

DEQ Nutrient Work Group 20th Meeting Summary May 20, 2013

Introductions

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

Introduction of DEQ Director Tracy Stone-Manning

George Mathieus introduced the new DEQ Director Tracy Stone-Manning. Director Stone-Manning reiterated her agency's commitment to working with the NWG to address the nutrient issues collaboratively.

Mr. Mathieus also set the stage for this meeting. He stated that in response to concerns from NWG members that DEQ was moving too quickly towards adoption of the numeric nutrient standards, the department slowed the process last fall. The purpose of this meeting is threefold: to discuss the DEQ's response to comments made by stakeholders to fall drafts of the nutrient rule making package, highlight the differences between the fall package and the current May 2013 draft, and to identify what still needs to be done before the package can be finalized and submitted to the Board of Environmental Review.

Agenda

- Review of the September 12, 2012 Meeting Summary
- Treasure State Endowment Program Data
- Status of Wadeable Stream and Lower Yellowstone River Criteria Reports
- New Dischargers and Nondegradation
- Discussion of the May 2013 Nutrient Criteria Rule Package (Rules [v7.7], DEQ-12[v6.6], and Technical Guidance [v7.3])
- Next Steps
- Public Comment
- Next Steps

Review of the September 12, 2012 Meeting Summary

NWG members present at this meeting had no comments on the September 12, 2012 meeting summary.

Treasure State Endowment Program Data

Kate Miller reported that she recently compiled data from the Treasure State Endowment Program (TSEP) and the 2000 and 2010 censuses to examine affordability and community waste water user rates. She calculated median household income (MHI) levels for various communities. These data will be given to DEQ for posting on the NWG web page.

Briefing on the Academic Peer Review of Numeric Nutrient Criteria for Wadeable Streams

Mike Suplee used a PowerPoint presentation entitled “[Status of Criteria Technical Reports and Recommended Criteria](#)” to highlight the changes DEQ has made to the numeric nutrient criteria for wadeable streams, large rivers, and lakes. This presentation is available on the NWG web page: <http://www.deq.mt.gov/wqinfo/NutrientWorkgroup/default.mcp.x>. In some cases, phosphorus criteria were lowered, i.e. made more stringent, and in some cases nitrogen criteria were raised, i.e. made less stringent.

Question - Could we discuss the criteria changes at the next NWG meeting?

Answer - Yes.

Question - What are the implications of the criteria changes for permit holders?

Answer - The lowered phosphorus criteria would require lower discharges.

Question - Can the lower discharges be met with current technology?

Answer - Yes. Operational changes may be required.

Question - Has the DEQ Circular 12 been changed to reflect these criteria changes?

Answer - The Circular has not yet been changed, but it will.

New Dischargers and Nondegradation

Dr. Suplee led a discussion of the following topics.

Nondegradation Regulation Applications to Proposed Criteria in Draft Rules - Nutrients were previously treated as toxics and addressed under DEQ-7, and the main purpose of those standards is to protect human health. Nutrients to protect human health will continue to be included in DEQ-7, and the human health standards are unchanged. The new numeric nutrient criteria in draft DEQ-12, which are lower than those in DEQ-7 and are for eutrophication control, are moved to the harmful category to which nondegradation regulations apply. Under nondegradation, a new or increased source may degrade water quality up to 40% of standard levels for harmful parameters. New sources unable to meet the 40% cap may apply for an allowance to degrade up to the water quality standard levels.

Anticipated Number of Applicants - George Mathieus stated that DEQ anticipates only a couple of new permit applications to which nutrient nondegradation would apply. DEQ does not see this as insurmountable from a management/work load perspective.

Question - Over the past two years, about 30 grant applications were made to TSEP for waste water plants. A handful of these involved changes to the point of discharge of existing facilities. Does a change in the discharge point trigger the nondegradation review?

Answer - Yes. Sources with changed discharge points are considered new sources.

