisory Group (NCAAG), recommended that expenditures to upgrade a wastewater treatment system for nutrient removal should have a 1% of median household income (MHI) cost cap until EPA and DEQ handle non-point nutrient discharges. The League of Cities and Towns will propose legislation in the next legislative session to cap nutrient treatment costs at 1% of MHI.*

*Question - How well are the substantive and widespread test parameters forecasted into the future?*

## Review Draft - Not for Quotation

Answer - The temporary nutrient criteria (variance) decision is based on a snap shot in time. The criteria will be reevaluated on a five year interval to see if new technology would invalidate their justification.

*Question - Thank you for the examples of the application of the temporary criteria. They are based, however, on comparisons to Montana averages. Would more cities and towns pass the substantial and widespread tests, if the comparisons were made to national averages?*

Answer - Some comparisons to national values would be more favorable, and some would not. For example, Montana's average per capita income is lower, but so are our unemployment rates.

*Comment - DEQ should investigate other ways to make the tests more flexible. For example, in the case of the Great Lakes and mercury, state legislation was passed deeming the widespread test to be met for an entire state. EPA accepted this approach.*

*Question - Where in these tests would you look at the effects on unemployment due to the loss of a big plant?*

Answer - The widespread test would capture the impacts of loss of a large plant that is a customer of a municipal waste water plant. Large plants that discharge directly into wadeable streams would be addressed via the private sector affordability criteria.

*Question - For Helena, the waste water treatment plant is 13% of the nitrogen and phosphorus discharges. In the upper Flathead, the municipal plant is only 5% of the nutrient discharges. How does the state justify requiring the expenditure of municipal funds on nutrient treatment when most of the loading comes from non-point sources?*

Answer - The relative point source and non-point source loading percentages you cite may be the case in some instances but not in others. For example, on the lower Yellowstone River, just 20% of the nitrogen but 60% of the phosphorus discharges come from the municipal waste water plants. Non-point loadings are addressed in the TMDL process. We could ask our non-point staff to address TMDL allocations. However, please remember that DEQ pursued the authority to grant temporary nutrient criteria to keep municipal waste water system costs under control. As we have explained many times, DEQ regulates some discharges, but not others.

*Question - How many people on the DEQ staff will be required to evaluate the substantial and widespread tests? Why set the standards so low that everyone will need a variance?*

Answer - Water quality standards must be set based on the science of harm-to-use. Analyses so far have shown that setting the standards at comfortable levels would not protect uses. You are arguing for a technology based variance to the standards. EPA considered national technology based standards, but backed off from setting them. We do not anticipate that additional staffing would be required to implement the numeric nutrient standards and the temporary affordability criteria.

*Question - If the Montana legislature set a nutrient standard, what would DEQ do?*

Answer - We would be bound by it. However, EPA must approve the standard. If it disapproves a state standard, it is required to set the standard.

## Review Draft - Not for Quotation

*Comment - The legislature set the arsenic water quality standard to be protective of a 1-in-10,000 risk level rather than EPA's level of 1-in-1,000,000.*

*Comment - One approach might be to have the legislature determine that the substantial and widespread tests are met state-wide so that all point source discharges would be qualified for a variance. The nutrient standards would continue to be set on a scientific, harm-to-use basis, but all towns would receive variances based on application of reasonable technology and would be subject to interim technology requirements.*

*Comment - If you polled point sources in Montana, you would find that they would want to continue to base water quality standards on science and protection of uses. However, they would also want load reductions to be distributed equitably among point and non-point sources, and they would want DEQ to be accountable for showing water quality benefits.*

*Comment by Gerald Mueller - The DEQ staff present in today's meeting cannot respond to the idea of legislation to cap nutrient water treatment costs at 1% of MHI or of deeming the entire state to meet the substantial and widespread tests for temporary affordability criteria. We will ask DEQ to respond to these ideas at the next NWG meeting in either December or January. The NWG can discuss other legislative proposals at the same meeting.*