Nondegradation Process and Review Steps - The steps leading to an authorization to degrade have not been used often and are not clear. DEQ has had a sub-group of the NWG to consider nondegradation issues. Mike Suplee asked if this small group should be tasked with examining the authorization to degrade to flesh out the issues related to it and the process for obtaining it.

No NWG member or other participant in this meeting objected to asking the nondegradation sub-group to address the authorization to degrade.

Comment - This may be useful, but the increments involved are so small that an allowance to degrade would be relevant to only a small number of applicants.

Response by George Mathieus - DEQ's policy is to put as many tools in the tool box as possible. The authorization to degrade is one possible tool.

Comment - Two small mines had nondegradation permit levels set so low that they could not be met with current technology. If variances from nutrient criteria are not available for new discharges, then new projects will not happen, particularly when no water is available for dilution so that the criteria become end-of-pipe standards.

Response by George Mathieus - DEQ is committed to making nondegradation work, including developing a clear road map to an allowance to degrade.

Other Possible Approaches - Mike Suplee stated that DEQ is considering another possible approach if numeric nutrient standards cannot be met. Current statutes allow for two types of actions, temporary standards and temporary beneficial use classifications. Temporary standards have been used during remediation when cleanup activities may temporarily degrade water quality. A temporary standard was used during the New World Mine remediation. The other possibility, temporary use classifications, has not been used to date. If all available processes such as engineering solutions, nondegradation increments, application of best management practices (BMPs), and the authorization to degrade would not work, then DEQ might allow a temporary change to the use classification. This change would temporarily forgo a beneficial use, but after a designated period the forgone use would have to be supported. An example of a case where a temporary use classification might be applied is a new mine. During the start-up mine phase, the recreation use, which is the most restrictive water use in some circumstances, might be dropped while retaining the aquatic life use. After the mine is in full operation and generating income, water treatment might be upgraded so that the recreation use would be supported.

DEQ dosing studies and subsequent modeling indicate that in certain types of streams water quality can recover rapidly when a nutrient source is removed. Rosgen type A and B streams have high gradients and aerate naturally, and maintain adequate levels of dissolved oxygen when algae die all together in the early winter.

DEQ has discussed this approach briefly with EPA, but no decisions have been made. George Mathieus stated that DEQ may include provisions for an individual rule making for a temporary use classification in the current nutrient rule package to provide stakeholders with confidence moving forward.

Question - What was EPA's response?

Answer by Tina Laidlaw - We have talked informally with DEQ, and are open to exploring alternatives for new mines. Missouri and other states have removed recreation uses for waters after submitting a Use Attainability Analysis to EPA.

Question - Will affordability still be a factor after BMPs, available technology, etc, have been considered?

Answer - Yes.

Question - What would temporarily dropping the recreation use do to the nutrient standard?

Answer - It would change the benthic algae levels from 150 mg chlorophyll *a* per liter to about 300 mg chlorophyll *a* per liter. Allowable nitrogen levels might double.

Question - Would a temporary use classification require rule making?

Answer by George Mathieus - We are not sure, but probably. But addressing it now appears to make sense.

Question - Do you have science that establishes how long a use can be foregone before water quality cannot rebound?

Answer - Limited work has been done in New Zealand in rivers with good aeration.

Question - Do you have a gut feeling for how long the period might be?

Answer - My guess is that a change in water quality over a long period would change the macroinvertebrate community, which is the food source for fish, and in turn change the fish community.

Comment - The goal should be to protect water uses. New dischargers or changes to the point of discharge are subject to nondegradation requirements stricter than the numeric nutrient standards. They should not be precluded if they would not impact beneficial uses.

Response by Tina Laidlaw - The 40% requirement for nondegradation is a result of narrative nutrient standards. The ability to degrade water quality up to the standard is available under an authorization to degrade. A numeric nutrient standard would allow new dischargers to degrade up to the standard which may provide more flexibility to some dischargers.

Comment - A definition of new or increased discharges would be useful; advanced facility planning is generally focused on numbers. We need to know what a permit might look like.