### **Public Sector Case Study**

Dr. Mike Suplee and Jenny Chambers discussed a Circle Montana case study of the application of numeric nutrient standards and their implementation procedures carried through from beginning to end (current permit sunset, to permit renewal). They used a PowerPoint presentation entitled "[Public WWTP Affordability Process: Case Study](http://deq.mt.gov/wqinfo/nutrientworkgroup/Agendasminutes/2010/November18/CaseStudy_Circle_11-2010.pdf)" ([http://deq.mt.gov/wqinfo/nutrientworkgroup/Agendasminutes/2010/November18/CaseStudy\\_Circle\\_11-2010.pdf](http://deq.mt.gov/wqinfo/nutrientworkgroup/Agendasminutes/2010/November18/CaseStudy_Circle_11-2010.pdf)) and a [Word document](http://deq.mt.gov/wqinfo/nutrientworkgroup/AgendasMinutes/2010/November18/PublicWWTPAffordabilityProcess.pdf) (<http://deq.mt.gov/wqinfo/nutrientworkgroup/AgendasMinutes/2010/November18/PublicWWTPAffordabilityProcess.pdf>) with the same title.

*Question - What does 14Q10 mean?*

*Answer - The fourteen day low flow over a ten year period.*

*Question - Is the 14Q10 applied on an annual or seasonal basis?*

*Answer - Annual. An internal DEQ working grouping group is still working on detailed implementation details such as seasonal versus annual flows.*

*Question - Are permits guaranteed for a 20-year period?*

*Answer - No. The current statute requires that the permits have five year interim reviews that may determine that more advanced treatment technology is available and should be applied.*

*Question - What if Circle's capital improvement plan calls for building a new trunk line?*

Answer - The cost cap applies to all waste water facility expenditures, including collection and treatment. This means that all expenditures under the cap might, in some instances, go for improving infrastructure, such as a new trunk line, rather improving treatment.

*Question - What happens if during the variance period, a community's median household income (MHI) increases? Would the increase impact the next permit cycle?*

Answer - We haven't thought this through yet. Our initial thinking is that the review would consider only improvements in waste treatment technology.

*Question - What about changes to the cost cap during the five year review period?*

Answer - As stated above, the temporary nutrient criteria decision is based on a snap shot in time.

*Comment - Expenditures on water treatment should be measured against results, i.e. how much nutrient levels change.*

Response - Under the cap approach, expenditures may be made on the collection system, which should also benefit nutrients. The objective of the nutrient standards is to improve and protect water quality.

*Question - Would a community have to repeat the variance process every five years?*

Answer - No. Our present thinking is that the 5-year review would address only treatment technology changes.

*Comment - Treatment technology changes slowly rather than in a step function.*

Response - We are aware of this. We should keep in mind, however, that water quality standards other than for nutrients may change, and these standards may not allow variances. For example, no standards currently exist for pharmaceuticals and personal care products. Standards may be developed for them over the next ten to twenty years.

*Question - Would EPA approve permits and variances?*

Answer - EPA's primary focus is approving or disapproving water quality standards. Variances are considered changes to the standards, so their approval by EPA would be required. Therefore, if EPA approved the water quality standard, implementation guidelines, and accompanying variance site-specific temporary water quality standard, then no formal permit approval would be necessary. EPA can comment on a draft permit, and if they still have objections after the permit is issued, then they could formally object.

*Comments - The League of Cities and Towns would like to present permitting alternatives to this group.*

Response by Gerald Mueller - I will afford you the opportunity to do this at the next NWG meeting.

Response by Jenny Chamers - Permitting alternatives may be possible to explore, but would depend on factors associated with how the water quality standards are expressed/written.

*Question - Would TMDL load allocations supersede variances?*

Answer - In theory, the TMDL and permits are based on the water quality standards. The TMDL process must be based on the standard and could provide the flexibility/framework for the variance process. We will ask TMDL staff to come to the next NWG meeting to walk through the steps for the variance with an existing and a subsequent TMDL.

*Question - Municipalities now use grants to reduce customer waste water rates. Am I correct that the variance process would not give credit for grants when considering the expenditure cap amount?*

Answer - Yes.

*Question - If grants do not affect the cap amount, then there would be no incentive for a municipality to pursue them. For example, if a community would be at its cap amount, then it would not be required to make additional investments on its waste treatment system under the variance. Why then seek a grant?*

Answer - DEQ would welcome ideas of how to change the incentive structure.

*Comment - This system would incentivize spending money to fix the rest of the waste water system before improving treatment levels.*

Response - The NCAAG rejected requiring that expenditures be made only on treatment improvements. That group decided that qualified expenditures would include investments in the entire waste water system including collection.

*Comment - The City of Bozeman paid for improvements in its waste water treatment using impact fees rather than waste water rates. Under the variance system you have described, the city may have been better off using rates so that the expenditure cap would apply.*

*Comment - Under the temporary criteria process you are proposing, there would be no incentive to engage in nutrient trading. I propose that the NWG form a subcommittee to consider how nutrient trading and the variance process can work together.*

Response - The Water Quality Circular DEQ would develop would specify only that certain total nitrogen and total phosphorus levels must be attained. It would not specify how attainment would occur. The nutrient trading policy, as written, does not address this issue. Perhaps it should.

***NWG Actions - Those members of the NWG present at this meeting agreed to form a subcommittee to consider nutrient trading and variances.***

*Comment - There should be incentives to benefit municipalities that go above and beyond their treatment requirements.*

Response - The variances are temporary; the water quality standard levels will have to be met sometime in the future. Grants to improve treatment levels would hasten the day when compliance would be obtained.

*Comment by Gerald Mueller - We will revisit this grant/incentive issue at the next NWG meeting.*

*Question - Step 7 in the Word document includes two options. What is the distinction between them regarding a TMDL?*

Answer - Both options assume a TMDL is in place. Option 1 assumes that the temporary nutrient criteria are based on the long term averages achievable by the proposed facility. Option 2 assumes that the criteria are to be interpreted as the waste load allocation for the facility.

## **EPA Update**

Rosemary Rowe provided the update on the following subjects.

Private Sector Affordability Options - Private Sector Affordability Options - EPA has sent out a request to other regions asking how they have addressed variances for the private sector but have not heard anything back yet. EPA Region 1 is issuing permits including nutrient limits in Massachusetts and Rhode Island. EPA will have more to report on this latter. EPA has also been petitioned to develop technology based limits for nutrients. The agency's response may provide an example useful to Montana. EPA does not recommend a limit of technology approach for private sector variances but does think that an affordability approach might work.

Private sector affordability addresses discharges that are not a publicly owned treatment works (POTW).

*Comment - We have about 50 permitted facilities that are not POTWs, and among them, about half discharge into wadeable streams. There is not one dominant industry among the roughly 25 facilities.*

One concern regarding the private sector affordability criteria is holding confidential information. We understand that Montana may not have this ability. EPA has memoranda of understanding (MOU) with some states in the Superfund Program for handling confidential information. Our attorney advises us, however, that the MOU approach will not work here.

*Question - When the Superfund site management involves both EPA and a state, how does the confidentiality work?*

Answer - EPA holds the information but gives the state access to it.

*Comment - Confidentiality has proven contentious in the context of Superfund. Some non-state parties want access to the information. Industries are concerned that confidentiality may become an issue.*

Response by Mike Suplee - DEQ looked into this approach to addressing confidential information but found it to be problematic.

Florida Nutrient Rule - EPA has signed the Florida rule, and it is available at the following web address.

<http://water.epa.gov/lawsregs/rulesregs/upload/floridaprepub.pdf>



*Question - There may be aspects of the Florida rule of interest to this group such as multi-discharger or geographic variances and implementation costs. Could someone from EPA talk with us about the content of the Florida at the next NWG meeting?*

Answer - Yes, depending on schedules.