Response - We will discuss this with the permit shop.

Question - What is the status of the leadership of the permit shop?

Answer - A new bureau chief for the Water Protection Bureau has just been hired. Bob Habeck has accepted the position on a one year temporary assignment.

Comment - We supported the passage of legislation to make variances available to all nutrient dischargers. The law is being interpreted to so that variances are available only for existing dischargers.

Response by Tina Laidlaw - The Clean Water Act requires protection of existing water uses, so EPA expects new discharges to meet standards. We are, however, willing to look at options for new discharge permits such as those DEQ has discussed today.

Response by George Mathieus - Some of this may be semantics. We can consider options for new discharges, but we cannot label them variances.

Question - How high up in EPA has the position on variances for new discharges been vetted?

Answer by Tina Laidlaw - It has been vetted with upper management. EPA regulations focus on protection of existing uses.

Question - Are there precedents in other parts of the country?

Answer by Tina Laidlaw - We have looked at a couple of issues regarding nondegradation for nutrients and new permits and have not found a lot of examples. Uses have been removed in other states. I will follow up regarding the definition of new discharges and moving the point of discharge.

Comment - Any written EPA guidance would be helpful.

Comment - My understanding is that Colorado has adopted technology based numeric nutrient standards.

Response by Tina Laidlaw - Instead of variances, Colorado has adopted numeric criteria for stream segments upstream of dischargers. Technology-based effluent limits will be implemented for 44 dischargers on segments downstream of existing discharges. Utah's nutrient approach also incorporates tech-based limits for dischargers in areas where numeric nutrient criteria are not being adopted.

Discussion of the May 2013 Nutrient Criteria Rule Package

Mike Suplee used a PowerPoint presentation entitled "Key Changes in the Rule Package between Summer 2012 and the Current Version" to discuss this topic. This presentation is available on the NWG web page.

Comment - It is a significant change that a discharger can pursue an individual variance if compliance would be too costly.

Response - An individual variance based on affordability is not new. The new path involving DEQ approved modeling or empirical data does not include the exact same type of economic argument. It does meet the spirit of the law, however, because if modeling shows that one nutrient can be reduced more and get the same biological effect as reducing both equally, there is a cost savings involved which gets back to the intent of the individual variance (i.e., "economic impacts").

Response by Tina Laidlaw - Any variance providing an interim standard level would still be based on the underlying demonstration of significant and widespread impacts.

Comment - Some of DEQ's proposals would do more harm to greenhouse gas emissions.

Response - DEQ has avoided detailed greenhouse cost/benefit analyses.

Question - Does the new path allow for reach specific criteria?

Answer - DEQ water quality modeling on large rivers has led to reach specific criteria. Modeling can also be used for wadeable streams and may also result in reach specific criteria.

Comment - DEQ has severability language in other rules. We suggest using the existing language in the numeric nutrient rule as well.

Response by George Mathieus - We will look at the language and include it in this rule.

Proposed Stepped Approach to Nutrient Reductions - David Mumford discussed a proposal from the League of Cities and Towns to DEQ for stepped nutrient criteria that would provide both certainty to dischargers and progress towards reduced nutrient discharges. For publicly owned treatment works (POTW) with an outflow of 1 million gallons per day (Mgd) or larger, after May 2016 the general variance levels would be reduced for the five-year permit cycle from the current levels of 10 milligram per liter (mg/l) total nitrogen (TN) and 1 mg/l total phosphorus (TP) to 8

mg/l TN and 0.8 mg TP. The level would drop to 6 mg/l TN and 0.6 mg/l TP for the subsequent five-year permit cycle. After the second 5-year permit cycle, POTW discharges could seek an individual variance. After May 2016, the 1 Mgd discharges will also be responsible for monitoring their receiving water. Lagoon systems would apply BMPs and be subject to a review for maximizing the removal of their system. The League does not have a proposal for POTW with an outflow less than 1 Mgd. Fewer treatment options are available for these sized plants that do not require significant expenditure of funds beyond the capability of the communities in this category. Perhaps a sub-group of the NWG could develop a proposal for the POTW less than 1 Mgd. This proposal allows time to consider breaking the less than 1 Mgd category into additional categories through legislation and to work on solutions to non-point nutrient sources.