*Comment - My understanding is that the rule does provide for watershed or multi-discharger variances.*

Answer - I believe the rule does provide for watershed based variances.

Stressor-Response Guidance - EPA has issued guidance for stressor-response studies.

Headquarters Nutrient Advisory Group - EPA Headquarters has had a nutrient advisory group for about a year. I am Region 8's representative. The existing water quality technical support document was written from a toxics perspective. We are attempting to build on it for nutrients addressing issues such as mixing zones, averaging times, and case studies. This group's work will not be completed until late 2011 or 2012, so it will likely not be timely to assist the NWG.

## **NWG Work Plan**

Gerald Mueller stated that based on today's discussion the outstanding topics on the NWG work plan include:

- Temporary criteria for private sector affordability;
- Options for reducing rather than treating nutrient discharges;
- DEQ's review of the numeric nutrient standard levels;
- Alternative permit processes;
- Nutrient trading and the temporary nutrient affordability criteria;
- The interaction of TMDLs and the temporary nutrient affordability criteria;
- Incentives for municipalities to improve nutrient treatment under the temporary nutrient affordability criteria;
- Legislative ideas; and
- A package of rules and implementation guidance for the numeric nutrient criteria.

## **Public Comment**

There was no additional public comment.

## **Next Meeting**

DEQ will set the next meeting date, choosing between the second and third Thursday of January, 2011, i.e., between January 13 and January 20. An agenda will be posted on the NWG web site prior to the meeting.

**Appendix 1  
NWG Attendance List  
November 18, 2010**

**Members**

Scott Murphy	Morrison-Maierly, Inc.
John Rundquist	City of Helena - Montana League of Cities and Towns
Jim Edgcomb	Montana Department of Commerce
Dick Hoehne	Town of Philipsburg - Montana League of Cities and Towns
Brian Sugden	Plum Creek
Donald Quander	Holland and Hart/Montana Petroleum Association
Don Allen	Western Environmental Trade Association (WETA)
Debbie Shea	Montana Mining Association
Ryan Swinney	Bruce Swinney & Associates
Chris Brick	Clark Fork Coalition (via telephone)

**Alternate Members**

Alan Stine	Olympus Technical Services (alternate for Michael Perrodin)
Doug Parker	Hydrometrics (alternate for Debbie Shea)
Kate Miller	Montana Department of Commerce (alternate for Jim Edgcomb)
Jay Bonder	Montana Stockgrowers Association (alternate for John Youngberg)

**Non-Voting Members**

Dr. Mike Suplee	DEQ, Water Quality Standards Section, Water Quality Specialist
Dr. Jeff Bland	DEQ Economist

**Other Meeting Participants**

Mark Simonich	Helena Association of Realtors
Jessie Luther	Browning, Kaleczyc, Berry, and Hoven
Paul Burnham	City of Kalispell
Susie Turner	City of Kalispell
Claudia Massman	DEQ Attorney
Kristi Kline	Montana Rural Water Systems, Inc.
James Lloyd	Hydrometrics, Inc.
Judel Buls	AE2S, Inc.
Jeff May	DEQ, Permitting Compliance Division, Water Protection Bureau
Jenny Chambers	DEQ Water Protection Bureau Chief
Judy Hanson	DEQ, Permitting and Compliance Division Administrator
Todd Teegarden	DEQ Technical and Financial Assistance Bureau Chief
Ray Armstrong	DOWL HKM
Tom Reid	DEQ Water Protection Bureau, Senior Environmental Science Specialist
Craig Pozega	Great West Engineering
Jessie Luther	Browning, Kaleczyc, Berry, and Hoven
Tom Adams	City of Bozeman
Amanda McInnis	HDR



Paul LaVigne

DEQ Technical and Financial Assistance Bureau, Water Pollution  
Control Revolving Fund, Section Supervisor

Rosemary Rowe

EPA

Alan Towerton

City of Billings (via telephone)

Dave Mumford

City of Billings (via telephone)

**NWG Facilitator**

Gerald Mueller

Consensus Associates