Comment - This approach would provide certainty for facility planning.

Response by George Mathieus - DEQ considered a similar approach when we were drafting SB367. It appears to make sense.

Comment - Dischargers must meet an array of standards in addition to nutrients such as ammonia.

Question - Is the idea in this proposal to provide two permit cycles after May 2016 and then move to an individual variance?

Answer - Yes. POTW's will also be collecting ambient stream data to evaluate how things are changing.

Question - Is not setting criteria below 6 mg/l TN and 0.6 mg/l TP acceptable to EPA?

Answer by Tina Laidlaw - This proposal has the advantage of defining how ratcheting down would occur.

Question - How many POTWs are in Montana below the 1 Mgd threshold?

Answer - There are a significant number, but I don't remember specifically how many.

Comment - Predictability is important to small communities. Predictability creates more accountability and something to take to political bodies such as city and town councils and the public. The lack of predictability is preventing forward action on nutrient treatment.

Comment - This proposal probably would not affect private dischargers very much.

Comment - One approach to the less than 1 Mgd POTW would be to drop the general variance levels from the current 10 mg/l TN and 1 mg/l TP to 8 mg/l and 0.8 mg/l respectively for the second permit cycle following May 2016.

Comment - The general variance levels for less than 1 Mgd communities should be the same as for the larger ones.

Comment - Communities have put together their funding package and facility plan for the 2013-15 biennium. Under this proposal, the discharge limits will change in 2016.

Comment - Five years are required to move from a facility plan to an on-line facility.

Comment - Under this proposal, communities will have 13 years of knowing where we are and what levels we have to meet.

Comment - The technology necessary to meet the stepped requirements of this proposal is tried and true, not leading edge. This fact will make it easier to convince political leaders to act and lenders to provide funding

Comment - Some small communities face uncertainty about when permitted subdivisions will be developed. This in turn creates uncertainty about development of treatment facilities.

Comment - The imposition of nitrate and ammonia standards will require shifting from lagoons to mechanical treatment systems regardless of nutrient standards.

Comment - Everyone plans facilities for a twenty year period. We should therefore wait one more permit cycle before changing the nutrient general variance levels.

Comment - The issue is that we have 5 year permit cycles and 20 year financing cycles.

Comment - We cannot lock into 20-year development certainty. We do not provide such certainty for developers in our communities. We need to make progress towards complying with the numeric nutrient standards. This proposal provides ten years of certainty.

Comment - For smaller communities the biggest constraint is a lack of staff to operate treatment facilities.

Comment - In the future phosphorus recovery may be preferable to removal.

Question by Mike Suplee - Would establishing a sub-group of the NWG to consider the general variance for the less than 1 Mgd communities be worthwhile?

No participant in this meeting objected to DEQ convening a small group to consider this issue, provided that teleconferencing and/or video conferencing is used to mitigate travel difficulties.

Discussion of the DEQ-12 Circular and the Technical Guidance Document - Using the same PowerPoint presentation referenced in this section above, Mike Suplee reviewed the changes in the May draft of the DEC-12 Circular and the Technical Guidance Document.

Question - Will the criteria tables in DEQ-12 be brought up to date?

Answer - As mentioned earlier in this meeting, we will update the tables to include changes to the criteria.

Question - Will the proposal by the League of Cities and Towns for stepped general variance levels be included in DEQ-12?

Answer - Yes.

Question - I have reviewed the DEQ's response to our comments on the fall draft rule package, and do not agree with some of them. One example is the how disclosures of private entity financial data will be treated. What is the best way we can discuss our disagreements?

Answer by George Mathieus - We are open to discussing the department's responses and will arrange a conference call to do so. Anyone wishing to do so is welcomed to participate in the call.

Question - Is there anything in the consultant's report on nondegradation that this group should discuss?

Answer by George Mathieus - DEQ did hire a retired EPA official, Ephram King, to address the nondegradation issue. Mr. King wrote his as an individual, not as a representative of EPA. Mr. King did not solve the issue, nor did he identify anything that would cause the numeric nutrient criteria rule making to fall apart.

Question by George Mathieus - In past meetings, DEQ has provided examples of how the numeric nutrient criteria might impact facility permits. Would additional examples be useful?

Comment - It would help if DEQ would review practices in other states to identify alternatives that reduce nutrient loads short of building treatment plants.

Response by George Mathieus - DEQ has already done this, and our review resulted in the reuse bill passed two legislative sessions ago.

Next Steps

As a result of this meeting, three next steps were identified regarding nondegradation, the general variance levels for communities with POTWs that discharge less than 1 Mgd, and discussion of DEQ responses to comments made on the fall rule making package:

- DEQ will convene a NWG nondegradation sub-group and ask it to consider how to flesh out the allowance to degrade process.
- DEQ may convene a new NWG sub-group to discuss the general variance levels for POTWs discharging less than 1 Mgd; teleconferencing and video conferencing will be used for the group's deliberation.
- DEQ will hold a teleconference to discuss its response to comments on the fall rule making package.

All three actions will occur prior to the next NWG meeting, and reports on them will be made to the NWG at its next meeting.

Public Comment

There was no additional public comment.

Next Meeting

The next meeting of the NWG is scheduled for Tuesday, July 9, 2013 from 1:00-5:00 p.m. in room 111 of the Metcalf Building at 1520 E. Sixth Ave in Helena.

Appendix 1
NWG Attendance List
May 20, 2013

Members

Mark Lambert	Treasure State Resource Industry Association
Scott Murphy	Morrison-Maierle
Shari Johnson	City of Polson/League of Cities and Towns
John Rundquist	City of Helena
Dave Aune	Great West Engineering
Michael J. Perrodin	BNSF Railway
Kate Miller	Montana Department of Commerce
Dave Galt	Montana Petroleum Association
Jeff Tiberi	Montana Association of Conservation Districts
Tom Hopgood	Montana Mining Association (via telephone)
Brian Sugden	Plum Creek (via telephone)

Alternate Members

Doug Parker	Hydrometrics (alternate for Tom Hopgood)
Bill Mercer	Holland & Hart (alternate for Dave Galt)
Matt Clifford	Clark Fork Coalition (alternate for Chris Brick)

Non-Voting Members

Dr. Mike Suplee	DEQ, Water Quality Standards Section, Water Quality Specialist
George Mathieus	DEQ Planning, Prevention and Assistance Division Administrator
Dr. Jeff Bland	DEQ Economist

Other Meeting Participants

Tracy Stone-Manning	DEQ Director
Amanda McInnis	HDR/Montana League of Cities and Towns
David Mumford	City of Billings
Alan Wendt	AE2S, Inc.
Nate Weisenburger	AE2S, Inc.
Craig Woolard	City of Bozeman
Jessie Luther	Browning, Kaleczyc, Berry & Hoven
Todd Teagarden	DEQ, Technical and Financial Services Bureau Chief
Randy Weimer	Stillwater Mining
Matt Wolfe	Stillwater Mining
Mark Schaffer	Copper Engineering
Scott Anderson	Anderson-Montgomery Consulting Engineers
Paul Lammers	Revett Minerals, Inc
Joe Kolman	Legislative Environmental Policy Office
Susie Turner	City of Kalispell
Rebecca Bodine	City of Kalispell
Mike Jacobson	City of Great Falls
Tina Laidlaw	EPA
Kristi Kline	Montana Rural Water Systems, Inc.
Mark Simonich	Helena Association of Realtors
Gary Swanson	Robert Peccia & Associates

NWG Facilitator

Gerald Mueller Consensus Associates